



Research Article

IMPACT OF SOCIO-ECONOMIC PROFILE OF BENEFICIARIES AND NON-BENEFICIARIES OF FLD PROGRAMME ON THEIR SCIENTIFIC TEMPERAMENT

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Abstract: The study was conducted at Saver blocks of Indore district, Madhya Pradesh. where FLDs were conducted by IARI Regional station on Wheat, Indore M.P. during 2015-16 and 2016-17, 60 wheat growers were benefited by this programme. All the beneficiary farmers, and same number of non-beneficiary farmers, were selected randomly from same villages of Indore district. Thus, 120 respondents were selected to constitute the sample of the study. For the study purpose 11 independent variables namely age, education, annual income, marketing behavior, farm power, land holding, farm mechanization, attitude, economic motivation, knowledge and mass media exposure were selected for analyzing their relationship with the response variable *i.e.*, scientific temperament. The study revealed that majority of the respondents 50% belonged to middle age group, middle school education, medium size of land holding, one bullock pair, medium level of farm mechanization, Rs. 60,001 to 1,00,000/- annual income, medium & high marketing behaviour, high level of economic motivation, medium level attitude, high level of knowledge and medium level of mass media exposure.

Keywords: Energy and nutrition, Socio-economic Profile, FLD

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Introduction

Wheat is the main source of energy and nutrition in human diet. Wheat is unique in the sense that large numbers of diverse end-products such as chapatti, biscuit, bread, noodles, macaroni and other pasta products are made from it. Wheat is cultivated mainly in temperate regions of the world. Uttar Pradesh, Madhya Pradesh, Punjab, Rajasthan, Bihar, Haryana, Maharashtra and Gujarat are major wheat growing states in the country. For increasing the productivity and improving the economic condition of the farmers, depend upon the level of knowledge and skills of the farmers. The FLD aimed at achieving this twin objective by bringing about the change in knowledge and adoption behavior of farmers. The frontline demonstration is the important mandate of Krishi Vigyan Kendra. It aims to demonstrate the production potentialities of newly developed crop production technologies of pulses and oilseeds on farmers' field. The main emphasis is to maximize production per unit area by using high yielding varieties of wheat in conjunction with the package and practices. Looking to above points into consideration, an effort was made to see the impact of FLD on farmers with regard to their scientific temperament of wheat growers in Indore district, with the following objectives:

1. To study the socio personal, economic, psychological and communication attributes beneficiaries of FLD programme and non-beneficiaries.
2. To study the scientific temperament of the beneficiaries of FLD programme and non-beneficiaries.
3. To analyze the relationship between socio personal, economic, psychological and communication attributes of the respondents with their scientific temperament.

Materials and Methods

The study was conducted by IARI, at Regional Research Station, Indore district, Madhya Pradesh. During 2015-16 and 2016-17, four blocks comes under the IARI, Regional station, where the FLDs of Durum Wheat have been laid down.

Out of these, Saver block was taken purposively for the study. All the beneficiary farmers and same number of non beneficiary farmers was selected randomly from other villages situated far away from those villages where FLDs were conducted. Thus total 120 respondents will be selected to constitute the sample of the study. The primary data were collected through personal interview method with the help of pre-tested interview schedule, which was prepared on the basis of objectives of investigation and variables. The interview schedule was thoroughly discussed with the member of the advisory committee and their suggestions were incorporated. The statistical tests and procedures were used for analyzing the data with the help of statistical tools like- mean, S.D., percentage, and Karl Pearson's coefficient of correlation, multiple correlation and regression analysis were used for analysis of data [1-9].

Results and Discussion

Socio economic attributes of beneficiaries and non-beneficiaries of FLD programme

Socio-individual, socioeconomic, communication and psychological characteristics of respondents were derived with reference to 11 independent variables namely age, education, land ownership, farm strength, mass media exposure, annual Income, economic motivation, attitudes, knowledge and farm mechanization were chosen to analyze its relationship with response variables, that is, scientific temperament. [Table-1] revealed that majority (53.33%) of the of participant farmers belong to middle age group followed by old age in case of beneficiary respondents. Whereas, 46.66 percent of non-participant farmers belonged to young age group followed by middle age, 46.66 and 26.66 percent of beneficiary participants had education up to middle school level and up to primary school level respectively and 53.33 and 16.66 percent of non-participant farmers had education up-to primary school and high school, respectively.

Table-1 Distribution of the respondents according to Socio-personal, socio-economic, communication and psychological traits (n=120)

SN	Independent Variables	Categories	FLD respondents (60)	Non-FLD respondents (60)	Total
1	Age	Young (30 to 40 years)	23(38.33%)	28(46.66%)	51(42.50%)
		Middle (41 to 50 years)	32(53.33%)	24(40.00%)	41(46.65%)
		Old (51 to 60 years)	5(8.33%)	8(13.33%)	13(10.83%)
2	Education	Up to primary education	16(26.66%)	32(53.33%)	60(50.00%)
		Middle school education	28(46.66%)	18(30.00%)	34(28.33%)
		Higher Secondary and above	16(26.66%)	10(16.66%)	26(21.63%)
3	Annual Income	Rs.24,001 – 60,000/-	9(15.00%)	15(25.00%)	24(20.00%)
		Rs. 60,001 – 1,00,000/-	34(56.66%)	31(51.66%)	65(54.15%)
		Above Rs.1,00,001	17(28.33%)	14(23.33%)	31(25.83%)
4	Marketing Behaviour	Low (<19.98)	4(6.66%)	32(53.33%)	36(30.00%)
		Medium (19.98-22.74)	28(46.66%)	13(21.66%)	41(34.13%)
		High (>22.47)	28(46.66%)	15(25.00%)	43(35.83%)
5	Farm Power	No bullock pair	6(10.00%)	12(20.00%)	18(15.00%)
		One bullock pair	23(38.33%)	24(40.00%)	47(39.16%)
		Two bullock pairs	20(33.33%)	17(28.33%)	37(30.83%)
		Tractor	11(18.33%)	7(11.66%)	18(15.00%)
6	Land Holding	Marginal (up to 1 ha)	5(8.33%)	9(3.33%)	14(11.66%)
		Small (1.1 to 2 ha)	20(33.33%)	15(25.00%)	35(29.16%)
		Medium (2.1 to 4 ha)	23(38.33%)	30(50.00%)	53(44.15%)
		Large (Above 4 ha)	12(20.00%)	6(10.00%)	18(15.00%)
7	Farm Mechanization	Low (<3.5)	18(30.00%)	19(31.66%)	37(30.83%)
		Medium (3.5-7.05)	39(65.00%)	35(58.33%)	74(61.66%)
		High (>7.05)	3(5.00%)	6(6.00%)	9(7.50%)
8	Attitude	Low (up to 16)	9(15.00%)	3(5.00%)	12(10.00%)
		Medium (17-20)	38(63.33%)	30(50.00%)	68(56.63%)
		High (above 20)	13(21.66%)	27(45.00%)	40(33.33%)
9	Knowledge	Low (up to 46)	5(8.33%)	49(81.66%)	54(45.00%)
		Medium (47-50)	17(28.33%)	6(10.00%)	41(19.13%)
		High (above 50)	38(63.33%)	5(8.33%)	43(35.83%)
10	Mass Media Exposure	Low (upto 16)	11(18.33%)	15(25.00%)	26(21.65%)
		Medium (17-20)	32(53.33%)	40(66.66%)	73(60.83%)
		High (above 20)	17(28.33%)	5(8.33%)	22(18.33%)
11	Economic Motivation	Low (<9.57)	7(11.66%)	46(76.66%)	53(44.13%)
		Medium (9.57-14.59)	8(13.33%)	6(10.00%)	14(11.63%)
		High (>14.59)	45(75.00%)	8(13.33%)	53(44.13%)

The data indicated that out of total beneficiary respondents, 20.00 percent had income between Rs. Rs. 24,001 to 60,000/-, 54.15 percent had income between Rs. 60,001 to 1,00,000/-. Majority of the beneficiary's 46.66 percent have medium marketing behavior under FLDs farmer and 53.33 come under low marketing behavior in case of non-beneficiary farmers. The data indicated that out of total respondents, 15.00 percent of the respondents had no bullock pair, 39.16 percent had one bullock pair, 30.83 percent had two bullock pairs and 15.00 percent had tractor. In case of beneficiaries of FLD programme, 10.00 percent had no bullock pair, 38.33 percent had one bullock pair, 33.33 percent had two bullock pairs and 18.33 percent had tractor.

Similarly, in case of non-beneficiaries of FLD programme, 20.00 percent had no bullock pair, 40.00 percent had one bullock pair, 28.33 percent had two bullock pairs and 11.66 percent had tractor. Out of total respondents, 11.66 percent had marginal farm size, while 29.16 percent had small size land holdings. Most of the beneficiaries (65.00%) have medium farm mechanization followed by low farm mechanization 30.00 percent under FLD respondents and 58.33 percent have medium farm mechanization followed by low farm mechanization 31.66 percent under Non- FLD respondents. In case of beneficiaries of FLD programme, 15.00 percent had low level of knowledge, 63.33 percent had medium, similarly in case of non-beneficiaries, 5.00 percent had low level of knowledge, 56.63 percent had medium. Out of total respondents, 45.00 percent had low level of knowledge, 19.13 percent had medium. In case of beneficiaries of FLD programme, 18.33 percent had low level of mass media exposure, while 53.33percent had medium. And in case of non-beneficiaries, 25.00 percent had low level of mass media exposure, while 66.66 percent had medium level of mass media exposure. Out of total respondents, 44.13 percent had low level of mass media exposure, followed by 11.63 percent medium and 44.13 percent had high mass media exposure.

Scientific temperament beneficiaries and non-beneficiaries

The scientific temperament of FLD beneficiaries and non-beneficiaries was measured with the help of the scientific temperament scale includes four

components, i.e. scientific knowledge, scientific aptitude, scientific habit and scientific method. The perusal of the data revealed that out of total respondents' 16.66 percent of them possessed low level of scientific temperament, while 60.00 percent of the respondents possessed medium level of scientific temperament. In the case of beneficiaries' farmers, 03.33 percent had low level of scientific temperament, while in case of non-beneficiaries, 30.00 percent had low level of scientific temperament.

Table-2 Distribution of respondents according to their scientific temperament

S	Scientific temperament	FLD respondents(60)	Non-FLD respondents(60)	Total
1	Low (56-177)	02(03.33)	18(30.00)	20(16.66)
2	Medium (178-298)	34(56.66)	38(63.33)	55(60.00)
3	High (299-419)	24(40.00)	04(6.66)	28(23.33)
	Total	60	60	120
	X	75.96	63.28	
	S.D.	6.63	6.68	
	t	10.43		

** Significant at 0.01 probability level

The t test was used to test the significant difference in the mean score of scientific temperament of two groups (FLD and non-FLD beneficiaries) in relation to their scientific temperament. The hypothesis under this test was that the beneficiaries of the FLD program and the non-beneficiaries differ their degree of scientific temperament. So, the null hypothesis is rejected the original hypothesis that there is a very significant difference between the scores of both groups was accepted. It can therefore be concluded that there is a difference between scientific temperament of FLD and non-FLD respondents.

Relationship of the respondents and scientific temperament

The correlation coefficient of education, annual income, farm power, land holding, farm mechanization, attitude, mass media exposure, and knowledge were found to have positive and significant correlation of FLD respondents with scientific temperament.

The correlation coefficient of education, annual income, mass media exposure, and knowledge were found to have positive and significant correlation of Non-FLD respondents with scientific temperament.

Table-3 Relationship of all independent variables with their scientific temperament (in FLD respondents)

SN	Attributes of respondents	'r' values
1	Age	-0.226 ^{NS}
2	Education	0.073 ^{**}
3	Annual income	0.113 ^{**}
4	Marketing Behavior	-0.013 ^{NS}
5	Farm power	0.277 ^{**}
6	Land holding	0.237 ^{**}
7	Farm Mechanization	0.199 ^{**}
8	Attitude	0.157 ^{**}
9	Economic motivation	-0.026 ^{NS}
10	Knowledge	0.245 ^{**}
11	Mass media exposure	0.024 ^{**}

^{**} Significant at 0.01 probability level, NS: Non-significant

Table-4 Relationship of all independent variables with their scientific temperament (in Non- FLD respondents)

SN	Attributes of respondents	'r' values
1	Age	-0.199 ^{NS}
2	Education	0.048 ^{**}
3	Annual income	0.036 ^{**}
4	Marketing Behavior	-0.009 ^{NS}
5	Farm power	-0.027 ^{NS}
6	Land holding	-0.008 ^{NS}
7	Farm Mechanization	-0.013 ^{NS}
8	Attitude	-0.125 ^{NS}
9	Economic motivation	-0.189 ^{NS}
10	Knowledge	-0.023 ^{NS}
11	Mass media exposure	0.108 ^{**}

^{**} Significant at 0.01 probability level, NS: Non-significant

Conclusion

The study of Front-Line Demonstration (FLD) is to demonstrate newly released crop production and protection technologies, also its management practices on the farmers' field to study the constraints of production, factors contributing for higher production. Study thereby to generate production data and feedback information. For the investigation purpose 11 independent variables namely age, education, age, education, annual income, marketing behavior, farm power, land holding, farm mechanization, attitude, economic motivation, knowledge and mass media exposure were selected for analyzing their relationship with the response variable i.e., scientific temperament. In case of attributes, the study revealed that majority of the respondents 50% belonged to middle age group, middle school education, medium size of land holding, one bullock pair, medium level of farm mechanization, Rs. 60,001 to 1,00,000/- annual income, medium & high marketing behaviour, high level of economic motivation, medium level attitude, high level of knowledge and medium level of mass media exposure.

Application of research: The correlation coefficient of education, annual income, mass media exposure, and knowledge were found to have positive and significant correlation of Non-FLD respondents with scientific temperament.

Research Category: Agriculture Economics

Abbreviations: FLD: Front Line Demonstration

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Study area / Sample Collection: Regional Research Station, Indore district, Madhya Pradesh

Cultivar / Variety / Breed name: Wheat

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