A Scale to Measure Farmer's Attitude Towards Improved Agricultural Practices

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ABSTRACT

Due to the non-availability of a proper scale to measure farmer's attitude towards improved agricultural practices in Uttaranchal hills, it was thought necessary to construct a scale for the purpose. Keeping this in view, an attempt has been made to develop a scale for measuring the attitude of hill farmers. Method of equal-appearing intervals, by Thurstone and Chave (1929) was used. Twenty statements were selected from 100 statements for which scale (S) and Q values were worked out. The scale values of the statements on the psychological continuum were relatively equally spaced.

Key words : *Farmer's attitude; Attitude scale; Psychological continuum*

Attitude here is defined as the degree of positive or negative affect associated with some psychological object (Thurstone, 1946). Psychological object may be any symbol, phrase, slogan, person, institution, idea or ideal towards which people can differ with respect to positive or negative affect. The cognitive component of an attitude consists of the beliefs, which involves attributes like favorable or unfavorable, desirable or undesirable, good or bad etc. The feeling component refers to the emotions i.e. likes or dislikes, pleasing or displeasing etc. which give attitude a motivating character or action tendencies. It is actually a physical manifestation. The action tendency component of an attitude includes all behavioral readiness associated with it. These three components of attitude are, however, consistently related to each other.

The psychological object for the present study has been conceptualized as the recommended agricultural practices.

METHODOLOGY

Method of equal-appearing intervals, by Thurstone and Chave (1929) was used. A total of 100 statements were selected which varied in degree of favorableness or unfavorableness as expressed by each statement. The statements were then subjected for judging to 100 experts. Each subject was asked to judge the degree of favorableness or unfavorableness of feeling expressed by each statement in terms of the 11 intervals.

Calculation of scale and Q values : The data obtained from a large number of judges was then arranged. Data obtained for each statement was arranged in three rows. Frequency was arranged in the first row the way in which the statement was placed in each of the 9 categories. The second gives these frequencies as proportions. The proportions are obtained by dividing each frequency by the total number of judges or, more simply, by multiplying each of the frequencies by the The median of the distribution of judgments for each statement was taken as the scale value of the statement; scale value was obtained by using the following formula

$$S = l + \left(\frac{.5 - \sum p_b}{p_w} \right) i$$

Where,   S = the median or scale value of the statement

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

Sp_b = the sum of the proportions 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

Interquartile range (Q) was used as measure of variation of the distribution of judgments for a particular statement. To determine the value of Q 75th and 25th centiles were calculated. The 25th centile was obtained by using the following formula

$$C_{25} = l + \left(\frac{.25 - \sum p_b}{p_w} \right) i$$

Where, l = the lower limit of the interval in which the 25th centiles falls

Sp_b = the sum of the proportions below the interval in which the 25th centiles falls

$p_w =$ the proportion within the interval in which the 25th centiles falls

$i =$ the width of the interval and is assumed to be equal to 1.0

The 75th centile was obtained by using the following formula

$$C_{75} = l + \left(\frac{.75 - \Sigma\, p_b}{p_w} \right) i$$

Where, $l =$ the lower limit of the interval in which the 75th centile falls

$Sp_b =$ the sum of the proportions below the interval in which the 75th centile falls

$p_w =$ the proportion within the interval in which the 75th centile falls

$i =$ the width of the interval and is assumed to be equal to 1.0

Then the interquartile range or Q value was obtained by taking the difference between C75 and C25. Thus

$$Q = C_{75} - C_{25}$$

Selection of statements : 20 statements were selected from 100 statements for which we had scale and Q values in such a way that the scale values of the statements on the psychological continuum are relatively equally spaced and such that the Q values are relatively small. These statements were then arranged in random order and presented to subjects with instructions to indicate those that they are willing to accept or agree with and those that they reject or disagree with. Taking only the statements with which the subject has agreed, an attitude score was obtained from the scale values of these statements that were regarded as an indication of the location of the subject on the psychological continuum on which the statements have been scaled. The attitude score is based upon the arithmetic mean or median of the scale values of the statements agreed with.

Results : Statements were selected with lower Q values to form the attitude scale. The scale is presented in the following table with the scale values.

S.No.	Statements	Scale value
1	Line sowing helps in reducing disease incidence	7.742
2	Line sowing gives good yield.	7.979
3	Line sowing makes the inter-cultural operations easy	8.254
4	Inter cropping helps in balanced use of fertilizer	6.936
5	Inter cropping provides different crops for home consumption	5.101
6	Inter cropping increases the total returns	8.163
7	Plant protection measures help in control of crop damages	8.431
8	Seed treatment through chemicals is the best preventive measure against diseases	5.697
9	Proper time of sowing ensures better germination of the seeds	8.209
10	Improved seeds are essential for higher yield	8.118
11	Improved seeds require high inputs	7.529
12	Local seeds are tested by the farmers for ages so it is not good to replace them	1.589
13	As lot of research goes in to developing improved seeds so every farmers should adopt them without hesitation	7.120
14	Inter cultural operations save crops from weeds	8.668
15	Inter cultural operations ensure better use of soil moisture	7.849
16	Use of chemical fertilizers have no impact on crop yield	2.815
17	Chemical fertilizer application helps in maintaining soil fertility for a longer period	1.725
18	Use of chemical fertilizers have negative impact on soil health	2.384
19	Soil testing has no relevance on use of fertilizer	1.866
20	Drip irrigation can not be successful in farmer's field	2.161

Reliability test: Two comparable forms of the attitude scale were prepared. Selecting from the initial group of statements for which scale and Q values have been obtained did this. In addition to the first set, a second set of 20 statements was prepared. Both forms of the attitude scale were then given to the same group of 80 farmers. The scores for the subjects on the two forms were correlated and this correlation was taken as a measure of the reliability of the scales. Reliability coefficient thus obtained was .90.

Validity of scale: The final scale was administered on farmers of two different villages (50 from each village) for the validity of the scale. The value oft" test was found to be significant.

REFERENCE

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