To determine the level of knowledge of improved production practices of maize enterprise.

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Abstract:- Maize is a cereal grain belonging to the family Gramineae/ Poaceae and is known as 'Queen of Cereals' because it has the highest genetic yield potential among the cereals. The study was conducted purposefully in Block Bheemadevarapalli vangara of Warangal district.Total 120 respondents were selected randomly from 10 villages and the results of descriptive study revealed that knowledge level improved production practices of maize enterprise were medium. The analysis showed that majority (74.16%) of the respondents had medium level of knowledge followed by low (15.83%) and high (10.00%) respectively towards improved production practices of maize enterprise. Correlation analysis of knowledge with other independent variables results revealed that the age, education, occupation, annual income, livestock, Mass media exposure, extension contact and economic motivation were found to be positive and significant at the 0.05 level The variables like land holding, material possession and market orientation were found non-significant both 0.01 and 0.05 level of significance.

Key words:- Correlation analysis, Enterprise, Knowledge, Production practices

1. Introduction

Maize (*Zea mays* L) or corn is a cereal grain belonging to the family Gramineae/ Poaceae and is known as 'Queen of Cereals' because it has the highest genetic yield potential among the cereals. It was first adopted and cultivated by the Latin American countries and was first introduced in India by the Portuguese during the 17th century. According to All India Report on Agriculture Census 2005-06, more than 12 million farmer-households are cultivating maize in India, thus directly influencing their food and livelihood security. In India, maize is traditionally grown in monsoon (Kharif) season, which is accompanied by high temperature (<35° C) and rainfall. However, with the development of new cultivars and appropriate production technology, winter cultivation of maize has emerged as a viable alternative. In India, maize is grown in an area of 8.17 m. ha with a production around 19.33 m. tons and productivity 2414 kg/ha. It ranks next to rice, wheat, sorghum and pearl millet. It is the main staple food in hilly and sub mountain tracts of northern India and consumed all over the country as a fodder and grains. Major shift in global cereal demand is underway: by 2020, demand for maize in developing countries will surpass the demand for both wheat and rice. This shift will be reflected in a 50 per cent increase in global maize demand from its 1995 level of 558 million tonnes to 837 million tonnes by 2020. Maize requirements in the developing world alone will increase from 282 million tonnes in 1995 to 504 million tonnes in 2020 (IFPRI 2000). Maize crop is predominantly grown in Telangana state. This crop accounted for 11.71 percentage of the total cropped area in the state during 2015-16. The maize is large extent grown in the districts of Mahbubnagar, Medak, Karimnagar, Warangal, Rangareddy and Nizamabad districts and these districts together accounted for 92.22 percentage of the total area under the crop. The area under Maize was 5.73 lakh hectares during 2015-16 as against 6.92 lakh hectares in 2014-15, showing a decrease of 17.20 percentage over 2014-15 year. As the increase in demand knowledge regarding improved production practices is increasing and a person must have sufficient level of how-to-knowledge before the innovation test to increase the adoption. The main objective of this paper is to reveal the level of knowledge of improved production practices of maize enterprise based on research result.

2. Materials and Methods

For the present study, Warangal district of Telangana has been purposively selected for the because of the availability of both the highly irrigated and dry land cultivable areas and also more area under maize production. Ten villages (Jeelugula, Musthapoor, Koppur, Kothakonda, Manikyapoor, Gantlanarsingapoor, Kothapally, Vangara, Mulkanoor and Bheemadevarapally) were selected randomly. A well structured interview schedule was prepared and pre-tested for the study. The sample population of 120 maize farmers has been selected based on random sampling method from the selected 10 villages. Relevant questions on maize include production practices were collected with well structured interview schedule to understand the knowledge levels of the respondent and answers were recorded with 3 point scale as fully correct(3), partially correct(2) and not correct(1). The data was tabulated, analyzed and interpretation's were drawn on the basis of percentage analysis and coefficient of correlation test using SPSS software and Microsoft excel.

3. Results

Knowledge of farmers towards improves maize production practices

The (Table-1) presented the distribution of respondents based on their level of knowledge towards improves maize production practices. The majority of the respondents had partial knowledge about spacing (78.33 %), method of weed control (78.33 %) followed by deep ploughing (76.66%), seed rate (76.66%), irrigation management (76.66 %), varieties (75.83 %), and method of sowing (75.00 %) respectively. The (Table-2) presented the distribution of respondents based on their level of knowledge towards improved maize production practices. About 63.33 percent of the respondents were having medium level of knowledge towards improved maize production practices followed by low (22.50 %) and high level of knowledge (14.16 %) respectively.

Factors influencing the knowledge of farmers towards improved maize production practices

The (Table-3) presented that the relationship between the independent variables with knowledge towards improved maize production practices. The variables like age, occupation, land holding, material possession and mass media exposure were found significant at the level of 0.05. The variables like education, annual income, livestock possession, extension contact, market orientation, economic motivation were found no significant relationship with knowledge towards improved maize production practices.

Discussion

From the above interpreted results, it was found that there is a medium level of knowledge towards improved maize production practices in farmers of bheemadevarapally mandal. The age of farmers were found to be negatively and significantly correlated with the level of knowledge of maize producers. With the increase in age (years) leads to less knowledge to farmers. The variables like occupation, land holding, material possession, mass media exposure were found negatively and significantly correlated with knowledge level. The variables like education, annual income, livestock possession , extension contact, market orientation , economic motivation were found no significant relationship with level of knowledge towards improved maize production practices.

Table-1 Knowledge of farmers towards improved maize production practices. (n=120)

SN	Statement	Knowledge level		
		FC	PC	NC
1	Soil testing	16(13.33)	87(72.50)	17(14.16)
2	Deep ploughing	14(11.66)	92(76.66)	14(11.66)
3	Varieties	23(19.16)	91(75.83)	6(5.00)
4	Time of sowing	26(21.66)	86(71.66)	8(6.66)
5	Seed treatment and fungicides	38(31.66)	80(66.66)	2(1.66)
6	Seed rate	23(19.16)	92(76.66)	5(4.16)
7	Method of sowing	24(20.00)	90(75.00)	6(5.00)
8	Spacing	21(17.50)	94(78.33)	5(4.16)
9	Recommended Fertilizers	31(25.83)	86(71.66)	3(2.50)
10	Irrigation management	25(20.83)	92(76.66)	3(2.5010
11	Method of weed control	20(16.66)	94(78.33)	6(5.00)
12	Use of integrated pest management	30(25.00)	83(69.16)	7(5.83)
13	Harvesting	29(24.16)	83(69.16)	8(6.66)
14	yield	28(23.33)	73(60.83)	19(15.83)

Parenthesis shows in percentage, FC=Fully Correct, PC=Partially Correct, NC=Non Correct

Table-2 Level of knowledge of farmers towards improved maize production practices n=(120)

SN	Level of knowledge	Frequency	Percentage
1	Low	27	22.50
2	Medium	76	63.33
3	High	17	14.16
	Total	120	100.00

Table-3 Relationship of independent variables with knowledge towards improved maize production practices

SN	Independent variables	Correlation (r) value
1	Age	-0.218*
2	Educational	0.001 NS
3	Occupation	0.227*
4	Land holding	0.169*
5	Annual Income	0.071 NS
6	Material possession	-0.187*
7	Livestock Possession	-0.055 NS
8	Mass media exposure	0.152*
9	Extension contact	-0.036 NS
10	Market orientation	0.007 NS
11	Economic motivation	-0.011 NS

**= Significant at the 0.01 level (2-tailed)
*=Significant at the 0.05 level (2-tailed)
NS=Non Significant

Conclusion

The present study revealed that the level of knowledge of farmers towards improved maize production practices are medium. The study established farmer's knowledge in improved maize production as low, medium, high respectively. Correlation table above shows the significant relationship between their knowledge and variables like age, occupation, land holding, material possession, mass media exposure. The reasons which could contribute to medium knowledge level may be the medium mass media exposure, medium age group, occupation, material possession which might have stagnant in overall knowledge level. The farmer should increase their land holdings, material possession , more agriculture as main occupation, more information from mass media will give rise to increase in improved maize production practices. Therefore, high level of interventions are needed to enhancing productive capacity of maize growers and this would help to improve the existing medium level knowledge to high level of knowledge towards improved maize production practices.

Application of research: This research can be applied for better policy makers, extension workers and researchers to work in line of farmer's perspective for improving productivity and minimizing the gap in extent of adoption, knowledge and friendly technologies.

Research Category: Agriculture Extension

Abbreviations:
FAO= Food and Agriculture Organization
IFPRI= International Food Policy Research Institute
SPSS= Statistical Package for Social Sciences

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