

## RESEARCH NOTE

## Attitude of Farmers towards Seed Village Programme -A Scale Development

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### ABSTRACT

*A agriculture to be sustainable, a good quality seed is the foremost important factor to be considered where the whole crop improvement takes place. Agriculture being the backbone of Indian rural economy and got to feed millions of growing population minute by minute, day by day, need to be backed by a strong seed improvement programmes where both public and private sectors involvement is most essential. The developments in the seed industry in India, particularly in the last 30 years, are very significant. Future of agricultural production will largely depend upon development of improved varieties/ hybrids in various crops, supported by efficient, cost effective seed production technology. For present growing and for future generations there is all need to produce improved quality seeds and make that seed available to farmers everywhere in nation, this is made possible by one of the public funded programmes called "Seed Village Programme (SVP)". It is therefore significant to know the attitude of farmers towards seed village programme (SVP). Hence, the study was designed with the objective to develop and standardize a scale to measure the attitude of farmers towards seed village programme. A summated (likert) rating scale was been developed. The process started with identifying the dimension, collection of items followed by relevancy and item analysis and checking the reliability and validity for precision and consistency of the results. A Total of 42 statements were framed in which 23 statements were finally retained which has practical applicability in ascertaining the attitude towards seed village programme.*

**Key words:** *Attitude scale; Seed Village Programme (SVP); Summated rating scale; Quality seed production;*

Seeds are the foundation of agriculture. Technology has modernized much of farmer's day-to-day operations, but without a steady supply of high-quality seed, yields and crop quality would be greatly decreased. 15-20 per cent yield witnessed with quality seed alone. The response of all other input depends on quality of seeds to a large extent. It is estimated that the direct contribution of quality seed alone to the total production is about 15-20 per cent depending upon the crop and it can be further raised up to 45 per cent with efficient management of other inputs (Asif, 2016). Despite implementation of the organized seed programme since the mid-60s, the seed replacement rate has only reached the level of 15 per cent, 85 per cent of the seeds used are farm saved. It is, therefore, necessary to improve the stock of farm saved seeds for enhancing crop production/productivity. For

this, seed production, seed distribution and other connected aspects will have to be improved and strengthened at the farmer's level. To address this limitations seed village programme is being implemented on all India bases from the year 2005-06. It is proposed to provide financial assistance for distribution of foundation/certified seed at 50 per cent cost of the seed of crops for production of certified /quality seed only and to provide training on seed production and technology to the farmers.

A village, where in trained group of farmers are involved in production of seed of various crops and cater to the needs of themselves, fellow farmers of the village and farmers of the neighboring village in appropriate time and at affordable cost is called "A Seed Village". The implementing agencies will be State Department of

Agriculture, State Agriculture Universities, Krishi Vigyan Kendras, State Seed Corporation, National Seed Corporation, State Farms Corporation of India (SFCI), State Seed Certification Agencies, and Department of Seed Certification. The programme offers 50 per cent subsidy on seed for half an acre. Trainings are given to the farmers on crucial crop stages, it includes development of infrastructure facilities for seed storage.

It is very much needed to know the farmers preferences and opinion towards this SVP programme, as this programme train and empower farmers in production of quality seed of various crops which helps in catering needs of themselves, fellow farmers of the village and farmers of the neighboring village at right time and at affordable cost. Generally, opinion is a kind of attitude that is framed already about the existing system. *Thurstone (1946)* defined attitude as a degree of positive or negative affect associated with some psychological object. It may be any symbol, phrase, slogan, person, institutions and idea towards which people can differ with respect to positive or negative effect. The method of summing rating suggested by *Likert (1932)*, *Edwards (1957)* were followed in the development of the scale.

The objective of the study was to develop a scale to measure attitude towards seed village programme.

The definition of attitude in accordance with the present study was operationalized as farmer's degree of favourableness or unfavourableness towards seeds village programme.

## METHODOLOGY

Collected a large number of statements showing the favourable or unfavourableness of farmers. In which the entire universe of content is been covered. Statements were prepared by reviewing the study related literature available and discussions where been made with various seed and seed production related researchers, farmers and extension experts. The statements thus prepared were then carefully edited according to the fourteen criteria laid down by *Edward (1957)*. Total 42 statements were finally selected for analysis. Further, there is a need to include approximately equal number of negative and positive statements for analysis.

*Relevancy test:* Not all the statements selected were equally relevant, there is every need to know the relevancy of all the 42 selected statements. Hence, these

statements were subjected to scrutiny by mailing to 100 judges with appropriate necessary instructions. Judges were also requested to make any necessary modifications of words and sentences in according to their preferences. Judges were experts in field of agriculture extension in Indian Council of Agricultural Research (ICAR) and State Agriculture University (SAU) and Telangana State Department of Agriculture and asked to determine the relevancy under four point continuum *viz.*, most relevant, relevant, least relevant and not relevant with scores 4, 3, 2, and 1, respectively.

Out of 100 judges, 60 judges were responded to the statements. Thereby the relevancy score of each item was found out by adding the scores. From the data so obtained relevancy percentage, relevancy weightage and mean relevancy scores were worked out for all the 42 statements individually. Considering a relevancy percentage more than 70, relevancy weightage more than 0.70 and mean relevancy score was more than 3, then the statements were selected for further analysis with suggested modification by judges.

*Item analysis:* After the items have been carefully edited, they are subjected to procedure called "Item Analysis". Item analysis is to examine the extent to which each item can discriminate the respondent with high favorableness than the respondent with low favorableness towards seed village programme. This is applied to a schedule of 42 selected relevant statements and is administered by personally interviewing a sample of 120 farmers from non-sampled area. The responses for the statements were obtained on a five point continuum *viz.*, strongly agree, agree, undecided, disagree and strongly disagree with scores of 5, 4, 3, 2 and 1, respectively, in case of negative statements the scoring was reversed *i.e.*, 1, 2, 3, 4 and 5 respectively. The attitude score of the respondent on the scale was obtained by summing up the scores of all statements.

*Computing 't' values:* In item analysis, the respondents were arranged either in descending or ascending order based on the obtained attitude scores. Later, the criterion group was selected by elimination middle 50 per cent scores, *i.e.*, 25 per cent of respondents with high scores (high group) and 25 per cent respondents with low scores (low group) were taken and finally subjected to calculate t values. t value is a measure of extent to which a given statement differentiates the high group from the low group.

The t value for each statement was calculated by using the below mentioned formula:

$$t = \frac{X_H - X_L}{\sqrt{\frac{S_H^2}{n_H} + \frac{S_L^2}{n_L}}}$$

Where,

$X_H$  = the mean score on a given statement for high score group

$X_L$  = the mean score on a given statement for low score group

$S_H^2$  = the variance of the distribution of responses of the high group of the statement

$S_L^2$  = the variance of the distribution of responses of the low group of the statement

$n_H$  = the number of respondents in high score

$n_L$  = the number of respondents in low scores

After computing the 't' value for all the items, the statements with highest 't' value equal to or greater than 1.75 were finally selected and included in the attitude

scale. It was observed that, 23 statements were finally retained in the scale. The statements under each component were given in Table 1.

**Reliability:** A test to be called sound must be reliable because reliability indicates the extent to which the scores obtained in the test are free from internal defects of standardization, which are likely to produce errors of measurement (*Chandrakandan et al. 2001*). With respect to the reliability split- half method was been used. The scale was split into two halves based on odd and even number of items and was employed on fresh group of 60 respondents outside the sample area. After the obtaining two scores, it was corrected by using Rulon and Flanagan formulae and obtained the reliability coefficient of the whole set. The  $r_{tt}$ -value for scale was 0.87, indicating high reliability of the instrument and was suitable for administrating to the farmers to test their attitude towards SVP.

**Table 1. The final Attitude scale with 23 statements representing the attitude of farmers towards Seed Village Programme (SVP).**

Statements	't' values	Response categories				
		SA	A	UD	DA	SDA
Subsidy provided to develop storage bins under SVP are inadequate	5.97					
There is a need for seed certification to ensure quality of seeds produced under SVP	5.21					
Adoption of SVP doesn't make any difference in income earned	5.11					
SVP provides timely inspection by seed specialists	4.73					
Under SVP, seed distribution in selected areas is biased	3.86					
Awareness on SVP in remote areas is poor	3.50					
SVP carried out only in the assured irrigated areas	3.42					
Under SVP, farmer to farmer seed distribution is not carried out.	3.33					
High investment is needed to practice seed production techniques under SVP	3.00					
SVP training within a season is not enough to learn skills	3.00					
SVP disappointed the farmers for no buyback agreement with Government	3.00					
Seed distribution is delayed in selected areas of SVP.	2.85					
Under SVP, due to lack of quality in the seed produced, farmers are unable to sell their seeds.	2.85					
Trainings under SVP lack follow-up sessions.	2.78					
Agriculture Officers helps in disseminating the information of seed produced farmers of concede village	2.75					
SVP encourages youth to take-up farming specially in quality seed production	2.75					
SVP trainings enhance knowledge level in quality seed production	2.63					
Farmers lack sustenance in SVP as it is not providing marketing facilities after seed production	2.38					
Under SVP, farmers don't follow the seed production techniques provided at trainings	2.21					
SVP takes the feedback from farmers after their seed production	2.17					
SVP enhances the confidence of farmers to go for their own seed production	2.07					
Concede officers call university scientist to visits farmer's field under SVP	1.80					
SVP is very popular in my locality	1.78					

SA: Strongly agree    A: Agree    UN: Undecided    DA: Disagree    SDA: Strongly disagree

*Validity:* Here the validity used for the analysis was Content validity. According to *Anastasi (1968)* the content validity involves essentially the systematic examination of the test content to determine whether it covers a representative sample of the behaviour domain to be measured (*Chandrakandan et al. 2001*). While selecting attitude statements due care was taken in selecting and wording the statements so as to cover all the relevant aspects by discussing formally and informally with extension experts, resource personnel/ subject matter specialists and researchers and also followed the available reviews obtained thus, ensuring the scale to satisfy the content validity.

*Utility of scale :* The final scale which measures the attitude towards seed village programme consists of 23 statements. Each statement was noted on a five-point continuum as strongly agree, agree, undecided, disagree and strongly disagree with scores of 5,4,3,2 and 1 respectively for positive statements. The scoring was reversed in the case of negative statements, the score was obtained for each item and summed up to get the

attitude scores towards Seed Village Programme. The maximum score was 115 and the minimum was 23.

## RESULTS AND DISCUSSION

The final scale was called to be the standardized one which consisted of 23 statements. The scale developed to measure the attitude towards Seed Village Programme where responses had to be recorded on a five point continuum representing strongly agree, agree, undecided, disagree and strongly disagree with scores of 5, 4, 3, 2, and 1, respectively. The attitude score of each respondent can be calculated by adding up the scores.

## CONCLUSION

This scale was made to be standardized one to measure the attitude towards Seed village Programme which helps in showing the intensity of attitude of farmers, academicians and extension personnel who aids in making right decisions by policy makers. This scale also aids in enabling the agriculture department in making future decisions regarding the development of seed programmes.

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