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## Adoption of improved maize production technologies among farm women of Udaipur district, Rajasthan

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#### Abstract

Maize is one of the most versatile emerging crops having wider adaptability under varied agro-climatic conditions. Globally, maize is known for highest genetic yield potential among the cereals. Our present research aimed to study the knowledge of improved maize production technologies among farm women, adoption of maize production technologies & to study the constraints faced in adoption of improved maize production technologies. The present study was conducted in Udaipur district of Rajasthan. For selection of the sample, a random sampling technique was used. A list of farm women was procured from 4 villages. 30 farm women from each village were selected for the study. Thus, the total sample consisted of 120 farm women. Our study concluded that majority (69.17%) of respondents possessed medium-level knowledge regarding improved maize production technologies with MPS 53.23 followed by 17.50% of respondents who possessed low knowledge with MPS 20.46 and only 13.33% of respondents belonged to a high category of knowledge with MPS 69.32. With an overall MPS of 45.24, the majority of farm women had a medium level of adoption methods. The important constraint faced by respondents was inadequate number of trainings for farm women, lack of active leaders with an overall MPS of 33.33, the other constraints were high cost of farm implements with MPS of 66.67, poor net return as compared to other crops (MPS 33.33) followed by low price of maize in the market (66.67) were faced by women in adoption of improved maize production technologies.

**Keywords:** Maize, adoption, knowledge, MPS

#### 1. Introduction

Maize Crop is at the third position next to rice and wheat in area and production. Among the maize growing countries, India rank 4<sup>th</sup> in area and 7<sup>th</sup> in production, representing around 4% of the world maize area and 2% of the total production. Rajasthan is the largest state of the Indian Union with the geographical area of 3.42 lac sq. km. Due to the vast diversity in agro-climatic condition and in order to cater to the location specific need of agricultural research, the state has been classified into ten distinct agro-climatic zone. This Humid Southern Plain Zone lies in south eastern physiographic region, comprising only 5% geographical area of Rajasthan. Maize is the important cereal grown in the zone in both of area and production. Scientists has developed improved varieties of different crops which has much higher production potential as compared to the local one. Similarly, the extension scientists of KVK's and field functionaries worked under Broad Based Agriculture Extension System are actively engaged in dissemination of technologies among the farming community in the state. Despite the efforts of research and extension, the expected results in crop productivity could not be achieve leading to exists vast gap in productivity between the highest yield recorded at the research farm and those representing the mean performance in the zone. This is basically due to non-adoption of technologies by the farming community. Keeping this point in view, the study was conducted with following specific objectives to find out the extent of knowledge and adoption of improved maize production technologies by the farm women.

#### Objectives

This research aimed to study the knowledge of improved maize production technologies among farm women, adoption of maize production technologies & to study the constraints faced in adoption of improved maize production technologies.

#### 2. Methodology

The present study was conducted in Udaipur district of Rajasthan. The investigation was done purposively because the Krishi Vigyan Kendra (Badgaon) and Agriculture supervisors of

Badgaon and Girwa has been working in the enhancement of maize production by providing agriculture supplies to the farming community which was helpful to the researcher in the authentic and reliable data collection. For selection of the sample, a random sampling technique was used. A list of farm women was procured from each village with the help of KVK (Krishi Vigyan Kendra) Badgaon supervisor. 30 farm women from each village were selected for study.

Thus, the total sample consisted of 120 farm women. Keeping in view the type of research for the present study, interview schedule was developed with consultation of subject matter specialist of Agronomy and Extension Education considering the main objectives of the study. The interview schedule consisted of following sections as follows: I-Schedule for background information of the respondents. II-Knowledge of the respondent regarding improved maize production technologies. III-Adoption of improved maize production technologies by respondents. IV-Constraints in adoption of improved maize production technologies by respondents. To collect the required information the personal interview technique was used by the researcher. After establishing good rapport with the respondents, data were collected by the researcher with the help of developed interview schedule in an informal manner using local dialect. The variables were selected on the basis of objectives set forth for the study. The variables and their measurement are presented below: a) Background Information of the Respondent b) Measurement of Knowledge, c) Measurement of adoption) Measurement of constraints.

The following statistical measures used for studying the background information of respondents and for interpreting the data. Frequency and percentage

Frequency of the respondents in a category (f)

Percentage of the respondents in a category (%)

Mean score of the respondent (MS).

Mean percent score of a respondent (MPS).

Standard Deviation

### 3. Result and discussion

#### 3.1 Knowledge of farm women regarding improved maize production technologies

**Table 1:** overall mean percent score of the respondents on the basis of knowledge of participation

| S.No. | Component | Knowledge Level of participation |       | MPS   |
|-------|-----------|----------------------------------|-------|-------|
|       |           | F                                | %     |       |
| 1     | Low       | 21                               | 17.50 | 20.46 |
| 2     | Medium    | 83                               | 69.17 | 53.23 |
| 3     | High      | 16                               | 13.33 | 69.32 |

#### 2. Adoption of Farm Women Regarding Improved Maize Production Technologies

**Table 2:** overall mean percent score of the respondents on the basis of adoption of participation

| S. No. | Particular | Adoption Level of participation |       | Overall MPS |
|--------|------------|---------------------------------|-------|-------------|
|        |            | F                               | %     |             |
| 1      | Low        | 25                              | 20.83 | 33.62       |
| 2      | Medium     | 81                              | 67.50 | 45.24       |
| 3      | High       | 14                              | 11.67 | 53.23       |

#### 3. Constraints faced by farm women regarding improved maize production

**Table 3:** overall mean percent score of the respondents on the basis of constraints of participation

| S. No. | Component | Overall constraints Level of participation |       | MPS   |
|--------|-----------|--|-------|-------|
|        |           | F  | %     |       |
| 1      | Low       | 32   | 26.67 | 15.66 |
| 2      | Medium    | 68   | 56.67 | 21.34 |
| 3      | High      | 20   | 16.67 | 25.89 |

The majority (69.17%) of respondents possessed medium-level knowledge regarding improved maize production technologies with MPS 53.23 followed by 17.50% of respondents who possessed low knowledge with MPS 20.46 and only 13.33% of respondents belonged to a high category of knowledge with MPS 69.32. The findings revealed by Netam (2019) [1] stated that 72.96% of respondents had medium level of knowledge regarding improved maize production technologies.

With an overall MPS of 45.24, the majority of farm women had a medium level of adoption of improved maize production methods. The adoption category of respondents in adoption revealed that (11.67%) of respondents belonged to the high adoption category, followed by 67.50% of respondents in the medium adoption category, and 20.83% in the low adoption category. Similarly, Ranawat *et al.* (2011) [2] conducted study on the adoption of improved maize cultivation practices by trained and untrained farmers of KVK, Udaipur. The study interviewed 160 maize growers in four villages across three Panchayat Samities in the Udaipur district. Only 20.00 percent of farmers were high adopters of maize cultivation practises, 34.37 percent were medium level adopters, and 45.63 percent were low adopters.

56.67% of respondents faced major constraints regarding adoption of improved maize production technologies with MPS 21.34 whereas remaining 16.67 and 26.67% respondents with MPS 25.89 and 15.66 were under the category of high and low constraints for adoption of improved maize production technologies. In one study by Jamakhandi *et al.* (2020) [3] constraints of production and marketing of maize in north Karnataka were examined. The findings revealed that maize area and production grew at a positive rate of 6.49 and 5.19 percent, respectively. In the case of maize production, it was discovered that frequent occurrence of drought ranked I, with a Garrett mean score of 73.38, and whereas in the case of maize marketing, location of markets in remote areas ranked I with a Garrett mean score of 72.23.

#### 4. Conclusion

It is recommended to conduct special trainings only for farm women and a regular feedback of the imparted training must be assured. It is recommended that a women extension personnel must be in regular touch with whom farm women can easily share about the problems regarding adoption of several improved technologies without any hesitation. One of the major constraints faced by the farm women was high price of farm implements. It is suggested that agriculture supervisors along with KVK must provide essential farm implements to the farm women along with special trainings on usage regarding complicated implements. Research scientists must provide farm women with complete knowledge regarding the hybrid as well as local varieties depending upon the season and the area along with soil fertility, the amount of fertilizers to be applied and pest disease occurrence. A special audio-visual aid must be prepared by the extension workers for the better

understanding of improved technology regarding maize so that it will be easy to follow the correct method with better future yield product.

## 5. References

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