ADOPTION OF IMPROVED CLUSTER BEAN CULTIVATION PRACTICES BY THE FARMERS

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ABSTRACT

The present study was conducted in two tehsils namely Chomu and Ajmer of Jaipur district of Rajasthan. These tehsils were selected on the basis of maximum area under cultivation of cluster bean. Five villaegs were selected from each tehsil, thus total ten villages were selected on the basis of maximum area under cluster bean cultivation. 60 cluster bean growers were selected from each tehsil then 120 cluster bean growers were selected. Data were collected by personal interview technique through suitable structured schedule. The finding of the study indicated that farmers had adequate adoption regarding recommended time growing, using recommended seed rate maintaining recommended spacing, irrigation management whereas, they had less adoption regarding using recommended insectiondes for insect pest control, recommended chemicals for disease control.

INTRODUCTION

Adoption is a mental process. In the modern era new things are being invented by agricultural scientists but all the innovations are not being adopted by many of the members of social system. Adoption of an innovation depends on many factors viz., awareness and knowledge of adopters, innovativeness, characteristics of an innovations etc. It is generally assumed that if an individual has more knowledge about different aspects of technologies, he is likely to adopt the innovations with higher speeds. Several transfer of technology (TOT) programmes are in operation to help farmers to adopt the new technologies in our country, but there is a wide gap between the technology available at the research farm and its adoption. Keeping this in mind an attempt has been made to know the extent of adoption of improved cluster bean production technology. The results are presented in this section of report.

RESEARCH METHODOLOGY

The present study was conducted in the selected Jaipur district of Rajasthan. There are total thirteen tehsils in Jaipur district of Rajasthan, out of which, two tehsils namely Choumu and Amer were selected on the basis of maximum area under cultivation of cluster bean. Further, a comprehensive list of all the major cluster bean growing villages was prepared in consultation with the personnel of Revenue and Agriculture Department from the identified tehsils. Five villages from each selected tehsils were taken on the basis of maximum area under cluster bean cultivation. Thus, total ten villages were selected for the present investigation. For selection of respondents, comprehensive list of cluster bean growers was prepared with the help of village patwari and Agriculture Supervisor of respective village. Out of the list so prepared, cluster bean growers were selected proportionately from each identified village from selected tehsil (60 cluster bean growers were selected from each tehsil). Thus, in all 120 farmers were included in the sample of study. Data were collected by personnel interview technique through suitable structured schedule. Thereafter, data were tabulated, analysed and inferences were drawn in light of the objective.

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RESULTS AND DISCUSSION

Distribution of respondents on the basis of their level of adoption

To get an overall view of adoption level, the respondents were divided into three groups viz., (i) low adoption (31), (ii) medium adoption group (32 to 39) and (ii) high adoption group (> 39). The groups were based on the calculated mean and standard deviation of the adoption scores obtained by the respondents. The results of the same are presented in Table 1.

Table 1. Distribution of respondents on the basis of their level of adoption of improved cluster bean production technology

n=120

S. No.	Category	f	%
1.	Low (≤ 31)	38	31.67
2.	Medium (32 to 39)	62	51.67
3.	High (> 39)	20	16.66
	Total	**120**	**100.00**

f = Frequency, % = Per cent, Mean=35, S.D. =4

Data presented in Table 1 depict that majority of the respondents (51.67 per cent) were in the medium adoption group, whereas, 31.67 per cent respondents were in low adoption group and remaining 16.66 per cent cluster bean growers were observed in the high level of adoption about cluster bean production technology.

These findings are similar to the findings of Bareth (1991), who reported that majority (69.27 per cent) of gram growers were in medium adoption group and 17.19 per cent respondents in the high adoption group, while only 13.54 per cent were in the group of poor adopters.

Aspect wise extent of adoption of cluster bean production technology

Individual aspect-wise extent of adoption of cluster bean growers was worked out. For this mean per cent score were calculated. The results of the same have been presented in Table 2.

Table 2 depicts that the adoption of recommended time of sowing was ranked first by the respondents with MPS 91.45 likewise, using recommended seed rate with MPS 87.49, maintaining recommended spacing with MPS 81.24, irrigation management with MPS 71.25, recommended depth of sowing with MPS 71.24 and interculture operation with MPS 64.37, were ranked second, third, fourth, fifth and sixth respectively in adoption by the cluster bean growers.

Table 2. Extent of adoption of production practices by cluster bean growers

S. No.	Production Practices	MPS	Rank
1.	Adoption of high yielding varieties	49.79	XII
2.	Recommended soil treatment	43.95	XIV
3.	Recommended time of sowing	91.45	I
4.	Adoption of useful method of sowing	47.91	XIII
5.	Using recommended seed rate	87.49	II
6.	Recommended seed treatment	53.12	X
7.	Inoculation of seed with *Rhizobium* culture	55.83	IX
8.	Maintaining recommended spacing	81.24	III
9.	Recommended depth of sowing	71.24	V
10.	Applying FYM as per recommended by scientists	49.80	XI
11.	Using nitrogenous fertilizers	63.33	VII
12.	Applying phosphatic fertilizers	62.91	VIII
13.	Intercultural operations	64.37	VI
14.	Irrigation management	71.25	IV
15.	Using recommended chemicals for disease control	39.16	XVI
16.	Using recommended insecticides for insect pest control	35.83	XVII
17.	Recommended method and time of harvesting	43.53	XV

MPS = Mean per cent score

A considerable high adoption was found in these practices because of these practices do not require much specialized skill by the farmers and may be due to the fact that these practices needs to be done before and after sowing the crop. As a result of this maximum number of respondents have followed these practices in their field. The table further reveals that the extent of the adoption about using nitrogenous fertilizer and applying phosphatic fertilizer was 63.33 MPS and 62.91 MPS which were ranked seventh and eighth by the respondents respectively.

The table 2 indicates that cluster bean growers had less adoption regarding using recommended insecticides for insect pest control with MPS 35.83, using recommended chemicals for disease control with MPS 39.16, recommended method and time of harvesting with MPS 43.53, recommended soil treatment with MPS 43.95 and adoption of useful method of sowing with MPS 47.91 and they were ranked seventeenth, sixteenth, fifteenth, fourteenth and thirteenth respectively.

It was observed that it may be due to lack of knowledge about recommended insecticides and pesticides for insect pest and disease control, lack of knowledge of soil treatment chemicals, high cost of insecticides and pesticides, lack of knowledge about high yielding varieties and high cost of seed material may cause less adoption of these recommended practices by the cluster bean growers.

The present findings are in line with the findings of Singh (1999) who revealed that farmers had very poor adoption of improved practices of pigeon pea i.e., inoculation of seed with Rhizobium culture, seed treatment and soil treatment, about pigeon pea production technology.

CONCLUSION

It was concluded from the study that 51.67 per cent of the total respondents adopted the cluster bean production technology to a medium level whereas, 31.67 and 16.66 per cent of total respondents adopted cluster production technology to low and high level respectively.

The finding of the study indicated that farmers had adequate adoption regarding recommended time of sowing, using recommended seed rate, maintaining recommended spacing, irrigation management where as they had less adoption regarding using recommended insecticides for insect pest control, recommended chemicals for disease control, recommended method and time of harvesting recommended soil treatment and high yielding varieties.

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