

## KNOWLEDGE AND ATTITUDE OF FARMERS TOWARDS VERMI COMPOST TECHNOLOGY

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### ABSTRACT

A study was conducted with 150 randomly selected farmers under Krishi Vigyan Kendra, Danta in its operational area of Barmer Panchayat Samiti of Barmer district. The study revealed that the majority of the farmers (84%) had moderate level of knowledge and favourable attitude about advantage of vermi compost technology. The major constraints were the non-availability of worms in nearby market, lack of knowledge about preparation of vermi-compost and shooting temperature in summer months. Ameliorating these constraints need organized efforts from the stakeholders viz. the farmers, government (mostly local administration and research institution) and grass root level non-government organization. Therefore, there is greater need for creating awareness and ensuring active participation.

### INTRODUCTION

Agriculture production depends on the availability and use of quality and quantity of farm inputs. The chemical fertilizer is supposed to be an essential input for boosting up agriculture production. It had played significant role in a increasing agricultural production in country. However the continuous use of chemical fertilizers has deteriorated the soil fertility, destroyed soil microbial activity and disturbed environmental balance and ecological soundness. Vermicompost is the potential alternative to chemical fertilizer in improvement of soil fertility for sustainable crop production. Vermicompost is assuming greater significance as complement or supplement to chemical fertilizers because of significant change in crop production system, reasonable cost and environmental soundness.

It is helpful for proliferation and survival of beneficial micro-organisms in the soil. They are affordable to farmers because of low costs and economically they are very significant in making available plant nutrient like nitrogen and phosphorus (Pandey and Pandey, 1995). For accelerating the use of vermicompost, it is essential to catch the attention of farmers towards them and encourage them to use it in crop production. For achieving this goal, it is essential to assess the existing level of knowledge and attitude towards vermicompost and actual use

and the constraints encountered by the farmers while using vermicompost technology. The present study was designed with the following specific objectives:

- To ascertain the level of knowledge and attitude of farmers towards vermi-compost technology.
- To identify the constraints faced by the farmers in adoption of vermi-compost technology

### RESEARCH METHODOLOGY

The investigation was carried out in Barmer Panchayat Samiti in Barmer district of Western Rajasthan. It was selected purposely for this study as the Krishi Vigyan Kendra, Danta, Barmer is disseminating knowledge about vermicompost technology through lectures, demonstrations and exhibitions and is promoting the adoption of vermi compost technology in crop production system at farmers' level. Probability proportionate random sampling techniques was used to draw the sample. For the study, total 150 respondents were selected from five randomly selected villages of the Barmer Panchayat Samiti of Barmer district. All these farmers constituted the sample of respondents for the study. The survey was undertaken to collect the data from the selected farmers through face to face interview with the help of an interview schedule. The data obtained were analyzed for mean, percentage and standard

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error as per standard procedure (Snedecor and Cochran 1980).

## RESULTS AND DISCUSSION

### Measurement of variables

#### Knowledge and attitude of farmers

**Knowledge-** Knowledge of the respondent’s vermi-compost technology was measured by asking simple questions. Total number of knowledge items were 12, each of them was scored zero and one for ‘no’ knowledge and ‘complete’ knowledge, respectively on the part of the respondents. The knowledge for an individual respondent was arrived at by using the following formula:

$$\text{Knowledge} = \frac{\text{Score obtained} \times 100}{12}$$

#### Attitude towards the vermi-compost

To measure the level of attitude of respondents towards vermi-compost, questions were prepared on the basis of available literature, discussion with experts in the related field and personal experience. The score were assigned as 5, 4, 3, 2, and 1 for strongly agree, agree, neutral, disagree and strongly disagree response choice respectively. In order to arrive at the composite attitude score, the scores obtained by each respondents for every item were summed up and on the basis of their attitude scores, the respondents were classified into three groups namely; least favourable, favourable and most favourable.

The awareness and knowledge possessed by the farmers given in Table 1 reveals that majority of the farmers (84%) were having moderate level of knowledge about vermi-compost and their associated practices. About one tenth of them were adequately equipped with the knowledge about vermi-compost production and appeared in high knowledge category. Very meager percentage of farmers were in low knowledge category with poor knowledge. The farmers were therefore, mediocre in knowledge about vermi-compost technology and this indicates a scope for improvement. Similar were the observation of Chothe (1999) with regard to knowledge of farmers about bio-fertilizers.

In the respect of attitude, it is evident from the table-1 that majority of the farmers (83.33%) were

found to be favourable in their feelings about vermi-compost technology. Nearly one-fourth of the farmers (24.67%) were found to be favourably disposed towards vermi compost. Only 12 percent farmers were observed to be unfavourable in their reaction about vermi compost. The farmers in general were thus favourable in their feelings towards vermi-compost production. It might be due to lack of detailed knowledge about vermi compost technology. The persuasion through regular guidance, trainings and demonstration seem to be essential.

**Table 1: Distribution of farmers according to their knowledge and attitude towards vermi-compost technology: (n=150)**

S.No.	Variable and Category	Farmers	
		No.	Per cent
1.	Knowledge about vermi-compost production		
	Low	08	5.33
	Medium	126	84.00
	High	16	10.67
2.	Attitude towards vermi compost technology		
	Least favourable	18	12.00
	Favourable	95	83.33
	Most Favourable	37	24.67

A fair degree of knowledge and a favourable attitude towards vermi-compost often leads to the betterment of the farmers. Keeping this in view, an attempt was made to understand the association among knowledge of respondents on vermi-compost adoption, their attitude towards the vermi-compost technology. Chi square analysis was carried out to know the association among these variables (Table 2). It was observed that knowledge and attitude were associated very strongly. This shows that fair amount of knowledge of the respondents. Further favourable attitude leads to active participation by the farmers by adopting such practices which improve their living conditions. This was brought out by strong association between attitude and knowledge as shown by the Chi-Square value ( $\chi^2=9.12^*$ ).

**Table 2: Association between knowledge and attitude of farmers**

Variables	X <sup>2</sup> values	
	Knowledge	Attitude
Knowledge	-	9.12*
Attitude	-	

\*Significant at 1 per cent level.

### Constraints encountered by farmers in the adoption of vermi-compost

The constraints encountered by the farmers were collected and the same have been presented in table 3. It is apparent from the table 3 that 63.33 per-

cent of the farmers stated the problem of non-availability of worms at nearby places. Another important constraint reported by 53.33 per cent farmers was lack of knowledge about methods & preparation of vermi-compost. Most of the farmers (50%) perceived that response of vermicompost was not uniform or immediate. Next constraint expressed were shooting temperature in summer especially in the month of April to June of the year as reported by 40 per cent of the respondents. The other constraints like lack of reinforcement, lack of interest and lack of finance was reported by 27.33, 23.33 and 20.00 percent respectively. Similar findings were observed by Ranganatha *et al.* (2001), Bhole and Borkar (2002) and Nirmala *et al.* (2002).

**Table 3: Constraints faced by farmers in adoption of vermi-compost technology**

S.No.	Problems	Nos.	Per cent	Rank
1.	Non-availability of Worms in near by market	95	63.33	I
2.	Lack of knowledge/guidance about preparation of vermi-compost	80	53.33	II
3.	Response of vermi-compost not uniform or immediate	75	50.00	III
4.	Shooting temperature especially in summer months(April – June)	60	40.00	IV
5.	Lack of reinforcement	41	27.33	V
6.	Lack of interest	35	23.33	VI
7.	Lack of finance	30	20.00	VII
8.	Delayed land preparation	27	18.00	VIII
9.	Venue of training is at far off places	18	12.00	IX

## CONCLUSION

The study has indicated that the farmers were mediocre in knowledge and favourable in attitude about vermi-compost. Important constraints in adoption of vermi-compost faced by farmers were: non-availability of worms in near by market, lack of knowledge/ guidance about preparation of vermi-compost and response of vermi-compost not uniform or immediate. The positive and significant relationship between the knowledge and attitude revealed the fact that when farmers had good knowledge with positive attitude towards the vermi-compost; it resulted in better level of adoption. Extension efforts should be directed to increase the adoption level of farmers in respect of organic farming practice.

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