

Extent of Adaptability of Modern Agricultural Technologies by Rural Women at Samastipur District of Bihar

Arunima Kumari¹ and Pooja Kumari²

ABSTRACT

The prosperity and growth of a nation depends on the position and development of its females, as they not only constitute nearly half of its population but also positively influence the growth of remaining half of population. It is only women around whom the whole families growth rotates. The present study was conducted in samastipur district of Bihar with 100 respondents to find out the extent of adoption of improved technologies by rural women farmers. The study revealed that rural women were adopting post-harvest technologies more than the pre-harvest technologies and their adoption was affected by their knowledge level.

Keywords: Farm women, adoption, agricultural, technology

INTRODUCTION

Indian women are the backbone of farming community. Women in agriculture are often physically visible but conceptually invisible and marginalised. Rural women, besides their normal household responsibilities play a very significant role in agriculture and allied activities. Female as agricultural cultivators and labourers constitutes 24.92 and 18.56 per cent. Women are involved in pre-sowing, post-sowing, harvesting and post-harvesting operations as well as allied activities through physical participation and supervision. Despite their important role, women farmers face several disparities in different areas of agriculture. Despite the important role played by women in agricultural production, they face several handicaps. They are in fact the largest group of landless labourers. Woman farmers face constraints such as lack of accessibility to skills, trainings, information, technology, access to inputs, credits, financial incentives, market and control over farm income. Woman farmers are less likely than men to use modern inputs such as improved seeds, fertilizers, mechanical tools etc., They use conventional tools with little efficiency and face drudgery while working in the field and home. There is lack of knowledge and skill in rural women. The adoption of the improved technology by woman farmers are believed to be affected directly or indirectly by different socio-economic factors. Women can be more successful and effectively adopt and use the technology than their male counterparts if they are provided with the

opportunities and resources. Keeping these views in mind, present study entitled role of women in today's agriculture has been taken up to ascertain the rate of adaptability of modern agricultural technologies by rural farm women in agriculture.

METHODOLOGY

The study was undertaken in Samastipur district of Bihar. Out of 20 blocks 2 blocks namely, Pusa and Kalyanpur were selected purposively. From these 2 blocks, 4 villages 2 from each blocks *i.e.*, Gorei, Madhurapur, Harpur, and Mahmadda were selected. The selection was based on the assumption that these were having maximum number of farm women involved in agricultural activities. A total of 100 respondents were taken for the present study. Keeping in view the objective of the study, well structured interview schedule was developed. The data was collected by personally interviewing the respondent in an informal atmosphere either at home or at farm.

RESULTS AND DISCUSSION

Adoption of improved technologies is pre-requisite for bringing change into the family and is indicator of change in any society. An attempt has been made in this section to analyse the adoption of selected improved agricultural technology by the respondents. The percentage distribution of women by adoption of

¹Associate Professor-cum-Deputy Director Extension (Training). ²M.Sc. student, of Home Science, R.A.U., Pusa. Department of Extension Education and communication management ,Rajendra Agricultural University, Bihar, Pusa, Samastipur (848 125)

improved technologies in the given areas has been presented in Table 1 and Fig 1. Table 1 revealed that substantial percentage of respondents were adopting the agricultural technologies in the area of study. The respondents adopting various technologies were, land preparation (30%), variety of seed used (47%), line sowing (35%), seed rate (41%), seed treatment (24%), irrigation management (54%), time period of irrigation (51%), chemical fertilizers (47%), plant protection measures (46%), harvesting of crops (63%), and storage management(56%). Adoption of agricultural technologies followed an increasing trend with increase in land holding status of the respondents. Hence, it can be concluded that land holding status of the respondents has direct bearing on the adoption of improved practices. Rate of adoption of improved technologies may be attributed as the extent of adoption presented in percentage of adoption of technologies. Adoption of various improved technology of HYV wheat were affected by the respondents knowledge level, land holding size, education and social participation. Also, the adoptions of various technologies were different in terms of percentage adoption. Post-harvest technologies were adopted by more number of respondents than the pre-harvest technologies. The findings were supported by Krishnamurthy *et al.* (1998), Kumbhare and Singh (2011).

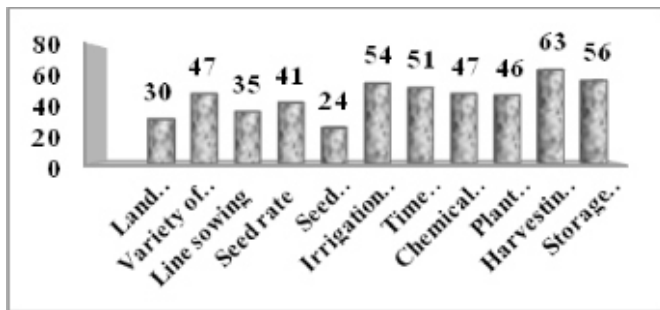


Fig.1 Extent of adoption of agricultural technologies

Table 1: Extent of adoption of improved technologies by rural women

Technology	Landless (N=33)		Marginal (N=45)		Small (N=11)		Medium (N=11)		Pooled (N=100)	
	f	P	f	P	f	P	f	P	f	P
Land preparation	0	0.00	19	42.22	5	45.46	6	54.55	30	30.00
Variety of seeds used	0	0.00	28	62.22	9	81.82	10	90.91	47	47.00
Line sowing	0	0.00	18	40.00	6	85.71	11	100	35	35.00
Seed rate	0	0.00	20	44.45	10	90.91	11	100	41	41.00
Seed treatment	0	0.00	11	24.45	4	36.36	9	81.82	24	24.00
Irrigation mgt	0	0.00	33	73.33	10	90.90	11	100	54	54.00

Time period of irrigation	0	0.00	31	68.88	9	81.81	11	100	51	51.00
Chemical fertilizers	0	0.00	27	60.00	9	81.81	11	100	47	47.00
Plant protection measures	0	0.00	28	62.22	8	72.752	10	90.91	46	46.00
Harvesting of crops	0	0.00	42	93.33	10	90.91	11	100	63	63.00
Storage mgt.	0	0.00	35	77.78	10	90.91	11	100	56	56.00

The data presented in Table 2 revealed that the extent of adoption of improved technology was correlated with the socio-economic characteristics. The independent variables education (self) (r =0.738), education (male-head) (r =0.614), size of land holding r =.0.726), family income (r =0.781), agricultural implements (r =0.738) and knowledge-level (r =0.651) were positively and significantly correlated. This means that the respondents with male heads of family were more adopting the improved technology. Other variables were not significant but positively correlated except age and size of family. This means that with the incensement in independent variables of education, land holding, and knowledge-level, the extent of adoption of improved technology by woman farmers increases. The findings were supported by Kaur (1981), Reddy *et al.*, (1989), Singh and Sharma (1990), Singh and Singh (2002), Subodh (2003) and Snehlata (2006).

Table 2: Coefficient of correlation between extent of adoption of improved technology (wheat) by woman farmers and selected independent variables

Variables	Value of 'r'(adoption)
Age (X ₁)	-0.140
Education (respondent) (X ₄)	0.738**
Education (Respondent Husband) (X ₅)	0.614**
Total family members (X ₆)	-0.105
Size of land holding (X ₁₀)	0.726**
Family Income (X ₁₁)	0.781**
Domestic animals (X ₁₂)	0.404**
Social participation (X ₁₃)	0.131
Knowledge level (X ₁₄)	0.651**
Agricultural implements (X ₁₅)	0.738**

* = Significant at 5% level of probability
 ** = Significant at 1% level of significant

CONCLUSION

With rapid expansion of India's economy, we closely observe a phenomenon of 'feminization of agriculture' where women play an increasingly important role in agriculture and work spanning, from cultivating field crops, to livestock rearing, gardening, gathering, and fishing. These women are important drivers of economic and ecological sustainability. Adoption of agricultural

technologies by rural farm women followed an increasing trend with increase in land holding status of the respondents. The respondents adopting various technologies were, land preparation (30%), variety of seed used (47%), line sowing (35%), seed rate (41%), seed treatment (24%), irrigation management (54%), time period of irrigation (51%), chemical fertilizers (47%), plant protection measures (46%), harvesting of crops (63%), and storage management (56%). The best way to make use of natural and potential capabilities of rural women is to provide them with opportunities for self development and self employment.

Paper received on : April 22, 2016
Accepted on : April 29, 2016

REFERENCES

Kaur, S. 1981. Role of farm women in selected agricultural operations in five villages of Ludhiana district. Unpublished M.Sc. Thesis, Punjab Agricultural University, Punjab.

Krishnamurthy, B., Mahadevaiah, D., Laxminarayana, M.T., and Manujnath, B.N. 1998. Extent of adoption of recommended practices of sugarcane cultivation by farmers. *Journal of Extension Education* 9: 2033-2036.

Kumbhare, N.V. and Singh, K. 2011. Adoption behaviour and constraints in wheat and paddy production technologies. *Indian. Research Journal of Extension Education* 11(3): 41-44.

Singh, P. and Singh, K. 2002. Technological gap in rapeseed and mustard cultivation in Bharatpur. *Agricultural Extension Review*, 10-13.

Singh, S.P. and Sharma, R.K. 1990. Technological gaps in gram production Haryana. *Research and Development Reporter*. 1(1&2): 178-181.

Subodh, K. 2003. An analysis of technological gap in potato cultivation in Nalanda districts of Bihar, Unpublished M.Sc.(Ag.) Thesis. Deptt. of Extn. Edu. RAU, Pusa, Bihar.