

## IMPACT OF TRAINING ON SYMBOLIC ADOPTION BEHAVIOR OF THE TRAINEE FARMERS ABOUT QUALITY SEED PRODUCTION

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### ABSTRACT

*A study was conducted in 2019 - 2020 on a randomly selected 80 trainee farmers who were trained by the Department of Seed Science & Technology, B. A. College of Agriculture, Anand Agricultural University, Anand about the various aspects of Quality Seed Production. The findings revealed that before the training less than two fifth (38.75 percent) of the trainee had a very low level of symbolic adoption, followed by 18.75 percent each of them had a medium and a high level of symbolic adoption, 16.25 percent had a low and only 7.5 percent of them had a very high level of symbolic adoption, respectively. Whereas, in the case of after the training, more than two fifths (45.00 percent) of them had a high level of symbolic adoption, followed by 42.50 percent had a very high, 10 percent had a medium and 2.5 percent had a low level of symbolic adoption, respectively. However in case of effectiveness, before training program the mean score for symbolic adoption of the trainees with respect to different aspects related to Quality Seed Production was found 39.02 and it was reached to 83.08 after the training with a net gain of 44.05.*

**Keywords :** *symbolic adoption behavior, quality seed production, trainee farmers*

### INTRODUCTION

In broad sense, seed is a material which is used for planting or regeneration purpose. However scientifically, Seed is a fertilized matured ovule together covered with seed coat is called seed or it is a propagating material i.e., part of agriculture, sericulture, silviculture and horticultural plants used for sowing or planting purpose. Seed may be defined as “Structurally a true seed is a fertilized matured ovule, consisting of an embryonic plant, a store of food and a protective seed coat, a store of food consists of cotyledons and endosperm”. The importance of quality seeds has been recognized from the time immemorial. The old scripture, Manu Smriti says “Subeejam Sukshetre Jayate Sampadyathe” i.e., Good seed in good soil yields abundantly. Seed quality has been treated as sacred, being an important factor in the improvement of agriculture and agrarian societies. The Rigveda, 2000 BC indicate the importance accorded to seed and the mother earth. 5th century Kautilya Artha Shashtra, surapalas vrikshayurveda mentioned importance of seed and mentioned about seed treatments to ensure good germination. Seed dressing with milk, vidanga, cowdung, honey to protect the seed during germination. Although the importance of seed was recognized in ancient agriculture, the need for organized seed production was identified only at the beginning of 20th century when Royal commission of Agriculture (1925) recommended spread of improved

varieties and seed distribution.

*(Retrieved from: <https://vikaspedia.in/agriculture/agri-inputs/seeds/seed-quality>)*

Department of Seed Science & Technology, B. A. College of Agriculture, Anand Agricultural University, Anand is providing training to the trainee farmers of various districts of Gujarat State on Quality Seed Production. As the training can be beneficial for the general progress of the farmers as well as for the diffusion of any proven or newer technology among the farming community. Keeping the above facts in mind the study was conducted with the following objectives.

### OBJECTIVES

- (1) To know the profile of the trainee farmers
- (2) To study the effectiveness of training for promoting seed production in terms of behavioral changes pertaining to change in symbolic adoption behavior of trainee farmers

### METHODOLOGY

Department of Seed Science & Technology, B. A. college of Agriculture, Anand Agricultural University, Anand is providing training to the farmers of various districts of Gujarat State on Seed Production among them 80 trainee farmers were selected by simple random sampling method

during the year 2019-20 and data was collected before training and after training for the impact analysis. All the data were analyzed in light of the objectives by using appropriate statistical tools. The paired “t” test was used. Change in

symbolic adoption was measured by using following formula.

**Change in Symbolic adoption** = Mean symbolic adoption index after training - Mean symbolic adoption index before training

## RESULTS AND DISCUSSION

### Profile of the trainee farmers

Table 1: Profile of the trainee farmers

(n=80)

| Sr. No. | Particular           | Category                                 | Frequency | Percent |
|---------|----------------------|--|-----------|---------|
| 1       | Age                  | Young (36 to 50)                         | 18        | 22.50   |
|         |                      | Old (51 & above)                         | 24        | 30.00   |
|         |                      | Middle (36 to 50)                        | 38        | 47.50   |
| 2       | Gender               | Female                                   | 14        | 17.50   |
|         |                      | Male                                     | 66        | 82.50   |
| 3       | Education            | Illiterate (0)                           | 11        | 14.00   |
|         |                      | Primary (1 to 7)                         | 26        | 33.00   |
|         |                      | Secondary (8 to 9)                       | 20        | 25.00   |
|         |                      | Higher Secondary (10 to 12)              | 20        | 25.00   |
|         |                      | College & Above                          | 03        | 3.80    |
| 4       | Social participation | No membership                            | 19        | 24.00   |
|         |                      | Membership in one organization           | 36        | 45.00   |
|         |                      | Membership in more than one organization | 21        | 26.00   |
|         |                      | Position holder in an organization       | 04        | 05.00   |
| 5       | Extension contact    | Very low (up to 2.40 )                   | 23        | 28.75   |
|         |                      | Low (2.41 to 4.80)                       | 12        | 15.00   |
|         |                      | Medium (4.81 to 7.20)                    | 27        | 33.75   |
|         |                      | High (7.21 to 9.60)                      | 15        | 18.75   |
|         |                      | Very high (9.61 to 12.00)                | 03        | 03.75   |
| 6       | Mass media exposure  | Very low (up to 2.00)                    | 40        | 50.00   |
|         |                      | Low (2.01 to 4.00)                       | 09        | 11.25   |
|         |                      | Medium (4.01 to 6.00)                    | 17        | 21.25   |
|         |                      | High (6.01 to 8.00)                      | 11        | 13.75   |
|         |                      | Very high (8.01 to 10.00)                | 03        | 3.75    |

From the table 1 it can be concluded that less than half (47.50 per cent) of the respondents belonged to the old age group, followed by 82.50 percent of the trainee respondents were male, exactly one third (33.00 percent) of the respondents had a primary level of education, more than two fifth (45 percent) of the trainee farmers had a membership in one organization, slightly more than one third (33.33

percent) of the respondents had a medium level of extension contact, exactly half (50.00 percent) of the respondents had a very low level of mass media exposure, respectively. The findings are somewhat in line with the findings of Patel, et al. (2020), Desai et al. (2021), Mahammad et al. (2021) and Khandave et al. (2022).

**Symbolic Adoption behavior of the trainee farmers about quality seed production**

**Table 2 : Distribution of the respondents according to their symbolic adoption**

**(n=80)**

| Sr. No | Particulars  | Already Adopted | Not adopted | Symbolic adoption before Training |          |                     |          | Symbolic adoption after Training |          |                     |          |
|--------|--|-----------------|-------------|-----------------------------------|----------|---------------------|----------|----------------------------------|----------|---------------------|----------|
|        |  |                 |             | Willing to adopt                  | Per cent | Don't want to adopt | Per cent | Willing to adopt                 | Per cent | Don't want to adopt | Per cent |
| 1      | Use of certified seeds   | 05              | 75          | 36                                | 48       | 39                  | 52       | 75                               | 100      | 00                  | 0        |
| 2      | Deep ploughing   | 80              | 00          | 00                                | 00       | 00                  | 00       | 00                               | 00       | 00                  | 00       |
| 3      | Use of insect-pest-disease resistance varieties                | 09              | 71          | 38                                | 53.52    | 33                  | 46.48    | 68                               | 95.77    | 03                  | 4.23     |
| 4      | Maintenance of Isolation distance                              | 00              | 80          | 34                                | 42.50    | 46                  | 57.50    | 53                               | 66.25    | 27                  | 33.75    |
| 5      | Variation in time of planting and harvesting                   | 34              | 46          | 13                                | 28.26    | 33                  | 71.74    | 32                               | 69.57    | 14                  | 30.43    |
| 6      | Gap filling and proper distance between two plants and two row | 63              | 17          | 05                                | 29.41    | 12                  | 70.59    | 08                               | 47.05    | 09                  | 52.94    |
| 7      | Cleanliness of the farm  | 80              | 00          | 00                                | 00       | 00                  | 00       | 00                               | 00       | 00                  | 00       |
| 8      | Irrigation at critical stage of particular plant               | 68              | 12          | 00                                | 00       | 12                  | 100      | 02                               | 16.67    | 10                  | 83.33    |
| 9      | Rogging  | 08              | 72          | 05                                | 6.94     | 67                  | 93.05    | 70                               | 97.22    | 02                  | 2.78     |
| 10     | Sun drying of the seed   | 76              | 04          | 03                                | 75       | 01                  | 25       | 04                               | 100      | 00                  | 00       |
| 11     | Post-Harvest Management (Grading, Sorting and Packaging)       | 72              | 08          | 00                                | 00       | 08                  | 100      | 04                               | 50       | 04                  | 50       |

From the table 2, it can be said that in case of Symbolic adoption of use of certified seeds and rogging was increased from 48 percent to 100 percent, use of insect-pest-disease varieties was increased from 53.52 percent to 95.77 percent, variation in time of planting and harvesting was increased from 28.26 percent to 69.57 percent, maintenance of isolation distance was increased from 42.50 percent to 66.25 percent, post-harvest management was increased from 0 percent to 50 percent, gap filling and proper distance between two plants and two rows was increased from 29.41 percent to 47.05 percent and irrigation at critical stages of plant was increased from 0 percent to 16.67 percent.

**Overall Symbolic adoption of trainee farmers about Quality Seed Production****Table- 3 Overall Symbolic adoption of trainee farmers about Quality Seed Production n=80**

| Sr. No. | Symbolic adoption index before training |           |         | Symbolic adoption index after training |         |
|---------|---|-----------|---------|--|---------|
|         | Category                                | Frequency | Percent | Frequency                              | Percent |
| 1       | <b>Very low</b> (up to 20)              | 31.00     | 38.75   | 0.00                                   | 0       |
| 2       | <b>Low</b> (21 to 40)                   | 13.00     | 16.25   | 2.00                                   | 2.5     |
| 3       | <b>Medium</b> (41 to 60)                | 15.00     | 18.75   | 8.00                                   | 10      |
| 4       | <b>High</b> (61 to 80)                  | 15.00     | 18.75   | 36.00                                  | 45      |
| 5       | <b>Very high</b> (81 to 100)            | 6.00      | 7.5     | 34.00                                  | 42.5    |

From the table 12, it can be said that before the training less than two fifth (38.75 percent) of the trainee had a very low level of symbolic adoption, followed by 18.75 percent each of them had a medium and a high level of symbolic adoption, 16.25 percent had a low and only 7.5 percent of them had a very high level of symbolic adoption, respectively.

In the case of after the training, more than two fifths (45.00 percent) of them had a high level of symbolic adoption, followed by 42.50 percent had a very high, 10 percent had a medium and 2.5 percent had a low level of symbolic adoption, respectively. Whereas, none of them had a very low level of symbolic adoption.

**Impact of training in terms of gain in Symbolic adoption****Table 4 : Impact of training in terms of gain in Symbolic adoption**

| Symbolic Adoption Index | Frequency | Mean Score | Change in symbolic adoption index | t- value |
|-------------------------|-----------|------------|-----------------------------------|----------|
| <b>Before training</b>  | 80        | 38.85      | 44.44                             | 12.34*   |
| <b>After training</b>   | 80        | 83.30      |                                   |          |

The table 4 showed that before training program the mean score for symbolic adoption of the trainees concerning different practices related to quality seed production was 38.85 and it reached 83.30 after the training with a net gain of 44.44

**CONCLUSION**

From the above findings, it can be said that the training provided by the AAU on Quality Seed Production can be an ideal medium for wider adoption of different practices related to the Quality Seed Production as the significant change was observed in the symbolic adoption behavior of the trainee farmers in adopting various practices

related to Quality Seed Production after training. Before the training programme the mean score for symbolic adoption of the trainees concerning different practices related to Quality Seed Production was 38.85 and it reached 83.30 after the training with a net gain of 44.44

**CONFLICT OF INTEREST**

All authors declare that they have no conflict of interest

**REFERENCES**

- Desai, C. J. (2015). Effectiveness of training for promoting organic farming, M.Sc. (Agri.) Thesis (Unpublished) AAU, Anand
- Desai, H. K., Patel, G. J. and Pandya, E. H. (2021) Knowledge and adoption behavior of soybean growers. *Guj. J. Ext. Edu.* 32(2):40-44.
- Khandave, Swati, Prajapati, M.R. and Patel, V.T.. (2022) A scale for measuring entrepreneurial behavior of members of farmer producers' organization. *Guj. J. Ext. Edu.* 33(2):136-144.
- Mahammad Shafi R. Sk, Chauhan N. B. and Vinaya Kumar H. M. (2021). Responsible factors to encourage dairy farmers' sons to avail training on animal husbandry. *Guj. J. Ext. Edu.* 32 (1): 202-205.
- Narasaraj, M. A. (1981). Relative effectiveness of selected combinations of visuals in sericulture extension meetings. M.Sc. (Agri.) Thesis (Unpublished), University of Science, Bangalore
- Patel, P. C. Desai, J. D. and Patel, H. B. Impact of training on symbolic adoption behavior of the trainee farmers about integrated pest management. *Guj. J. Ext. Edu.* Vol. 31 : Issue 1 : December 2020.
- Webpage: <https://vikaspedia.in/agriculture/agri-inputs/seeds/seed-quality>