

Factors affecting Knowledge of Farmers about Recommended Production Technologies of Clusterbean Cultivation in Arid Area of Rajasthan

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ABSTRACT

The study was conducted in 19 villages of Bikaner and Churu districts. With the sample size of 316 cultivating clusterbean crop since last 5 years. Results indicated that majority of respondents had medium knowledge. Out of fifteen independent variables, two variable i.e. credit behaviour and economic motivation were found non-significant association and remaining thirteen were found significantly associated with knowledge level of the farmers regarding recommended production technologies of clusterbean cultivation likewise age, education, size of land holding, social participation, farm assets, credit behaviour, achievement motivation, risk orientation, training received, extension participation, progressiveness, source of information utilized, socio-economic status and extent of adoption.

Key words: Clusterbean; Credit behaviour; Achievement motivation; Risk orientation;

Guar grown well under wide range of soils, guar fits well into a crop rotating programmes. It is a deep tap rooted legumes and is an excellent soil improving crop. It works well in rotation with pearl millet a major staple cereals in its growing area. Increased yield can be expected from crops following guar because of increased soil fertility. When harvested from seed, guar returns considerable dry organic matter to the soil surface. Arid zone is endowed with harsh adverse climatic conditions with very limited irrigated water, erratic rains, fragile eco-system etc. under these situations farming is a challenging task.

The average productivity of the crop was 272 kg per hectare in Rajasthan, 881 in Haryana, 522 in Gujarat and 748 in Punjab respectively, whereas on all India basis it was 350 kg per hectare (*Souvenir, 2008*).

The per unit production of clusterbean mainly depends upon the technical know-how and extent of its use by the clusterbean growers. Therefore, it was thought opportune to probe into the level of knowledge of the clusterbean growers about the recommended clusterbean production technology. Keeping this background in view, the present research study

was planned during the year 2008 with the specific objectives as:

1. To measure knowledge level of clusterbean growers about recommended production technologies of clusterbean.
2. To ascertain association between knowledge level of the farmers about recommended production technologies of clusterbean and selected independent variables.

METHODOLOGY

Rajasthan state comprises ten agro-climatic zones out of these ten agro-climatic zone the Zone-Ic was selected purposely for the study. As this zone is comprised of three districts, out of these, Bikaner and Churu districts were selected randomly. From the selected districts 50.00 per cent panchayat samities were selected randomly (four panchayat samities were selected out of eight panchayat samities). Ten per cent gram panchayats were selected randomly from selected panchayat samities and hence, 19 gram panchayats were selected. One village was selected randomly from each gram panchayat. A list of all the farmers who

were growing clusterbean crop since last 5 years was prepared for each selected village. From the list of farmers so prepared 40 per cent respondents were selected randomly making a total sample of 316 respondents for the study purpose.

RESULTS AND DISCUSSION

Knowledge level of the clusterbean growers about recommended production technologies : The collected data on farmer's knowledge regarding recommended production technologies of clusterbean cultivation are presented in Table -1.

Table 1. Distribution of farmers according their knowledge level about recommended production technologies of clusterbean cultivation N = 316

Knowledge level	No.	%
Low (score below 25.31)	43	13.61
Medium (score from 25.31 to 41.93)	212	67.09
High (score above 41.93)	61	19.30
Total	316	100.00

Mean 33.62

SD 8.31

Table 1 depict that 67.09 per cent respondents possessed medium knowledge level regarding recommended production technology of clusterbean. Besides that 13.61 per cent and 19.30 per cent respondents possessed low and high knowledge level, respectively. It may be concluded that majority of the respondents had medium knowledge level regarding recommended production technology of clusterbean cultivation. This might be because of continued cultivation experience and exposure to mass media.

The findings of the study are in line with the findings of Chaudhary (1999), Rathore and Panjabi (2001), Shinde (2002) and Geengar (2006).

It is visualized from the data presented in Table 2, the positive and highly significant association was found between knowledge level of cultivators about recommended production technology of clusterbean cultivation and their age, education, size of land holding, social participation, farm assets, training received, extension participation, progressiveness, source of information utilized, achievement motivation, risk orientation, socio-economic status and extent of adoption, whereas, non-significant association was found between credit behaviour and economic motivation. In accordance with the inference about by Yadav (2002), Rathore et al. (2003), and Geenger(2006).

Table 2. Association between knowledge level of the farmers about recommended production technologies of clusterbean and selected independent variables N = 316

S.No.	Variables	Correlation coefficient
1.	Age	0.1943**
2.	Education	0.2724**
3.	Size of land holding	0.2434**
4.	Social participation	0.2034**
5.	Farm assets	0.3515**
6.	Credit behaviour	0.0573 ^{NS}
7.	Achievement motivation	0.2384**
8.	Risk orientation	0.2055**
9.	Training received	0.1553**
10.	Extension participation	0.2885**
11.	Economic motivation	0.1012 ^{NS}
12.	Progressiveness	0.1813**
13.	Source of information utilized	0.2478**
14.	Socio-economic status	0.4342**
15.	Extent of adoption	0.3812**

** - Significant at 1 per cent level of significance; NS - Non-significant

Table 3. Multiple regression analysis between knowledge level of clusterbean cultivators with independent variables N=316

S. No.	Independent variables	Byx	SE byx	"t" calculated
X1	Age	2.1971	0.6060	3.6556***
X2	Education	1.1708	0.3334	3.5116***
X3	Size of land holding	1.7578	0.4776	5.3056***
X4	Social participation	1.3201	0.2969	3.3260***
X5	Farm assets	0.4470	0.1072	4.4168***
X6	Credit behaviour	0.6414	0.9825	0.6528 ^{NS}
X7	Achievement motivation	1.6947	0.3895	4.3510***
X8	Risk orientation	0.1596	0.0429	3.7202***
X9	Training received	1.5225	0.4066	3.7445***
X10	Extension participation	0.2902	0.0543	5.3444***
X11	Economic motivation	0.1956	0.9085	0.2152 ^{NS}
X12	Progressiveness	1.0011	0.3065	3.2662***
X13	Source of information utilized	0.4919	0.1505	3.2668***
X14	Socio economic status	0.1594	0.0187	8.5240***
X15	Extent of adoption	0.3462	0.0474	7.3038***

$R^2 = 0.8946$ F value = 158.67 a value -60.8987

*** = Significant at 1 per cent level of significance;

NS = Non-significant

The R^2 value (0.8946) in table 3 indicates that fifteen independent variables (X1—— X15) jointly contributed towards 89.46 per cent of the variation in the level of

knowledge of clusterbean cultivators about recommended production technology of clusterbean.

CONCLUSION

It can be concluded that Majority of the cultivators had medium level of knowledge about recommended production technology of clusterbean. Out of Fifteen independent variables, Thirteen variables were found significantly associated with their age, education, size

of land holding, social participation, farm assets, credit behaviour, achievement motivation, risk orientation, training received, extension participation, progressiveness, source of information utilized, socio-economic status and extent of adoption. Whereas remaining two independent variables i.e. credit behaviour and economic motivation were non-significantly associated with the knowledge level of the farmers about recommended production technologies of clusterbean cultivation.

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