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Component wise adoption gap of recommended dose of fertilizers

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Abstract

The present study was conducted in the south Konkan region of Maharashtra state using ex-post facto research design (Kerlinger 1969). Four talukas were selected on the basis of maximum area under mango cultivation and from each selected taluka, 5 villages were selected on the basis of maximum area under mango cultivation. Thus, 20 villages were selected. Total 120 respondents, respondents selected on the basis of proportionate sampling. The respondents were interviewed with the help of specially designed schedule. Collected data was classified, tabulated and analysed by using various statistical methods.

Keywords: Component, adoption gap, recommended dose of fertilizers

Introduction

Mango (*Mangifera indica* L.) belonging to family Anacardiaceae is the most important commercially grown fruit crop in India. It is being consumed in each part of the world due to its good medicinal and nutritional values. Alphonso variety is honoured as the king of all varieties of mangoes. Alphonso mango has geographical indications (GI) in Ratnagiri and Sindhudurg which enables it to claim exclusive rights to the product.

Mango has been considered as one of the most important horticultural crop of Konkan region. The mango growers can increase their production of mango through the adoption of new varieties with improved practices and regular use of fertilizers. A first-hand knowledge regarding existing status of adoption of recommended dose of fertilizers helpful to extension workers for concentrating their efforts to create favourable conditions for better adoption of the innovations related to fertilizer use in mango cultivation. It is expected that the findings of this study may prove beneficial to know the personal, social, economic and psychological characteristic of the mango growers as well as their adoption towards the use of fertilizer recommendations. Furthermore, it may reveal the crucial factors responsible for gap in adoption. These findings may help researchers and extension workers to plan better communication strategies to bridge gap in the adoption of recommended dose of fertilizers by the growers.

The findings of the study were of practical importance in several ways. The study was highlight on the personal-social, economical and psychological characteristics of the mango growers. At a same time, researcher was also focuses on the level of knowledge gained by the mango growers about recommended dose of fertilizers. It would further access the gap in adoption in different components of recommended dose of fertilizers in mango crop.

Methodology

This study was carried out in Ratnagiri and Sindhudurg districts. Ratnagiri and Rajapur tehsils selected from Ratnagiri district and Devgad and Malwan tehsils selected from Sindhudurg district. The 120 mango growers were from selected villages. The data were collected by conducting personal interview through pre- Structured Interview Schedule.

The adoption gap refers to the difference between technology recommended by the institution and technology adopted by the farmers. It was felt that agricultural technology is not adopted by the farmers completely in all respects. As a result, adoption gap appears and poor production is obtained. Keeping this in view, adoption gap has been studied.

Adoption gap were calculated by following formula;

$$\text{Gap in Adoption} = \frac{\text{Maximum possible score} - \text{Actual score}}{\text{Maximum possible score}} \times 100$$

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Result and Discussion

The component wise average adoption gap in adoption of

recommended dose of fertilizers among the mango growers are summarized in Table 1.

Table 1: The component wise average adoption in gap

Sl. No.	Components of recommended dose of fertilizers	Adoption gap (%)	Rank
1	Above ten years aged orchard, a well rotten FYM (50 to 100 kg) should be given	42.50	VI
2	For orchards above ten years age, add 1500 g N, 500 g P ₂ O ₅ and 1000 g K ₂ O / tree / year along with 50 to 100 kg well-rotted FYM in the month of June	54.00	V
3	To get higher fruit production from Alphonso mango: Foliar application of 0.5% urea and SOP each and 0.25% sodium molybdate spray three times at branching, flowering and fruit setting (egg shaped fruit) stage	62.50	III
4	To increase the yield of Alphonso mango and to improve the quality of the fruits, spray three times with 1 percent potassium nitrate when the fruits are in pea-sized, small, round and egg shape stages	61.50	IV
5	To reduce mango fruit drop: After fruit setting, spray 2% urea (20 g urea / liter in water) from 3 rd , 4 th and up to 6 th spray	76.00	II
6	“Amrashakti” (Multi Nutrient Spray) foliar application during flowering and fruit development to improve quality and yield of Alphonso mango	80.50	I
Overall gap (Average)		62.83	

The table 1 shows that the highest adoption gap was observed in adoption of “Amrashakti” (Multi Nutrient Spray) foliar application during flowering and fruit development to improve quality and yield of Alphonso mango (80.50 percent) and was ranked the first, followed by to reduce mango fruit drop: after fruit setting, spray 2% urea (20 g urea / liter in water) from 3rd, 4th and up to 6th spray (76.00 percent) with second rank, to get higher fruit production from Alphonso mango: foliar application of 0.5% urea and SOP each and 0.25% sodium molybdate spray three at branching, flowering and fruit setting (egg shaped fruit) stage (62.50 percent) was ranked third, to increase the yield of Alphonso mango and to improve the quality of the fruits, spray three times with 1 percent potassium nitrate when the fruits are in pea-sized, small, round and egg shape stages (61.50 percent) was ranked fourth, for orchards above ten years age, add 1500 g N, 500 g P₂O₅ and 1000 g K₂O / tree / year along with 50 to 100 kg well-rotted FYM in the month of June (54.00 percent) was ranked fifth and above ten years aged orchard, a well rotten FYM (50 to 100 kg) should be given (42.50 percent) of the growers had ranked sixth.

The overall adoption gap combining of the listed six components together was found 62.83 percent of the total recommended dose of fertilizers.

The possible reasons for this might be that the farmers could not get exact information about recommended practices in time in acceptable form. Further, farmers might have tried their best to use and adopt the recommended practices but some constraints might have hindered them to do so, and hence adoption gap might have observed.

Conclusion

The critical practices like optimum dose of NPK fertilizers and their application, foliar application of 0.5% urea and SOP and 0.25% sodium molybdate, “Amrashakti” foliar application of multi nutrient spray were found to be less adopted. In this line technical assistance from extension agency, NRM group of university would be very much required in motivating the farmers to realize the importance of these practices to increase the yield levels of mango.

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