

Empirical Association of Farmers of Adopted and Non Adopted Villages of Krishi Vigyan Kendra (KVK)

A Manoj* G Sivanarayana** Ch. Ramesh Babu** and V. Srinivasa Rao**

* Indian Agricultural Research Institute, New Delhi, India

** Agricultural college Bapatla, Guntur District, Andhra Pradesh, India

Abstract- The present study was formulated during the year 2008 in the district Srikakulam of State Andhra Pradesh, India with a sample of 80 respondents with equal proportions *i.e.* 40 farmers from adopted villages and 40 farmers from non-adopted villages were selected by random sampling. Results revealed that nine out of ten computed correlation coefficient values of personal and socio-economic variables with indirect changes were found to be positively significant association in both adopted and non adopted villages. While observing regression values, it was acknowledged that the variables viz., scientific orientation, economic orientation and innovativeness were found to have positive association at 0.05 level of probability for adopted village farmers but in case of non adopted villages the one variable education alone had positive association at 0.01 level of probability and rest of variables had no association with indirect changes.

Index Terms- adopted, indirect change, KVK, personal, socio-economic, farmers

I. INTRODUCTION

Krishi Vigyan Kendra (K.V.K.) is a viable concept developed by Indian Council of Agricultural Research (ICAR), India in the year 1974 which was rest upon a solid base of transfer of technology from laboratory to farmer's field with respect to Agriculture and allied sectors at district level. Every K.V.K. has adopted 4 to 6 economically, culturally and technologically backward villages situated within 10-20 kilo meters radius of the K.V.K. These villages are not too small or too large. Before adoption a detailed survey of the village was conducted to study the socio-economic and cultural status of that village. Since last 39 years, KVK has been vigorously conducting several technological demonstrations directly in farmers' fields with active participation of farmers to trigger the various innovations and applications in agriculture and its related fields. Today KVK plays a First Line Extension role-A linkage between research and the field in augmenting the socio-economic conditions of farmers and farmwomen. The productivity of agricultural technology at farmer's level can be enhanced through innovative and appropriate technological advancements/ interventions, complemented with institutional support in both direct as well as indirect means.

A change in one part of system often initiates the chain reaction of indirect gains stemming from the direct gains of innovation. Direct gains are the changes that occur in a immediate response to an innovation but indirect gains are the changes that occur as a result of the direct gains of innovation. In many contexts, directs changes are measured and indirect changes are neglected. Conceptualizing and measuring of indirect effects is highly complex, yet is needed for each situation if technology is to be used as an effective instrument for income generation and poverty reduction. Considering the above facts in view, the present study was formulated to know the extent to which the KVK has brought desirable changes among farming community in terms of indirect changes and their association as compared with non KVK farmers.

II. METHODOLOGY

The present study was undertaken in Srikakulam district of Andhra Pradesh in India during the year 2008 by adopting ex-post-facto research design in purposively selected four villages viz., Chimalavalasa & Divanjipeta (adopted villages), Vanjarampeta & Guyyanavalasa (non-adopted villages), two each from the purposively selected two mandals namely Amadalavalasa and Rajam out of 37 mandals in Srikakulam district of Andhra Pradesh. A total of 80 farmers were selected with equal proportions *i.e.* 40 farmers from adopted villages and 40 farmers from non-adopted villages.

Indirect changes were taken as dependent variables. Parameters viz., change in the use of high yielding varieties, pesticide & fertilizers application, nutritional education & health habits, self confidence, decision making ability, communication behaviour, economic status, socio-political participation and reduce cost of cultivation were taken as indirect changes. Ten important antecedent factors of farmer's viz., age, education, land holding, social participation, mass media exposure, extension contact, risk orientation, scientific orientation, economic orientation, achievement motivation and innovativeness were selected as independent variables. The data were statistically analysed to workout correlation coefficient and multiple linear regression coefficients to draw the meaningful inferences.

III. RESULTS AND DISCUSSION

Table 1: Association between personal and socio-economic characteristics of adopted and non adopted villages farmers and their indirect changes

(n=40)

S. No	Independent variables	'r' values	'r' values
1	Education	0.3906*	0.7417**
2	Land holding	0.0368NS	0.1437NS
3	Social participation	0.6006**	0.5145**
4	Mass media exposure	0.5009**	0.6991**
5	Extension contact	0.7437**	0.5094**
6	Risk orientation	0.7632**	0.6702**
7	Scientific orientation	0.8290**	0.3389*
8	Economic orientation	0.7598**	0.6750**
9	Achievement motivation	0.7567**	0.5564**
10	Innovativeness	0.6980**	0.6822**

** = Significant at 0.01 level of probability NS = Non Significant
* = Significant at 0.05 level of probability

It is evident from the table 1 that the indirect changes of the farmers of adopted villages were found to have positive and significant relationship with social participation, mass media exposure, extension contact, risk orientation, scientific orientation, economic orientation, achievement motivation and innovativeness at 0.01 level of probability. The table 1 further indicating that variable education alone was found positively correlated with indirect changes at 0.05 level of probability. Whereas, land holding with indirect changes was non-significant.

In case of non adopted villages, the indirect changes were found positive relationship at 0.01 level of probability with eight personal and socio-economic variables viz., education, social participation, mass media exposure, extension contact, risk orientation, economic orientation, achievement motivation and innovativeness, whereas, scientific orientation alone contributed positively significant at 0.05 level of probability. Whereas, land holding was found to be non-significant with indirect changes. These findings were in accordance with Ghosh (2004), Kumar (2006) and Ranuji, (2006).

Table 2: Multiple linear regression analysis of personal and socio-economic characteristics with indirect changes of farmers in the adopted villages
(n=40)

S.No	Independent variables	Regression coefficient	Standard error	't' value
1	Education	0.2030	0.167	-1.222NS
2	Land holding	-0.3910	0.283	-1.383NS
3	Social participation	0.2840	0.176	1.619NS
4	Mass media exposure	-0.0304	0.129	-0.236NS
5	Extension contact	-0.0687	0.103	-0.664NS
6	Risk orientation	0.1370	0.124	1.110NS
7	Scientific orientation	0.3170	0.160	1.977*
8	Economic orientation	0.3450	0.165	2.094*
9	Achievement motivation	0.3800	0.257	1.476 NS

10	Innovativeness	0.2760	0.122	2.271*
----	----------------	--------	-------	--------

a = 18.130

R² = 0.862

* = 0.05 level of significance

NS = Non Significant

Y=18.130+0.203x₁-0.391x₂+0.284x₃-0.030x₄-

0.068x₅+0.137x₆+0.317x₇*+0.345x₈*+0.380x₉+0.276x₁₀*

In multiple regression analysis ten independent variables were fitted to explain the variation in extent at indirect changes for the farmers of adopted villages. It may be seen from the Table 2 that the selected ten variables explained to the 86.2 per cent variation in the extent of indirect changes for the farmers of adopted villages. The 't' test of statistic showed that this was significant at 0.5 per cent level of probability. It was revealed from the data that out of ten variables, three variables namely, scientific orientation, economic orientation and innovativeness had a positively significant relationship with indirect changes for the farmers of adopted villages, whereas, another three variables viz., social participation, risk orientation and achievement motivation showed no significant effect on the indirect changes. Rest of the variables comprising education, land holding, mass media exposure and extension contact contributed negatively significant relationship with the indirect changes. The above findings are associated with the findings of Jahromi and Zamani (2006).

Table 3: Multiple linear regression analysis of Personal and socio-economic characteristics with indirect changes of farmers in the non-adopted villages
(n=40)

S.No	Independent variables	Regression coefficient	Standard error	't' value
1	Education	0.5440	0.174	3.132**
2	Land holding	0.4720	0.404	1.168NS
3	Social participation	0.4060	0.270	1.505NS
4	Mass media exposure	0.2280	0.204	1.120NS
5	Extension contact	-0.0326	0.101	-0.323NS

6	Risk orientation	0.0646	0.148	0.436NS
7	Scientific orientation	0.0858	0.147	0.582NS
8	Economic motivation	0.0435	0.180	0.242NS
9	Achievement motivation	0.1580	0.179	0.884NS
10	Innovativeness	0.3580	0.214	1.673NS

$a = 12.162$ $R^2 = 0.807$

** = 0.01 level of significance NS = Non Significant

$$Y = 12.162 + 0.544x_1^{**} + 0.472x_2 + 0.406x_3 + 228x_4 - 0.032x_5 + 0.064x_6 + 0.085x_7 + 0.043x_8 + 0.158x_9 + 0.358x_{10}$$

As regard indirect changes, it was clear from the table 3 that total 10 variables explained to the extent of 80.70 percent of variation for the farmers of the non-adopted villages. The findings hereby explaining that out of ten variables, education alone yielded significant contribution in explaining the variation with indirect changes. Other eight variables viz., land holding, social participation, mass media exposure; risk orientation, scientific orientation, economic motivation, achievement motivation and innovativeness were found to have no significant association with indirect changes. The variable extension contact was only showed negatively significant relation with indirect changes. Findings are in the line of the findings of Ommani & Chizari (2006)

IV. CONCLUSIONS

Out of ten variables, nine variables viz., education, social participation, mass media exposure, extension contact, risk orientation, scientific orientation, economic orientation, achievement motivation and innovativeness, showed significant relationship with indirect changes in both adopted and non adopted villages. But the magnitude of correlation of all the variables with indirect changes is as high as in adopted villages as compared to non adopted villages. It was also acknowledged from the study that the regression coefficient values of scientific orientation, economic orientation and innovativeness contributed positive and significant association with indirect changes in adopted villages but the same variables was negatively associated in case of non adopted villages. If any farmer wants to be a successful farmer, essentially he must have these three attributes to adopt any novel idea whatever it may cost. Moreover, Farmer to farmer diffusion is being vanished today due to lack of

innovative information oriented farmers in technology dissemination in most parts of the country. Hence it is a good sign that KVK has been doing an enormous role in bringing innovative, scientifically oriented and economically motivated farmers to improve livelihood security and facilitate adoption and diffusion of technologies through farmer to farmer extension. To maintain its stand, the KVK need to give further due importance for the above significant attributes with suitable changes by the staff to promote desirable changes in a consistent manner among the farming community in years to come.

REFERENCES

- [1] Ghosh, R. K., Goswami, A. and Mazumdar, A. K. "Adoption behaviour of dairy farmers in Co-operative Farming Systems. Livestock Research for Rural Development", 2004, 16 (11): 245-256
- [2] Jahromi, A. B. and Zamani, G. H. "The Predictor Parameters of Farmers" "Attributional Style". In Proceedings of the Association for International Agricultural and Extension Education, 22nd annual conference, 2006.
- [3] Kumar, R. "Information management behaviour of khol crop growers of Belgaum district of Karnataka state". Doctoral dissertation, university of agricultural sciences, 2006.
- [4] Ranuji, C. R. "A study on entrepreneurial behaviour of dairy farmers". Doctoral dissertation, University of Agricultural Sciences, 2006.
- [5] Ommani, A. R. and Chizari, M. "The perception of rural youths regarding teamwork in youth club". In Proceedings of the Association for International Agricultural and Extension Education, 22nd annual conference, 2006.

AUTHORS

First Author – A. Manoj, Ph.D Scholar, Division of Agricultural Extension, Indian Agricultural Research Institute, New Delhi, India. alajangimanoj@gmail.com.

Second Author – G.Sivanarayana, Professor, Department of Extension Education, Agricultural College, Bapatla, Guntur District, Andhra Pradesh, India. genikala_siva@yahoo.co.in

Third Author – Ch. Ramesh Babu, professor, Department of extension education, Agricultural college Bapatla, Guntur District, Andhra Pradesh, India.

Fourth Author – Associate Professor and Head, Department of Agricultural statistics, Agricultural College, Bapatla, Guntur District, Andhra Pradesh, India.

Correspondence Author – A. Manoj, alajangimanoj@gmail.com., bromanojag@gmail.com, +919013980925.