



# Plant Archives

Journal homepage: <http://www.plantarchives.org>  
DOI Url : <https://doi.org/10.51470/PLANTARCHIVES.2023.v23.no1.016>

## SOCIO-ECONOMIC AND AGRARIAN IMPACT OF WHEAT FRONTLINE DEMONSTRATIONS IN MALWA REGION OF MADHYA PRADESH, INDIA

Rakesh Jain<sup>1\*</sup>, V. K. Sharma<sup>1</sup> and A.K. Singh<sup>2</sup>

<sup>1</sup>Department of Agriculture Extension, RBS College, Bichpuri, Agra U.P.

<sup>2</sup> Department of Agriculture Extension, ICAR- IARI, RS, Indore M.P.

\*Corresponding author Email: [rakesh\\_jain606@yahoo.com](mailto:rakesh_jain606@yahoo.com)

(Date of Receiving : 21-09-2022; Date of Acceptance : 27-12-2022)

### ABSTRACT

Wheat is the most important and popular cereals crop in India. Wheat is the main source of nutrients and energy in the human diet. The study was conducted in five district of the Malwa region of Madhya Pradesh. The total sample was consist 300 farmers (150 beneficiary farmers and 150 non-beneficiary farmers). A large number, 50.00 percent of the respondents were having low category, increased (up to 3.8 q/ha) productivity after adopting the new technologies through WFLDs and larger part 60.00 percent of the respondents had low category increased their area under wheat cultivation. A comparison between beneficiary and non-beneficiary farmers, 08.00 percent of the beneficiary farmers reported their overall annual income was increased in high category i.e. >Rs. 100,000/- due to the FLDs of wheat production technology and only 02.00 percent of the non-beneficiary farmers reported their overall annual income was increased in high category i.e. >Rs. 100,000/-. Almost 72.67 percent of the respondents reported their overall purchasing power & improvement in life style was increased, due to the FLDs of wheat production technology. Majority 88.67 percent of the farmers expressed that MSP should be double in ways of effectiveness. The next opinion 81.67 percent of the farmers were cost of input should be decreased.

**Keywords :** Socio-Economic, Agrarian, Impact, Frontline Demonstrations, ways and effectiveness, MSP.

### Introduction

Wheat is one of the oldest and most important grain crops. Among the many species known, the most important being the common wheat (*Triticum aestivum*), used to make bread or Chapati and Duram wheat that is used to make pasta like spaghetti and macaroni. In addition, some wheat is used by industries to produce starch, paste, malt, dextrose, gluten, alcohol and other products. Wheat is the main source of nutrients and energy in the human diet. Wheat differs in the sense that a large number of different products such as chapatti, pasta, bread, biscuits, halva, noodles, dalia, maida etc are made from it. Wheat is widely used in many industries such as milling, bread and bakery etc. Wheat gluten (protein) is useful in the preparation of adhesives, polymers and resins. Wheat starch is used in the cosmetics, paper, and pharmaceutical industries. Wheat is also used as cattle feed like hay and silage etc.

Frontline demonstration is a unique way of providing direct communication between the researcher and the farmers as scientists are directly involved in planning, implementing and monitoring demonstrations of technologies developed and receiving direct feedback from the field. This enables scientists to develop a more efficient research program. In FLDs, the subject specialist provides technical input to the farmer.

ICAR-IARI Regional Station on Wheat, Indore (M.P.) has been tasked with conducting FLDs in Madhya Pradesh. The emphasis was on increasing productivity in each area through the most productive wheat varieties in accordance with the package and processes. Although many studies have been conducted to discuss crop yields and the mechanisms for making these demonstrations, limited studies have been conducted to assess the impact of FLD on knowledge and the level of acceptance of farmers, Impact of Frontline Demonstrations in terms of agriculture, economics, Social, personal, psychological, and communication signals to explore available infrastructure resources, and to identify potential issues in the adoption of Recommended Production technology.

Therefore, the current study is an attempt to assess the impact of FLD on the knowledge and level of acquisition of wheat farmers of Indore, Ujjain, Dewas, Dhar, and Jhabua Districts (M.P.). The study was designed to investigate the scientific background of the beneficiaries of the FLD program and its beneficiaries and the factors that affect the scientific spirit of farmers. Therefore, the review focuses on findings related to the scientific status of FLD beneficiaries and non-beneficiaries and we arrive at the appropriate hypothesis for research theory. The main objectives of the research are the following:

1. To analyze the socio economic and agrarian impact on farmers & farming community.
2. To find out ways to improve effectiveness of WFLD's.

### Material and Methods

The study was conducted in the Malwa region of Madhya Pradesh. Indore, Dewas, Ujjain, Dhar and Jhabua districts were deliberately selected because ICAR-IARI Regional Station, Indore (M.P) is conducting the Front Line Demonstration of wheat during 2016-2020. A districts selection list was prepared and three villages in each district were deliberately selected. The list of farmers making wheat FLDs was prepared and 10 beneficiary farmers and 10 non-beneficiary farmers in each village were randomly selected. Thus, the total sample included 300 farmers in 15 selected villages. The data were collected through survey method with the help of a pre-tested interview schedule, which was prepared on the basis of the objectives. The primary data were collected from the respondents by using a semi-structured interview schedule, which was pre-tested before actual application. The respondents were interviewed individually by the investigator. Secondary data were collected from records & statistical office.

### Results and Discussion

#### 1. Socio economic and Agrarian Impact on farmers & farming community (Productivity Increment & Area Increment)-

The impact of WFLDs was shown in two terms namely area increment and productivity increment. Impact of WFLDs on cereals production technologies in term of area increment and productivity increment has been find out and presented here-

**Table 1 :** Distribution of the respondents according to their productivity increment-

SN	Categories	Frequency	Percentage
1	Low (2.5 to 3.8 q/ha)	75	50.00
2	Medium (3.9-5.13 q/ha)	39	26.00
3	High (5.14-6.5 q/ha)	36	24.00
	<b>Total</b>	<b>150</b>	<b>100</b>

It could be experiential that the table 1 shows that out of 150 beneficiary farmers, a large number, 50.00 percent of the respondents were having low (up to 3.8 q/ha) productivity increased, followed by 26.00 percent of the respondents had medium change (3.9-5.13 q/ha) in their productivity and only 24.00 percent respondent reported (5.14-6.5 q/ha) the yield increased in wheat cultivation after adopting the new technologies through WFLDs. Similar findings were also reported by Pyasi and Sharma (2017) and Singh (2017).

**Table 2 :** Distribution of the respondents according to their area increment-

SN	Categories	Frequency	Percentage
1	Low (<0.4ha)	90	60.00
2	Medium (0.4-0.7 ha)	34	22.67
3	High (>0.7 ha)	26	17.33
	<b>Total</b>	<b>150</b>	<b>100</b>

It could be seen in Table 2, confirms that out of 150 beneficiary farmers, greater part 60.00 percent of the respondents had low increased their area under wheat cultivation followed by 22.67 percent of the respondents had

medium change in area and only 17.33 percent of the respondents had high category of increased the area under wheat cultivation after adopting the recommended packages of practices of WFLDs. This finding is in line with Badodiya *et al.* (2021) & Pyasi, and Sharma (2017)

#### Socio-economic impacts in term of monetary gain after adoption of technology demonstrated by FLD-

Socio economic impacts in term of monetary gain after adoption are described as income increased and purchasing power & life style.

It could be matter-of-fact that the table-3 shows that out of 150 beneficiary farmers, a large number 73.33 percent of the respondents reported their overall annual income was increased in low category i.e. <Rs. 50,000/- due to the FLDs of wheat production technology, followed by 18.67 percent of the respondents reported their overall annual income was increased in medium category i.e. between Rs. 50,000 to 1,00,000/- and only 08.00 percent of the respondents reported their overall annual income was increased in high category i.e. >Rs. 100,000/- due to the FLDs of wheat production technology.

##### a. Income increased-

**Table 3 :** Distribution of the respondents according to their annual income increased-

S. N.	Category	Frequency of farmers	
		Beneficiary farmers	Non Beneficiary farmers
1.	Low income (<Rs. 50,000)	110 (73.33%)	129 (86.00%)
2.	Medium income (Rs. 50,000 to 100,000)	28 (18.67%)	18 (12.00%)
3.	High income (>Rs.100,000)	12 (08.00%)	03 (02.00%)
	<b>Total</b>	<b>150(100%)</b>	<b>150(100%)</b>

It could be matter-of-fact that the table-3 shows that out of 150 non beneficiary farmers, a large number 86.00 percent of the respondents reported their overall annual income was increased in low category i.e. <Rs. 50,000/- due to the FLDs of wheat production technology, followed by 12.00 percent of the respondents reported their overall annual income was increased in medium category i.e. between Rs. 50,000 to 1,00,000/- and only 02.00 percent of the respondents reported their overall annual income was increased in high category i.e. >Rs. 100,000/- due to the FLDs of wheat production technology. This, findings were in accordance with findings of Badodiya *et al* (2021).

##### b. Purchasing power and improvement in life style-

It could be matter-of-fact that the table-4 shows that out of 150 beneficiary farmers, a large number 72.67 percent of the respondents reported their overall purchasing power & improvement in life style was increased in low category i.e. <33.00 percent due to the FLDs of wheat production technology, followed by 21.33 percent of the respondents reported their overall purchasing power& improvement in life style was increased in medium category i.e. between 33.00 to 66.00 percent, and only 06.00 percent of the respondents reported their overall purchasing power& improvement in life style was increased in high category

>66.00 percent due to the FLDs of wheat production technology.

**Table 4 :** Distribution of the respondents according to their purchasing power increased-

S. N.	Category	Frequency of farmers	
		Beneficiary farmers	Non Beneficiary farmers
1.	Moderate increased (<33%)	109 (72.67%)	133 (88.67%)
2.	Medium increased (33% to 66%)	32 (21.33%)	17 (11.33%)
3.	Highly increased (>66%)	09 (06.00%)	-
	Total	150 (100%)	150 (100%)

It could be matter-of-fact that the table-4 shows that out of 150 non beneficiary farmers, a large number 88.67 percent of the respondents reported their overall purchasing power & improvement in life style was increased in low category <33.00 percent due to the FLDs of wheat production technology, followed by 11.33 percent of the respondents reported their overall purchasing power & improvement in life style was increased in medium category between 33.00 to 66.00 percent, and no respondents reported their overall purchasing power & improvement in life style was increased in high category >66.00 percent due to the FLDs of wheat production technology. This, findings were in accordance with findings of Badodiya et al (2021).

## 2. Ways to Improve Effectiveness of WFLD's-

During investigation, the farmers expressed many opinions to improve effectiveness of wheat production technology by them during the study. These views were termed as opinions in this study and were expressed. It is fact that farmer's training is an important factor of agricultural development. The opinion of farmers regarding strategies for increase the effectiveness of wheat front line demonstrations and quality of FLDs programmes.

Hence, it become utmost important to know the opinion & various suggestions to experience by the farmers during the study as well as WFLDs were organized by the ICAR-IARI, RS Indore. So that useful suggestions and proper importance may be made in improving the knowledge and socio-economic status of the farmers. Keeping this view, the various opinions & ways to express by the farmers were presented in Table-5.

The reactions from the farmers show that majority 88.67 percent of the farmers expressed that MSP of farm produce should be double and got (I<sup>st</sup> rank) in ways of strategies. The next serious opinion of the farmers were cost of input should be decreased (81.67%). However, (72.67% and III<sup>rd</sup> rank of seriousness) respondents expressed, critical input should be timely available. Majority, 67.00 percent of the respondents had stated transportation & market facilities should be available at village level. Training should be regularly organized by KVK and Agriculture department reported by 58.00 percent respondents and got V<sup>th</sup> ranked.

**Table 5 :** Ways to improve effectiveness of WFLD's-

S.No.	Statement	Frequency	Percentage	Rank
1	Training should be regularly organised by KVK and Agriculture department	174	58.00	V
2	Technical guidance/knowledge about production technology should be given	152	50.67	VII
3	Number of demonstration should be increased	140	46.67	IX
4	Literature should be published in local language	130	43.33	X
5	Critical input should be timely available	218	72.67	III
6	Cost of input should be decreased	245	81.67	II
7	Location specific technologies should be demonstrated	148	49.33	VIII
8	Transportation & Market facilities should be available at village level	201	67.00	IV
9	MSP should be double	266	88.67	I
10	Loan should be available in time and subsidised rate	169	56.33	VI

The Table-5 shows that 56.33 percent of the respondents reported Loan should be available in time and subsidized rate. It is clearly indicated in table that technical guidance/knowledge about production technology should be given is accounted by 50.67 percent of the respondents. Location specific technologies should be demonstrated stated by 49.33 percent of the respondents and got VIII<sup>th</sup> ranked. However, (46.67% and IX<sup>rd</sup> rank of seriousness) respondents expressed that number of demonstration should be increased and followed by 43.33 percent respondents said that literature should be published in local language

### Conclusion

The study was conducted in the Malwa region of Madhya Pradesh. The total sample was consist 300 farmers.

A large number, 50.00 percent of the respondents were having low (up to 3.8 q/ha) productivity increased, greater part 60.00 percent of the respondents had low increased their area under wheat cultivation. A comparison between beneficiary and non-beneficiary farmers, 08.00 percent of the beneficiary farmers reported their overall annual income was increased in high category i.e. >Rs. 100,000/- due to the FLDs of wheat production technology and only 02.00 percent of the non-beneficiary farmers reported their overall annual income was increased in high category i.e. >Rs. 100,000/- due to the FLDs of wheat production technology. Almost 72.67 percent of the respondents reported their overall purchasing power & improvement in life style was increased medium to high level category due to the FLDs of wheat production technology. Majority 88.67 percent of the farmers

expressed that MSP should be double and got (I<sup>st</sup> rank) in ways of strategies. The next serious opinion of the farmers were cost of input should be decreased (81.67%).

### References

- Badodiya, S.K.; Jain, D.K.; Maratha, P.; Gour, C.L. and Sikarwar, R.S. (2021). Efficacy of training programs as perceived by the tribal farmers with regards to organic farming practices in West Nimar Region Barwani of Madhya Pradesh. *SKUAST Journal of Research*, 23(1): 83-86.
- Baviskar, V. (2018). Economic impact of front line demonstrations on wheat in the Semi-Arid tropics of western Maharashtra, *India BGRI*.
- Prasad, D.; Prakash, V.; Meena, R.S. and Bairwa, S.K. (2022). Performance of Chickpea (*Cicer arietinum*) Frontline demonstrations in Rajasthan. *Indian Journal of Agricultural Sciences* 92 (2): 106-109
- Pyasi, V.K. and Sharma, A. (2017). Impact of Front Line Demonstration (FLD) on Area and Productivity of Wheat Growers in Jabalpur District of Madhya Pradesh, *India. Int. J. Curr. Microbiol. App.Sci.*, 6(12): 2237-2242.
- Singh, S.B. (2017). Impact of frontline demonstrations on yield of wheat (*Triticum aestivum*) under rain fed condition in Uttarakhand. *International Journal of Science and Environment technology*. 6(1) 779 – 786.