

A SCALE TO MEASURE ATTITUDE TOWARDS IMPROVED BANANA CULTIVATION PRACTICES

H. B. Patel¹, P. M. Bhatt² and P. P. Patel³

ABSTRACT

The present study was confined to develop a scale which can scientifically measure the attitude of banana growers towards improved banana cultivation practices. Among the techniques available, 'Scale product method' combining Thurston's technique of equal appearing interval scale for selection of items and Likert's technique of summated rating for ascertaining the response on the scale was used. The final scale constitutes 19 statements. The calculated reliability co-efficient is 0.83.

INTRODUCTION

Improvement in agricultural practices is the product of modern science and technology. Generally, the development of new technology is not a major problem now-a-days, but the main issue is of its adoption by the farmers. For the new technology to be adopted, the farmers must have first positive attitude towards that. In case of banana crop, the package of practices based on scientific investigation is recommended to achieve greater production. However, one of the important factors affecting its adoption is the attitude of banana growers towards improved banana cultivation practices. With this in view, an attempt has been made to develop a scale which can scientifically measure attitude of banana growers towards improved banana cultivation practices.

METHODOLOGY

Among the techniques available, 'Scale product method' which combines the Thurston's technique of equal appearing interval scale (1929) for selection of items and Likert's technique of summated rating (1932) for ascertaining the response on the scale as proposed by Eysenck and Crown (1949) was used.

1 Item Collection

The items of attitude scale here refer to the

statements about improved banana cultivation practices. In initial stage of developing the scale, large numbers of such statements were collected from relevant literature, discussion with experts and extension workers. The statements, thus selected were edited according to the criteria laid down by Edward (1957). From the 72 statements, 48 statements were selected as they were found to be non-ambiguous and non factual.

2 Item Analysis

The above 48 statements were handed over to judges consisting of the professors and extension educationists, horticulturist and extension officers of Gujarat State. The judges were requested to judge each statement in terms of their agreement or disagreement on five point equal appearing interval continuum. The responses of those 50 experts who returned the statements after duly recording their judgments were considered for the analysis.

3 Determination of scale value and Q. values

The five points of the rating scale were assigned scores ranging from 1 to 5. For positive statements, 5, 4, 3, 2 and 1 score was given to strongly agree, agree, undecided, disagree and strongly disagree responses respectively, while for negative statements scoring system was reversed. Frequency distribution of the scores of judges

1 Programme Coordinator, KVK, Devataj, AAU, Anand

2 Director, Distance Education, AAU, Anand

3 Director of Extension Education, AAU, Anand

was than prepared. Based on the judgment, scale (median) value and 'Q' value for each of 48 statements were calculated by using following formula:

$$S = L + (0.50 - P_b) / P_w \times i$$

Where,

S = The median or scale value of the statement

L = Lower limit of the interval in which the median falls

P_b = The sum of the proportion below the interval in which the median falls

P_w = The proportion within the interval in which the median falls

i = The width of the interval and is assumed to be equal to 1.0 (one).

The inter-quartile range (Q = Q₃ - Q₁) for each statement was worked out for determination of ambiguity involved in the statement. Based on the median and Q values, 19 statements were finally selected to constitute attitude scale.

4 Reliability of the scale

The reliability of the test was examined by employing test-retest method. In this method, the developed attitude scale with 19 items was administered twice to the 20 banana growers

at 15 days interval, who were neither previously interviewed nor had a chance to come in the final sample of study. Thus two sets of attitude scores were obtained for each of 20 respondents. Co-efficient of reliability between the two sets of score was calculated by Rulon's formula (Guliford 1954), which came to be 0.832, which indicated the stability of the instrument.

5 Scoring Techniques

The selected 19 statements for final format of the attitude scale were randomly arranged to avoid response bias, which might contribute to low reliability and direction from the validity of the scale. Against each of 19 statements there were five columns representing a five point continuum of agreement or disagreement to the statements as followed by Likert (1932). The points on continuum were strongly agree, agree, undecided, disagree and strongly disagree with weight of 5,4,3,2 and 1 respectively for favourable (positive) statement and with weight 1,2,3,4 and 5 respectively for unfavourable (negative) statement. The weights of Likert's technique and scale values of Thurston's techniques were combined in form of a product and the total score for an individual was the sum of the product. The final format of the scale is presented in Appendix -I.

Appendix I Final format of the attitude scale

Sr. No.	Statements	SA	A	UD	DA	SDA
1	Improved banana cultivation is adopted extensively by most of farmers.(3.4)	5	4	3	2	1
2	Adopting improved banana cultivation technology one should get higher yield.(3.4)	5	4	3	2	1
3	Improved banana cultivation is an instrument for social and economic change.(1.7)	5	4	3	2	1
4	There is no risk in adoption of improved banana cultivation technology.(3.0)	5	4	3	2	1
5	Only big farmers can do improved banana cultivation efficiently.(2.6)	1	2	3	4	5

Sr. No.	Statements	SA	A	UD	DA	SDA
6	I would like to advise my son to continue improved banana cultivation.(3.2)	5	4	3	2	1
7	As one of the new technology, drip irrigation in banana cultivation is not preferable because of higher installation cost.(0.9)	1	2	3	4	5
8	Acceptance of new technology is not a solution of perishable nature of banana fruit.(1.4)	1	2	3	4	5
9	Proper technical guidance is essential on agronomical practices on improved banana cultivation.(3.5)	5	4	3	2	1
10	Fertilizer requirement in improved banana cultivation is more, which is not economically affordable.(2.8)	1	2	3	4	5
11	Improved banana cultivation practices are more complex and technical in nature.(3.3)	1	2	3	4	5
12	Improved banana cultivator becomes an example for other fellow farmers.(3.7)	5	4	3	2	1
13	Transplanting of tissue-cultured plants is at all not remunerative.(0.8)	1	2	3	4	5
14	After introduction of new banana cultivation technology, economic condition of farmers has improved.(3.3)	5	4	3	2	1
15	People having less income can also be successful in improved banana cultivation.(3.1)	5	4	3	2	1
16	Tissue culture is the only resort for banana growers.(1.8)	5	4	3	2	1
17	Improved banana cultivation is costly affair for small and marginal farmers.(2.5)	1	2	3	4	5
18	A banana grower should adopt new farming ideas, which may earn him more money.(3.6)	5	4	3	2	1
19	The most successful banana grower is one who gets maximum of return with minimum cost.(4.6)	5	4	3	2	1

SA: Strongly agree, A: Agree, UD: Un decided, DA: Disagree, SDA: Strongly Disagree

REFERENCE

- Eysenck, H. J. and Crown, S. (1949). An experimental study in opinion-attitude methodology. *Int.J.Opin. Attitude Res.*, 3: 47-86.
- Guilford, J. P. (1954). *Psychometric methods*. Tata McGraw hill publishing Co., Bombay pp 597.
- Likert, R. A. (1932). A technique for the measurement of attitude scales. *Arch. Psychol.* New York, No.140.
- Thurstone, L. L. (1946). The measurement of attitude. *American J. of Socio*, Chicago Univ. Chicago Press, 39-50