International Journal of Multidisciplinary Education and Research
ISSN: 2455-4588
Impact Factor: RJIF 5.12
www.educationjournal.in
Volume 2; Issue 5; September 2017; Page No. 21-23

Knowledge and attitude of farmers towards vermiculture technology

[1] RR Kalita, [2] M Dutta Das, [3] Sayanika Bora

[1] Student, Department of Extension & Communication Management, College of Home Science, Assam Agricultural University, Jorhat, Assam, India

[2] Professor, Department of Extension & Communication Management, College of Home Science, Assam Agricultural University, Jorhat, Assam, India

[3] Assistant Professor, Department of Extension & Communication Management, College of Home Science, Assam Agricultural University, Jorhat, Assam, India

Abstract
A study was conducted with 120 randomly selected farmers from the Jorhat district of Assam. The study revealed that the majority of the farmers (75%) had medium level of knowledge and 79.16% had favourable attitude towards vermiculture technology. The major constraints were inadequate training facility, lack of organized market, lack of extension contact, lack of government support, lack of scientific knowledge, lack of relevant literature and attract of insect. Therefore, there is greater need of creating awareness and ensuring active participation.

Keywords: knowledge, farmers, vermiculture technology, favourable

Introduction

Agriculture is the basic source of subsistence for man over thousands of years. It provides a livelihood to half of the world population even today. According to the food and agricultural organization (FAO), people in the developing world, where the population increase is very rapid, may face hunger if the global food production does not rise by 50-60% by the year 2020 AD. The contribution of developing countries to the world agricultural production in 1975 was about 38 per cent, while that of developed countries, which account for 33per cent of the world's population.

After the green revolution launched in India, substantial increase in the production of food grains was achieved through the use of improved crop varieties and higher levels of inputs of fertilizers and plant protection chemicals. But it has now been realized that the increase in production was achieved at the cost of soil health and that sustainable production at higher levels is possible only by the proper use of factors which will help to maintain the fertility of the soil. In fact, about 60 per cent of our agricultural land currently under cultivation suffers from indiscriminate use of irrigation water and chemical fertilizers. The gravity of environmental degradation resulting from faulty agricultural practices has caused alarm among the concerned farmers, scientists and conservationists and greater viable and sustainable farming systems have become a necessity. One such alternative agriculture system which will help to overcome the problems of soil degradation and declining soil fertility is organic farming. Among the various sources of organic farming but first and foremost way is vermiculture technology.

Vermiculture technology is the best method to dispose off organic waste. It is an easy to operate and eco-friendly technology for handling biodegradable garbage. It is the latest 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. (Lalita Arora *et al.* 2012) [1]. 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 vermiculture technology.
- To identify the constraints faced by the farmers in adoption of vermiculture technology.

Method

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 i.e Jorhat and Titabor. 120 numbers of respondents from selected 12 villages of the three blocks 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.

To measure the knowledge level of farmers in this study by using standardized scale developed by Vyas *et al*. (2014) [9] with slight modification. The scale was consists of 43 knowledge statements these statements are based on concept of vermiculture technology, bed preparation, raw material, earthworms, water, filling of bed, maintenance of vermin-bed, harvesting of ready compost, care during transportation and its uses and advantages. The 3 points continuum were know thoroughly, know somewhat and not known with respective weightage 3, 2, 1. On the basis of the total score obtained, respondents were categorized into three classes i.e. low, medium and high level of knowledge.

Attitude of farmers was measured in this study by using standardized scale developed by Vyas *et al*. (2010) [10] with slight modification. The scale consists of 24 attitude statements where 12 statements were the positive statements and the remaining 12 were the negative statements. The 5 points continuums were most favourable, favourable, neutral, unfavourable and most unfavourable with respective weightage of 5, 4, 3, 2 and 1.On the basis of the total score obtained, respondents were categorized into three classes i.e unfavourable, favourable and most favourable.

Findings and Discussion

Knowledge and attitude of farmers

The data on knowledge of the farmers towards vermiculture technology is presented in Table 1. Data shows that majority (75%) of the respondent had medium knowledge level and 13.33% of the respondents had high knowledge and 11.67% had high knowledge. It is assumed that farmers might require information from the different sources like extension workers, VLEW and other financial institution. The respondents need due to consideration in mass media exposure, organizational membership, extension contact and attending the different training programme. Similar findings found that Singh *et al.* (2016) [8], Pagaria (2014) [6], Aski *et al.* (2014) [2] etc.

The data on attitude of the farmers towards vermiculture technology is presented in Table 1. Data shows that majority (74.17%) of the respondent had favourable attitude level followed by 13.33 per cent had most favourable attitude and only 12.50 per cent had unfavourable attitude towards vermiculture technology. It might be due to lack of detailed knowledge about vermiculture technology. The persuasion through regular guidance, trainings and demonstration seem to be essential. Similar findings found that Sharma and Maheshwari (2015) [7], Lavania and Kumar (2014) [4], Magarvadiya *et al.* (2014) [5] etc.

Table 1: Distribution of farmers according to their knowledge and attitude towards vermiculture technology

Category	Frequency	Percentage
1. **Knowledge towards vermiculture technology**		
Low	14	11.67
Medium	90	75
High	16	13.33
2. **Attitude towards vermiculture technology**		
Unfavourable	15	12.50
Favourable	89	74.17
Most favourable	16	13.33

A fair degree of knowledge and a favourable attitude towards vermiculture technology often leads to the betterment of the farmers. Keeping this in view, an attempt was made to understand the association among knowledge of respondents and their attitude towards the vermiculture technology. Chi square analysis was carried out to know the association among these variables (Table 2). It was observed that knowledge and attitude were significantly associated. 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 significant association between attitude and knowledge as shown by the "p" value (p=.021*) which is less than the.05.

Table 2: Association between knowledge and attitude of farmers towards vermiculture technology

Sl. No.	Variables	Chi square value	"p" value
1	Knowledge	11.597	.021*

***** Significant 5% level of significant

Constraints faced by the farmers for adoption of vermiculture technology

The data in the table 3 reveals that lack of training facility ranked I with mean score 1.90, followed by lack of organized market ranked II, lack of extension contact ranked III, lack of government support ranked IV, lack of scientific knowledge ranked V, lack of relevant literature ranked VI and attack of insect-pest and diseases ranked VII with mean score (1.84), (1.82), (1.80), (1.77), (1.69) and (1.67).

It can be concluded that extension training programme could be planned considering the prioritized problems area perceived by the farmers in the study area. Similar findings were reported by Ekatpure *et al.* (2011) [3] and Lavania and Kumar (2014) [4].

Table 3: Distribution of respondents according to the constraints faced by the farmers for adoption of vermiculture technology.

Sl. No.	Problems	Mean	Rank
1	Lack of scientific knowledge	1.77	V
2	Inadequate training facility	1.90	I
3	Lack of relevant literature	1.69	VI
4	Lack of organized market	1.84	II
5	Lack of extension contact	1.82	III
6	Lack of Government support	1.80	IV
7	Attack of insect-pest and diseases	1.66	VII

Conclusion

The study has indicated that the majority of the farmers were medium level of knowledge and favourable in attitude about vermiculture technology. Important constraints in adoption of vermiculture technology faced by farmers were: inadequate training facility, lack of organized market, lack of extension contact, lack of government support, lack of scientific knowledge, lack of relevant literature and attack of insect-pest and disease. The positive and significant relationship between the knowledge and attitude revealed the fact that when farmers had good knowledge with positive attitude towards the vermiculture technology; 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.

References

1. Arora L, Agarwal S, Kalla NP. Knowledge, Attitude and Practices Regarding Vermiculture Biotechnology of Hostel Students of Rajasthan University. Rajasthan Journal of Extension Education. 2012; 20:53-56.
2. Aski GS, Hirevenkanagoudar LV. Knowledge level of farmers about vermicompost production technologies, Karnataka. Hind Agricultural Research and Training Institute. 2014; 9(3):407-410.
3. Ekatpure MS, Kale TM, Bodake DH, Antwal NP. Study of the participation of farm women in production of vermicompost, Maharashtra. Hind Agricultural Research and Training Institute. 2011; 6(1):14-16.
4. Lavania P, Kumar D. Knowledge and Attitude of Farmers towards Vermi Compost Technology, Barmer. Indian Journal of Extension Education. 2014; 22:56-59.
5. Magarvadiya KD, Patel TV. Knowledge and Attitude of Farmers Regarding Biofertilizers, Gujrat. Gujrat Journal of Extension Education. 2014; 25(2):149-151.
6. Pagaria P. Knowledge and attitude of farmers towards vermicompost technology, Rajasthan. Journal of Krishi Vigyan. 2014; 3(1):42-44.
7. Sharma S, Maheshwari S. Opinion of Tribal Women Regarding Organic Farming, Udaipur. Indian Journal of Extension Education. 2015; 23:54-57.
8. Singh M, Bhargav SK, Bhagat VD, Sharma PR. Impact of training and entrepreneurship development on vermicomposting, Madhya Pradesh. International Accreditation and Research Council. 2016; 8(50):2137-2139.
9. Vyas L, Bhardwaj LR, Panwar P. A scale to measure knowledge of tribal women regarding vermiculture technology. Asian Journal of Home Science. 2014; 9(1):162-165.
10. Vyas L, Maheshwari S, Dangi LK, Dashora KP. Attitude scale construction for tribal women towards vermiculture technology, Udaipur. Rajasthan Journal of Extension Education. 2010; (17&18):56-59.
11. RR. Kalita* (Student)- 8399097704, email- rashmikalita73@gmail.com.
12. M. Dutta. Das ** (Professor)- 9435094391, email- ppp.aau@gmail.com.
13. Sayanika Bora*** (Assistant Professor)- 9706667750, email- sayahari3@gmail.com.