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Research Article

A STUDY ON SCIENTIFIC TEMPERAMENT OF DURUM WHEAT GROWERS UNDER FLD CONDUCTED BY IARI, REGIONAL STATION IN INDORE DISTRICT OF MDHYA PRADESH

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ABSTRACT

Durum Wheat (Triticum tergidum L.) is an economically important crop grown worldwide including India. It is being cultivated 10 to 11% of world area and accounts about 8% of the total Wheat production. Durum is 2nd most important species grown in the country. The aestivam wheat is invariably consumed as chapatti. Durum Wheat is consumed in the form of suji, macroni, noodles, sevai, pasta and some local product like "bati"and "baffle". In central india it is being cultivated in Malva region, Sourastra and Kathiaward in Gujarat and Kota, Bundi, Jhalawad and Udaipur regions of Rajasthan Bundelkhand region and west Maharashtra since long time and its traditional food product like Bati, Bafla, Dalia, Churma, LapsiUpmaetc are being consumed as staple food. The frontline demonstration is to demonstrate potential of new varieties, newly released crop production and protection technologies and its management practices in the farmers' field under different farming situations. The present study is an attempt to evaluate Scientific Temperament of Durum Wheat Growers under FLD in Indore district with 120 durum wheat beneficiaries. The major finding of the study was Majority of the respondents (beneficiaries of FLD programme and non-beneficiaries) possessed medium level of scientific temperament. The mean value of scientific temperament of beneficiary farmers of FLD was higher than the mean score of scientific temperament of non-beneficiaries. The't' test indicated that there is a significant difference between scores mean of both the group. Thus, it can be stated that, there is an impact of FLD programme on scientific temperament of the wheat growers.

INTRODUCTION

The population is increasing in a geometric progression leading to an increased demand of wheat but there is no possibility of further increase in area due to growing urbanization, diversification, dwindling water resources, micro-nutrient deficiencies and soil health deterioration. Therefore, the need to produce more wheat has to be met out with fewer resources in a sustainable and cost effective manner. The wheat production, currently, is hovering around 70 to 94 million metric tons (MMT) and produced around 157 MMT of wheat straw in the past few years. Recent estimates have shown that India will need nearly 100 million tons of wheat by the end of 2018-19 and more than 113 million tons by 2025.

The area under throughout the world as well as in India has become constant i.e., 215 million ha. and 26 million ha. Respectively. India can harvest over 95 million tons of wheat merely by bridging the present demonstrated through frontline trials. There lies tremendous scope of improving wheat production in UP, MP, and Bihar.

The frontline demonstration 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 situation. The objective of Front Line Demonstration (FLD) is to demonstrate newly released crop production and protection technologies and its management practices on the farmers' field to study the constraints of production, factors contributing for higher production and thereby to generate production data and feedback information.

The IARI Regional station on wheat, Indore (M.P) was entrusted with the responsibility of conducting FLD in Sawer block of district Indore m.p. the main emphasis was to maximize production per unit area by using high yielding varieties of wheat in conjunction with the package and practices. While a large number of studies have been made to

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discuss the yield potentialities and procedures for conducting these demonstrations, limited studies have been conducted to assess the impact of FLD on knowledge and adoption level of farmers. Thus, the present study is an attempt to evaluate the impact of FLD on knowledge and adoption level of wheat growers in Sawer block with the following specific objectives:

The present study is an attempt to evaluate Scientific Temperament of Durum Wheat Growers under FLD in Indore district with the following specific objective:

Objective

To study the scientific temperament of the beneficiaries of durum wheat FLD programme and non- beneficiaries.

Review Literature

Kirar *et al*. (2006) reported that frontline demonstration programme was effective in changing attitude, skill and knowledge of improved practices of HYV of urd including adoption this also improved the relationship between farmers and scientist and built confidence between them. The farmers who adopted demonstration acted also as source of information and pure seed for wider dissemination of HYV of urd for the farmers. The productivity gain under FLD over traditional practices of urd cultivation created greater awareness and motivated the other farmers to adopt appropriate production technology of urd in the district. The selection of critical input and participatory approach in planning and conducting the demonstration definitely help in the farmers of technology to the farmers.

Jatav (2010) reported that majority of the respondents were of medium level of scientific temperament, the mean value of scientific temperament of FLD beneficiaries has higher than the mean score of scientific temperament of non-beneficiaries. The t-test indicates that there is a significant difference between scores mean of both the group those it can be stated that, there is a positive impact of FLD programme on scientific temperament wheat growers in Indore and dewas district.

Jheenger *et al*. (2012) reported that maximum respondents (beneficiaries of FLD programme and non-beneficiaries) possessed medium level of the scientific temperament. The scientific temperament of beneficiaries' farmer of FLD gave batter result then scientific temperament of non-beneficiaries.

Methods and Procedures

The study was conducted in Indore district of Sawer blocks M.P. 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, 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. It has been defined in this study as farmers' mental disposition related to items pertaining to four areas of human behavior vis-à-vis scientific knowledge, scientific attitude, scientific habit and utilization of scientific method.

The primary data were collected from the respondents by using a pre-tested semi- structured interview schedule.

Result & Discussion

Study on Scientific Temperament of the FLD Beneficiaries and non-Beneficiaries- Scientific temperament : The scientific temperament of the beneficiaries of FLD programme and non-beneficiaries was measured with the help of scientific temperament scale comprises of four components viz., scientific knowledge, scientific attitude, scientific habit and scientific method.

Table 1 Distribution of respondents according to their scientific temperament

S.N.o	Scientific Temperament	FLD respondents (60)	FLD respondents (60)	Total
1	Low	02(03.33)	18(30.00)	20(16.66)
2	Medium	34(56.66)	38(63.33)	55(60.00)
3	High	24(40.0)	4(6.66)	28(23.33)
	Total	**60**	**60**	**120**
	_X	**75.66**	**63.28**	
	S.D.	**6.63**	**36.68**	
	t		**10.43****	

** Significant at 0.01 probability level. (Figures in parenthesis indicate percentage)

In the case of beneficiaries' farmers, 03.33 per cent had low level of scientific temperament, while 56.66 per cent had medium and 40.00 per cent had high level of scientific temperament. In case of non-beneficiaries, 30.00 per cent had low level of scientific temperament, while 63.28 per cent had medium and 6.66 per cent had high level of scientific temperament. The data given in the Table also presents regarding mean value of scientific temperament of the farmers. The data indicated that mean value of scientific temperament of beneficiary farmers of FLD was higher (75.96) than the mean score (63.28) of scientific temperament of non-beneficiaries with standard deviation of 75.96 and 63.28, respectively. The t-test was used for testing the significant difference of the mean score of scientific temperament of two groups (FLD beneficiaries and non FLD beneficiaries) in relation to their scientific temperament. The hypothesis under this test was that the beneficiaries of FLD programme and non-beneficiaries differ in their degree of scientific temperament. Hence the null hypothesis is rejected and the original hypothesis that there is a highly significant difference between scores of both the group was, accepted. It can therefore be concluded that there was difference in the scientific temperament of FLD and non-FLD respondents.

Study of the Scientific Temperament of the Beneficiaries of FLD programme non-Beneficiaries

With regard to scientific temperament of durum wheat, it was observed that majority of the FLD beneficiaries (80.00%) were having medium to high level of scientific knowledge of Durum wheat production technology. The finding is contrary to that reported by Singh and Sharma (2004), Asiwal, *et al*. (2007) and Jatav (2010)

The finding regarding scientific attitude of the beneficiaries is concerned, it was observed that majority (83.34%) of the FLD beneficiaries were having medium to high level of scientific attitude towards Durum wheat production technology. Rajput (2005) and Tyagi (2012) also observed similar findings.
The finding regarding scientific habit, majority of the FLD beneficiaries (79.90%) owned medium to high scientific habit. This finding is similar to the finding of Nagle (2011) and Tyagi (2012).

The finding regarding utilization of scientific methods, majority of FLD beneficiaries (81.66%) were having medium to high utilization of scientific methods. This finding is similar to the finding of Nagle (2011) and Tyagi (2012).When the data was pooled pertaining to scientific attitude, scientific habit, scientific knowledge and utilization of scientific methods towards Durum wheat production technology, it was observed that the overall scientific temperament of the beneficiaries, majority (76%) of the FLD beneficiaries were having medium to high level of scientific temperament towards Durum wheat production technology. The finding obtains support with the work of Bathri *et al* (2014).

CONCLUSION

The results of this study may be useful to the agriculture scientists and extension personnel, who are involved in the process of planning and dissemination of the technology through large number of demonstrations and mass publicity to the farmers.

Implication of the study

The findings of the study imply that there is an Front Line Demonstration on scientific temperament of the farmers. Hence, the demonstrations may increase the scientific temperament of the farmers.

The findings of the study suggest that higher the level of age, education, land holding, farm power, farm mechanization, marketing behavior, economic motivation, attitude, mass media exposure, income, knowledge higher will be the scientific temperament. Hence, these factors may be considered for increasing the scientific temperament of the farmers.

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