

IMPACT OF PARTICIPATORY SEED VILLAGE PROGRAMME ON ADOPTION LEVEL OF WHEAT SEED PRODUCERS IN REWA DISTRICT (M.P.)

R.P. Joshi¹, Sanjay Singh^{2*} and Nirmala Singh²

¹College of Agriculture Rewa, JNKVV (M.P.)

²Krishi Vigyan Kendra Rewa JNKVV IM.P.)

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Abstract: The word seed or seeds may be defined as all propagating materials used in any kind of cultivation. The seed is considered as most precious input in agriculture. The quality seed availability at desired time determines the sustainable crop productivity growth. It has been observed that presently about 80- 85% of the seeds used by the farmers is their own farm produced seeds and which is managed and conserved by the farmers from his own produce for future use.. Due to poor quality of seed with low germination capacity of seed the crop growth is affected adversely which eventually reduces the productivity of the crop. Despite implementation of the organized seed program since the mid 60s, the seed replacement rate has touched the level of 15 per cent. only .In view of the above facts it has been realized that the availability of genetically good quality of seed materials are of great importance to improve the quality of farm saved seed. In order to accelerate the seed replacement rate of desired genetic seed materials Krishi Vigyan Kendras through its participatory Seed Village Programme was implemented by Krishi Vigyan Kendras of M.P. in the year 2006-07 and continued till 2011-12. Under this programme about twenty villages were covered. The seeds of high yielding varieties along with recommended seed production technologies were demonstrated at farmers' field. Besides this capacity building programmes were also conducted at critical stages of the crops. Since regular follow up and evaluation is a necessary concomitant of such programme to assess the impact and suggest strategy for further growth and expansion of the programme the present investigation entitled "The impact of participatory seed village Programme on adoption behaviour of wheat seed producers in Rewa district (M.P.)" was under taken to assess the impact of the programme on adoption behaviour of seed producers. The study was based on 120 respondents (60 beneficiaries and 60 non-beneficiaries as control) covering 10 villages of Rewa block of Rewa district for analyzing the impact of Seed Village Programme on adoption behaviour of seed producers.. The ex-post facto research design was adopted in this research work. The responses were obtained by administering a pretested interview schedule .The findings inferred there was significant difference between beneficiaries and non-beneficiaries as regards to extent of adoption of seed production technology. The beneficiaries had greater extent of adoption than non-beneficiaries. Correlation coefficient between independent variables and extent of adoption as dependent variable elucidated that knowledge, risk orientation, marketing orientation, attitude towards agricultural technology, extension participation, mass media exposure, innovativeness, education, land holding and annual income had positive and significant relationship with adoption behaviour of both the categories i.e. beneficiaries and non beneficiaries. Social participation and family type had negative and significant relationship with extent of adoption.

Keywords: Seed Production Technology, Krishi Vigyan Kendras , Adoption behaviour

INTRODUCTION

India remains mainly an agrarian economy in spite of intensive planned efforts to urbanization and industrialization. In the agrarian economy, agriculture exports have shown great significance and foreign trade has depicted dynamic character. The word seed or seeds may be defined as all propagating materials used in any kind of cultivation. The seed is considered as most precious input in agriculture. The quality seed availability at desired time determines the sustainable crop productivity growth. It has been observed that presently about 80- 85% of the seeds used by the farmers is their own farm produced seeds and which is managed and conserved by the farmers from his own produce for future use.. Due to poor quality of seed with low germination capacity of seed the crop growth is affected adversely which eventually reduces the productivity of the crop. Despite implementation of the organized seed program since the mid 60s, the seed replacement rate has touched the level of 15 per cent only. In view of the above facts it has been

realized that the availability of genetically good quality of seed materials are of great importance to improve the quality of farm saved seed.

Government of India initiated various policy measures which contributed in the growth of seed industry in India. From a few units there has been a tremendous rise (more than 200 seed companies in private sector) in number of seed companies and corporations. Quality seed production was recorded 346.36 lakh quintals and 353.62 lakh quintals in 2012-13 and 2013-14, respectively .In order to accelerate the seed replacement rate of desired genetic seed materials Krishi Vigyan Kendras through its participatory Seed Village Programme was implemented by Krishi Vigyan Kendras of M.P. in the year 2006-07 and continued till 2011-12. Under this programme about twenty villages were covered. The seeds of high yielding varieties along with recommended seed production technologies were demonstrated at farmers' field. Besides this capacity building programmes were also conducted at critical stages of the crops. Since regular follow up and evaluation is a necessary concomitant of such

*Corresponding Author

programme to assess the impact and suggest strategy for further growth and expansion of the programme the present investigation entitled “The impact of participatory seed village Programme on adoption behaviour of wheat seed producers in Rewa district (M.P.)” was under taken to assess the impact of the programme on adoption behaviour of seed producers

Review of Literature

Singh (1983) studied 300 adopters and 150 non adopter's farmers of Sehore district to find out the impact of modern technology on production employment and income in agriculture. His study revealed that gross income per hectare for the farm business as a whole was 98% more on adopter farms than the non adopters, similarly, the intensity of cropping was higher (164.34%) among adopter farms than the non-adopter farms(132.59%) respectively

Dhillon and Kumar (2004) reported that maximum number of respondent (44.17%) were observed to have medium extent of adoption in terms of area under the crop, 26.67 per cent and 19.17 per cent were found to have low and high extent of adoption, respectively. Level of adoption was medium for nearly half of the respondents (49.17%) whereas 32.50 per cent and 18.33 per cent farmers had and high level of adoption, respectively

Manoj and Sharma (2004) stated that majority of small respondents had medium level of adoption about improved practices of gram cultivation, whereas majority of the marginal farmers had low level of adoption as compared to big and small farmers.

Singh *et al.* (2005): observed that the adoption of recommended varieties of wheat viz., Sonalika, K-65, C-306. Mukta were found to the level of 41.33 per cent of the total sample farmers, followed by paddy and gram.

METHOD AND MATERIAL

Ex-post-facto research design was used in the present investigation. It is a systematic inquiry in which researcher does not have direct control of independent variables because their manifestation have already occurred and they cannot be manipulated. The present study was carried out using ex-post facto research design during 2015-16 in the purposively selected Rewa district of M.P. as the participatory Seed Village Programme. was implemented in this district. The sample population consisted 120 (60 beneficiaries and 60 non beneficiaries) were selected from 10 villages of Rewa block of Rewa district. The statistical tools were used for determining the extent of knowledge on three points continuum as full, partial, and non-adoption. The independent variables represented

personal, socio-economic and psychological characteristics of the respondents and were empirically measured by procedures evolved by earlier researchers. A structured and pre-tested interview schedule was used to collect data from the respondents by personal interview method.

Co-Efficient of Correlation ('r' Value)

Co-efficient of correlation was computed to find out the relationship between the variables. The correlation coefficient gives two kinds of information (i) degree of the relationship and (ii) direction of the relationship (whether positive or negative) between any two variables.

For computing the correlation coefficient 'r' the Karl Pearson method was used

Z Test

To test the hypothesis z test was used because of the large sample size. This test was used to find out if there were any significance difference between beneficiaries and non-beneficiaries as regarding their knowledge and adoption of seed production technology.

RESULT

Extent of adoption regarding seed production technology of wheat among beneficiaries and non beneficiaries

Adoption is a decision made by an individual or group to use an innovation in a continuous manner. Adoption is regarded by Rogers (1995) as a decision to make full use of an innovation or technology as the best course of action available. Adoption of innovation is the decision of an individual or group to use or apply an innovation. Modern agriculture requires an innovative technology which systematically adopts scientific knowledge to farming. In the present study the adoption refers to the actual implementation or use of the location specific seed production technologies of wheat disseminated to them in training programmes through various activities of seed village programme conducted by Krishi Vigyan Kendra Rewa (M.P.). Hence in the present study a scale as in case of was used consisting the recommended components of seed production technology of wheat crop. While administering the final adoption test of respondents score '3' was assigned for a complete adoption answer "2" for partial adoption and score '0' (zero) was assigned for non adoption for each practice. The summation of scores of all selected components of seed production technologies of wheat for a respondent was taken as his extent of adoption level. Based on the extent of adoption scores obtained (maximum and minimum) on the scale, respondents were classified into three following categories

S. No.	Level of adoption	Score range
1.	Low	Up to 33
2.	Medium	34-60
3.	High	Above60

Table 1. Overall adoption regarding seed production technology of wheat among beneficiaries and non beneficiaries

S. No	Categories of Level of adoption	Beneficiaries		Non- Beneficiaries	
		Frequency	Percentage	Frequency	Percentage
1	Low (Up to 33)	10	16.66	28	46.66
2	Medium (34-60)	13	21.67	19	31.67
3	High (above 60)	37	61.66	13	21.67
	Total	60	100.00	60	100

Mean adoption score of beneficiaries 57.9 & Mean adoption score of non beneficiaries 44.3

S.d₁=12.60 S.d₂=9.15

Z test= 2.97

Tabulated value at 5%=1.96

It is clear from the Table 3 that of out of 60 beneficiaries 61.66 per cent had high extent of adoption followed by 21.67 percent medium and 16.66 percent low adoption. In case of non-beneficiaries 48.66 per cent respondents were having low, 31.67 percent medium and 21.67 per cent had high extent of adoption. Thus, it may be inferred from the above observation that higher percentage of beneficiaries were found to have had higher extent of adoption as compared to non-beneficiaries.

In order to find out if there was a significant difference between beneficiaries and non-beneficiaries as regards to their overall extent of adoption, the null hypothesis (ho) i.e. there was no significant difference between beneficiaries and non-

beneficiaries as regards their extent of adoption of seed production technology was tested. The calculated value of Z test was found to be 2.97 which was greater than the table value of z (1.96) at 5 % level of significance. Hence, the null hypothesis (Ho) was rejected and the alternate hypothesis was accepted.

It may be concluded that there was significant difference between beneficiaries and non-beneficiaries as regards to extent of adoption of seed production technology. The beneficiaries had greater extent of adoption than non-beneficiaries. The findings are in the conformity of the findings of Manoj and Sharma (2004), Bussain *et al.*, (2009) and Burman *et al.* (2010).

Relationship between independent variables and adoption behavior of seed producers

Table 2. Correlation between independent variables and adoption behavior of seed producers

S.N.	Independent Variable	Beneficiaries	Non- beneficiaries
1	Age	0.076 ^{NS}	-0.028 ^{NS}
2	Education	0.24 [*]	0.21 [*]
3	Land holding	0.29 ^{**}	0.28 ^{**}
4	Social participation	-0.28 ^{**}	-0.37 ^{**}
5	Size of family	-0.36 ^{**}	-0.29 ^{**}
6	Annual income	0.31 ^{**}	0.31 ^{**}
7	Marketing orientation	0.36 ^{**}	0.44 [*]
8	Attitude towards	0.274 ^{**}	0.315 ^{**}
9	Risk orientation	0.35 ^{**}	0.38 ^{**}
10	Innovativeness	0.46 ^{**}	0.360 ^{**}
11	Mass media exposure	0.29 ^{**}	0.34 [*]

12	Extension participation	0.33**	0.40**
13	Knowledge	0.39**	0.42**

NS= Non-significant

** = Significant at 1%

*= Significant at 5%

Correlation coefficients between independent variables and extent of adoption as dependent variable are presented in Table 2. The table elucidated that knowledge, risk orientation, marketing orientation, attitude towards agricultural technology, extension participation, mass media exposure, innovativeness, education, land holding and annual income had positive and significant relationship with adoption behaviour of both the categories i.e. beneficiaries and non beneficiaries. Social participation and family type had negative and significant relationship with extent of adoption, while age had negative and non-significant relationship. These findings of the present investigation are in the conformity with the findings of Shakya (2008) and Maraddi (2009).

CONCLUSION

It may be concluded from the above findings that the adoption behavior of beneficiaries about seed production technology was significantly higher than non-beneficiaries and the non-beneficiaries were found to be ignorant about some important aspects of technological practices. The study has brought into focus some attributes of the farmers viz. knowledge, risk orientation, marketing orientation, attitude towards agricultural technology, extension participation, mass media exposure, innovativeness, education, land holding and annual income which influenced positively the adoption of -seed based technology programme. On the light of the results of

this research work it may be recommended that the modal farms, demonstrations plots and seed farms are introduced in the community development blocks to serve the farmers as key centers of technological information and in the process of diffusion of innovations.

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