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INFLUENCE OF SOCIO-ECONOMIC ASPECTS OF FARMERS ON THEIR ACQUAINTANCE WITH NOVARITS COMPANY

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This paper examines the relationship of farmers' age, educational qualification and size of land holding with awareness of Novartis company's pesticides and information exposure through which they became aware of Novartis Company. The data were collected from 120 respondents of tehsil Arifwala, selected at random. The analysis of the data showed that age had a highly significant negative relationship with the awareness of Novartis Pesticide Company, while there existed a non-significant relationship between the age and information exposure. Education had a highly significant relationship with respondents' awareness about pesticides of Novartis Company. Similarly there existed a highly significant positive relationship between educational qualification of the respondents and their information exposure through which they became aware ofNovartis Company.

Key words: Information exposure, Novartis pesticide company, socio-economic aspects

INTRODUCTION

Agriculture plays an important role in Pakistan's economy and will continue to occupy a key position in future. It provides employment to 44.1 % of the total employed, besides being the main source of foreign exchange earnings. It also contributes about 26% to GDP (Govt. of Pak., 2000). Unfortunately, generally the farmers of the country are lagging behind very much with regard to agricultural productivity and farm income even in this technologically developed era. The average per hectare yield of various crops including wheat, sugarcane, cotton and rice obtained in Pakistan is much lower than that obtained in many other countries.

It is obvious that with such a low average per hectare yield and low rate of increase in agricultural production, it seems impossible to fulfill even the basic needs of our rapidly increasing population. The question therefore, arises that how to get out of the situation. Evidently it is only possible if farmers are made aware of the improved crop production and protection technologies and be motivated to adopt the same according to the recommendations.

Apart from other agronomic practices, plant protection occupies a key position in increasing crop productivity. Research has shown that application of proper plant protection measures has increased the yield of many agricultural crops. For example, in case of cotton crop, average yield was 339 kg/ha in 1980-81 when there was less trend of pesticide use. In 1998-99 the average yield was raised to 512 kg/ha (Govt. of Pak., 1999). The increase in production/yield may mainly be attributed to the adoption of plant protection technologies by the farmers. Different pesticide companies, at present, are playing important role by employing various communication methods to achieve their objectives.

The effectiveness of the pesticide companies depends upon the extent to which farmers know and use their products according to the recommendations. This ultimately demands that the farmers should have acquaintance with pesticide agencies working in the area. Unless they are fully acquainted with the field staff, the desired results may not be achieved. The present study has, therefore, been conducted to assess the influence of socio-economic aspects of farmers on their acquaintance with Novartis pesticide company in tehsil Arifwala.

MATERIALS AND METHODS

Arifwala tehsil of district Pakpattan was selected as a research area for the study, which consists of 33 union councils and 191 villages. The tehsil is geographically divided into 4 strata by main roads. Three villages from each stratum were selected at random. From each selected village, 10 respondents were randomly selected thereby making a sample size of 120 respondents for the research project. "Novartis" company was selected for being a multinational and the biggest pesticide company in the research area. The data were collected with the help of an interview schedule. The data were analyzed by using Chi-square test to see the relationship between the selected independent and dependent variables. The significance of association was shown at three levels: * is $P < 0.05$, ** is $P < 0.0$ I, *** is $P < 0.00$ I and NS is $P > 0.05$.

RESULTS AND DISCUSSION

Socio-economic characteristics of a person I.e. age, education and size of land holding play a vital role in the adoption of modern/latest agricultural technologies (Javed, 1983). It is generally believed that with the increase in age. the individual becomes mentally mature and takes rational decisions. Keeping in view the importance of this factor the respondents were asked about their age to see whether or not it has any influence on their acquaintance with Novartis company.

Relationship of age with awareness about the Novartis company's pesticides and with information exposure through which the respondents became aware of Novartis company

The data presented in Table I show that there was a highly significant negative relationship between' age of the

respondents and awareness about Novartis company's pesticides. It implies that younger farmers were more likely to be aware of Novartis pesticides. It may be due to the reason that the young farmers might have shown more interest in the pesticides than old farmers. These results are partially in agreement with those of Muhammad (1994) who found that age was negatively associated with awareness of recommended agricultural technologies. However, the association was non-significant.

The data presented in Table 2 show that there existed a non-significant relationship between age of the respondents and information exposure through which they became aware of Novartis company.

Table 1. Relationship of age with awareness about Novartis company's pesticides

Age category	Awareness of Novartis company's pesticides			Total
	Low	Medium	Hilh	
Young (up to 35 years)	7 (38.9%)	6 (33.3%)	5 (27.8%)	18 (15.0%)
Middle (35-50 years)	17 (32.1%)	16 (32.2%)	20 (37.7%)	53 (44.2%)
Old (above 50 years)	17 (34.7%)	30 (61.2%)	2 (4.1%)	49 (40.8%)
Total	41 (34.2%)	52 (43.3%)	27 (22.5%)	120 (100.0%)

x^2 Cal = 19,4*** d.f. = 4
x^2 tab = 18,46

Table 2. Relationship of age with information exposure through which the respondents became aware of Novartis company

Age category	Information exposure			Total
	Low	Medium	High	
Young (up to 35 years)	2 (11.1 %)	6 (33.3%)	10 (55.6%)	18 (15.0%)
Middle (35-50 years)	10 (18.9%)	26 (49.1%)	17 (32.1%)	53 (44.2%)
Old (above 50 years)	4 (8.2%)	26 (53.1%)	19 (38.8%)	49 (40.8%)
Total	16 (13.3%)	58 (48.3%)	46 (38.3%)	120 (100%)

x^2 Cal = 5.27^{NS} d.f. = 4
x^2 tab = 9,49

Relationship of education with awareness about the Novartis company's pesticides and with information exposure through which the respondents became aware of Novartis company

Education is considered to be an important factor which has a positive influence on human behavior either directly or indirectly. Educated farmers can exploit wider range of information sources (Byerlee,1988) and thus logically be better adopters than those who have little or no education. Educated people are expected to have more favorable attitude towards agricultural innovations and plant protection measures as compared to uneducated ones (Hassan, 1991). Keeping in view the importance of this factor, the respondents were asked about their educational background.

Table 3 shows that there existed a highly significant positive relationship between educational qualification of the respondents and their awareness about pesticides of Novartis company. It may imply that farmers with higher levels of education were more likely to be aware of pesticides of Novartis company than those who had lower levels of education. It is just but natural, educated farmers may be more able to know, understand and retain information than the illiterates.

The data presented in Table 4 show that there existed a highly significant positive relationship between educational qualification of the respondents and their information exposure through which they became aware of Novartis company. It may imply that educated farmers by virtue of education, might had links with many information sources. These findings are in agreement with those of Kashem and Jones (1988) who found that educated farmers had more contacts with information sources than those who had no education. Similar results were obtained by Muhammad (1994) who reported that education was found to have a highly significant positive association with information exposure.

Table 3. Relationship of education with awareness about Novartis company's pesticides

Educational qualification	Awareness of Novartis company's pesticides			Total
	Low	Medium	High	
Illiterate	15 (60.0%)	2 (8.0%)	8 (32.0%)	25 (20.8%)
Up to Middle	19 (27.5%)	43 (62.3%)	7 (10.1%)	69 (57.5%)
Matric and above	7 (26.9%)	7 (26.9%)	12 (46.2%)	26 (21.7%)
Total	41 (34.2%)	52 (43.3%)	27 (22.5%)	120 (100%)

xc Cal = 32.87*** d.f. = 4
xc tab = 18,46

Table 4. Relationship of education with information exposure through which the respondents became aware of Novartis company

Education qualification	Information exposure			Total
	Low	Medium	High	
Illiterate	10 (40.0%)	7 (28.0%)	8 (32.0%)	25 (20.8%)
Up to Middle	3 (4.3%)	48 (69.6%)	18 (26.1%)	69 (57.5%)
Matric and above	3 (11.5%)	3 (11.5%)	20 (76.9%)	26 (21.7%)
Total	16 (13.3%)	58 (48.3%)	46 (38.3%)	120 (100%)

xc Cal = 46.49*** d.f. = 4
xc tab = 18,46

Relationship of size of land holding with awareness about the Novartis company's pesticides and with information exposure through which the respondents became aware of Novartis company

The data presented in Table 5 show that there existed a non-significant relationship between the size of land holding of the respondents and their awareness of Novartis company's pesticides. It implies that size of land holding had no influence on the awareness of respondents about Novartis company's pesticides. This relationship seems to be quite illogical. The possible explanation of this relationship is that the small farmers might not be in a position to purchase costly pesticides due to low income. and resultantly they might not be more aware of Novartis pesticides than those who had large land holdings.

The data presented in Table 6 show that there existed a highly significant negative relationship between the size of land holding and information exposure. through which the respondents became aware of Novartis company. It implies that small farmers were more likely to be acquainted with many information sources to become aware of Novartis company than those having large land holdings.

Table 5. Relationship of size of land holding with awareness of Novartis company's pesticides

Size of land holding	Awareness of Novartis company's pesticides			Total
	Low	Medium	High	
Small (up to 12'h acres)	22 (33.3%)	29 (43.9%)	15 (22.7%)	66 (55.0%)
Medium (12Yz-25 acres)	12 (27.3%)	21 (47.7%)	11 (25.0%)	44 (36.7%)
Large (Above 25 acres)	7 (70.0%)	2 (20.0%)	1 (10.0%)	10 (8.3'"0)
Total	41 (34.2%)	52 (43.3%)	27 (22.5%)	120 (100%)

xc Cal = 6.65~s d.f. = 4
xc tab = 9.49

Table 6. Relationship of size of land holding with information exposure through which the respondents became aware of Novartis company

Size of land holding	Information exposure			Total
	Low	Medium	High	
Small (up to 12Yz acres)	2 (3.0%)	30 (45.5%)	34 (51.5%)	66 (55.0%)
Medium (121;2-25 acres)	10 (22.7%)	23 (52.3%)	11 (25.0%)	44 (36.7%)
Large (Above 25 acres)	4 (40.0%)	5 (50.0%)	1 (10.0%)	10 (8.3%)
Total	16 (13.3%)	58 (48.3%)	46 (38.3%)	120 (100%)

x_c Cal = 20.88*** d.f. = 4

x^2 tab = 18,46

CONCLUSIONS

The results of the study have given a clear picture of the relationship of age, educational qualification and size of land holding of farmers with their acquaintance with Novitis pesticide company. Age of the respondents had highly significant negative relationship with their awareness of Novartis company's pesticides. However it had non-significant relationship with information exposure through which the respondents became aware ofNovartis company.

Educational level of the respondents was found to have highly significant positive relationship with both their awareness of Novartis company's pesticides and information exposure through which they became aware of Novartis company. Size of land holding of the respondents showed a non-significant relationship with their awareness ofNovartis company's pesticides. However, it had a highly significant negative relationship with information exposure through which the respondents became aware of Novartis company.

REFERENCES

Byerlee, D. 1988. Agricultural extention and the development of farmers' management skills. Howell, J, (ed.). Training and Visits Extention in Practice, PP.9-27. Agricultural Administration Unit Occasional Paper 8, 001, London.

Govt.. of Pak. 1999. Economic Survey Report, Finance Division, Economic Advisor's Wing, Islamabad.

Govt.. of Pak. 2000. Economic Survey Report, Finance Division, Economic Advisor's Wing, Islamabad.

Hassan, M. 1991. A study into the adoption of plant protection measures among the mango growers of tehsil Muzaffargarh. M.Sc. (Hons.) Agri.Ext.. Thesis, Dept. of Agri. Ext., Univ. of Agri., Faisalabad.

Javed, M.T.. 1989. A study of productivity differential between progressive and non-progressive farmers in cotton crop: A case study of Bahawalpur district.. M.Sc. Thesis, Dept.. of Agri. Econ., Univ. of Agri., Faisalabad.

Kashem, M.A. and G.E.Jones, 1988. Small farmers contact with information sources and its relationship with some selected characteristics. Bangladesh 1. Ext.Edu.3 (1) 1-7.

Muhamrnad, S. 1994. An effective communication model for the acceptance of new agricultural technology by farmers in the Punjab, Pakistan. Ph.D. Thesis, AERDD, Reading, UK.