Knowledge level of mango orchardists in relation to different practices of mango in Meerut Districts Uttar Pradesh

ABSTRACT

The study was conducted in Meerut district of Uttar Pradesh to assess the present status of mango orchardists with the objective Knowledge level of mango orchardists in relation to different practices of mango orchardists. The Meerut district has comprises 12 community development block. Which two blocks were purposely selected according to need and availability of mango orchardists. On the basis of maximum area and production. 10 orchardists were selected from each selected village randomly with the help of progressive orchardists and village pradhan, thus the total sample size of 80 orchardists were selected for the present investigation. Appropriate knowledge of the recommended new and improved mango production technology is a prerequisite for adopting any new innovation. The most of the respondents were having high level of knowledge about the improved varieties of mango. Among the total sample size 56.25 per cent respondents, medium level of knowledge about the land preparation practices of mango orchard the total sample size 63.75 per cent respondents. Medium level of knowledge about the Plantation practices of mango plant the total sample size 62.25 per cent orchardists.

Keywords: knowledge level, mango orchard, practices.

Introduction

Mango (*Mangifera indica* L.) comes under the family *Anacardiaceae* is the most important commercially grown fruit crop of the country. It is called the **king of fruits**. India has the richest collection of mango cultivars. Cultivation of mango is believed to have originated in South East Asia. Mango is being cultivated in south Asia for nearly six thousand years. Mango is native to South Asia, from where it has been distributed worldwide to become one of the most cultivated fruits in the tropics.

India to become the second largest fruit producer in the world, after china, with a production of 90183 thousands metric tonnes of fruits from an area of 6301 thousands hectares in 2015-16. The fruit is grown in India, the total area under mango cultivation was 2209 thousand hectare with an annual production of 18,643 thousand metric tonnes. The productivity of mango was 8.44 metric tonnes per hectare recorded during 2015-16. A large variety of fruits are grown in India, of which mango, banana, citrus, guava, grape, pineapple and apple are the major ones. Apart from these, fruits like papaya, sapota, annona, phalsa, jackfruit, ber, pomegranate in tropical and sub-tropical group and peach, pear, almond, walnut, apricot and strawberry in the temperate group are also grown in a sizeable area. Although fruit is grown throughout of the country, the major fruit growing states are Maharashtra, Tamil Nadu, Karnataka, Andhra Pradesh, Bihar, Uttar Pradesh and Gujarat. In Uttar Pradesh, production of fruits was 10353.49 metric tons in an area of 471 thousands hectares in 2015-16. (**National Horticulture Board**)

Mango is well adopted in tropical and sub-tropical climates but it can be grown up to 1,100 meters above sea-level. There should not be humidity, rain or frost during flowering. The temperature between 24 and 27 ^{0}C is ideal for its cultivation. Higher temperature during fruit development and maturity gives better quality fruits. The areas expressed frequent showers and high humidity is prone to many pests and diseases. Thus it can grow best in regions with a rainfall between 25 cm and 250 cm. Regions having bright sunny days and moderate humidity during flowering is ideal for mango growing.

Mango has high nutritive value, delicious taste and excellent flavour. It plays important role in balancing the diet of human being by providing about 64-66 calories per hundred grams of ripe fruits. It is a good source of vital protective nutrients like vitamins such as vitamin A (1400 I.U.), and C. Mango fruit contains 73.0-86.7 per cent moisture, 11.6-24.3 per cent carbohydrate, 0.3-1.0 per cent protein, 0.1-0.8 per cent fat, 0.3-0.7 per cent mineral, 650-25900 µg vitamin 'A' and 3-83 mg vitamin 'C' per 100 gram fruit. Seed kernels contain 9.5 per cent protein, 8-12 per cent fat, 79.2 per cent starch, 2 per cent mineral matter and 2 per cent fibres**.** Raw fruits are also used for making chutney, amchur, pickles and juices. The ripe fruits are also utilized for preparing several products like ready to serve, nectar, squash, panna syrup, mango leather, mango powder, toffee, jams, jelly etc. Maximum 57.50 per cent mango orchardists adopt 10 m x 10 m planting distance. Most of the orchardists have full adoption of Dashehari, Langra and Chausa varieties for plantation in mango orchard **(Tanwar, 2013).**

MATERIALS AND METHODS

The present study was conducted in Meerut district of Uttar Pradesh because the area under mango cultivation is adequate in this district. The Meerut district has comprises 12 community development block which two blocks namely Sardhana and Machhara were purposely selected according to need and availability of mango orchardists. The revenue villages was arrange in descending order based on the maximum area and maximum number of mango Orchardists, top 4 revenue villages were select from the each block. On the basis of maximum area and production. 10 orchardists were selected from each selected village randomly with the help of progressive orchardists and village pradhan, thus the total sample size of 80 orchardists were selected for the present investigation. Constraints refer to the item of difficulties faced by mango orchardists in actual adoption of mango production technology. It may be seen that altogether 10 constraints were faced by the mango orchardists in the adoption of mango production technology in the study area.

RESULT AND DISCUSSION

Table No.1: To assess the knowledge level of the mango orchardists in relation to different practices of mango production technology.

Sr. No.	Statements	High knowledge		Medium knowledge		Low knowledge	
		F	P	F	P	F	P
1	Improved varieties	45	56.25	31	38.75	4	5.00
2	Land preparation	15	18.75	51	63.75	14	17.50
3	Plantation practices	17	21.25	50	62.50	13	16.25
4	Manures and fertilizers application	8	10.00	53	66.25	19	23.75
5	Irrigation	14	17.50	58	72.50	8	10.00
6	Use of plant growth regulators	2	2.50	34	42.50	44	55.00
7	Plant protection measures	27	33.75	39	48.75	14	17.50
8	Suitable inter crops in mango orchards	30	37.50	32	40.00	18	22.50
9	Yields take to bearing of fruit plant	15	18.75	54	67.50	11	13.75
10	Harvesting procedure	51	63.75	28	35.00	1	1.25
11	Storage of fruit after harvesting	19	23.75	31	38.75	30	37.50
12	Packing of mango for disposal at short distant market.	16	20.00	28	35.00	36	45.00
13	Packing of mango for disposal at long distant market.	18	22.50	28	35.00	34	42.50
14	Marketing procedure	39	48.75	21	26.25	20	25.00

F-frequency, P-percentage

Improved varieties:

The data from the table1. Revealed that the most of the respondents were having high level of knowledge about the improved varieties of mango. Among the total sample size 56.25 per cent respondents were reported under high level of knowledge about the improved varieties of mango followed by 38.75 per cent of the respondents were reported under medium level of knowledge about the improved varieties of mango. Only 05.00 per cent respondents were having under low level of knowledge about the improved varieties of mango.

Land preparation:

The data from the table1. Revealed that the most of the respondents were having medium level of knowledge about the land preparation practices of mango orchard. Among the total sample size 63.75 per cent respondents were reported under medium level of knowledge about the land preparation practices of mango orchard followed by 18.75 per cent of the respondents were reported under high level of knowledge about the land preparation practices of mango orchard and remaining 17.50 per cent respondents were having under low level of knowledge about the land preparation practices of mango orchard.

Plantation practices:

The data from the table1. Showed that the most of the orchardists were medium level of knowledge about the Plantation practices of mango plant. Among the total sample size 62.25 per cent orchardists were reported under medium level of knowledge about the Plantation practices of mango plant and 21.25 per cent orchardists were reported high level of knowledge about plantation practices of mango plant. Only 16.25 per cent orchardists were reported under low level of knowledge about the plantation practices of mango plant.

Manures and fertilizers application:

The data from the Table1. Showed that the most of the orchardists were medium level of knowledge about manures and fertilizers application in mango orchard. Among the total sample size 66.25 per cent orchardists were reported under medium level of knowledge and 23.75 per cent orchardists were reported under low level of knowledge about the manures and fertilizers application in mango orchard. Only 10.00 per cent orchardists were reported under high level of knowledge about the manures and fertilizer application in mango orchard.

Irrigation:

The data from the Table1. Showed that the most of the orchardists were medium level of knowledge about the irrigation management of mango orchard. Among the total sample size 72.50 per cent orchardists were reported under medium level of knowledge and 17.50 per cent orchardists were reported under high level of knowledge about the irrigation management of mango orchard. Only 10.00 per cent orchardists were reported under low level of knowledge about the irrigation management of mango orchard. In the study of area good irrigation facilities were available. Most of the mango orchardists were having their own private electric tube well.

Use of plant growth regulators:

The data from the table1. Presented that the most of the orchardists were low level of knowledge about the use of plant growth regulators in mango orchards. Among the total sample size 55.00 per cent orchardists were reported under low level of knowledge and 42.50 per cent orchardists were reported under medium level of knowledge about the use of plant growth regulators in mango orchard. Only 02.50 per cent orchardists were reported under high level of knowledge about the use of plant growth regulators in mango orchard.

Plant protection measures:

The data from the table1. Presented that the most of the orchardists were medium level of knowledge about the plant protection measures of mango orchards. Among the total sample size 48.75 per cent orchardists were reported under medium level of knowledge, 33.75 per cent orchardists were reported under high level of knowledge about the plant protection measures of mango orchards and remaining 17.50 per cent orchardists were reported under low level of knowledge about the plant protection measures of mango orchards. The mostly respondent were not having any scientific knowledge regarding name of pesticides, their doses and method of application of pesticides for plant protection measurement in mango orchard.

Suitable inter crops in mango orchards:

The data from the table1. showed that the most of the orchardists were medium level of knowledge about the suitable inter crops in mango orchards. Among the total sample size 40.00 per cent orchardists were reported under medium level of knowledge 37.50 per cent orchardists were reported under high level of knowledge about the suitable inter crops in mango orchards and remaining 22.50 per cent orchardists were reported under low level of knowledge about the suitable inter crops in mango orchards**.**

Yields take to bearing of fruit plant:

The data from the table1. Showed that the most of the orchardists were medium level of knowledge about the yields take to bearing of fruit plant of the mango orchards. Among the total sample size 67.50 per cent orchardists were reported under medium level of knowledge and 18.75 per cent orchardists were reported under high level of knowledge about the yields take to bearing of fruit plant of the mango orchards. Only 13.75 per cent orchardists were reported under low level of knowledge about the yields take to bearing of fruit plant of the mango orchards**.**

Harvesting procedure:

The data from the table1. Presented that the most of the orchardists were high level of knowledge about the correct harvesting procedure of mango fruits. Among the total sample size 63.75 per cent orchardists were reported under high level of knowledge, 35.00 per cent orchardists were reported under medium level of knowledge about the correct harvesting procedure of mango fruits. Only 01.25 per cent orchardists were reported under low level of knowledge about the correct harvesting procedure of mango fruits.

Storage of fruit after harvesting:

The data from the table1. Reveals that the most of the orchardists were medium level of knowledge about the storage of fruits after harvesting of the mango fruits. Among the total sample size 38.75 per cent orchardists were reported under medium level of knowledge, 37.50 per cent orchardists were reported under low level of knowledge about the storage of fruits after harvesting from the mango plants. Only 23.75 percent orchardists were reported under high level of knowledge about the storage of fruits after harvesting from the mango plants.

Packing of mango for disposal at short distant market:

The data from the table1. Showed that the most of the orchardists were low level of knowledge about the packing of mango fruits for disposal at short distance market. Among the total sample size 45.00 percent orchardists were reported under low level of knowledge, 35.00 percent orchardists were reported under medium level of knowledge about the packing of mango fruits for disposal at short distance markets. Only 20.00 per cent orchardists were reported under high level of knowledge about the packing of mango fruits for disposal at short distance market**.**

Packing of mango for disposal at long distant market:

The data from the table1. Observed that the most of the orchardists were low level of knowledge about the packing of mango fruits for disposal at long distance market. Among the total sample size 42.50 per cent orchardists were reported under low level of knowledge, 35.00 per cent orchardists were reported under medium level of knowledge about the packing of mango fruits for disposal at long distance markets and remaining 22.50 percent orchardists were reported under high level of knowledge about the packing of mango fruits for disposal at long distance market.

Marketing procedure:

It is clear from the table1. That the most of the orchardists were high level of knowledge about the marketing procedure of mango fruits. Among the total sample size 48.75 per cent orchardists were reported under high level of knowledge 26.25 per cent orchardists were reported under medium level of knowledge about the marketing procedure of mango fruits and remaining 25.00 per cent orchardists were reported under low level of knowledge about the marketing procedure of mango fruits.

Conclusion

From the above analysis we observed that the majority 56.25 per cent orchardists were reported under high level of knowledge about improved varieties of mango. It was clear from the study that the most of the orchardists 63.75 per cent were medium level of knowledge about the land preparation practices of mango orchard. It was found that 62.5 percent of orchardists had a medium level of expertise on plantation procedures. It was observed that the most of the orchardists 66.25 per cent had medium level of knowledge about the manures and fertilizers application in mango orchard. It was observed from the study that the most of the orchardists 72.50 per cent were medium level of knowledge about irrigation management in mango orchard. From the most of the orchardists 48.75 per cent were medium level of knowledge about the plant

protection measures of mango orchard. Observed that the most of the orchardists 63.75 per cent were high level of knowledge about the correct harvesting procedure of mango fruits. From the orchardists 67.50 per cent were medium level of knowledge about yields take to bearing of fruit plant in mango orchards. It was observed that the most of the orchardists 55.00 per cent were low level of knowledge about the use of plant growth regulators in mango orchards. From the most of the orchardists 58.75 per cent were high level of knowledge about the suitable inter crops in mango orchard. It was observed that the most of the orchardists 38.75 per cent were reported under medium level of knowledge about the storage of fruits after harvesting. It was noted that 45.0% of orchardists had low levels of understanding about the packaging of mango fruits for sale at nearby markets. The majority of orchardists, 42.50 percent, were found to have limited expertise of how to package mango fruits for sale at distant markets. It was found that 48.75 percent of orchardists had a high degree of understanding on mango marketing.

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