

IMPACT OF FRONT LINE DEMONSTRATIONS ON SCIENTIFIC TEMPERAMENT OF WHEAT GROWERS

Hansraj Jatav*, M.M.Patel**, K.S.Kumar*** and Arvind Saxena****

ABSTRACT

The study was undertaken to investigate the impact of Front Line Demonstrations on scientific temperament of the wheat growers. A total of 90 respondents (45 beneficiaries of FLDs and 45 non-beneficiaries) were selected. It was found that the scientific temperament of the beneficiaries of FLDs was higher than scientific temperament of the non-beneficiaries. It indicates that, there is an impact of FLD programme on scientific temperament of the wheat growers. The study also revealed that the selected profile characteristics viz; education, social participation, extension participation and mass media exposure were apt and they contributed to about 77 per cent of the variation in the scientific temperament of the wheat growers. There fore it is suggested that these factors may be taken for considered to increase the scientific temperament of the farmers.

INTRODUCTION

Undoubtedly, today it can be said that history of agriculture is in fact the history of humanity itself. With changing times, the agricultural scenario in India has also undergone drastic changes. Gone are the days when agriculture was practiced by rule of thumb only, today it has become extremely scientific, sophisticated and mechanized and consequently a very profitable profession. In ensuing proper transfer of technologies and changing scientific temperament of the farmers, Frontline Demonstration may play a very important role.

Front-Line Demonstration is the new concept of field demonstration evolved by the Indian Council of Agricultural Research with the inception of the Technology Mission on Oilseed Crops during mid-eighties. The main objective of Front-Line Demonstrations is to demonstrate newly released crop production and protection technologies and its management practices in the farmers' field under different agro-climatic regions and farming situations. Front-Line Demonstrations are conducted in a block of two or four hectares land in order to have better impact of the demonstrated technologies on the farmers and field level extension functionaries.

While a large number of studies have been

made to discuss the yield potentialities and procedures for conducting these demonstrations, limited studies have been conducted to assess the impact of FLD on scientific temperament of farmers. Thus, the present study is an attempt to evaluate the impact of FLD on scientific temperament of wheat growers in Indore and Dewas districts with the specific objectives to determine the scientific temperament of the beneficiaries of FLD programme, to analyze the relationship between characteristics of wheat growers and their scientific temperament.

RESEARCH METHODOLOGY

The study was conducted in Dewas and Indore Districts of M.P. where FLDs were conducted by the IARI Regional Station on Wheat, Indore M.P. During 2003-04 to 2006-07, forty five wheat growers were benefited by this programme. All the beneficiary farmers and same number of non-beneficiary farmers, were selected randomly from the study area. Thus, 90 respondents were selected to constitute the sample of the study. In this study the scientific temperament of the farmers was operationalized as farmers' mental disposition related to items pertaining to four areas of human behaviour vis-à-vis scientific knowledge, scientific attitude, scientific habit and utilization of scientific method. Scientific temperament was measured with the help of scale developed by De (2004). Student's 't' test

* RVSKVV, College of Agriculture, Indore (M.P.)

was used for testing the significant difference of mean score of two categories of the respondents in relation to their scientific temperament and the correlation and regressions analysis were carried out to measure the strength of association between selected variables and scientific temperament of the wheat growers.

RESULTS AND DISCUSSION

Impact of Front Line Demonstrations on Scientific temperament of the wheat growers

The scientific temperament of FLD beneficiary and non beneficiary farmers presented in Table 1 revealed that majority (55.55%) of the respondents possessed medium level of scientific temperament,

while about one fourth (25.55%) of the respondents possessed high and 18.88 per cent possessed low level of scientific temperament. Similar findings were reported by De (2004) in case of potato. The data also indicated that mean value of scientific temperament of FLD beneficiaries was higher (76.35) than the mean score (62.2) of scientific temperament of non-beneficiaries. Thus, it can be stated that there is an impact of FLD programme on scientific temperament of the wheat growers.

Factors affecting scientific temperament

Scientific temperament of the wheat growers was found to be significantly correlated with education, social participation, extension participation, farm mechanization, information source utilization, cosmopolitaness and mass media

Table 1. Distribution of the respondents according to their scientific temperament

Scientific temperament	Beneficiaries	Non-beneficiaries	Total
Low(<60.04)	1 (2.22)	16 (35.55)	17 (18.88)
Medium(60.04-78.36)	24 (53.33)	26 (57.77)	50 (55.55)
High(>78.36)	20 (44.44)	3 (6.66)	23 (25.55)
Total	45	45	90
Mean	76.35	62.2	69.2
SD	4.71	6.71	9.16

't' = 11.69**

(Figures in parenthesis indicate percentage)

**Significant at 0.01 level of probability

exposure at 0.01 level of significance. (Table 2). It indicates that as education, social participation, extension participation, farm mechanization,

information source utilization, cosmopolitaness and mass media increased, scientific temperament also increased. This result was in conformity with the findings of De (2004).

Table 2. Correlation coefficient between scientific temperament of wheat growers and their characteristics

S. No.	Characteristics	Correlation coefficient "r"
1	Age	-0.04
2	Education	0.425**
3	Farm size	0.046
4	Irrigation potential	0.079
5	Social participation	0.503**
6	Extension participation	0.792**
7	Farm mechanization	0.353**
8	Information source utilization	0.593**
9	Cosmopolitaness	0.426**
10	Mass media exposure	0.479**

**Significant at 1% level of significant

In order to determine the combined effect of all the selected independent variables in explaining the variation in scientific temperament Multiple Linear Regression Analysis was carried out. The computed co-efficient of determination (R^2) value and partial regression co-efficient (b) values with their corresponding 't' values are given in Table 3.

The R^2 and 'b' values were tested significantly for their significance. The R^2 value of 0.78 indicated that all the selected 10 independent variables put together explained about 78 per cent variation in scientific temperament of the wheat growers.

The partial regression co-efficient presented in Table 3 indicated that independent variables, viz;

Table 3. Regression coefficient of selected characteristics of wheat growers with their scientific temperament

S. No.	Characteristics	Regression coefficient	Standard error	t value
1	Age	0.061567	0.053261	1.155935
2	Education	1.796272	0.542072	3.313714**
3	Farm size	0.064258	0.353356	0.181851
4	Irrigation potentiality	0.033078	0.044535	0.74275
5	Social participation	0.033078	0.519402	3.119735**
6	Extension participation	0.033078	0.02722	8.313592**
7	Farm mechanization	-0.00915	0.036467	-0.25095
8	Information source utilization	0.32535	0.427763	0.760586
9	Cosmopoliteness	0.21935	0.314069	0.698416
10	Mass media exposure	1.395104	0.606863	2.298876*

$R^2=0.78$ Multiple correlation $R=0.88$

$F_{10,79}$ value 28.00433**

**Significant at 1% level of significant

*Significant at 5% level of significant

education, social participation, extension participation and mass media exposure were positively significant as evident from their significant 't' values. This implied that education, social participation, extension participation and mass media exposure positively and significantly contributed to most of the variation (77%) in scientific temperament of the farmers (Table 4).

Table 4. Optimum model of multiple regression analysis of four factors with scientific temperament

S. No.	Factor	Regression analysis	Standard error	t value
1	X2 Education	1.63**	0.50	3.23
2	X5 Social participation	1.87**	0.43	4.27
3	X6 Extension participation	0.24**	0.02	10.64
4	X10 Mass media exposure	1.51*	0.55	2.70

$R^2=0.77$

$F_{5,85} = 57.85**$

Multiple correlation $R=0.88$

**Significant at 1% level of significant

*Significant at 5% level of significant

CONCLUSION

The mean value of scientific temperament of beneficiary farmers of FLD was higher than the mean score of scientific temperament of non-beneficiaries. Thus, it can be concluded that, there is an impact of FLD programme on scientific temperament of the wheat growers. The selected profile characteristics for the study were apt and they contributed to about 77 per cent of the variation in the scientific

temperament of the wheat growers. There fore it is suggested that these factors may be taken for considered to increase the scientific temperament of the farmers.

REFERENCE

De, Dipak 2004. Scientific temperament of farmers and its correlates. *Indian J. Extn. Edu.*, 40(1&2): 89-94

