

A CASE STUDY :

Development and standardization of attitude scale of farmers towards vermicompost

■ **H. SAINI**

ARTICLE CHRONICLE :

Received :

11.06.2017;

Accepted :

28.10.2017

SUMMARY : The study was conducted to develop and standardize the reliable and valid scale, to measure attitude of farmers towards vermicompost. Appropriate statistical methods ‘scale product method’ was used, which combines Thurston and Likert techniques. Thirty six statements were selected for judgment; a panel of 60 judges was requested to assign the score for each statement on five point continuum. Based on the scale (median) and Q values, twenty statements were finally selected to constitute attitude of farmers towards vermicompost.

How to cite this article : Saini, H. (2017). Development and standardization of attitude scale of farmers towards vermicompost. *Agric. Update*, 12(4): 729-731; DOI: 10.15740/HAS/AU/12.4/729-731.

KEY WORDS :

Attitude,
Vermicompost, Scale
product method

BACKGROUND AND OBJECTIVES

It is estimated that in India nearly 700 million tonnes of organic waste are generated annually which is either burned or land filled. The large amount of the agro waste generated created the major environmental problems. Vermicomposting is a method of preparing enriched compost with the use of earthworms. It is one of the easiest methods to recycle agricultural wastes and obtaining the nutrient rich organic manure. Earthworms consume biomass and excrete it in digested form called vermicompost. The compost is rich in nutrients, growth promoting substances, beneficial soil micro flora and having properties of inhibiting pathogenic microbes. Vermicompost is stable, fine granular organic manure, which enriches soil quality by improving its physicochemical and biological properties. It is becoming

popular as a key component of organic and sustainable farming system. To understand the feeling of the farmers towards such important component, there was no any well developed scale to study positive or negative disposition towards its utility. Considering this, the present study was planned to construct the scale to measure the attitude of famers towards vermicompost.

Objective :

To develop and standardize the scale to measure attitude of farmers towards vermicompost

RESOURCES AND METHODS

In the present study, attitude is operationalized as positive or negative feeling of famers towards the vermicompost. Among

Author for correspondence :

H. SAINI

Department of
Extension Education,
B.A. College of
Agriculture, Anand
Agricultural University,
ANAND (GUJARAT) INDIA
Email:hlatahem@
gmail.com

Table 1: Final selected statements to measure attitude of the farmers towards the vermicompost

Sr. No.	Statements	SA	A	UD	DA	SDA
1.	Vermicompost is an important component of organic farming. (+)					
2.	Vermicompost is a time consuming process. (-)					
3.	Vermicompost is effective way to recycle agricultural waste. (+)					
4.	Vermicompost is possible only by skillful person. (-)					
5.	Vermicompost helps in precious soil improvement. (+)					
6.	Vermicompost is possible to accept only for rich farmers. (-)					
7.	Vermicompost generates additional farm income. (+)					
8.	Vermicompost doesn't help in adding market value of farm products. (-)					
9.	Vermicompost helps in the improvement of agriculture. (+)					
10.	Vermicompost is a costly affair. (-)					
11.	Vermicompost improve the drainage system of soil. (+)					
12.	Application vermicompost doesn't reduce the use of chemical fertilizers. (-)					
13.	Vermicompost decreases the beneficial soil micro-organism. (+)					
14.	Vermicompost does not help in improving soil health status. (-)					
15.	Vermicompost is a very rich source of nutrients. (+)					
16.	Application of vermicompost increases soil problems. (-)					
17.	Even a simple person can use vermicompost. (+)					
18.	Use of vermicompost doesn't give quick results. (-)					
19.	Use of vermicompost increases the pollution (-)					
20.	Chemical fertilizers are superior to vermicompost. (-)					

the techniques available 'scale product method' which combines the Thurstone's technique (1928) of equal appearing interval scale for selection of items and Likert's technique (1932) of summated rating for ascertaining the response on the scale as proposed by Eysenck and Crown (1949) was used.

Statement collection :

The items of attitude scale are called as statements. In initial stage, 45 statements reflecting feelings of the farmers towards vermicompost were collected from relevant literature and discussion with experts of extension and agronomy discipline. The collected statements were edited according to the criteria laid down by Edward (1957) and then 36 statements were selected as they were found to be unambiguous.

Statement analysis :

In order to judge the degree of 'Unfavorableness' to 'Favorableness' of each statement on the five point equal appearing interval continuum, a panel of judges was selected. Sixty slips of the selected statements were handed over to the experts connected with extension educational work. The judges were requested to judge each statement in terms of their most agreement or most

disagreement with the statements with the five equal appearing interval continuums. Out of these experts, all the experts returned the statements after duly recording their judgments and were considered for the analysis. Determination of scale values.

$$S = L + \frac{0.50 - \sum P_b}{P_w} \times i$$

Based on judgment, the median value of the distribution and the S value for the statement concerned were calculated with the help of the inter-quartile range ($Q = Q_3 - Q_1$) for each statement was also worked out. Only those statements were selected whose median values were greater than Q value. When a few statements had the same scale values, the statements having lowest Q values were selected. Thurstone and Chave (Edwards, 1957) described another criteria in addition to Q as a basis for rejecting statement in scales constructed by the method of the equal appearing interval. Accordingly when a few items had the same scale values, the item having lowest Q values were selected. The final selected statement showing attitudes are given in Table 1.

Reliability of the scale :

To know the consistency of the scale, reliability was worked out. The split-half technique was used to measure

the reliability of the scale. Selected 20 attitudinal statements were divided into two halves with 10 (Ten) odd and 10 (Ten) even numbered statements. Each of the two sets was treated as separate scales having obtained two score, for each of the 20 respondents. Coefficient of reliability between the two sets of score was calculated by Rulon's formula (Guilford, 1954), which was 0.849.

Validity of the scale :

The validity of content of scale was examined by discussing with specialists of the extension and statistics. Specialists examined and realized appropriateness of the each statement to measure the feeling of farmers towards vermicompost.

Administration of the scale (Scoring technique) :

For application of the scale, the researcher can collect information against each 20 statements in five point continuum viz. 'Strongly agree', 'Agree', 'Undecided', 'Disagree' and 'Strongly disagree' with weighted score of 5,4,3,2 and 1 for positive and reverse

to negative statements.

OBSERVATIONS AND ANALYSIS

Based on the scale and Q values out of 36 statements, 20 statements were finally selected to constitute scale to measure attitude farmers towards vermicopost.

REFERENCES

- Edward, A.L.** (1957). Techniques of attitude scale construction, Appleton Century Crofts, Inc., New York.
- Eysenck, H.J.** and Crown, S. (1949). An experimental study in opinion attitude methodology. *Internat. J. Attitude Res.*, **3** : 47-86.
- Guilford, J.P.** (1954). *Psychometric methods*. Tata McGrawHill Publication Co. Ltd., Bombay: 378-382.
- Likert, R.A.** (1932). A technique for the measurement of attitude. *Archives of psychology*, New York. 140
- Thurston, L.L.** and Chave, E.G. (1928). *The measurement of attitude*, Chicago University Press, USA. pp. 39- 40.

★★★★★ **12th** Year of Excellence ★★★★★
 ★★★★★ of Excellence ★★★★★