



A STUDY ON THE CHARACTERISTICS OF THE FARMERS AND ADOPTION OF ECO-FRIENDLY TECHNOLOGIES

Darling B. Suji and A.M. Sathish kumar

Department of Agricultural Extension, Faculty of Agriculture, Annamalai University

Abstract

A Study was conducted in Salem district to find out the adoption of eco-friendly technologies and its relationship with the profile of the respondents and the constraints in the adoption of eco-friendly technologies. The study reveals that 47.50 per cent were found to possess medium level of adoption and 32.50 per cent were found to possess low level of adoption. The education reveals appositively significant relationship with adoption. The study also reveals that farming experience showed a positive and highly significant relationship with the adoption of the respondents on eco-friendly technologies. Lack of knowledge to identify the bio-agents was the foremost personal constraints expressed by majority of the farmers.

Key words: adoption, age, education, occupation.

Introduction

Eco-friendly practices are simple, low cost, pollution free techniques and operations that are socially and economically accepted. There is an urgent need to develop farming techniques which are sustainable from environmental, production and socio economic point of view. The means to guarantee sufficient food production in the next decades and beyond is critical because modern agricultural production throughout the world does not appear to be sustainable in the long term. The agricultural community is thus setting its hopes on sustainable agriculture, which will maintain the cycles of input- output and ecosystem balance. While sustainable agriculture has become the umbrella under which many of the alternative farming systems fall, it is important to note that sustainable agriculture is really a long term goal, not a specific set of farming practices.

Green revolution in our country, while ushering the much needed self-sufficiency in food production also paved way for intensive use of chemicals. At present the concern for environment is increasing and both scientists and farmers are searching for eco-friendly agricultural technologies. The eco-friendly agricultural technologies are recommended by extension workers and practiced by farmers. Eco-friendly agricultural technologies are simple, low cost, pollution free, techniques and operations that are socially and economically accepted. Eco-friendly agricultural technologies have demonstrated their ability not only to produce safer commodities but also to produce bio-diversity at all levels. The present study was conducted to study the knowledge and adoption of ecofriendly technologies

Methodology

The study was carried out in salem district. There are nine taluks in Salem district viz; Salem, Omalur, Mettur, Edapadi, Sankagiri, Attur, Vazhapadi, Gangavali, and Yercaud. There are eighty seven revenue villages in Omalur block. From the eighty seven revenue villages ten revenue villages viz., Omalur, Muthunayakanpatti, Sikkampatti, Karuppur, Pannapatti, Tharamangalam, Kadayampatti, Tholsampatti, Periyeripatti, Konagapadi were selected. The lists of farmers in the selected villages were obtained from village extension workers concerned. The respondents were selected by random sampling. The required numbers of respondents (120) were selected from ten revenue villages. The data were collected from 120 farmers. To find out the adoption of ecofriendly technologies a well structured interview schedule was used for the data collection. The ecofriendly technologies recommended were chosen to test the knowledge and its relationship with the profile of the respondents. The data were collected from the selected farmers through personal interview method. To assess the adoption, a score of two was given for adoption and one for adoption.

Result and Discussion

Overall adoption of eco-friendly technologies

The overall adoption of respondents on eco-friendly technologies was assessed and the findings are given in Table 1.

Table 1 shows that 47.50 per cent of the respondents had medium level of adoption. The respondents under low and higher levels of adoption category were 32.50 per cent and 20.00 per cent respectively. The reason for the respondents

under medium level of adoption may be due to the effect of training programme conducted by state department of agriculture which might have motivated the respondents to adopt the recommended eco-friendly technologies in paddy.

Socio-economic and psychological characteristics of the respondents

In this section, results on socio-economic and psychological characteristics of the respondents *viz.*, age, educational status, occupational status, farm size, farming experience, annual income, social participation, extension agency contact, mass media exposure, risk orientation, scientific orientation, economic motivation and innovativeness are discussed.

Age

The results on distribution of respondents according to their age are presented in Table 2.

It could be seen from Table 2 that (56.60 per cent) of the respondents were middle aged followed by old (31.70 per cent) and young 11.70 per cent. This may be due to the nature of the sample selected for the study. This finding is in line with the findings of Balakrishnan (2010).

Educational status

The results on distribution of the respondents according to their educational status are presented in Table 3.

It could be observed from the Table 3 that 52.40 per cent of the respondents had attained primary education followed by middle school education (23.30 per cent), illiterates (9.30 per cent), higher secondary education (9.20), and collage education (5.80 per cent). This may be due to their unawareness on the importance of education. This finding is in line with the findings of Jeyalakshmi (2008).

Occupational status

The results on distribution of respondents according to their occupational status are presented in Table 4.

It could be observed from the Table 4 that majority of the respondents (55.80 per cent) were found to have agriculture as their primary occupation. Respondents with agriculture as their secondary occupation constituted only a limited proportion (44.20 per cent). It could be concluded that majority of the farmers depend only on agriculture for their family income. There is no industries in the study area and most of the villages are hamlets without any basic infrastructure facilities. Hence, there was no option for them to get any other job. This finding is in line with the findings of Rajivghandhi (2010).

Farm size

The results on distribution of respondents according to their farm size are presented in Table 5.

It may be seen from the Table 5, that (55.50 per cent) of the respondents were small farmers followed by marginal farmers (25.70 per cent) and only 18.80 per cent of the respondents were big farmers. This may be due to the fact that the land has been fragmented too much resulting in smaller

size holdings. This findings is in line with the findings Siddharthan (2011).

Farming experience

The results on distribution of the respondents according to their farming experience are presented in Table 6.

The data in Table 6, shows that more than half of the respondents (64.16 per cent) had medium level of farming experience followed by high (20.83 per cent) and low (15.00 per cent) level of farming experience respectively. The reason for majority of the farmers under medium level of experience in paddy cultivation may be due the reason that majority of the farmer were middle aged farmers. This finding is in line with the findings Guna (2013).

Annual income

The results on distribution of the respondents according to their annual income are presented in Table 7.

It could be seen from the Table 7, it could be observed that nearly half of the respondents (46.66 per cent) had medium annual income followed by low (28.34 per cent) and only 25.00 per cent of the respondents had high annual income. This might be due to the fact that majority of the respondents were engaged only in farming traditionally which resulted in lesser income from agriculture. This finding is in line with the findings of Manikandan (2013).

Social participation

The results on distribution of respondents according to their social participation are presented in Table 8.

It could be noticed from the table 8, that majority of the respondents (58.33 per cent) had medium level of social participation, followed by 33.33 per cent of the respondents with low level of social participation. Only 8.34 per cent of the respondents belonged to high social participation. This might be due to the lack of awareness about the social organisations and lack of time for the farmers in the study area. This finding is in line with the findings of Termaricoanam (2014).

Extension agency contact

The results on distribution of respondents according to their extension agency contact are given in Table 9.

It could be observed from Table 9, that nearly half of the respondents (45.00 per cent) had medium level of extension agency contact followed by 30.83 per cent and 24.17 per cent of the respondents with high and low level of extension agency contact respectively. Lack of awareness about the extension agency and rare contacts with them might be the reasons for their poor extension agency contact. This finding is in line with the findings of Santhi (2006).

Mass media exposure

The results on distribution of respondents according to their mass media exposure are presented in Table 10.

Table 10 shows that majority of the respondents (44.16 per cent) had medium level of mass media exposure,

followed by 31.68 per cent of the respondents with low level of mass media exposure and 24.16 per cent of the respondents with high level of exposure towards mass media. This may be due to their less education. This finding is in line with the findings of Arockiyamary (2011).

Risk orientation

The results on distribution of respondents according to their risk orientation are presented in Table 11. The Table 11 shows that nearly fifty per cent of the respondents (46.66 per cent) had medium level of risk orientation followed by 33.33 per cent of the respondents with low and 20.00 per cent with high level of risk orientation. As most of the respondents were marginal farmers with medium land holdings and medium annual income, resulted in lesser risk orientation. This might be the reason for medium level risk orientation. This findings is in line with the findings of Muruganatham (2008).

Relationship of the characteristics of the respondents with their extent of adoption

The relationship of the characteristics of the

Table 1: Distribution of respondents according to their overall adoption of eco-friendly technologies in paddy

S.No	Category	Number of respondents	Per cent
1	Low	39	32.50
2	Medium	57	47.50
3	High	24	20.00
	Total	120	100.00

Table 2: Distribution of respondents according to their age (n=120)

S.No	Category	Respondents	
		Number	Per cent
1.	Young	14	11.70
2.	Middle	68	56.60
3.	Old	38	31.70
Total		120	100.00

Table 3: Distribution of respondents according to their educational status (n=120)

S.No	Category	Respondents	
		Number	Per cent
1.	Illiterates	11	9.30
2.	Primary education	63	52.40
3.	Middle school education	28	23.30
4.	Higher secondary education	11	9.20
5.	Collegiate education	7	5.80
Total		120	100.00

respondents with their extent of adoption is given in Table 12. The positive and highly significant relationship of education with adoption needs no explanation because it is a proven fact that education enables the people to adopt the eco-friendly technologies. Farming experience showed a positive and highly significant relationship with adoption of the respondents. As the farming experience increases their experience made them to know the eco-friendly technologies. Extension agency contact was found to have positive and highly significant relationship with the adoption.

Conclusion

Most of the farmers (47.50 per cent) belonged to medium level of adoption followed by low (32.50 per cent) and high adoption (20.00 per cent). The effective utilization of mass media like radio television newspaper and farm magazine is extent there for creating wider dissemination of the eco-friendly agricultural practices. The findings on adoption of the farmers would help the extension system to formulate strategies for the adoption of eco-friendly technologies.

Table 4: Distribution of respondents according to their occupational status (n=120)

S.No.	Category	Respondents	
		Number	Per cent
1.	Agriculture as primary occupation	67	55.80
2.	Agriculture as Secondary occupation	53	44.20
Total		120	100.00

Table 5: Distribution of respondents according to their farm size (n=120)

S.No.	Category	Respondents	
		Number	Per cent
1.	Marginal farmers (below 2.5 acres)	32	25.70
2.	Small farmers (2.5-5 acres)	66	55.50
3.	Big farmers (above 5 acres)	22	18.80
Total		120	100.00

Table 6: Distribution of respondents according to their farming experience (n=120)

S.No	Category	Respondents	
		Number	Per cent
1.	Low	25	20.83
2.	Medium	77	64.16
3.	High	18	15.00
Total		120	100.00

Table 7: Distribution of respondents according to their annual income (n=120)

S.No	Category	Respondents	
		Number	Per cent
1.	Low	34	28.34
2.	Medium	56	46.66
3.	High	30	25.00
Total		120	100.00

Table 8: Distribution of respondents according to their social participation (n=120)

S.No	Category	Respondents	
		Number	Per cent
1.	Low	40	33.33
2.	Medium	70	58.33
3.	High	10	8.34
Total		120	100.00

Table 9: Distribution of respondents according to their extension agency contact (n=120)

S.No	Category	Respondents	
		Number	Per cent
1.	Low	29	24.17
2.	Medium	54	45.00
3.	High	37	30.83
Total		120	100.00

Table 10: Distribution of respondents according to their mass media exposure (n=120)

S.No	Category	Respondents	
		Number	Per cent
1.	Low	38	31.68
2.	Medium	53	44.16
3.	High	29	24.16
Total		120	100.00

Table 11: Distribution of respondents according to their risk orientation (n=120)

S.No	Category	Respondents	
		Number	Per cent
1.	Low	40	33.34
2.	Medium	56	46.66
3.	High	24	20.00
Total		120	100.00

Table 12: The relationship of the characteristics of the respondents with their extent of adoption

Variables	Independent Variables	Correlation Coefficient
X1	Age	-0.023NS
X2	Educational status	0.193*
X3	Occupational status	0.004NS
X4	Farm size	0.016NS
X5	Farming experience	0.201*
X6	Annual income	-0.093NS
X7	Social participation	-0.097NS
X8	Extension agency contact	0.219*
X9	Mass media exposure	0.011NS
X10	Risk orientation	-0.234NS
X11	Scientific orientation	0.265**
X12	Economic motivation	0.036NS
X13	Innovativeness	-0.022NS

** Significant at 1 per cent *Significant at 5 per cent level
NS-Non-significant

References

- Ganapathisankaran, S. (1997). Impact of integrated water shed development programme on farmer beneficiaries. Unpublished M.Sc. (Ag.) Thesis, AC & RI., Madurai.
- Guna, B. (2013). A study on knowledge and adoption of eco-friendly practices in rice at Sirkali taluk. Unpublished M.Sc. (Ag.) Thesis, Annamalai University, Annamalai Nagar.
- Kabir, M.S., M.E. Haque and H. Uddin (2007). Constraints in adoption of eco-friendly rice farming practices. *Journal of extension education*, **20**: 133-137
- Vijayalan, R. (2001). A study on awareness, knowledge and adoption of eco-friendly agricultural practices in rice. Unpublished M.Sc. (Ag.) Thesis, Tamilnadu Agricultural University, Coimbatore.