Pre and post training assessment of mango growers regarding mango production in Sindhudurg district of Maharashtra, India

ABSTRACT

The investigation was undertaken to study the assess pre and post training assessment of mango growers regarding mango production in Sindhudurg district of Maharashtra. The training were organized in three tahsils during the December, 2019 on different management aspects in mango production. The overall average of knowledge level indicated that 49.44 per cent growers had medium knowledge and 32.22 per cent mango growers had high knowledge level. However, low knowledge level was seen in 18.33 per cent growers. Among different phases and management practices, 67.78 per cent growers were well acquainted with harvesting technique. Before training, the lowest score (25.56) was in knowledge about induction of flowering as the flowering in mango is complex phenomena and associated with several factors which may need to explain deeply. The maximum score (82.22) was recorded in harvesting technique. The mean knowledge score on Pest and diseases in mango blossom phase and their management after imparting training was maximum (95.56) compared to the mean knowledge score 48.89 before training. The highest per cent change in knowledge (112.12 per cent) was observed in the causes of fruit drop and remedy for control.

Keywords : Mango growers, training, knowledge, Alphonso

INTRODUCTION

The mango (*Mangifera indica* L.) is the leading, most renowned tropical fruit and known as ‘King of the fruits’ due to its delicious taste, admirable flavour, appealing aroma and attractive colour and other several desirable characters. It is the most popular tropical fruit from Anacardiaceae family originated from South East Asia, the Indo-Burma region. It is the oldest fruit cultivated in world for over 4000 years. Mango has intimate association with religious, cultural, aesthetic and economical values since from long time and therefore it the national fruit of India.

Mango is commercially grown in most of the states of India. However, the mango grown in the Konkan region of Maharashtra is famous due to certain attributes associated with the region. The most important attribute is the ‘Alphonso’ cultivar which is dominant in the region. India has the richest wealth of mango germplasm consisting of more than thousands of varieties growing all over the country. Among the popular cultivars, ‘Alphonso’ ranks tops and acclaimed as the best Indian mango variety. This cultivar is commercially grown in west coast of India comprising Maharashtra, Goa, Karnataka and Gujarat states.

In the recent years, the production of mango is crucial due to climatic aberrations and certain socio-economical problems. The technologies are being developed which are being certainly helping in improvement of productivity of mango. However, crop management during the flowering to harvest is imperative which eventually persuade the yield and economic returns. It is obvious that farmers are trying their best for increasing production levels by using the traditional methods and their experiences. But the lack of scientific knowledge and favourable environment towards the recommended practices, they cannot use available resources in proper scientific manner (Harikrishna, *et al*., 2012).

The training to farmers during the specific phase of crop production may lead to educate them about the practices and assessment of their knowledge about the technology is also important to know the extent and accordingly to plan the extension activities. It help to increase the knowledge and awareness about the technologies among the farmers, and ultimately adoption, because knowledge is a pre-requisite to adoption (Mahadik *et al*., 2007). With this view, the pre and post training evaluation of the growers was done in Sindhudurg district of Maharashtra.

METHODOLOGY

The farmers training programme were arranged in three tahsils of Sindhudurg district viz; Deogad, Malvan and Kankawali. Total three training programmes were conducted during the month of December, 2019 to impart knowledge on different phases and management practices of Alphonso mango production. For each training, 30 farmers were randomly selected for pre and post training evaluation. The questionery was prepared to evaluated the knowledge. The knowledge was assessed on low, medium and high level categories. The questions on each events were asked and pre and post training assessment was done. The collected data were tabulated and analyzed.

RESULTS AND DISCUSSION

The knowledge level of the mango growers (trainees) about different phases and management practices of Alphonso mango production is presented in Table 1. It is observed that the overall average of knowledge level indicate that 49.44 per cent growers had medium knowledge and 32.22 per cent mango growers had high knowledge level. However, low knowledge level was seen in 18.33 per cent growers. Among different phases and management practices, 67.78 per cent growers were well acquainted with harvesting technique. The

knowledge about pest and diseases in mango blossom phase and their management was comparatively low to 24.44 per cent growers. In case of causes of fruit drop and remedy for control, 71.11 per cent growers were reported under medium knowledge level.

All the phenophases from the mango flowering induction to harvesting are very important and the growers should be well aware about timely management practices. The present findings indicates that there is scope to improve the knowledge levels in this specific phase. The results were in agreement with the findings of Kumar *et al*. (2022). These findings are corroborated by Jadhav (2009) and Borate *et al*. (2010) who found that the majority of mango farmers possessed 'extensive knowledge of production technologies. In contrast, Pawar (2013), and Sowmya (2015) reported that the majority of farmers had 'moderate' knowledge of mango production technology.

The knowledge level of mango growers about different phases and management practices of Alphonso mango production is presented in Table 2. The analysis on extent of change in knowledge presented in Table 2 revealed that before training, the lowest score (25.56) was in knowledge about induction of flowering as the flowering in mango is complex phenomena and associated with several factors which may need to explain deeply. The maximum score (82.22) was recorded in harvesting technique aspect as maturity signs and harvesting technique is widely known to mango growers. The mean knowledge score on Pest and diseases in mango blossom phase and their management after imparting training was maximum (95.56) compared to the mean knowledge score 48.89 before training. The results revealed improvement in knowledge about plant protection which indicated 95.46 per cent after the imparting the training.

The highest per cent change in knowledge (112.12 per cent) was observed in the causes of fruit drop and remedy for control as fruit drop is a key issue in mango production in recent years due to changing climate and the participants acquired knowledge regarding causes of fruit drop, remedies for control such as use of growth regulators, irrigation, nutrition, etc. The overall improvement in the knowledge level was 74.77 per cent. The similar findings were also reported by Kumar *et al*. (2008), Malshe *et al*. (2016) and Jadhav et al. (2021).

CONCLUSION

The present findings revealed that the training conducted on various management practices of Alphonso mango production especially during the phase of flowering to harvesting were advantageous in changing the knowledge of the respondent mango growers in an encouraging direction.

CONSENT

As per international standard or university standard, Participants' written consent has been collected and preserved by the author(s).

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Table 1. Knowledge level of the mango growers (trainees) about different phases and management practices of Alphonso mango production

Sr. No.	Particulars	Frequency (N = 90)		
		Low	Medium	**High**
1.	Induction of flowering	14 (15.56)*	55 (61.11)	21 (23.33)
2	Pest and diseases in mango blossom phase and their management	22 (24.44)	52 (57.78)	16 (17.78)
3	Fruit set and fruit development	20 (22.22)	41 (45.56)	29 (32.22)
4	Causes of fruit drop and remedy for control	16 (11.11)	64 (71.11)	10 (17.78)
5	Harvesting technique	8 (8.89)	21 (23.33)	61 (67.78)
6	Post harvest handling	12 (13.33)	34 (37.78)	44 (48.89)
	Overall average	16.5 (18.33)	44.5 (49.44)	29.0 (32.22)

(* indicates percentage of respective frequencies)

Table 2. Pre and post training knowledge level of the mango growers (trainees) about different phases and management practices of Alphonso mango production

Sr. No.	Technology	Knowledge (Score)			Per cent change	Rank
		Before	**After**	**Mean difference**		
1	Induction of flowering	25.56	47.78	22.22	86.96	**III**
2	Pest and diseases in mango blossom phase and their management	48.89	95.56	46.67	95.46	**II**
3	Fruit set and fruit development	47.78	86.67	38.89	81.40	**IV**
4	Causes of fruit drop and remedy for control	36.67	77.78	41.11	112.12	**I**
5	Harvesting technique	82.22	88.89	6.67	8.11	**VI**
6	Post harvest handling	53.33	87.78	34.44	64.58	**V**
	Overall average score	49.07	80.74	31.67	74.77	