

A Study on Adoption Level of Improved Cultivation Practices by Mango Growers of North Karnataka *

Mango (*Mangifera indica* L.) is eulogized as the king of fruits. It belongs to the dicotyledonous family, *Anacardiaceae*. It is believed that the fruit originated from India and its cultivation has been traced back to more than 6000 years in the past. Mango is grown in all tropical countries (Anon., 2000). Mango fruits are rich source of Beta-carotene, the precursor of vitamin-A, which is essential for the prevention of night blindness in human beings and rich source of vitamin-C also. The present investigation was therefore carried out to study the adoption of improved cultivation practices of mango growers and relationship between socio-economic characteristics of mango growers. Dharwad and Belgaum districts of Northern Karnataka were purposively selected for the study as they ranked first and second in area under mango cultivation (3130 and 2974 ha, respectively) and mango production (39,657 and 36,241 tonnes, respectively) in the state. Two talukas namely Dharwad and Khanapur were selected from each selected division. The total revenue villages selected for the study were 6 and from each village 20 farmers were selected randomly following the criteria that selected farmers should have at least three years of experience in mango cultivation. Thus, total respondents identified for the study was 120. The method used by Saravanakumar (1996) was followed for measuring adoption by the farmers in respect of the mango cultivation practices. Seventeen recommended practices included in the package of practices in mango cultivation were used for measuring this adoption. For each item one score was earmarked for adoption and no marks were given for the non-adoption of the practice.

The results indicated that majority of the respondents (68.33 %) belonged to medium adoption category. The probable reason for majority of the respondents to fall under medium adoption category might be due to the medium

knowledge possessed by majority of the respondents. Which is in conformity with the results of Vijaya Kumar and Narayana Gowda (1999) .

A perusal of data presented in table 1 revealed the cultivation practices adopted by the mango growers. Cent percent of the mango growers had grown Alphonso variety and 34.16 per cent had grown Bangalora. The reasons are due to the fact that these varieties are regular, prolific bearers and best suited to that area. This provides the farmer with assured income every year and fetch high prices. It was evident from table 1 that 58.33 per cent of the mango growers followed the recommended spacing of 10 m x 10 m. It is interesting to know that none of the respondents were applying recommended dose of fertilizer. However, results indicated that majority of the respondents (61.66%) had applied the fertilizers to mango trees. Mango hopper is an important pest that occurs regularly and its severe attack leads to reduction in yield up to 60.00 per cent. Majority of the mango growers (86.66%) had noticed the pest mango hopper and applied chemicals like carbaryl, monocrotophos, sulphur, endosulphan + sulphur once/more than once for their control. None of the respondents had adopted recommended plant protection measures to control pests. This was due to high cost of pesticides and no knowledge about recommended doses. Majority of the respondents (58.33%) had noticed the disease, powdery mildew and applied chemicals like sulphur and dithane M-45 once/more than once for the control. Majority of the respondents (65.00%) had done the pruning operations, regularly. More than one-third the number of respondents who had grown Alphonso variety (37.50%) got an average yield of less than 200 kg per tree. The reason for low yield was due to non-adoption of recommended cultivation practices.

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Table 1. Adoption of improved cultivation practices by mango growers (n=120)

Sl. No.	Cultivation practices	Frequency	Percentage
1	2	3	4
I	Varieties grown*		
	Alphonso	120	100.00
	Bangalora	41	34.16
	Neelum	28	23.33
	Hybrids (Mallika, Ratna)	02	1.66
	Other varieties (Pairy, Benson)	37	30.83
II	Spacing followed		
	10 m x 10 m	70	58.33
	9 m x m	32	26.66
	Different spacings (4 m ´ 4 m, 7 m ´ 7 m)	18	15.00
III	Intercropping followed*		
	Vegetables	45	37.50
	Pulses (Bengalgram, Greengram)	42	35.50
	Jowar	55	45.83
	Turmeric	5	4.16
	Other crops (Wheat, Bajra, Maize)	16	13.33
IV	Filling material used in the pit		
	FYM + Top soil	51	42.50
	Top soil alone	34	28.33
	Use of the same soil	25	20.83
V	Fertilizer application	74	61.66
	Type of fertilizer applied		
	Urea + superphosphate potash mix (< 500 g/tree)	28	23.33
	Urea + superphosphate + potash mix (more than 500 g/tree)	21	17.50
	Complex fertilizers (1-3 kg)	25	20.83
VI	Frequency of irrigation for young garden	45	37.50
	Once in 15 days	22	18.33
	Once in 4 weeks	15	25.00
	As and when water is available	8	11.11
VII	Pest chemical used* (once/more than once)*		
	a.Mango hopper : carbaryl, sulphur, endosulphon, monocrotophos, other chemicals	104	86.66
	b.Stem borer : Spraying with kerosene, picking of larvae with needle, BHC-10 D.	51	42.50
c.	Stone weevil : Bagging of fruits, dispose of affected fruits	19	15.83
d.	Leaf webber : Carbaryl and other chemicals	15	20.83

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1	2	3	4
VIII	Diseases (chemical used* (once/more than once)		
	a.Powdery mildew : Sulphur + Dithane M-45 and other chemicals	70	58.33
	b.Sooty mould : Maida spray, maida spray + Dithane M-45 and other chemicals	24	20.00
IX.	Pruning operations for mango trees	78	65.00
	Once in a year	26	33.33
	Once in two years	24	30.77
	Once in three years	18	23.07
	As and when required	10	12.82
X.	Grafting		
	Veener grafting	70	58.33
	Apicatel grafting	18	15.00
	Approach grafting	32	26.66
XI.	Yield tree		
	Alphonso variety		
	Below 200 kg	45	37.50
	Between 200-400 kg	35	29.17
	Above 400 kg	40	33.33
XII.	Cost of cultivation/acre		
	Less than Rs. 5,000	40	33.33
	Between Rs. 5,000 – Rs. 10,000	44	36.67
	Above Rs. 10,000	36	30.00

* Multiple responses obtained

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