

## Influence of Income of the Farmers on the Effectiveness of Extension Methods in the Adoption of Plant Protection Practices

M. MUTHIAH<sup>1</sup> and G. PERUMAL<sup>2</sup>

Individual contact was significantly more effective among farmers of high income group than the farmers of middle and low income groups for seed treatment and spraying. Indirect influence was more effective among farmers of middle and low income groups than farmers of high income group for dusting and spraying.

It is necessary for an extension worker to know the effectiveness of various extension methods under different situations in order to select and use the effective methods in his extension teaching programmes. It is generally believed that certain extension methods with regard to the adoption of improved agricultural practices are more effective among farmers having high income than farmers having low income. The present study was therefore conducted with an objective to assess the influence of income of the farmers on the effectiveness of selected extension methods in the adoption of plant protection practices.

### MATERIAL AND METHODS

Thondamuthur Panchayat Union in Coimbatore District was selected for the study. The influence of income of the farmers on the effectiveness of the four extension methods viz., individual contact, indirect influence, use of radio, and use of literature that were most

commonly used by the extension workers to educate the farmers for the adoption of the three plant protection practices viz., seed treatment, dusting and spraying of rice crop were studied. In six randomly selected villages 120 respondents were personally interviewed and their responses recorded.

### RESULTS AND DISCUSSION

The results indicate that only in the case of individual contact the chi-square value is significant and hence there is evidence to believe that the income of the farmers has influenced the adoption of seed treatment through this method (Table I). Farmers of high income group adopted seed treatment mostly (57.7 per cent), followed by farmers of middle income group (34.9 per cent) and low income group (19.2 per cent). The income of the farmers had not influenced the adoption of seed treatment through the other three methods.

1 - 2 Department of Agricultural Extension, College of Agriculture, Madurai

The Chi-square value is significant only in the case of indirect influence. Hence there is evidence to believe that the income had influenced the adoption of dusting through this method. More farmers of middle income group adopted dusting (67.5 per cent) than farmers of low income group (59.3 per cent) and high income (30.0 per cent).

Hence the method indirect influence (neighbour, relatives, etc.) was more effective among farmers of middle and low income groups than among high income group farmers. Income had not influenced the adoption of dusting through the other three methods (Table II).

TABLE I Influence of income of the farmers on the extension methods for the adoption of seed treatment.

Extension Methods	Income group	Adopter	Non-adopter	Effectiveness percentage	Chi-square value
Individual contract	High	15	11	57.7	8.45*
	Medium	22	41	34.9	
	Low	5	21	19.2	
Indirect influence	High	1	25	3.8	1.85
	Medium	7	60	10.4	
	Low	4	23	14.8	
Radio	High	2	24	7.7	1.76
	Medium	3	57	5.0	
	Low	—	23	—	
Literature	High	1	24	4.0	1.85
	Medium	1	64	1.5	
	Low	—	24	—	

\* Significant at 5 per cent level.

In the case of individual contact and indirect influence the chi-square value is significant and hence there is evidence to believe that the income of farmers had influenced the adoption of spraying through these methods. Individual contact was more effective among farmers of high income group (61.5 per cent) than farmers of medium income group (42.9 per cent) and low

income group (26.9 per cent). On the other hand indirect influence was more effective among farmers of low income group (66.6 per cent) than farmers of medium income group (47.7 per cent) and high income group (26.9 per cent). The income of the farmers did not influence significantly the adoption of spraying through the other two methods viz., radio and literature.

TABLE II Influence of income of the farmers on the extension methods for the adoption of dusting

Extension Methods	Income group	Adopter	Non-adopter	Effectiveness percentage	Chi-square value
Individual contact	High	16	10	61.5	5.11
	Medium	31	32	49.2	
	Low	8	18	30.7	
Indirect influence	High	6	20	30.0	7.3*
	Medium	27	40	67.5	
	Low	16	11	59.3	
Radio	High	3	23	11.4	3.20
	Medium	3	57	5.0	
	Low	—	23	—	
Literature	High	—	25	—	—
	Medium	1	64	1.5	
	Low	—	24	—	

\* Significant at 5 per cent level.

TABLE III Influence of income of the farmers on the extension methods for the adoption of spraying.

Extension Methods	Income group	Adopter	Non-Adopter	Effectiveness percentage	Chi-square value
Individual contact	High	16	20	61.5	6.35*
	Medium	27	36	42.9	
	Low	7	19	26.9	
Indirect influence	High	7	19	26.9	8.35*
	Medium	32	35	47.7	
	Low	18	9	66.6	
Radio	High	3	23	11.5	4.12
	Medium	2	58	3.3	
	Low	—	23	—	
Literature	High	—	25	—	—
	Medium	1	64	1.5	
	Low	—	24	—	

\* Significant at 5 per cent level.

The salient fact that emerged from the analysis is that individual contact was more effective among the farmers of high income group, than middle and low income group farmers for the plant protection practices. This is in conformity with the findings of Lionberger (1955) and Sharma (1966). The reason may be that the farmers of high income group, would have showed less resistance to innovations. The low income group on the other hand suffered from the added setback of not being in a position to risk their marginal available resources on innovations and hence they may not have acted on the advice given by extension workers through their formal individual contact.

The trend got reversed in the case of indirect influence. This method was more effective among the farmers of low and middle income groups than among farmers of high income group. It may be due to that farmers having less income are basically followers and they place great reliance and faith on persons known to them than a formal change agent.

#### REFERENCES

- LIONBERGER, H.F. 1955. *Diffusion of innovations*. The free press of Glancoe, London.
- SHARMA, D.K. 1966. 'Role of information sources and the communication channels in adoption of improved practices by farmers in M.P. State, India'. *Ind. J. Exten. Edn.* 2,