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## **Knowledge and attitude of farmers towards vermicompost technology in Saharsa District of Bihar**

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### **Abstract**

A study was conducted with 120 randomly selected farmers in from the Saharsa district of Bihar state. The study revealed that majority of the farmers (70.83%) had medium level of knowledge and about (75%) had favourable attitude towards vermicompost technology. The major constraints noticed were inadequate training facility, lack of organized market, lack of extension contact, lack of government support, lack of scientific knowledge, lack of relevant literatures and attack of insect. Removing these constraints need organized efforts from all stakeholders namely; farmers, government global administration and research institute and non-government organization. There is great's need of creating awareness and ensuring active participation.

**Keywords:** knowledge, attitude, vermi-composting, Bihar

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### **Introduction**

Agriculture is facing several critical issue like low fertilizer use efficiency, decreasing factor productivity, low soil organic carbon stock, imbalance between nutrient removal and addition to the soil. The whole scenario of agriculture is at a junction where one has to rethink and reform the agricultural package and practices to fulfil the dreams of million people of the country. Modern agriculture largely depends on the use of high cost inputs technologies increased the production but there is growing concern over the adverse effects of the use of chemicals on soil productivity and environmental quality. The logical way emerging to manage long-term fertility and productivity of soil is integrated use of organic and inorganic sources of plant nutrients. Vermicompost is the potential alternative to chemical fertilizers because of significant changes in crop production system, reasonable cost and environmental soundness vermicompost technology is affordable for farmers because of its low cost and marketing of its available plant nutrients like N and P (Pandey and Pandey, 1995) <sup>[6]</sup>. It is the best method to dispose off organic waste, easy to operate and eco-friendly technology of handling biodegradable garbage. For accelerating the use of vermicompost, it is essential to train the farmers, encourage them to use vermicompost in their field for crop production. In order to know the existing level of knowledge about vermicomposting and attitude of farmers towards vermicompost technology, its actual use, constraints faced by the farmers while using vermicompost technology in the fields, the present study was undertaken.

### **Materials and Methods**

The present study was carried out in Saharsa district of Bihar. A multi stage purposive cum simple random sampling design was followed for selection of three blocks namely; Sattar Katiya, Kahara and Mahishi. One hundred twenty (120) numbers of respondents from selected 12 villages of three blocks who were undergone training on vermicompost from various sources. To

measure the knowledge level of farmers in this study by using standardized scale developed by Vyas *et al.* (2014) <sup>[10]</sup> was adopted with slight modification. The three point's continuums were known 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 were measured in this study by using standardized state developed by Vyas *et al.* (2010) <sup>[11]</sup> with slight modification. The five-point continuums were most favourable, favourable, neutral, unfavourable and the most unfavourable with respective weightage of 5, 4, 3, 2 and 1. On the basis of total score obtained, respondents were categorized into three classes *i.e.* unfavourable, favourable and most favourable.

### **Results and Discussion**

#### **Knowledge and attitude of farmers**

Data in the Table 1 shows that majority (70.83%) of the respondent had medium knowledge level and 15.83% of the respondents had high level of knowledge and 13.33% had low level of knowledge. The farmers were therefore, mediocre in knowledge about vermicompost technology where indicates that there is a scope for improvement. Similar observations were also reported by Singh *et al.*, 2016 <sup>[9]</sup>. Kalita *et al.*, 2017 <sup>[1]</sup> also reported that majority of the respondents (75%) had medium knowledge level. The data on attitude of the respondents towards vermicomposting technology presented in Table 2 revealed that majority (75%) of the respondent had favourable attitude and only 10.83% had unfavourable attitude toward vermicompost technology followed by 15.83% had most favourable attitude. The farmers in general were thus favourable in their feeling towards vermicompost technology but due to lack of detailed knowledge about this technology they were not undertaking its production. The persuasion through regular guidance, trainings, demonstrations and required infrastructure seems to be essential.

Pagaria (2014) [5] also reported that majority of the farmers were found to be favourable in the feeling about vermicompost technology. Similar findings were also reported by Sharma and Maheshwari (2015) [8] and Magarvadiya *et al.*, 2014 [3].

**Table 1:** Distribution of farmers to the knowledge and attitude towards vermicompost technology

Sl. No.	Variable and Category	Farmers (N=120)		
		Frequency	Percentage	
01.	Knowledge level			
	Low	16	13.33	
	Medium	85	70.83	
	High	19	15.83	
02.	Attitude			
	Unfavourable	13	10.83	
	Favourable	90	75.00	
	Most favourable	17	14.16	

**Table 2:** Constraints faced by farmers in adoption of vermicompost technology

Sl. No.	Problems	Mean	Rank
01.	Lack of Scientific knowledge	1.78	V
02.	Inadequate training facility	1.92	I
03.	Lack of relevant literature	1.67	VI
04.	Lack of organized market	1.82	II
05.	Lack of extension contact	1.80	III
06.	Lack of government support	1.78	IV
07.	Attack of insect	1.65	VII

**Constraints faced by the farmers for adoption of vermicomposting technology**

The data in the table 2 reveals that lack of training facility ranked I with mean score 1.92, 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 ranked VII with mean score (1.82), (1.80), (1.78),(1.67) and (1.65), respectively. 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 finding were reported by Lavania and Kumar (2014), Kalita *et al.*, 2017. Ranganatha *et al.*, 2001, Nirmala *et al.*, 2002 and Pagaria (2014) [1, 2, 7, 4, 5].

**Conclusion**

The present study indicated that the majority of the farmers were medium level of knowledge and favourable in attitude about vermicomposting technology. Important constraints faced by the farmers were inadequate training facilities, lack of organized market, lack of extension contact and lack of government support, hence, extension efforts should be directed to overcome these constraints in order to increase the adoption level by the farmers.

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