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# Personnel correlates of farmers about dibbling method of soybean cultivation

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**Abstract**

The present study was conducted in Latur, Renapur and Ausa tehsils of Latur district from Marathwada region of Maharashtra State in 2023-2024, with a study sampke of 120 farmers. It was obsereved that, the results of correlation coefficient showed that independent variable age and land holding had negative and non-significant relationship with attitude towards dibbling method of soybean cultivation. Whereas area under soybean, annual income and extension contact, had positive and significant relationship with attitude towards dibbling method of soybean cultivation and sources of information, innovativeness, knowledge and risk orientation had positive and highly significant relationship with attitude towards dibbling method of soybean cultivation.

**Keywords:** Attitude, dibbling method, soybean, farmers

## Introduction

Soybean has been known by various names in India such as Bhat, Bhatman, Ramkuithi etc. It is also called as the miracle crop of the twentieth century and was popularly known as ‘queen of pulses’, wonder crop and agriculture cindrella. It is the least expensive source of premium protein. It includes 20 percent oil and 40 percent high quality protein. Soybean contains all essential amino acids and is rich in lysine and also rich in poly-unsaturated fatty acids and contains more of linoleic acid (54%). The yellow revolution in the nation is also largely attributed to soybeans. Just soybeans, out of the nine oilseeds cultivated, account for roughly 28% of the nation's production of vegetable oil.

Globally and in the main producing nations, soybean acreage and production have grown dramatically. Approximately 85% of the area and 88% of the world's soybean production is contributed by the five major soybean-producing nations namely United States, Brazil, Argentina, China, and India. Brazil now produces more soybeans than the United States, accounting for roughly 33% of the world's total production, with the United States coming in second with 32% and Argentina with 14%. Approximately 69% of the world's cultivated soybean area and 79% of its production are accounted for by the top three producers. India is ranked fifth internationally in soybean production and fourth in terms of area under soybeans.

In soybean cultivation, the dibbling method is used to plant soybean seeds. The soil is prepared by ploughing and harrowing to create a fine seedbed. The dibbler is then used to make small holes in the soil at regular intervals, usually 20-25 cm apart. Soybean seeds are then placed in the holes and covered with soil, ensuring that they are planted at a depth of 3-5 cm. The soil is then firmed around the seeds to ensure good contact between the seeds and the soil. The dibbling method is preferred for soybean cultivation as it allows for precise spacing and depth of planting, which is important for optimal growth and yield. Additionally, the dibbling method allows for easier weed control and irrigation management as the plants are evenly spaced. This method is also suitable for areas with limited water resources as it reduces water usage and wastage. It is also important to ensure that the dibbler used is of the correct size and shape to prevent damage to the seeds during planting. Overall, the dibbling method is a reliable and efficient way to plant soybean seeds and is commonly used by farmers worldwide.

## Materials and Methods

The present study was carried out in randomly selected Latur district from the Marathwada region of Maharashtra State. The Latur district consist of ten tehsils namely Ahmadpur, Ausa, Chakur, Deoni, Jalkot, Latur, Nilanga, Renapur, Shirur Anantpal and Udgir. Out of these three tehsils namely Latur, Renapur and Ausa were selected randomly. From each selected tehsil four villages were selected randomly. Thus twelve villages from three tehsils were selected for this study. From each of the selected village ten farmers were selected randomly. Thus a total 120 farmers were selected as respondent for the present study. This selection was done by using simple random sampling method. Data were collected by personally interviewing the farmers with the help of pretested and structured interview schedule.

## Results and Discussion

**Table 1:** Distribution of farmers according to their profile

| Sr. No. | Category | Farmers (N = 120) | |
|---|---|---|---|
| | | Frequency | Percentage (%) |
| **1.1 Age** | | | |
| 1. | Young (Up to 32 ) | 23 | 19.17 |
| 2. | Middle (33 to 50 ) | 77 | 64.16 |
| 3. | Old (51 and above ) | 20 | 16.67 |
| **1.2 Education** | | | |
| 1. | Illiterate | 8 | 6.67 |
| 2. | Primary School (1st to 4th ) | 20 | 16.67 |
| 3. | Secondary School (5th to 10th ) | 53 | 44.16 |
| 4. | Higher School (11th to 12th ) | 24 | 20.00 |
| 5. | Graduation | 11 | 09.17 |
| 6. | Post-Graduation | 4 | 03.33 |
| **1.3 Land holding** | | | |
| 1. | Marginal (up to 1.00 ha ) | 14 | 11.67 |
| 2. | Small (1.01 to 2.00 ha ) | 59 | 49.17 |
| 3. | Semi medium (2.01 to 4.00 ha ) | 40 | 33.33 |
| 4. | Medium (4.01 to 10.00 ha ) | 7 | 05.83 |
| 5. | Large (above 10.00 ha ) | 0 | 00 |
| **1.4 Area under soybean** | | | |
| 1. | Small (Up to 1.00 ha ) | 26 | 21.67 |
| 2. | Medium (1.01 to 2 ha ) | 73 | 60.83 |
| 3. | Large (2.01 ha and above ) | 21 | 17.50 |
| **1.5 Annual income** | | | |
| 1. | Low (Up to 89224 Rs.) | 16 | 13.33 |
| 2. | Medium (89225 Rs. to 1,59,842 Rs.) | 80 | 66.67 |
| 3. | High (1,59,843 Rs. and above ) | 24 | 20 |
| **1.6 Extension contact** | | | |
| 1. | Low (Up to 29 ) | 22 | 18.34 |
| 2. | Medium (30 to 42 ) | 79 | 65.83 |
| 3. | High (43 and above ) | 19 | 15.83 |
| **1.7 Social participation** | | | |
| 1. | Low (Up to 19 ) | 21 | 17.50 |
| 2. | Medium (20 to 37 ) | 82 | 68.33 |
| 3. | High (38 and above ) | 17 | 14.17 |
| **1.8 Sources of information** | | | |
| 1. | Low (Up to 24 ) | 28 | 23.33 |
| 2. | Medium (25 to 42 ) | 67 | 55.83 |
| 3. | High (43 and above ) | 25 | 20.84 |
| **1.9 Innovativeness** | | | |
| 1. | Low (Up to 17 ) | 35 | 29.17 |
| 2. | Medium (18 to 29 ) | 70 | 58.33 |
| 3. | High (30 and above ) | 15 | 12.50 |
| **1.10 Knowledge** | | | |
| 1. | Low (Up to 13 ) | 34 | 28.33 |
| 2. | Medium (14 to 18 ) | 74 | 61.67 |
| 3. | High (19 and above ) | 12 | 10.00 |
| **1.11 Risk orientation** | | | |
| 1. | Low (Up to 11 ) | 31 | 25.83 |
| 2. | Medium (12 to 25 ) | 55 | 45.84 |
| 3. | High (26 and above ) | 34 | 28.33 |

From table 1, it was observed that, 64.16 percent of the farmers had middle age, 44.16 percent of farmers were educated up to secondary school, 49.17 percent of farmers had small size of land holding, majority (60.83%) of the farmers had medium area under soybean, majority (66.67%) farmers had medium annual income, majority (65.83%) percent of farmers had medium level of extension contact, majority (68.33%) of farmers had medium social participation, 55.83 percent of farmers had sources of information, 58.33 percent of farmers had medium level of innovativeness, 61.67 percent of the farmers had medium level of knowledge and 45.84 percent of the farmers had medium level of risk orientation.

**Table 2:** Coefficient of correlation between attitude and profile of farmer

| SL. No | Independent Variable | Correlation coefficient ('r') |
|---|---|---|
| 1. | Age | -0.127$^{NS}$ |
| 2. | Education | 0.270** |
| 3. | Land holding | -0.135$^{NS}$ |
| 4. | Area under soybean | 0.202* |
| 5. | Annual income | 0.222* |
| 6. | Extension contact | 0.199* |
| 7. | Social participation | 0.224* |
| 8. | Sources of information | 0.401** |
| 9. | Innovativeness | 0.381** |
| 10. | Knowledge | 0.420** |
| 11. | Risk orientation | 0.405** |

***** = Significant at 0.05% level of probability
**= Significant at 0.01% level of probability, NS = non-significant

It is evident from table 2 that, the results of correlation coefficient showed that independent variable age and land holding had negative and non-significant relationship with attitude towards dibbling method of soybean cultivation. Whereas area under soybean, annual income and extension contact, had positive and significant relationship with attitude towards dibbling method of soybean cultivation and sources of information, innovativeness, knowledge and risk orientation had positive and highly significant relationship with attitude towards dibbling method of soybean cultivation.

## Conclusions

As regard with the profile of farmers it was observed that, 64.17 percent of the farmers had middle age, 44.16 percent of farmers were educated up to secondary school, 49.16 percent of farmers had small size of land holding, (60.83%) of the farmers had medium area under soybean, 66.67 percent farmers had medium annual income, majority (65.83%) percent of farmers had medium level of extension contact, 68.33 percent of farmers had medium social participation, 55.83 percent of farmers had sources of information, 58.33 percent of farmers had medium level of innovativeness, 61.67 percent of the farmers had medium level of knowledge and 45.83 percent of the farmers had medium level of risk orientation. It was found that majority (61.67%) of farmers had favourable level of attitude about dibbling method of soybean cultivation and the ratio characteristics showed that age, education, land holding, area under soybean, annual income, extension contact, social participation, sources of information, innovativeness, knowledge and risk orientation influenced the attitude of farmers towards dibbling method of soybean cultivation.

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