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## Suggestion overcome the constraints faced by trainees in adoption of vermicompost technology

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### Abstract

Vermicompost technology is emerging as a simple, easily adoptable and effective biotechnology for recycling of all organic wastes in all over India. The present study was conducted in Panagar block of Jabalpur district in Mahakoshal region of Madhya Pradesh. Krishi Vigyan Kendra of Jabalpur district was selected purposively on the basis of highest number of training imparted by the Krishi Vigyan Kendra. The present study revealed that, about 70.68 per cent trainees face the problem of availability of earthworms, whereas 29.31 percent trainees reported lack of proper communication regarding training schedule. Some useful suggestions were given by trainees. Majority (77.88%) of trainees suggested that species of earthworm should be made available and more emphasis should be given on practical aspects and problems related to vermicompost technology.

**Keywords:** vermicompost, constraints, adoption, suggestion

### 1. Introduction

In India, there are 98 million farm holdings, which are likely to increase further because of division of family. Of these total farm holdings, 58 per cent are marginal, 24 per cent are large and 18 per cent are small. Majority of marginal and small farmers are at lower level of literacy. In a rough estimate, India has more than one lakh paid agricultural extension personnel to cater the needs of farmers in agricultural production. On the other hand, we have 30,000 agricultural scientists who are directly or indirectly associated or engaged in the dissemination of innovations among the farming community. In spite of these facts, about 30 to 40 per cent innovations are being adopted by the farmers. It indicates that our farmers have lack of knowledge and skill of new innovations, thus it necessary to train the farmers and farm women in various aspects of agricultural production. In order to fulfill the aforesaid need, the various farmer's training centers were set up in different states for imparting training to farmers. Moreover, the National Commission of Agriculture referred to extension as an informal out-of-school education and services for the farmers and the persons engaged in farm production directly or indirectly to help and motivate them for adopting the improved practices related to production, management, conservation and marketing. Therefore, The Department of agriculture has launched a massive programme on organic farming throughout the state in order to minimize the cost of chemical fertilizers and pesticides as well as to curtail the use of these chemicals to enhance the benefit cost ratio in the production of various crops, as well to reduce the its resident effect on the human body along with animals.

As the vermicompost is a biological source of nutrient and can be prepared with the use of biodegradable wastes available at the village farm level through the joint action of microbes and earth worms, the vermicompost is the major component of organic farming as it may fulfill all the requirements with respect to production and protection of crop plants. The vermicompost may also be used as a tool for income generation, organic farming, and protection of environment, maintaining the soil health and sustaining the agricultural production. Thus the present study was focused on those farmers who have received this training and they are adopting this technology.

### 2. Methodology

The study was conducted in Jabalpur district of Madhya Pradesh having total Kharif and Rabi crops area is about 1, 34, 700 and 2,40,000 ha, respectively. The total irrigated area of the district is 1,11,075 ha. The district has 1508 villages.

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There are two important agricultural seasons, viz., Kharif and Rabi. In Kharif season, soybean, and paddy and in Rabi season wheat, gram, lentil and pea are mainly grown. The Jabalpur district comprises of seven blocks, out of which Panagar block was selected for the present study, because Krishi Vigyan Kendra Jabalpur has imparted more training programmers and also conducted demonstrations on vermicompost technology as compared to other blocks. The Krishi Vigyan Kendra, Jabalpur has conducted a training programme on vermicompost in seven villages of Panagar block during 2007-08 to 2009-10. During the training programs, total 290 trainees attended the training conducted by Krishi Vigyan Kendra. Only 40 per cent trainees were selected from each selected villages by random sampling method. Finally in all, 116 trainees have been selected for the study in seven villages viz. Gudagwa, Bhidari Kala, Jatawan, Urdwah Khurd, Umariya Choubey, Maharajpur and Pipariya.

### 3. Results and Discussion

#### Constraints experienced by the trainees in adoption of vermicompost technology

The data regarding problems faced by the trainees in adoption of vermicompost technology are presented in Table 3.1 Out of the various problems reported by the trainees, 70.68 per cent lack of availability of earthworms, 65.51 per cent trainees regarding in storage and marketing of vermicompost, 62.06 per cent reported attack of birds/ predators/ insects, especially ants, 56.89 per cent told that training should be practical-oriented, 51.72 per cent regarding the removal of vermicompost isolation of un-decomposed material and earthworms, 36.20 per cent trainees reported lack of transportation facilities for supply of vermicompost and 29.31 percent trainees reported lack of proper communication regarding training schedule. From the present study, it can be concluded that major problems perceived by the trainees in vermicompost technology were lack of availability of earthworms and storage and marketing problems of vermicompost. This finding has also been supported by Banerjee and Talukdar (2001) and Kamala and Raju (2003).

**Table 3.1:** Problems faced by the trainees in adoption of vermicompost technology

S. No	Problems	No. of trainees	Percentage	Rank
1.	Problems in storage and marketing of vermicompost	76	65.51	II
2.	Attack of birds / Predators / Insects especially the ants	72	62.06	III
3.	Problems in removal of vermicompost isolation of under composed material and earthworms	60	51.72	V
4.	Lack of transportation facilities for supply of vermicompost	42	36.20	VI
5.	Lack of proper communication regarding training schedule	34	29.31	VII
6.	Training should be practical-oriented	66	56.89	IV
7.	Lack of availability of earthworms	82	70.68	I

#### Suggestions given by trainees in adoption of vermicompost technology

Present study showed the suggestions offered by the vermicompost trainees who had attended the training programme organized by Krishi Vigyan Kendra, Jabalpur for the production of vermicompost. Out of the total vermicompost trainees, majority of respondents (77.88%) suggested that the species of earthworms should be made available, 67.30 per cent expressed that more emphasis should be given on practical aspects and problems related to vermicompost technology, 65.38 per cent trainees suggested that the training should be organized in off-season, 60.57 per

cent opined that the training programme should be organized at village level, 55.76 per cent suggested that language should be easy and understandable, 49.03 per cent suggested that practical knowledge should be encouraged through the method demonstration, 45.19 per cent trainees suggested that the training programme should be communicated timely to the farmers and 37.50 per cent trainees suggested that government should come forward for developing market network of vermicompost so that they can get the advantage of the training programme. These suggestions were also supported.

**Table 3.2:** Suggestions of trainees for the improvement of vermicompost training

S. No.	Suggestions	No. of trainees	Percentage	Rank
1.	Species of earthworm should be made available	81	77.88	I
2.	More emphasis should be given on practical aspect and problems related to vermicompost technology	70	67.30	II
3.	Training programme should be communicated to the farmers in time	47	45.19	VII
4.	Training should be organized in off-season (free from farming operations)	68	65.38	III
5.	Training programmes should be organized at village level	63	60.57	IV
6.	Language should be easy, simple and understandable.	58	55.76	V
7.	Government should come forward for developing market network of vermicompost	39	37.50	VIII
8.	Practical knowledge should be encouraged through the method demonstration	51	49.03	VI

### 4. Conclusion

The conclusions of the present study are presented here, based on the objectives to identify the problems faced by the trainees and obtain suggestions for making the training more effective. The present study concludes that trainees faced many problems why they could not adopt recommended vermicompost technology on their farms. During investigation, trainees reported many problems due to which

they could not adopt recommended vermicompost technology on their farms. Maximum number of trainees (70.68 per cent) reported the problem of lack of knowledge about availability of earthworms, whereas the minimum number of trainees (29.31 per cent) reported lack of proper communication regarding training schedule. Some useful suggestions were also given by trainees. Majority (77.88 per cent) of trainees suggested that species of earthworm should be made

available, whereas 37.50 per cent suggested that Government should come forward for developing market network of vermicompost which can help them to increase their knowledge and adoption of vermicompost technology.

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