

Original Research Article

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## Extent of Adoption of Recommended Technologies in Mango

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### ABSTRACT

#### Keywords

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Agriculture is considered as the backbone of India, where around 70 per cent of the population is dependent on agriculture and allied activities for their livelihood. Technology generation and adoption are identified as the most important aspects to increase the productivity and production of mango. Tremendous efforts have been made to develop packages of practiced for getting maximum yield. Hence, a study was taken up to access the adoption of recommended technologies in mango cultivation among 60 mango growers in Theni District. The findings of the study revealed that the adoption of recommended technologies was found to be low under weed management, plant protection, fertilizer application and high in recommended technologies of variety, spacing, training, pruning and time of harvest.

### Introduction

Mango is one of the most important tropical fruits of the world and it has been rightly referred to as the “King of fruits in India”. Indo Burmasian region and Philippines are considered to be the probable places of the origin of mango. The mango is one of the most ancient fruits of India. The botanical name for the mango is *Mangnifera indica* L belongs to the dicotyledonous family, Anacardiaceae. It is the leading fruit crop of India cultivated in about 1.28 million hectares, with total production about 10.81 tones, with an average productivity of 8.44 tonnes per hectare. The fully ripened fruits are not only considered delicious table fruits but

also used in the preparations like jam, jelly, squash, syrups and the like. In Tamil Nadu, it is one of the most important fruits and cultivated in almost all parts. Hence, a study was taken up to assess the adoption of recommended technologies by the farmers in mango crop.

### Materials and Methods

The study was taken in Theni district of Tamilnadu. Under Theni district, Periyakulam and Cumbum block which had maximum area under mango crop was chosen for the study. A sample size of 60 mango growers were chosen from each of 4 selected villages based on random sampling procedure. Rogers

(1983) defined adoption as a decision to make full use of an innovation as the best course of action available.

The cultivation of neelam variety was selected in order to study the extent of adoption based on discussion with horticulture scientists, subject matter specialists and horticulture officers of Theni district, 16 major mango cultivation practices along with sub-items were selected to study the extent of adoption.

## **Results and Discussion**

### **Practice wise adoption of recommended technologies in mango**

#### **Selection of variety**

Selection of Variety is very important for getting higher yield. It could be observed that adoption percentage of recommended variety was 100per cent. This shows that the mango growers are having more knowledge in adopting the variety for their field. This finding is in line with the findings of Bennur *et al.*(2013) (Table 1).

#### **Seedlings per ha**

More than 80 per cent of the respondents adopted recommended seedling rate whereas 20 per cent of the respondents failed to adopt the recommended technology. This finding is similar with the findings of Borate *et.al.*(2012).

#### **Preparation of main field**

The mean adoption percentage under preparation of main field was 77 per cent. Among the sub items under preparation of main field, recommended number of ploughing was adopted by 86 per cent and recommended quantity of FYM application

was adopted by 68 per cent of respondents. Non adoption may be due to lack of trained labours and non - availability of FYM. This finding is in line with the findings of Gotyal *et al.*, (2011).

#### **Spacing**

Nearly half of the respondents (58per cent) had adopted the recommended spacing in mango. The reason for non – adoption may be due to lack of preparedness to take risk by the farmers.

#### **Fertilizer application**

The mean adoption percentage of fertilizer application was found to be 66.33 per cent. Application of NPK was adopted by 80 per cent. Recommended time and quantity of application of fertilizers was adopted by 80 per cent and 48per cent of the farmers respectively. The reason for non –adoption might due to high cost of fertilizers and lack of information about application of fertilizers. This finding is similar with the findings of Yadav *et al.*, (2013).

#### **Weed management**

The mean adoption percentage under weed management was found to be 30 per cent. The respondents' adoption was found to be less than fifty per cent in all the practices viz., recommended herbicide (30 per cent), recommended dose (30 per cent) and time of application was (30 per cent). The non - adoption may be due to lack of conviction on these practices.

#### **Intercropping**

The adoption percent under intercropping is about 82 per cent. The reason for high adoption is due to the familiarization of intercropping practices by the mango growers.

**Table.1** Practice wise adoption of recommended technologies in mango

S.No	TECHNOLOGIES	ADOPTED	PERCENTAGE
1.	Selection of Variety	60	100.00
2.	Seedlings per hectare	48	80.00
3.	Preparation of main field		
	a)Recommended number of ploughing	52	86.00
	b)FYM	41	68.00
	<b>Mean</b>		<b>77.00</b>
4.	Planting	43	71.60
5.	Spacing	35	58.30
6.	Fertilizer application		
	a) Application of NPK	48	80.00
	b) Time of Application	43	71.00
	c) Quantity of application	29	48.00
	<b>Mean</b>		<b>66.33</b>
7.	Weed Management		
	a) Herbicide application	18	30.00
	b) Time of application	18	30.00
	c) Quantity of application	18	30.00
	<b>Mean</b>		<b>30.00</b>
8.	Irrigation		
	a) Irrigation Interval	52	86.00
	b) Drip Irrigation	47	78.00
9.	Intercropping	38	63.00
10.	Training	60	100.00
11.	Pruning	60	100.00
12.	Top working	18	30.00
13.	Plant Growth Regulators		
	a) Application of PGRs	17	28.00
	b) Time of application	17	28.00
	c) Quantity of application	17	28.00
	<b>Mean</b>		<b>28.00</b>
14.	Plant protection		
	1.Mango hopper		
	a) Recommended pesticide	26	43.00
	b) Time of application	20	33.00
	c) Quantity of application	24	40.00

	<b>Mean</b>		<b>38.66</b>
2. Mango fruit fly			
a) Recommended pesticide		26	43.00
b) Time of application		20	33.00
c) Quantity of application		24	40.00
	<b>Mean</b>		<b>38.66</b>
3. Mango Red rust			
a) Recommended fungicides		21	35.00
b) Time of application		15	25.00
c) Quantity of application		19	31.00
	<b>Mean</b>		<b>30.33</b>
4. Anthracnose			
a) Recommended fungicide		21	35.00
b) Time of application		15	25.00
c) Quantity of application		19	31.00
	<b>Mean</b>		<b>30.33</b>
a) Mango malformation		21	35.00
Application of Micronutrients		15	25.00
	<b>Mean</b>		<b>30.00</b>
b) Fruit drop		19	31.00
Application of Micronutrients		15	25.00
	<b>Mean</b>		<b>28.00</b>
<b>15. Harvest</b>			
a) Time of harvest		60	100.00

### **Training**

The adoption percent under training practices was high (100 per cent). The reason for adoption of this practice by the growers is to increase the yield in mango.

### **Pruning**

The adoption of pruning practices was high (100 per cent).

### **Plant protection**

The overall mean adoption percentage of plant protection was about 32.66 per cent. The mean adoption percentage of recommended technologies for Mango hopper was 38.66 per

cent and Mango fruit fly was 38.66 per cent. The mean adoption percentage of recommended technologies for Mango Red Rust was 30.33 per cent and Mango Anthracnose was 30.33 per cent. The mean adoption percentage of recommended technologies for Mango disorders (Malformation and Fruit Drop) was about 29 per cent.

### **Time of harvest**

The adoption percentage under time of harvest was to be 100. This showed that all farmers harvested the mango at the right time. Hence, it could be inferred that respondents had harvested the crop at the right time. This might be due to the fact that farmers believed the

harvesting at correct time would influence the crop yield.

In conclusion, with the respect to practice wise adoption to mango technologies, low adoption was found against the practice of weed management, fertilizers application, plant protection measures. Hence, it is suggested to design more number of training in these subject matter areas.

### References

Bennur Ashokkumar, N. Manjula, L. Manjunath and Printin P Sontakke (Jain). 2013. Adoption of banana farming practices and constraints of growers in Gulbarga district of Karnataka . *International Journal of Farm Sciences*, 5(1): 210-213

Borate, H.V., R.P. Mahadik, A.D. Hake and Sawant. P.A. 2012. Knowledge and adoption of sapota growers in thane district. *International Research Journals for Agricultural Economics and Statistics*. 3(1): 159-161

Gotyal, S.H., Aski. M.B. Patel and Hanumanaikar, R.H. 2011. Adoption of recommended lime cultivation practices by lime growers of Bijapur District. *Agriculture update*. 6(1): 122-124

Rogers , E.M 1983. Diffusion of innovation. The free press, New York.

Yadav, B.C., Ravish Choudhary and Saran. P.L. 2013. Adoption of Improved Production technology of Mandarin in Rajasthan , India: A Review. *African Journal of Agricultural Research*. 8(49): 6590-6600.

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