

DEVELOPMENT OF SCALE TO MEASURE ATTITUDE OF BRINJAL GROWERS TOWARDS GOB-1 VARIETY

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ABSTRACT

Main Vegetable Research Station, AAU, Anand has released more than 15 varieties of different vegetable crops. Among them, GOB -1 is one of the new varieties of Brinjal released by AAU. For betterment of brinjal growers, it is necessary to understand attitude of brinjal growers towards brinjal variety Gujarat Oblong Brinjal-1 (GOB-1). The scale was developed by using ' scale product method'. Initially, 32 statements reflecting feelings of brinjal growers about GOB-1 were collected from relevant literature and discussion with experts. Finally 25 statements were selected as they were found to be non-ambiguous and non factual. 50 return slips returned by the judges were considered for the analysis. 11 statements were selected based on the scale and quartile value. Finally, these 9 statements were selected for measurement of attitude of brinjal growers towards brinjal variety Gujarat Oblong Brinjal-1 (GOB-1). Reliability of the scale was found 0.88

Keywords : brinjal growers, attitude, statement, reliability

INTRODUCTION

Anand Agricultural University has taken responsibility of research, education and extension education in agriculture and allied fields. Vegetables play crucial role in human diet. Brinjal is one of the important vegetables for health. Main Vegetable Research Station (MVRS) of AAU, is conducting research experiments on various vegetable crops to develop high yielding varieties for the benefits of farming community.

Main Vegetable Research Station (MVRS), AAU, Anand has released more than 15 varieties of different vegetable crops. Among them GOB -1 is one of the new varieties of Brinjal released by AAU. For knowing the adoption level of this new variety by the brinjal growers, it is necessary to understand attitude of Brinjal growers about brinjal variety Gujarat Oblong Brinjal-1 (GOB-1) released by AAU.

OBJECTIVE

To Develop of scale to measure attitude of brinjal growers towards GOB-1 variety

METHODOLOGY

To measure the degree of positive or negative feelings of brinjal growers towards GOB-1 variety, a scale was developed by adopting systematic methodology. Among the techniques available, researcher had selected ' Scale product method' which combines the Thurstone's technique of equal appearing interval scale (1928) 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, Kapur, et al., 2016 and Vinaya et al., 2016)

Statement selection

The items of attitude scale were called as statements. In initial stage for developing the scale 32 statements reflecting feelings of brinjal growers about GOB-1 were collected from relevant literature; discussion with experts of Horticulture Department; B. A. College of Agriculture, AAU, Anand ; scientists of MVRS, AAU, Anand and extension functionaries of the Anand District. The collected statements were edited according to the criteria laid down by Edward (1957) and finally 25 statements were selected as they were found to be non-ambiguous and non factual.

Statement analysis

In order to judge the degree of ‘ Unfavorableness’ ‘Favourableness’ of each statement on five point equal appearing interval continuum a panel of judges was selected. 125 slips of the selected statements were handed over to the members of the Social Science group of Anand Agricultural University and extension educationists of Agricultural Universities of Gujarat state. The judges were requested to judge each statement in terms of their agreement or disagreement with the statements with the five point equal appearing interval continuum. Out of these experts, only 53 experts had returned the statements after dully recording their judgments. Following Thurstone and Chave (1928), responses of three judges were rejected as their judgements for six consecutive statements were put in the same category. This criterion was used to eliminate possible indifferent or careless judging. In all, 50 return slips were considered for the analysis.

Determiration of scale values

The five points of the rating scale were assigned scores ranging from 1 (for strongly disagree) to 5 (for strongly agree). Frequency distribution of the scores of judges was then prepared. Based on the judgment, scale (median) value and ‘Q’ value for each of 25 statements were calculated by using following formula

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

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 interquartile range (Q = Q3 - Q1) for each statement was also worked out for determination of ambiguity involved in the statement (Edward, 1957). To determine value of Q, two other point were measured, the 75th centile and 25th centile. Only those statements were selected whose scale values were greater than Q value.

Based on the scale and Q values, out of 25 statements, 09 statements were finally selected to constitute attitude scale to measure attitude of Brinjal Growers about brinjal variety Gujarat Oblong Brinjal-1 (GOB-1) released by AAU (Table 1).

Reliability of the scale

The reliability of the test was examined by employing test-retest method. In this method, the developed attitude scale with 9 items was administered twice to the 20 GOB-1 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 20 respondents. Co-efficient of reliability between the two sets of score was calculated by Rulon’s formula (Guliford 1954), which was 0.88

$$rtt = 1 - \frac{\sigma^2d}{\sigma^2t}$$

Where,

rtt = Co-efficient of reliability

σ²d = Variance of these differences

σ²t = Variance of the total scores

RESULTS

Based on the scale value or say median and Q values, out of 25 statements 9 statements were finally selected to constitute scale to measure attitude of brinjal growers.

Validity of the scale

The validity of the scale was examined for content validity by determining how well content were selected by discussing it with specialists, of extension and statisticians.

Administration of the scale

For application of the scale, the researcher can collect information against each 9 statements in five columns, representing a five point continuum viz., strongly agree, agree , undecided, disagree and strongly disagree with weighted score of 5,4,3,2 and 1 respectively, for favourable (positive) statement and reverse for unfavourable (negative) statement.

Table 1 : Final selected statements to measure attitude of brinjal growers towards GOB-1 variety

Sr. No.	Statements	SU	MU	N	MF	SF
1	I feel that fruit of brinjal variety GOB-1 Brinjal is attractive due to its good shining.					
2	Brinjal variety. GOB-1 is adoptable only by innovative farmers.					
3	Size of Brinjal variety. GOB-1 fruit is consumer friendly.					
4	I feel that average seeds in fruit of Brinjal variety. GOB-1 are less.					
5	I believe that Brinjal variety GOB-1 cultivation practices are more complex in nature.					
6	I believe that average numbers of fruits per plant are more in Brinjal variety GOB-1, as compared to other varieties.					
7	I feel that cultivation of Brinjal variety GOB-1 is more labour oriented.					
8	I believe that brinjal variety GOB-1 is more preferred by consumers.					
9	I believe that Brinjal variety GOB-1 cultivation is only suitable in irrigated area.					

SU - Strongly unfavourable

MU - Moderatetely unfavourable

N - Neutral

MF - Moderately favourable

SF - Strongly favourable

CONCLUSION

From the various methods available for constructing the attitude scale, scale product method which combines the Thrustone'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 as proposed by Eysenck and Crown was used to measure the attitude of brinjal growers towards GOB-1 variety.

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