

---

## DECISION-MAKING ABILITY OF FARMERS FIELD SCHOOL FARMERS

**K. Atchuta Raju**

Scientist (TOT), DAATTC (ANGRAU), Machilipatnam, A. P.

**K. Vijaya Prakash**

SMS (Vety.Extn.), KVK, Garikapadu, A.P.

---

**Abstract:** The “school” itself is a “school without walls” – a study plot on which the participants work together to carry out studies and learning activities with the facilitator. The study was carried out in Krishna district of Andhra Pradesh with total of 210 farmers (140 trained and 70 untrained). The results stated that majority of the trained farmers were having medium decision-making ability and in case of untrained farmers were found to be under low decision-making ability category.

**Keywords:** FFS, Knowledge. Decision Making, IPM, PPM.

---

**Introduction:** Field schools are organized by community-based groups of 25-30 farmers who share common interests and who can provide support to one another. A group facilitator assists farmers. The “school” itself is a “school without walls” – a study plot on which the participants work together to carry out studies and learning activities under the facilitator. The study area is the core of the field school and is essential to allow farmers to carry out studies without personal risk, allowing them to take management decisions that they might not otherwise attempt in trials on their own field. The land is maintained by the group and not by the facilitator alone. Field schools are always held in the community where farmers live so that they can easily attend weekly meetings and maintain the field school studies. The extension officer or farmer facilitator travels to the site on the day of the field school, which is weekly for most field crops but monthly for perennial crops. The FFS runs for one to two seasons.

A main philosophy behind the field schools that no technology will necessarily work in a new location; therefore, they must be tested, validated and adopted locally. As a result, IPM / PPM methods are always tested in comparison with conventional practices. The result is that the beneficial aspects of IPM / PPM are incorporated into better farming practices with high adoption rates.

**Methodology:** An ex-post-facto research design was followed. The study was conducted in Krishna district of Andhra Pradesh because of large area in rice cultivation and active functioning of Farmers Field Schools. 14 FFS were selected randomly. One hundred and forty farmers at the rate of 10 from each FFS were selected randomly for the study. Seventy untrained farmers at the rate of five from each FFS were also selected randomly for comparison. Thus, a total of 210 farmers (140 trained and 70 untrained) from the 14 FFS were selected. For measuring a respondent’s knowledge on IPM of rice growing farmers, a knowledge test was developed. The data collected by personal interview method through structured and pretested interview schedule.

### Results and Discussion:

#### Decision Making Ability of the Trained and Untrained Farmers:

**Distribution of the Respondents According to Their Decision-Making Ability:** It has been revealed from the table -1, that majority (57.14 %) of the trained farmers were having medium decision-making ability followed by high and low decision-making ability with equal percentage (i.e., 21.43 per cent each). In case of untrained farmers 42.86 per cent were found to be under low decision-making ability category followed by medium (41.43 %) and high (15.71 %) decision making ability categories.

**Table 1:** Distribution of the Respondents According to their Decision-Making Ability

| S.No. | Category                       | Trained (n=140) |               | Untrained (n=70) |               |
|-------|--------------------------------|-----------------|---------------|------------------|---------------|
|       |                                | Frequency       | Percentage    | Frequency        | Percentage    |
| 1.    | Low decision-making ability    | 30              | 21.43         | 30               | 42.86         |
| 2.    | Medium decision-making ability | 80              | 57.14         | 29               | 41.43         |
| 3.    | High decision-making ability   | 30              | 21.43         | 11               | 15.71         |
|       | <b>Total</b>                   | <b>140</b>      | <b>100.00</b> | <b>70</b>        | <b>100.00</b> |

Mean: 16.12, S.D: 6.52

Mean: 10.57, S.D: 4.18

A cursory observation from the table -1 confirmed that majority of the trained (57.14 %) farmers had medium decision-making ability followed by high and low level with equal percentage. This result was envisaged by Manoj (2013) and Neha (2013).

The FFS trained farmers who were exposed to different communication media viz, lectures, demonstrations, skill teaching, field visits, group interactions, multimedia presentations must have got convinced of the importance of the technologies in rice cultivation resulting in medium level of decision-making ability. Despite exposure to such communication channels, the farmers of the study like a typical Indian farmer were still apprehensive of the techniques involved in different operations of rice cultivation restricting their capacity building and decision-making ability. Therefore, there is a every need for the Dept. of Agriculture to adopt innovations in FFSs to enhance the decision-making ability of the farmers.

**Response Analysis of Decision-Making Ability of Trained and Untrained Respondents:** The decision-making ability of the trained and untrained respondents was critically analyzed to understand the extent of influence of the FFS programme (Tables -2 and 3).

About 62.86 per cent of the trained respondents involved in taking self decision for the item selection of crops followed by participation in decision (30.00 %) and non-involvement in decision (7.14 %). On the other hand, 51.43 per cent of the untrained respondents involved in taking self decision followed by non-involvement in decision (31.43 %) and participation in decision (17.14 %).

About 36.43 per cent of the trained respondents involved in taking self decision for the item selection variety followed by participation in decision (35.71 %) and non-involvement in decision (27.86 %). In case of untrained respondents 48.57 per cent of respondents not involved in decision followed by self decision (34.29 %) and participation in decision (17.14 %).

About 48.57 per cent of the trained respondents were not involved in decision for the item soil/water sample collection and testing followed by participation in decision (27.14 %) and self decision (24.29 %). On the other hand, 55.71 per cent of the untrained respondent's non-involvement in decision for item followed by self decision (24.29 %) and participation in decision (20.00 %).

About 38.57 per cent of the trained respondents involved in taking self decision for the item nursery bed preparation followed by non-involvement in decision (34.29 %) and participation in decision (27.14 %). On the other hand, 67.14 per cent of the untrained respondents not-involved in decision for the item followed by self decision (18.57 %) and participation in decision (14.29 %).

About 49.29 per cent of the FFS trained respondents were involved in taking self decision for rising of seedlings followed by non-involvement in decision (30.00 %) and participation in decision (20.71 %). On the other hand, 82.86 per cent of the untrained respondents were not involved in decision followed by participation in decision (10.00 %) and self decision (7.14 %).

About 57.86 per cent of the trained respondents were involved in taking self decision for the main field preparation followed by participation in decision (27.14 %) and non-involvement in decision (15.00 %). On the other hand, 84.29% of the untrained respondents were not involved in decision followed by participation in decision (14.29 %) and self decision (1.43 %).

---

About 61.43 per cent of the FFS trained respondents were involved in taking self decision for the item planting followed by participation in decision (21.43 %) and non-involvement in decision (17.14 %). In case of untrained respondents 91.43 per cent of the respondents were not involved in decision for the item followed by participation in decision (4.29 %) and self-decision (4.29 %).

About 45.71 per cent of the trained respondents were involved in taking self decision for the item fertilizer application followed by participation decision (27.14 %) and non-involvement in decision (27.14 %). On the other hand, 61.43 per cent of the untrained respondents were non-involved in decision for the item followed by participation in decision (25.71 %) and self decision (12.86 %).

About 73.57 per cent of the trained respondents were involved in taking self decision for the item weed control followed by participation in decision (15.00 %) and non-involvement in decision (1.43 %). On the other hand, 80.00 per cent of the respondents were not involved in decision for the item followed by participation in decision (14.29 %) and self decision (5.71 %).

About 67.14 per cent of the trained respondents were not involved in decision for the item irrigation followed by participation in decision (26.43 %) and self decision (6.43 %). Whereas in case of untrained respondents 92.86 per cent of the respondents were not involved in decision for the item followed by participation in decision (5.71 %) and self decision (1.43 %).

About 71.43 per cent of the trained respondents were involved in taking self decision for the item plant protection followed by participation in decision (27.14 %) and non-involvement in decision (1.43 %). On the other hand, 88.57 per cent of the untrained respondents were not involved in decision for the item followed by participation in decision (7.14 %) and self decision (4.29 %).

About 72.14 per cent of the trained respondents were involved in taking self decision for the item harvesting followed by participation in decision (17.14 %) and non-involvement in decision (10.71 %). In case of untrained respondents 95.71 per cent of the respondents were not involved in decision for the item followed by self decision (2.86 %) and participation in decision (1.43 %).

About 86.43 per cent of the trained respondents were not involved in decision for the item threshing followed by participation in decision (10.00 %) and self decision (3.57 %). On the other hand, 98.57 per cent of the untrained respondents were not involved in decision the item followed by self decision (1.43 %).

About 79.29 per cent of the trained respondents were involved in taking self decision for the item storage followed by participation in decision (15.71 %) and non-involvement in decision (5.00 %). In case of untrained respondents 97.14 per cent of the respondents were non-involvement in decision for the item followed by participation in decision (2.86 %).

About 81.43 per cent of the trained respondents were involved in taking self decision for the item sale of produce followed by participation in decision (11.43 %) and non-involvement in decision (7.14 %). On the other hand, 84.29 per cent of the untrained respondents were not involved in decision for the item followed by participation in decision (8.57 %) and self decision (7.14 %).

About 92.86 per cent of the trained respondents were not involved in decision for the item purchase of agro inputs/implements followed by self decision (5.71 %) and participation in decision (1.43 %). On the other hand, 98.57 per cent of the untrained respondents were not involved decision for the item followed by participation in decision (1.43 %).

**Table 2:** Response Analysis of Decision-Making Ability Statements of Trained Respondents

| S.No | Item                                     | Self decision |       | Participation in decision |       | Non - involvement in decision |       |
|------|--|---------------|-------|---------------------------|-------|-------------------------------|-------|
|      |  | F             | %     | F                         | %     | F                             | %     |
| 1    | Selection of crops                       | 88            | 62.86 | 42                        | 30.00 | 10                            | 7.14  |
| 2    | Selection of variety                     | 51            | 36.43 | 50                        | 35.71 | 39                            | 27.86 |
| 3    | Soil / water sample collection & testing | 34            | 24.29 | 38                        | 27.14 | 68                            | 48.57 |
| 4    | Nursery bed preparation                  | 54            | 38.57 | 38                        | 27.14 | 48                            | 34.29 |
| 5    | Raising of seedlings                     | 69            | 49.29 | 29                        | 20.71 | 42                            | 30.00 |
| 6    | Main field preparation                   | 81            | 57.86 | 38                        | 27.14 | 21                            | 15.00 |
| 7    | Planting                                 | 86            | 61.43 | 30                        | 21.43 | 24                            | 17.14 |
| 8    | Fertilizer application                   | 64            | 45.71 | 38                        | 27.14 | 38                            | 27.14 |
| 9    | Weed control                             | 103           | 73.57 | 21                        | 15.00 | 16                            | 11.43 |
| 10   | Irrigation                               | 94            | 67.14 | 37                        | 26.43 | 9                             | 6.43  |
| 11   | Plant protection                         | 100           | 71.43 | 38                        | 27.14 | 2                             | 1.43  |
| 12   | Harvesting                               | 101           | 72.14 | 24                        | 17.14 | 15                            | 10.71 |
| 13   | Threshing                                | 5             | 3.57  | 14                        | 10.00 | 121                           | 86.43 |
| 14   | Storage                                  | 111           | 79.29 | 22                        | 15.71 | 7                             | 5.00  |
| 15   | Sale of produce                          | 114           | 81.43 | 16                        | 11.43 | 10                            | 7.14  |
| 16   | Purchase of Agro inputs / implements     | 130           | 92.86 | 2                         | 1.43  | 8                             | 5.71  |

**Table 3:** Response Analysis of Decision-Making Ability Statements of Untrained Respondents

| S.No | Item                                     | Self decision |       | Participation in decision |       | Non involvement in decision |       |
|------|--|---------------|-------|---------------------------|-------|-----------------------------|-------|
|      |  | F             | %     | F                         | %     | F                           | %     |
| 1    | Selection of crops                       | 36            | 51.43 | 12                        | 17.14 | 22                          | 31.43 |
| 2    | Selection of variety                     | 24            | 34.29 | 12                        | 17.14 | 34                          | 48.57 |
| 3    | Soil / water sample collection & testing | 17            | 24.29 | 14                        | 20.00 | 39                          | 55.71 |
| 4    | Nursery bed preparation                  | 13            | 18.57 | 10                        | 14.29 | 47                          | 67.14 |
| 5    | Raising of seedlings                     | 5             | 7.14  | 7                         | 10.00 | 58                          | 82.86 |
| 6    | Main field preparation                   | 1             | 1.43  | 10                        | 14.29 | 59                          | 84.29 |
| 7    | Planting                                 | 3             | 4.29  | 3                         | 4.29  | 64                          | 91.43 |
| 8    | Fertilizer application                   | 9             | 12.86 | 18                        | 25.71 | 43                          | 61.43 |
| 9    | Weed control                             | 4             | 5.71  | 10                        | 14.29 | 56                          | 80.00 |
| 10   | Irrigation                               | 1             | 1.43  | 4                         | 5.71  | 65                          | 92.86 |
| 11   | Plant protection                         | 3             | 4.29  | 5                         | 7.14  | 62                          | 88.57 |
| 12   | Harvesting                               | 2             | 2.86  | 1                         | 1.43  | 67                          | 95.71 |
| 13   | Threshing                                | 1             | 1.43  | 0                         | 0.00  | 69                          | 98.57 |
| 14   | Storage                                  | 0             | 0.00  | 2                         | 2.86  | 68                          | 97.14 |
| 15   | Sale of produce                          | 5             | 7.14  | 6                         | 8.57  | 59                          | 84.29 |
| 16   | Purchase of Agro inputs / implements     | 0             | 0.00  | 1                         | 1.43  | 69                          | 98.57 |

A cursory examination into the table-2 and 3 clearly shows that the trained respondents taking vital decisions in the selection of crops, varieties, nursery bed preparation, main field preparation, fertilizer application, raising of seedling, planting, plant protection, weed control, harvesting, storage, sale of produce and purchase of agro inputs and implements this clearly explains that the FFS programme has helped them to take right and timely decisions on these key activities because of the knowledge gained and change in attitude on IPM practices.

In contrary, the untrained respondents were lacking the self decision in all the key activities mentioned in the table except for the selection of crops. The reason could be attributed for the low exposure to mass media, low extension contact, lack of knowledge and awareness which making them not to actively participate in decision making and mostly non-involvement in taking decision.

The calculated 'z' value was compared with the table value. It resulted in rejection of null hypothesis as the calculated value was significantly greater at 0.01 per cent level of probability. This indicated that there was significant difference between FFS trained and untrained farmers in respect of decision-making ability with special emphasis on different aspects of rice cultivation. Further when the means are compared between FFS trained and untrained farmers, it is evident that the mean decision-making ability scores of FFS trained (16.12) were higher to that of untrained (10.57) indicating that FFS trained farmers had higher level of decision-making ability on different aspects of rice cultivation compared to untrained farmer.

**Difference in Decision Making Ability Scores of FFS Trained & Untrained Respondents:** In order to find out the significant differences of any between the decision-making ability of FFS trained and untrained farmers with regard to different aspects of rice cultivation, the mean decision-making ability scores were subjected to 'z' test and the results are presented in table 36.

**Null hypothesis:** There will be no significant difference between the mean decision-making ability scores of FFS trained and untrained farmers on different aspects of rice cultivation.

**Empirical Hypothesis:** There is a significant difference between the mean decision-making ability scores of FFS trained and untrained farmers on different aspects of rice cultivation.

The calculated 'z' value was compared with the table value. It resulted in rejection of null hypothesis as the calculated value was significantly greater at 0.01 per cent level of probability. This indicated that there was significant difference between FFS trained and untrained farmers in respect of Decision-making ability with special emphasis on different aspects of rice cultivation. Further, when the means are compared between FFS trained and untrained farmers, it is evident that the mean Decision-making ability scores of FFS trained (16.12) was higher to that of untrained (10.57) indicating that FFS trained farmers had higher level of Decision-making ability on different aspects of paddy cultivation compared to untrained farmer.

**Table 4:** Difference in Decision Making Ability Scores of FFS Trained & Untrained Respondents

| S.No. | Category      | Mean  | S.D. | 'Z' value |
|-------|---------------|-------|------|-----------|
| 1.    | FFS Trained   | 16.12 | 6.52 | 37.96**   |
| 2.    | FFS Untrained | 10.57 | 4.18 |           |

'Z' – critical value significant at 0.01 probability level.

**Conclusion:** The findings revealed that majority of the FFS trained farmers had medium level of decision-making ability. The policy makers and authorities concerned should ensure that the FFS programme in each village should be continued for at least 3-4 crop seasons, so that the farmers will be well acquainted with IPM practices instead of discontinuing in the next season.

#### References:

1. Manoj, A. 2013. Impact of Farmers' Field Schools on farmers' knowledge, productivity and environment. PhD Thesis submitted to Indian Agricultural Research Institute, New Delhi.
2. Neha, S. 2013. Impact of Farmer's Field School Training Programme on Adoption of Integrated Pest Management practices in Rice by the farmers of the Korba District of Chhattisgarh. M.Sc. (Ag.) Thesis submitted to Indira Gandhi Krishi Vishwa Vidyalaya, Raipur (C.G).

\*\*\*