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Knowledge level of Farmers on Recommended Maize Cultivation Technologies in Chhindwara, District M.P. India

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A B S T R A C T

The present study was conducted in the Bichhua block of Chhindwara District of M.P. with selection of 80 respondents. From each village 20 respondents are selected for the study. It has become imperative to examine the knowledge of improved maize cultivation technologies and factors affecting it. Keeping this in view, the present investigation was planned and carried out with the following specific. To collect data, pre-structured schedule with the help of interview. The collected data was quantified, classified, tabulated and presented on frequencies, percentage, Rank and mean score. Result of the study revealed that maximum number of the respondents have complete knowledge level of extent of improved maize cultivation technology.

Introduction

Maize (*Zea mays* L) is one of the most versatile emerging crops having wider adaptability under varied agroclimatic conditions. Globally, maize is known as queen of cereals because it has the highest genetic yield potential among the cereals. It is cultivated on nearly 150 m ha in about 160 countries having wider diversity of soil, climate, biodiversity and management practices that contributes 36 % (782 m t) in the global grain production. The United States of America (USA) is the largest producer of maize contributes nearly 35 % of the total production in the world and maize is the driver of the US economy. In India, maize is the third most important food crops after rice and wheat. According to advance estimate it is cultivated in 8.7 m ha (2010-11) mainly during *Kharif* season which covers 80% area. Maize in India, contributes nearly 9 % in the national food basket and more than Rs. 100 billion to the agricultural GDP at current prices apart from the generating employment to over 100 million man-days at the farm and downstream agricultural and industrial sectors. In addition to staple food for human being and quality feed for animals, maize serves as a basic raw material as an ingredient to thousands of industrial products that includes starch, oil, protein, alcoholic beverages, food sweeteners, pharmaceutical, cosmetic, film, textile, gum, package and paper industries etc. The

maize is cultivated throughout the year in all states of the country for various purposes including grain, fodder, green cobs, sweet corn, baby corn, popcorn in peri-urban areas. The predominant maize growing states that contributes more than 80 % of the total maize production are Andhra Pradesh (20.9 %), Karnataka (16.5 %), Rajasthan (9.9 %), Maharashtra (9.1 %), Bihar (8.9 %), Uttar Pradesh (6.1 %), Madhya Pradesh (5.7 %), Himachal Pradesh (4.4 %). Maize can be grown successfully in variety of soils ranging from loamy sand to clay loam. Maize can be grown in all seasons viz; *Kharif* (monsoon), post monsoon, *Rabi* (winter) and spring.

During *Rabi* and spring seasons to achieve higher yield at farmer's field assured irrigation facilities are required. During *Kharif* season it is desirable to complete the sowing operation 12-15 days before the onset of monsoon. However, in rainfed areas, the sowing time should be coincided with onset of monsoon. To protect the maize crop from seed and major soil borne diseases and insect-pests, seed treatment with fungicides and insecticides before sowing is advisable/ recommended as per the below given details.

The irrigation water management depends on season as about 80 % of maize is cultivated during monsoon season particularly under rainfed conditions. For winter maize, it is advisable to keep soil wet (frequent & mild irrigation) during 15 December to 15 February to protect the crop from frost injury.

Materials and Methods

The study was conducted in district Chhindwara of M.P. District has 13 Blocks out of these Bichhua block was purposively selected and out of 147 village of Bichhua Blockonly four villages namely Ulhawadi, Zamata, Samarboh and Dokli Kalan were selected for the study. From each village 20 respondents are selected for the study.

A total number of 80 respondents were finally chosen for the study. The data was obtained through pre-tested structured schedule with the help of interview. The collected data was quantified, classified, tabulated and presented on frequencies, percentage, Rank and mean score.

Results and Discussion

The data presented in table No. 1. shows that100 per cent respondents have complete knowledge of Season of maize cultivation, with Mean Score 1and Rank XV while 98.75 per cent respondents have complete knowledge and 1.25 per cent have partial knowledge of maize cultivation season for the maximum yield with Mean Score 1.01and Rank XIV.70 per cent respondents have complete knowledge, 22.5 per cent have partial knowledge and 7.5 per cent have no knowledge of forms used of maize with Mean Score 1.37and Rank VII.76.25 per cent respondents have complete knowledge, 21.25 per cent respondents have partial knowledge and 2.5 per cent have no knowledge of recommended soil for maize cultivation with Mean Score 1.26and Rank IX.53.75 per cent respondents have complete knowledge, 35 per cent have partial knowledge and 11.25 per cent have no knowledge of type of field suitable for maize cultivation with respect to drainage facilitywith mean Score 1.57and Rank V.97.5 per cent respondents have complete knowledge and 2.5 per cent have partial knowledge of recommended sowing time of *kharif* season maize crop with mean Score 1.02 and Rank XIII.91.25 per cent respondents have complete knowledge and 8.75 per cent have partial knowledge of recommended sowing time in Rabi season maize crop with mean Score 1.08and Rank XII.73.75 per cent respondents have complete knowledge, 20 per cent have partial knowledge and 6.25 per cent have no knowledge of sowing time in springs season maize with mean Score 1.32and Rank VIII.92.5 per cent respondents have complete knowledge and 7.5 per cent have partial knowledge of recommended seed rate for grain in maize cultivation with mean Score 1.07and Rank XIII.38.75 per cent respondents have complete knowledge, 35 per cent have partial knowledge and 26.25 per cent have no knowledge of seed rate for green corn in maize cultivation with mean Score

1.87and Rank III.45 per cent respondents have partial knowledge, 28.75 per cent have complete knowledge and 26.25 per cent have no knowledge of maize cultivation for fodder with mean Score 1.97 and Rank II.41.25 per cent respondents have partial knowledge, 31.25 per cent have no knowledge and 27.5 per cent have complete knowledge of maize cultivation for baby corn popcorn and sweet corn with mean Score 2.03 and Rank I.65 per cent respondents have complete knowledge, 28.75 per cent have partial knowledge and 6.25 per cent have no knowledge of seed treatment with mean Score 1.41 and Rank VI.86.25 per cent respondents have complete knowledge and 13.75 per cent have partial knowledgeof recommended sowing methods with mean Score 1.13 and Rank X.45 per cent respondents have complete knowledge,33.75 per cent have partial knowledge and 21.25 per cent have no knowledge of recommended dose of FYM /hac. with mean Score 1.76 and Rank IV.46.25 per cent respondents have partial knowledge, 38.75 per cent have complete knowledge and 15 per cent have no knowledge of recommended time of application of organic manure in the field with mean Score 1.76 and Rank IV.91.25 per cent respondents have complete knowledge and8.75 per cent have partial knowledge of recommended dose of NPK and Zink/hac. with mean Score 1.08 and Rank XII.87.5 per cent respondents have complete knowledge and 12.5 per cent have partial knowledge of time & method offertilizer application for maize cultivationwith mean Score 1.12 and Rank XI.

Table.1 Distribution of respondents according to extent of knowledge of recommended maize cultivation technologies.

S. No.	Parameters	Complete Knowledge		Partial Knowledge		No knowledge		Mean Score	Rank
		F	%	F	%	F	%		
1	Season of maize cultivation for maximum production.	80	100	00	00	00	00	1	XV
2	Knowledge of forms in which maize is used	56	70	18	22.5	6	7.5	1.37	VII
4	Recommended soil	61	76.25	17	21.25	2	2.5	1.26	IX
5	Suitable drainage facility for field of maize cultivation	43	53.75	28	35	9	11.25	1.57	V
6	Sowing time of kharif maize crop	78	97.5	2	2.5	00	00	1.02	XIII
7	Sowing time of Rabi season maize crop	73	91.25	7	8.75	00	00	1.08	XII
8	Sowing time of spring season maize.	59	73.75	16	20	5	6.25	1.32	VIII
9	Seed rate of maize cultivation for grain.	74	92.5	6	7.5	00	00	1.07	
10	Seed rateof maize cultivation for green corn .	31	38.75	28	35	21	26.25	1.87	III
11	Maize cultivation for fodder.	23	28.75	36	45	21	26.25	1.97	II
12	Maize cultivation for baby corn popcorn & sweet corn.	22	27.5	33	41.25	25	31.25	2.03	I
13	Seed treatment of maize	52	65	23	28.75	5	6.25	1.41	VI
14	Recommended sowing methods	69	86.25	11	13.75	00	00	1.13	X
15	Recommended dose of FYM /1 hac.	36	45	27	33.75	17	21.25	1.76	IV
16	Time of application of organic manure In the field.	31	38.75	37	46.25	12	15	1.76	IV
17	Recommended dose of NPK and Zink/hac.	73	91.25	7	8.75	00	00	1.08	XII
18	time & methods of fertilizer application	70	87.5	10	12.5	00	00	1.12	XI

The highest respondents have complete knowledge of seasons of maize cultivation for the maximum production, knowledge of forms in which maize is used, recommended soil, suitable drainage facility for field of maize cultivation, sowing time of *kharif* maize crop, sowing time of Rabi maize crop, sowing time of maize in spring season, seed rate of maize cultivation fir grain, seed rate of maize cultivation for green corn, seed treatment, sowing methods, recommended dose of FYM /1 hac., time of application of organic manure in the field, recommended dose of NPK and Zink/hac., knowledge of time & method of fertilizer application for maize. Maximum respondents particial knowledge of maize cultivation for baby corn, popcorn & sweet corn, time of application of organic manure in the field. no knowledge of Maize cultivation for fodder

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