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Psychological Characteristics Affecting the Adoption of Agricultural Technologies

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ABSTRACT

A study was conducted to find out the influence of psychological characteristics in adoption of low cost technologies by farmwomen having small and marginal land holding. The study was conducted under Madhya Pradesh Women in Agriculture Programme in Katni district of Madhya Pradesh. Data were collected through pretested structured interview schedule and the relationship between the dependent variables and adoption was studied using correlation analysis. The study leads to the conclusion that both the categories of beneficiaries had different level of adoption. The psychological attributes of the beneficiaries like economic motivation, risk orientation, scientific orientation and knowledge were found to be positively and significantly correlated with the adoption of low cost technologies taken under MAPWA programme.

Key words : MAPWA, adoption, technology.

INTRODUCTION

Agriculture is the backbone of the Indian economy and women play a vital role in building this economy. Over the years, there is a gradual realization of the key role of women in agricultural development and their vital contribution in the field of agriculture and other allied sectors. The decreasing size of the land holdings per family, shrinking with each generation, has put enormous pressure on the small farmers for raising production and productivity. The only option left to make agriculture a sustainable activity for livelihood security seems to be to concentrate on intensive integrated agricultural development. Sustained growth of agriculture in the long run depends on the improvement of farming technology in the country. Introduction of new agricultural technology seems to offer an opportunity to increase output and income substantially. Indian agriculture is still in traditional character and adoption of innovative technologies can change this to modern one. But the point that needs special attention is that till now the adoption of innovative agricultural technology is medium. The adoption of technologies depends upon different factors and psychological traits are very important of them.

METHODOLOGY

The present study was conducted in the randomly selected villages of Katni, Vijayraghavgarh and Bahoriband blocks respectively in the Katni district of Madhya Pradesh. Multistage random sampling technique was administered to the identification of 240 (140 small and 100 medium landholding) farmwomen. The data were collected with the help of pre tested structured interview schedule by personally interviewing the respondents. In order to examine the relationship and rate of dependence of adoption of low cost agricultural technologies/practices upon the selected independent variables, simple correlation coefficient was tested by comparing with the table values.

RESULT AND DISCUSSION

Adoption of low cost agricultural technologies

In relation to adoption level of low cost technologies taken under MAPWA programme, majority of the small landholding beneficiaries were found under the category of low level of adoption while, majority had medium level of adoption. The results were found to be significant indicated that there was difference between small and medium beneficiaries regarding their adoption of low cost technologies. This might be due to low level of education, lake of social participation, economic motivation, scientific orientation, mass media exposure, extension participation and low knowledge level etc.

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Table 1: Distribution of beneficiaries according to their adoption

Category of Variables	Categories of respondents	
	Small land holding	Medium land holding
Low (up to 30)	63 (45.0)	13 (13.0)
Medium (30-60)	52 (37.14)	50 (50.0)
High (above 60)	25 (17.86)	37 (37.0)
Total	**140**	**100**
Mean (X)	**1.73**	**2.24**
Standard deviation	**0.75**	**0.67**
Coefficient of variation (CV)	**43.25**	**29.84**
'Z value'	**14.64**	

Correlation between psychological attributes of beneficiaries and adoption of low cost technologies

It is evident from the table 2 that variables *viz.*, economic motivation, risk orientation, scientific orientation and knowledge had significant and positive correlation with the adoption of low cost agricultural technologies. The economic motivation and adoption of low cost agricultural technologies was showed positive and significant relationship. It, therefore, implies that those farmers, who have a tendency to maximize their earnings and attempt towards this end, have higher adoption.

This research finding is line with the findings of Haque and Ray (1983), Haque and Ray (1985), Bose (1989), Biswas *et al.* (1991) and Praveen (1993) and The risk orientation and adoption was found to be positive and significant. The farmer who is willing to take the risk in farming always tends to try out new technologies without hesitation. This might have been the reason for the above relation. The scientific orientation of respondents showed positive and significant relationship with the extent of adoption.

In other words, the farmers with greater orientation towards application of science and technology in their occupation have more adoption. This finding is in line with those of Meeran (1983), Bose, (1989), Praveen (1993).

Table 2: Correlation of the psychological attributes of the respondents with their adoption of low cost technologies

Attributes of beneficiaries	Categories of beneficiaries		
	'r' value (Small land holding)	'r' value (Medium land holding)	'r' value Overall
Psychological attributes			
Economic motivation	0.608**	0.636**	0.670**
Risk Orientation	0.573**	0.616**	0.641**
Scientific Orientation	0.552**	0.678**	0.578**
Knowledge	0.877**	0.910**	0.895**

** Correlation is significant at the 0.01 level (2-tailed)
* Correlation is significant at the 0.05 level (2-tailed)

It could be observed from table that the knowledge level of respondents on low cost technologies is positively and significantly correlated to their extent of adoption it means that when the knowledge of respondents regarding low cost practices is more the extent of adoption of these practices is also more. This finding is in line with those of Ghosh, et.al. (1993) and Mahandrakumar (1996). Diffusion research studies conducted over the past four decades or so have already established a positive relation between knowledge and adoption (Rogers, 1987). The findings of the study, thus, support this trend.

On the account of these findings, it could infer that, the psychological attributes of beneficiaries (having small and medium land holding) were not similar with respect to adopt the low cost technologies taken under MAPWA programme. The medium beneficiaries were more aware and adopted the low cost technologies as compared to small beneficiaries.

CONCLUSION

In this study economic motivation, risk orientation, scientific orientation and knowledge towards low cost technologies were observed to be valuable psychological variables with reference to adoption and found to be positively and significantly correlated with the adoption of low cost agricultural technologies. Adoption of agricultural technologies was not found to be up to the expected mark. Hence special attention needs to be given to encourage the adoption of these practices. In addition to this more extension programme needs to be launched for sustainable adoption of such low cost agricultural practices.

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