A Scale to Measure the Attitude of Deputy Agricultural Officers towards Adaptive Research

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An attempt was made to develop a scale to precisely measure the attitude of Deputy Agricultural Officers towards Adaptive Research-an extension promotion programme which takes into account the regional and agro-climatic variations within the State and in district. Thanjavur district of Tamil Nadu was the locale of the study. This study would facilitate other researchers to adopt such procedures in the construction of scales and to use the same to know the attitudes of personnel involved in such programmes.

Adaptive Research as an extension promotion programme was first introduced in Tamil Nadu in 1969 in Thanjavur district. In Adaptive Research, the initiative emanates from the extension workers with due considerations to the views of the farmers and the prevailing physico-chemical and agro-climatic factors of the tract; whereas in district trials the extension worker is only an agency obliged to conform to specified designs and stipulated broad based activities formulated and guided by the research workers.

As Adaptive Research is a new extension promotion programme introduced by the State Department of Agriculture, its success depends on the attitude that an extension worker holds towards this programme. A standardized and objective scale is an immediate need to measure the attitude of extension workers towards the Adaptive Research trial programme and here is an attempt made in this direction.

MATERIALS AND METHODS

Construction of the Attitude Scale

Of the two methods available for the construction of attitude scale, viz. Thurstone's equal appearing interval scale and the Likert's summated rating scale, the latter was preferred, as it gets a five point judgement rather than mere acceptance or rejection. It does not require judges to rank the items. The interval consistency and reliability can be checked quickly. Recently Jha and Singh (1973) have also used this method to measure attitude.

Collection of items

The object was to select a set of items in such a manner that the acceptance or rejection of each one will

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imply a different degree of positive or negative attitude towards Adaptive research. The statements reflecting views for or against the topic under study were taken from printed sources and picked up from discussions with various personnel involved in Adaptive Research. Eighty three items were carefully collected at this stage.

The statements thus,collected were critically examined keeping in view the criteria suggested by Edwards (1957) for screening the items. Accordingly, factual and ambiguous items were eliminated.

Classification of items

First, the judges were asked to tick the statements which they considered favourable or positive. After collecting the responses, another copy was given to the same judges to check only negative items. Afterwards, the statements which were considered as both positive and negative were eliminated. Twenty four statements were thus, eliminated from the original list.

The remaining 59 statements were sent to another group of 25 judges who were extension workers engaged in Adaptive Research. They were requested to go through each statement carefully and indicate whether it was 'positive', 'negative' or 'ambiguous'. Thus, only 40 statments were retained for final selection. Suitable modifications were made based on the comments given by the judges.

Item selection

The critical ratio for the weighted responses was computed as described by Edwards (1957). The tool with 40 statements was mailed to a sample of 50 who were involved in Adaptive Research. In obtaining responses a five point continuum was used.

For favourable statements, the 'strongly agree' response was given a weightage of five, 'agree' response four, the 'undecided' three, the 'disagree' two and the 'strongly disagree' one, for unfavourable items, reverse scoring was adopted.

Total score of a respondent was computed by summating his scores for the individual item. These scores were then arranged in descending order according to their value. From this, 27 per cent of the respondents with highest score and another 27 per cent with lowest were selected to form the criterian groups.

RESULTS AND DISCUSSION

From the selected 40 statements, 10 positive and 10 negative statements having high 't' values were finally retained discarding the rest. The final statements along with critical ratio values are presented in Table I.

Reliability of the Scale

In this study, 'Test-Retest' and 'Split-half' methods were used to test the reliability. After a gap of 11 days,

TABLE k. Analysis of 't' values of Statements.

S. No	Statements	't' value
	Favourable	
1.	A.E.Os faith in extension work is increased because of Adaptive Reasenrch	8.99
2.	Adaptive Research enables the A.E.Os to practice new varieties	7.00
3.	Farmers'confidence in A.E.O's is increased because of Adaptive Research	5.66
4.	Adaptive Research develops confidence in A.E.Os in their work	4.58
5.	A.E.Os gain more technical knowledge through Adaptive Research	4.58
6.	Adaptive Research makes the A.E.O. an effective local authority to farmers	4.24
7.	Adaptive Research reduces time lag between new scientific findings and adoption by farmers.	4.02
8.	Professional competency has increased in A.E.Os due to Adaptive Research activities.	3.81
9.	Adaptive Research enables the farmers to try new varieties.	3.42
10.	A.E.Os can use Adaptive Research plots as a teaching or training site for the farmers.	3.35
	Unfavourable	
1.	The major obstacle to extension work is Adaptive Research.	8.99
2.	Wrong recommendations are often being formulated due to Adaptive Research.	8.99
3.	The observations recorded by the A.E.Os in Adaptive Research plots are not dependable.	8.99
4.	Adaptive Research plots should not be laid out in farmers, fields.	7.00
5.	Adaptive Research is merely a duplication of systematic research.	5.29
6.	Adaptive Research is nothing but the old district trials with a new name	.66
7.	A.E.O. is not the proper person to conduct Adaptive Research.	.58
8.	Adaptive Research is a mere waste of A.E.Os' time.	.42
9.	The relationship between the A.E.O. and his superiors became tough (worse) because of Adaptive Research.	3.35
10.	Agricultural programme for an area cannot be developed based on the results of Adaptive Research.	3.35

the same scale was administered again to the same group and the scores were calculated, and presented below.

Attitude scores of the two tests

Respondent Number	First test	Second test
1	76	77
2	94	94
3	80	80
4	81	80
5	90	90
6	96	96
7	82	82
8	67	68
9	72	70
10	69	69
11	58	58
12	61	62

The correlation coefficient between these scores was found to be 0.99. The calculated value of 't' for the coefficient was 40.74 and found to be significant at 0.01 probability level. The split half method was also used to test the reliability.

Validity of the Scale

Validity of the scale thus, developed was judged. As the scale value differences for almost all the statements included in the scale had high discriminating values, it seemed reasonable to accept the scale as valid

to measure the desired dimension. This was the only evidence available to show that the attitude scale developed for this study was valid.

Scoring and administering the scale

The final attitude scale consisted of 10 favourable and 10 unfavourable items. The scale was administered on a five point continuous, viz., 'strongly agree', 'agree' 'undecided' 'disagree' and 'strongly disagree', with weightages five, four, three, two and one respectively for favourable statements and just the reverse for unfavourable items.

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