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## Impact of training programmes on adoption of vermiculture technology practices

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### Abstract

An investigation was designed to explore the “Impact of Training Programmes on Adoption of Vermiculture technology Practices”. This study was conducted in Jorhat district of Assam due to the most of the trained farmers started vermicompost in their houses. 120 numbers of respondents, irrespective of sex were selected from 12 villages of the three blocks had been selected for the present study. Data collection was done by using interview cum questionnaire method. Data revealed that 69.17 per cent of the respondents had medium level of practices towards vermiculture technology. The findings revealed that attending the training programme had showed significant association with practices of the trained farmers towards vermiculture technology.

**Keywords:** Training programmes, adoption, vermiculture technology practices

### 1. Introduction

Vermiculture is the best method to dispose of organic waste. It is an easy to operate and eco-friendly technology for handling biodegradable aspect of biotechnology where application of earthworm is made for recycling the waste disposal problems. For minimizing the pollution effects and to get useful products from wastes, it requires no sophisticated machinery to operate vermiculture and do not produce any odour or any other type of pollution. The technology can be practiced in every home for fast recycling of the domestic wastes for vermicompost formation. It is capable of supplying necessary nutrients to help sustain plant growth. It also saves water, energy, landfills and helps rebuild the soil (Arora *et al.*, 2012) [1]. For reducing the cost of agricultural inputs, recycling of huge quantity of domestic, agricultural and rural industrial organic waste for various uses, vermicomposting is only the alternative arrangement. It also reduces the environmental pollution. It improves the soil physical condition which provides better environment for plant growth. From vermicomposting extra production can be marketable for generating extra income. Hence, there is an urgent need to sensitize the agricultural farmers about vermiculture technology for organic agricultural production.

The various extension agencies are continuously making efforts to create awareness among the farmers about vermiculture technology. Government Institution, Non Government Organization, Private Agencies and KVK are playing major role for promoting the vermiculture technology and conducting training programme, exhibition, kisan mela and other programmes for dissemination about vermiculture technology with low cost and environmentally safe condition. The success of any training programme depends greatly on the perception of the trainees towards it. Hence it is worthwhile to assess the impact of vermiculture technology training programmes in terms of trainee’s perception. Keeping the above fact in to consideration the entitled “Impact of Training Programmes on Adoption of Vermiculture technology Practices”.

### 2. Methodology

The present study was carried out in Jorhat District of Assam. A multi stage purposive cum simple random sampling design was followed for selection of three blocks namely Baghchung, Chipahikhula and Titabor from respective subdivision such as Jorhat and Titabor. 120 numbers of respondents (irrespective of sex) were selected from 12 villages of the three blocks

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who were undergone training on vermicompost formally or informally from various sources had been selected for the present study. Data collection was done by using interview cum questionnaire method.

In this study practice statements were prepared based on the actual performance of a respondent in application or use of an idea in making vermicompost. All total 26 statements were prepared with the help of the expert and collected reviews which are based on bed preparation, raw material, process of filling bed, maintenance of bed and care taken before using prepared vermicompost. The 3 points continuums was used that is fully apply, sometime apply and not apply with respective weightage of 3, 2 and 1. On the basis of the total score obtained, respondents were categorized into three classes i.e. low, medium and high level of practice.

### Findings and discussion

The data on existing practices of vermiculture technology adopted by farmers is presented in Table 1. Practice was assessed in bed preparation, raw material, earthworms, process of filling bed, maintenance of bed, harvesting of ready compost, care taken before using prepared vermicompost and uses and advantages. Data reveals that most of the respondent (69.17%) had medium practice level followed by 15.83 per cent had high and only 15.00 per cent had high practice level. It might be due to the lack of scientific knowledge regarding vermiculture technology. Similar findings revealed that Subhashini *et al.* (2017) [7], Tyagi (2016) [8], Sharma *et al.* (2013) [6] etc.

**Table 1:** Distribution of respondents according to existing practices of vermiculture technology, N=120

Category	Frequency	Percentage
Low	18	15.00
Medium	83	69.17
High	19	15.83

### Ranking of practice statements according to their mean score

The data in the table 2 reveals that uses of vermicompost ranked I with mean score 2.62, followed by filling of bed ranked II, water ranked III, earthworms ranked IV, maintenance of vermi-bed ranked V, raw material ranked VI, bed preparation ranked VII, harvesting of ready compost ranked VIII and care during transportation ranked IX with mean scores were (2.60), (2.57), (2.53), (2.49), (2.37), (2.32), (2.20) and (2.18).

**Table 2:** Distribution of the respondents according to their mean score of practice statement

S. No.	Statements	Mean Score	Rank
1	Bed Preparation	2.32	VII
2	Raw material	2.37	VI
3	Earthworms	2.53	IV
4	Water	2.57	III
5	Filling of bed	2.60	II
6	Maintenance of vermi-bed	2.49	V
7	Harvesting of ready compost	2.20	VIII
8	Care during transportation	2.18	IX
9	Uses	2.62	I

### Association between selected independent variables with existing practices of vermiculture technology adopted by trained farmers

Table 3 reveals that there was a significant association

between respondents' attending the training programmes associated with existing practices of vermiculture technology adopted by the farmers because the "p" value of training programme attended is less than 0.05 at the 5 per cent level of significant( i.e. 0.046\*). On the other hand variables such as age, education, organizational membership, mass media exposure and extension contact have no significant association with existing practices of vermiculture technology adopted by the farmers because the "p" value of these variables were greater than the 0.05 at the 5 per cent level of significant. Thus, out of six variables only one variable showed significant variance for the practices of the farmers towards vermiculture technology. Similar findings were reported by Pagaria (2014) [2] and Patidar and Patidar (2015) [3].

**Table 3:** Association between selected independent variables with existing practices of vermiculture technology adopted by trained farmers

S. No.	Variables	Chi square value	"p" value
1	Age	4.493	0.992
2	Education	8.146	0.086
3	Organizational membership	1.140	0.566
4	Mass media exposure	3.552	0.470
5	Extension contact	2.100	0.717
6	Training programme attended	3.238	0.046*

\* 5% level of significant

### Conclusion

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 the significant role in increasing food production in the country. However, the continuous use of chemical fertilizers had deteriorated the soil fertility, soil microbial activity and disturbed environmental balance. With the global concerns of safe foods, the concept of organic farming had been introduced among the farmers. Vermiculture is the best method to produce organic farming. It is an easy to operate and eco-friendly technology for handling biodegradable garbage. Over the last decade, 350 million tones are organic waste from agricultural sources. The findings of the present study revealed that majority of the respondents belonged to medium level of practices towards vermiculture technology adopted by farmers. The extension services could not reach the rural farmers for which they were unaware of actual adoption practices of vermiculture technology. Hence, suitable extension programmes should be planned based to perceive problems in study area so as to increase their efficiency in organic farming.

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