

RESEARCH NOTE

Technological Knowledge of Farmers about the Use of Bio-fertilizers in Kullu, Himachal Pradesh

R.S. Suman¹

1. Scientist, IARI Regional Station Katrain (Kullu Valley) H.P. –175129

Correspondence author e-mail: sumanrs@hotmail.com

ABSTRACT

The study was conducted in Kullu District of Himachal Pradesh. Findings of study revealed that 35 per cent of the respondents showed satisfactory knowledge level about the use of bio-fertilizers. It was further seen that about 50 per cent of them showed poor knowledge and less than this number of respondents were showing a good knowledge of bio-fertilizers use. Education, annual income, socio-economic status and scientific orientation were found negative and related at 0.05 per cent. On the other hand, cosmopolitaness was found to be non-significant. Knowledge about pest management was ranked first with mean score 19.21 followed by use of organic manures and crop residues with mean score 14.52. The use of vermicompost in the field was ranked sixth with mean score 5.98.

Key words: *Technological knowledge; Bio-fertilizers; Organic farming;*

The bio-fertilizers is alternative to chemical fertilizer in improvement of soil for sustainable crop production. Bio-fertilizers are assuming greater significance as complement or supplement to chemical fertilizers because of significance change in crop production system, reasonable cost and environment soundness. With the view to popularizing bio-fertilizers, Govt. of India has established a National Bio-fertilizers Development Centre at Ghaziabad in Uttar Pradesh, Regional Bio-fertilizers Development Centre (RBDC) at Bangalore, Bhubaneswar, Imphal, Hisar, Jodhpur and Nagpur. The main aim of this study was to find out the level of technological knowledge of bio-fertilizers, which is essential for increasing the crop production.

METHODOLOGY

The study was carried out in Kullu District (H.P.). 120 farmers were selected from 8 villages by random sampling method. To measure that technological knowledge of farmers about the use of bio-fertilizers, a suitable questionnaire was developed and the data were collected by personally interviewing the selected respondents. Two sets of variables namely, independent variables and dependent variables were selected. The independent variables included personal and socio-economic characteristics. The dependent variable

included was technological knowledge possessed by the farmers regarding the bio-fertilizers.

RESULTS AND DISCUSSION

The findings pertaining to extent of knowledge of the respondents on use of bio-fertilizers are presented in Table 1. It is revealed that 42 (35.0%) respondents showed satisfactory knowledge level about the use of bio-fertilizers. It is further seen that about 60 (50.0%) respondents showed poor knowledge and a small respondents (15.0%) were showing good knowledge of bio-fertilizers use.

Table 1. Distribution of respondents according to their technological knowledge level (N = 120)

S.No.	Technological knowledge level	No.	%
1.	Low (Poor knowledge)	60	50.0
2.	Medium (Satisfactory knowledge)	42	35.0
3.	High (Good knowledge)	18	15.0
	Total	90	100.0

Use of bio-fertilizers was known to most farmers but the technological knowledge was not of good level but was satisfactory only. It also indicated that poor knowledge was the outstanding factor in a considerable number of farmers. Based on three observations, it can be said that satisfactory knowledge and the poor

knowledge of majority of the farmers may be the reason for not adopting the bio-fertilizers in their farming. Moderate level of knowledge about bio-fertilizers was stated by *Bhople and Borker (2002)* and *Bodke (2003)*.

The results presented in Table 2 revealed that the variables viz., age and land holding were positively and significantly related at 0.01% level of probability about the use of bio-fertilizers, education, annual income, socio-economic status and scientific orientation were found negatively and significantly at 0.05% level of probability with technological knowledge about the use of bio-fertilizers. On the other hand, the correlation coefficient of cosmopolitanism with technological knowledge was found to be non-significant. Similar findings were reported by *Borker (2000)* and *Bodke (2003)*.

Table 2. Relationship of selected characteristics of respondents with technological knowledge

S. No.	Characteristics	Coefficient correlation
1	Age	0.175*
2	Education	-0.457**
3	Land holding	0.401*
4	Annual Income	-0.392**
5	Socio-economic status	0.422**
6	Scientific orientation	-0.284**
7	Cosmopolitanism	-0.215 ^{NS}

* and ** indicate significance of value at P = 0.01 and 0.05, respectively, NS = Non significant

Table 3 shows that knowledge about pest management was ranked first with mean score 19.21 followed by use of organic manures and crop residues with mean score 14.52. Use of bio-fertilizers was found ranked third and weed management was ranked fourth with mean score 12.56 and 9.25 respectively. Knowledge about concept of organic farming was ranked fifth with mean score 6.87. The use of vermicompost in the field was ranked sixth with mean score 5.98.

Table 3. Distribution of farmers regarding organic farming practices (N = 120)

Farm practices	No.	%	Mean	Rank
<i>Pest-Management</i>				
Low (0-8)	66	55.00	19.21	I
Medium (9-16)	36	30.00		
High (17-24)	18	15.00		
<i>Use of organic manures and crop residues</i>				
Low (0-7)	54	45.00	14.52	II
Medium (8-14)	42	35.00		
High (15-21)	24	20.00		
<i>Use of Bio-fertilizer</i>				
Low (0-5)	72	60.00	12.56	III
Medium (6-12)	36	30.00		
High (13-18)	12	12.00		
<i>Weed Management</i>				
Low (0-6)	24	20.00	9.25	IV
Medium (7-12)	60	50.00		
High (13-18)	36	30.00		
<i>Knowledge about organic farming</i>				
Low (0-5)	54	45.00	6.87	V
Medium (5-10)	48	40.00		
High (10-15)	18	15.00		
<i>Use of vermicompost</i>				
Low (0-3)	30	25.00	5.98	VI
Medium (4-6)	60	50.00		
High (7-9)	30	25.00		

CONCLUSION

From the findings of the present study, it can be concluded that their technological knowledge about the use of bio-fertilizers was satisfactory but this number can be increased to higher level of knowledge. Knowledge about pest management was ranked first with mean score 19.21 followed by use of organic manures and crop residues with mean score 14.52. The use of vermicompost in the field was ranked sixth with mean score 5.98.

Paper received on : November 29, 2011

Accepted on : February 11, 2012

REFERENCES

1. Borker, R.D. (2000). Adoption behaviour of farmers in respect of bio-fertilizer. M.Sc. (Ag.) Thesis (unpub.) Dr. Panjabrao Deshmukh Krishi Vidyaapeeth, Akola (M.S.).
2. Bhople, R.S. and Borker, R.D. (2002). Bio-fertilizer farmers attitude and adoption. *Agric. Ext. Review*, **14** (2): 18-21.
3. Bodke, H.D. (2003). Awareness and adoption of bio-fertilizer by farmers. M.Sc. (Ag.) Thesis, Dr. Panjabrao Deshmukh Krishi Vidyaapeeth, Akola (M.S.).
