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FACTOR INFLUENCING ROLE OF FARM WOMEN IN TRANSFER OF ECO-FRIENDLY TECHNOLOGIES FOR PADDY FARMING

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ABSTRACT

The world population of 7.56 billion in 2016 is expected to increase over 10 billion by 2050. Such a growth in population has created and will create unprecedented pressures on the limited natural resources base to produce additional food, fiber, fuel and raw materials. In the past, these increased requirements were met mainly through technological innovations, institutional and infrastructural development and policy initiatives that promoted growth in agricultural productivity. The present study was undertaken to study the relationship of characteristics of farm women with the role of farm women in the transfer of eco-friendly technologies. The study was conducted in Nagapattinam district of Tamil Nadu. A sample size of 300 small farm women was selected from 20 villages from three blocks viz., Sirkazhi, Kollidam and Nagapattinam by using proportionate random sampling technique. Hence, it may be concluded that educational status, farming experience, extension agencies contact, information seeking behaviour, information sharing behaviour, innovativeness, risk orientation and scientific orientation were the crucial variables influencing the role of farm women in transfer of eco-friendly technologies for paddy farming.

KEYWORDS: *farm women, eco-friendly, technologies, paddy farming, Agriculture*

INTRODUCTION

An eco-friendly technology may be defined as the use of knowledge and resources in a systematic way to produce desired output without harming the environment (Reijntjes *et al.,* 1992). The world population of 7.56 billion in 2016 is expected to increase over 10 billion by 2050. Such a growth in population has created and will create unprecedented pressures on the limited natural resources base to produce additional food, fiber, fuel and raw materials. In the past, these increased requirements were met mainly through technological innovations, institutional and infrastructural development and policy initiatives that promoted growth in agricultural productivity. Agriculture in developing countries like India is promoted mainly by the government organisation, the development and the transfer of eco-friendly technologies require these government extension agencies. Hence it becomes necessary to study the efforts of the major promoter of agriculture in promoting eco-friendly technologies. Considerable attention is being paid to the eco-friendly technologies in different parts of the world.

As the onus for promoting agricultural technologies is with the extension agencies, they must adapt themselves to the new environmental imperatives. In this point of view, agricultural extension is the educational process of advising and assisting farm women in getting the best use of agricultural land and other

natural resources in their care in the context of prevailing economical, technical, social and institutional conditions (Stocking and Perkin, 1995). The present study was undertaken to study the relationship of characteristics of farm women with the role of farm women in the transfer of eco-friendly technologies.

METHODOLOGY

The study was conducted in Nagapattinam district of Tamil Nadu. A sample size of 300 small farm women was selected from 20 villages from three blocks viz., Sirkazhi, Kollidam and Nagapattinam by using proportionate random sampling technique. The role of farm women in transfer of eco-friendly technologies for paddy was measured with help of a specially constructed schedule, which was prepared by discussion with experts. This research paper gives the association and contribution of the characteristics variables with the role of farm women in transfer of eco-friendly technologies for paddy. For studying association and contribution of independent variables towards dependent variables, the statistical tools namely zero-order correlation and linear multiple regression analysis were employed.

FINDINGS AND DISCUSSION

Association and contribution of characteristics of farm women with role of farm women in transfer of eco-friendly technologies for paddy cultivation:-

An attempt has been made with the specific objectives to identify the association and contribution of characteristics of farm women with role of farm women in transfer of eco-friendly technologies for paddy cultivation. The results are presented in Table – 1.

Table – 1. Association and contribution of characteristics of farm women with role of farm women in transfer of eco-friendly technologies for paddy cultivation.

S. No.	Variables	'r' value	Standardized regression co-efficient	Standard error	't' value
X_1	Age	0.075NS	0.800	0.500	1.600NS
X_2	Educational status	0.1658**	2.412	0.900	2.680**
X_3	Occupational status	0.042NS	0.750	0.485	1.556NS
X_4	Annual income	0.062NS	1.014	- 0.845	-1.200NS
X_5	Farming experience	0.119*	2.600	1.500	1.733*
X_6	Social participation	0.101NS	- 0.850	0.675	- 1.259NS
X_7	Extension agencies contact	0.130*	1.600	1.000	1.600*
X_8	Information seeking behaviour	0.161**	2.856	1.200	2.380**
X_9	Information sharing behaviour	0.165**	1.411	0.900	1.414*
X_{10}	Innovativeness	0.141*	0.560	0.350	1.600*
X_{11}	Risk orientation	0.154**	0.956	0.500	1.912*
X_{12}	Scientific orientation	0.160**	2.450	0.900	2.722**
X_{13}	Attitude towards eco-friendly technologies	0.105NS	0.524	0.450	1.164NS
X_{14}	Decision making	0.090NS	0.758	0.650	1.126NS

a = 17.832 R^2 = 0.521 F = 8.014**

** - Significant at 0.01 per cent level of probability

* - Significant at 0.05 per cent level of probability

NS - Non-significant

Association of characteristics of farm women with role of farm women in transfer of eco-friendly technologies for paddy cultivation:-

Correlation analysis was performed to find out the association of independent variables with the dependent variable role of farm women in transfer of eco-friendly technologies for paddy cultivation and the results are presented in Table – 1.

The results in Table – 1, exhibited that out of fourteen variables considered for the study, five variables viz., educational status (x_2), information seeking behaviour

(x_8), information sharing behaviour (x_9), risk orientation (x_{11}) and scientific orientation (x_{12}) had shown positive and significant association with role of farm women in transfer of eco-friendly technologies for paddy cultivation at one per cent level of probability. The variables farming experience (x_5), extension agency contact (x_7) and innovativeness (x_{10}) also had significant association at five per cent level of probability.

The correlation values for the rest of the six variables showed non-significant association with role of farm women in transfer of eco-friendly technologies for paddy cultivation.

Educated status had shown positive and significant association at 0.01 per cent level of probability. A majority of the farm women were having literate from primary school to secondary education. This might have influenced them to transfer the eco-friendly technologies among the farm women. It may be stated that more educational status would have motivated the farm women to transfer the eco-friendly technologies. This finding is in conformity with the findings of Kalirajan (2009).

Farming experience had shown positive and significant association at 0.05 per cent level of probability. A majority of the farm women were having medium level of farming experience. This might have influenced them to realise higher technological transfer by farm women in paddy farming. It may be stated that more experience in adopting eco-friendly technologies in paddy farming would have enhanced the transfer of technologies by farm women. This finding is in line with the findings of Guna (2013).

The variable extension agencies contact had showed positive association with role of farm women in transfer of eco-friendly technologies at 0.05 per cent level of probability. Most of them had medium level of extension agencies contact. This situation might have motivated the farm women to transfer the eco-friendly technologies among the farm women.

There was positive influence of information seeking behaviour with role of farm women in transfer of eco-friendly technologies for paddy. To gain knowledge about a technology, one has to expose herself to different experience provided by information providing sources. Hence, the information seeking behaviour would have shown positive and significant association at 0.01 per cent level of probability.

Information sharing behaviour had created a positive and significant association with their role of farm women in transfer of eco-friendly technologies for paddy cultivation at 0.01 per cent level of probability. This might be due to the fact that majority of the farm women had medium to high level of information sharing behaviour would have more opportunities to transfer the eco-friendly technologies among the paddy farm women.

Innovativeness showed a positive and significant association with role of farm women in transfer of eco-friendly technologies for paddy cultivation at 0.01 per cent level of probability. This might be due to the fact that more than eighty six per cent of the farm women had medium to high level of innovativeness. This would also facilitate them to increasing the role performed by farm women in transfer of eco-friendly technologies.

Risk orientation shared a positive and significant association with role of farm women in transfer of eco-friendly technologies at 0.01 per cent level of probability. Risk taking behaviour is the characteristics feature of farm women. Hence, the farm women with more risk orientation would have high level of technologies transfer in eco-friendly paddy farming. This is how the positive and significant association between risk orientation and role of farm women in transfer of eco-friendly technologies.

Scientific orientation had exhibited a positive and significant association at 0.01 per cent level of probability. This might be due to the fact that most of the farm women had high level of scientific orientation. This would also tent to favour their attitude towards higher role performed in transfer of eco-friendly technologies for paddy cultivation. This result is in agreement with the results of Jayalakshmi (2008).

Contribution of characteristics of farm women towards role of farm women in transfer of eco-friendly technologies for paddy cultivation:-

Correlation analysis will explain only the nature of association of characteristics of the farm women with their role in transfer of eco-friendly technology. In order to find out the relative contribution of each variable towards role of farm women in transfer of eco-friendly technologies for paddy farming, linear multiple regression analysis was performed and results are presented in Table – 1.

A perusal of regression co-efficient and 't' value given in table indicates, that out of fourteen characteristics, eight variables viz., educational status (x_2), farming experience (x_5), extension agencies contact (x_7), information seeking behaviour (x_8), information sharing behaviour (x_9), innovativeness (x_{11}), risk orientation (x_{12}) and scientific orientation (x_{13}) had contributed towards the role of farm women in transfer of eco-friendly technologies for paddy cultivation.

Among the eight variables, three variables had shown significant and positive relationship at one per cent

level of probability. They were educational status (x_2), information seeking behaviour (x_8) and scientific orientation (x_{13}). Another five variables viz., farming experience (x_5), extension agency contact (x_7), information sharing behaviour (x_9), innovativeness (x_{11}) and risk orientation (x_{12}) contributed significantly and positively at five per cent level of probability towards the role of farm women in transfer of eco-friendly technologies for paddy farming.

The predictive power of the linear multiple regression was estimated with the help of the co-efficient of multiple determination (R^2 = 0.521). The R^2 value indicated that all the fourteen variables taken together explained as much as 52.10 per cent of variation in the role of farm women in the transfer of eco-friendly technologies for paddy. The 'F' value was found to be significant at 0.01 per cent level of probability. Hence, the higher R^2 – value might be due to the significant and positive correlation co-efficient of educational status, farming experience, extension agencies contact, information seeking behaviour, information sharing behaviour, innovativeness, risk orientation and scientific orientation.

It can also be inferred that when all other variables were kept at constant level, a unit increase in educational status, farming experience, extension agencies contact, information seeking behaviour, information sharing behaviour, innovativeness, risk orientation and scientific orientation *ceteris paribus* would result respectively in an increase of 2.412, 2.600, 1.600, 2.856, 1.411, 0.560, 0.956 and 2.450 units of role of farm women in transfer of eco-friendly technologies for paddy farming. This meant that the farm women who had more educational status, farming experience, extension agencies contact, information seeking behaviour, information sharing behaviour, innovativeness, risk orientation and scientific orientation would have higher level of role performed in transfer of eco-friendly technologies by farm women. This finding is in accordance with that of Kalirajan (2009).

Hence, it may be concluded that educational status, farming experience, extension agencies contact, information seeking behaviour, information sharing behaviour, innovativeness, risk orientation and scientific orientation were the crucial variables influencing the role of farm women in transfer of eco-friendly technologies for paddy farming.

The other variables did not show significant effect on the role of farm women in transfer of eco-friendly technologies for paddy.

The prediction equation is as follows.

$$Y=17.832 +0.8\ x_1 +2.412\ x_2 +0.750\ x_3 +1.014\ x_4 +2.600\ x_5 - 0.850\ x_6 +1.600\ x_7 +2.856\ x_8 +1.411\ x_9 +0.560\ x_{10} +0.956\ x_{11} +2.450\ x_{12} +0.524\ x_{13} +0.758\ x_{14.}$$

CONCLUSION

The variables namely educational status, farming experience, extension agencies contact, information seeking behaviour, information sharing behaviour, innovativeness, risk orientation and scientific orientation were found to influence the role of farm women in transfer of eco-friendly technologies for paddy. Hence, the extension agencies, while selecting the farm women trainees for eco-friendly oriented training.

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