



## Extent of Adoption of farmers about improved mango cultivation

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### ABSTRACT

The research study was conducted by personal interview with 80 farmers in Pardi and Ahwa Talukas of Valsad and Dang districts of Gujarat state. It has been found that out of selected improved mango cultivation practices the extent of adoption of flowering regulation measures was 50.00 per cent. About 41.56 per cent farmers were adopting fertilizer applications, followed by plant protection measures (21.87 %) and selection and grading in mango (15.00 %). The practices like mango hybrid and fruit drop control were moderately adopted by the farmers to the extent of 11.56 per cent and 13.75 per cent respectively.

**Key words :** Cultivation, Extent of Adoption

Valsad district of Gujarat which occupies not only imported position in South Gujarat but also in whole of the state as far as agricultural and industrial development is concerned. It is popularly known as mango district of Gujarat about 20 per cent of state's mango production comes from this district. Mango is mainly used as fresh fruit, for papad, pickles and in canning industry, which is important source of money and provides the employment to large number of people.

The research scientists, extension workers and farmers have great responsibility to maximize the production of mango which is possible if farmers are aware and adopt new technology. A remarkable potentiality of new farm technologies are available and these are effective, adoptable and economically viable. The low productivity (8.0 t/ha) may be due to the farmers being unaware about improved mango cultivation practices or they may be facing some problems in its adoption at their own farms.

Keeping all these views in mind, the present investigation entitled '**Extent of Adoption of farmers about improved mango cultivation**' was undertaken with the following specific objectives:

#### **Objectives:-**

- (1) To study the socio economic characteristics of farmers.
- (2) To find out the extent of adoption of farmers about improved mango cultivation

### MATERIAL AND METHODS

Valsad and Dang district, were selected. From each selected district one taluka was selected purposively on the basis of central location position for study purpose. Four villages were selected from each selected taluka by simple random sampling technique. A list of mango growers was prepared from selected village. Out of those 10 respondents were selected from each village by simple random sampling technique. Thus total sample of 80 farmers was drawn for study purpose. Structured interview schedule was used for data collection. The data were tabulated and analyzed in the light of the objectives.

### RESULT AND DISCUSSION

I. To study the socio economic characteristics of farmers

**1 Age :** A perusal of data presented in Table -1 reveals that majority of mango growers (47.50 %) were found to be in the middle age group, followed by old age group (37.50 %) and young age group (15.00 %). *These findings are in line with those reported by Choudhary (2000) and Sharma and Sharma (2003).*

**2 Education :** The data presented in Table-1, indicated that 46.25 per cent of the mango growers were secondary level, followed by up to primary (26.25 %), up to middle (11.25 %), up to graduate (7.50 %), can read and write (6.25 %),

Table 1. Distribution of respondents according to their personal characteristics

Sl. No.	Category	Farmers	
		Frequency	Per centage
N=80			
1.	Age group		
	a.Young age group (up to 35 years)	12	15.00
	b.Middle age group (36 to 50 years)	38	47.50
	c.Old age group (above 50 years)	30	37.50
2.	Education		
	a. Illiterate	02	2.50
	b.Can read and write	05	6.25
	c.Up to primary	21	26.25
	d.Up to middle	09	11.25
	e.Secondary	37	46.25
	f.Graduate	06	7.50
3.	Land holding		
	a.Marginal farmers (up to 1.0 ha)	16	20.00
	b.Small farmers (1.01 to 2.50 ha)	57	71.25
	c.Big farmers (above 2.50 ha)	07	8.75
4.	Family size		
	a.Small (up to 5 members)	48	60.00
	b.Medium (6 to 8 members)	21	26.25
	c.Large (above 8 member)	11	13.75
5.	Family type		
	a.Nuclear	37	46.25
	b.Joint	43	53.75
6.	Social participation		
	a.Low participation (up to mean)	55	68.75
	b.High participation (above mean)	25	31.25
7.	Annual income		
	a.Low income (up to Rs. 66325.00)	51	63.75
	b.High income (above Rs. 66325.00)	29	36.25
8.	Extension contact		
	a.Once in a fortnight	08	10.00
	b.Once in a month	21	26.25
	c.Once in two months	33	41.25
	d.No contact		22.50

Table 2. **Distribution of respondents according to the extent of adoption**

			N=80
Sr. No.	Categories	Frequency	Percentage
1.	Low adoption level (score up to 0.13)	17	21.25
2.	Medium adoption level (score from 0.14 to 8.31)	48	60.00
3.	High adoption level(score above 8.31)	15	18.75

Table 3. Extent of adoption of farmers about improved cultivation practices of mango

Sr. No.	Improved practices	MPS*
1.	Mango hybrids	11.56
2.	Flowering regulation	50.00
3.	Fruit drop control	13.75
4.	Fertilizer application	41.56
5.	Plant protection measures	21.87
6.	Selection & Grading	15.00

\* Mean per cent score

and illiterate (2.50 %) respectively. [Similar findings are reported by Halkati and Sunderswamy \(1994\) and Pathak \(1977\).](#)

**3. Land holding :** The data presented in Table-1, indicated that majority of the mango growers (71.25 %) were comes in small farmers followed by marginal farmers (20.00 %) and big farmers (8.75 %), respectively

**4. Family size :** A perusal of data presented in Table-1, reveals that majority of the respondents (60.00 %) were found to be have their small families followed by medium (26.25 %) and 13.75 per cent were found large families.

**5. Family type:** It is evident from the Table-1, that majority of the mango growers (53.75 %) belonged to joint family and 46.25 per cent farmers belonged to nuclear family.

**6. Social participation :** The examination of data presented in Table-1, indicated that majority of the mango growers (68.75 %) had low social participation followed by 31.25 per cent farmers had high social participation.

**7. Annual income :** A perusal of the data in Table-1, indicate that 63.75 per cent of the mango growers were found to be in low income group followed by high income group i.e. 36.25 per cent.

**8. Extension contact:** It is evident from the Table-1, that 41.25 per cent of the respondents were found to have contact with extension personnel once in two months, followed by once in a month (26.25

%), no contact (22.50 %), once and only 10.00 per cent of the respondents had contact once in a fortnight, respectively.

## **2.To find out the extent of adoption of farmers about improved mango cultivation**

A close look at table-2 explains that on the whole 60.00 per cent of the mango growers were found to be medium adoption about mango cultivation practices. About 21.25 per cent respondents had low adoption level whereas only 18.75 per cent farmers had high adoption level about improved mango cultivation. [These findings are in conformity with those of Choudhary \(2000\) and Sharma and Sharma \(1998\).](#)

Further more the extent of adoption about different improved practices of mango cultivation was analyzed separately. The relative importance of selected practices of improved mango cultivation was highlighted on the basis of mean per cent score of adoption. The data has been presented in Table-3

The above table reveals that the extent of adoption of selected practices of mango cultivation was measured for the crop. It was found that out of selected practices the extent of adoption of flowering regulation measures was 50.00 per cent. About 41.56 per cent farmers were adopting fertilizer applications, followed by plant protection measures (21.87 %) and selection & grading in mango (15.00 %).

The practices like mango hybrid and fruit drop control were moderately adopted by the farmers

Table 4. The extent of adoption of farmers about different aspects of improved practices of mango cultivation.

Sr.No.	Aspect	Frequency	Percentage
1.	Mango hybrid		
	1.1 Amrapali	20	25.00
	1.2 Ratna	09	11.25
	1.3 Sonpari	07	8.75
	1.4 Neelphonso	01	1.25
2.	Flowering regulation		
	2.1 Paclobutrazol for flowering regulation in mango	40	50.00
3.	Fruit drop control		
	3.1 NAA for fruit drop control in mango	11	13.75
4.	Fertilizer application		
	4.1 Suitability of FYM for mango	43	53.75
	4.2 Recommended dose of Nitrogen	48	60.00
	4.3 Recommended dose of phosphorus	32	40.00
	4.4 Recommended dose of potash	10	12.50
5.	Plant protection measures		
	(a) common insect-pests and their control in mango		
	(i) Methyl eugenol trap	32	40.00
	(ii) Imidachlorpid	14	17.50
	(iii) DDVP	12	15.00
	(iv) Endosulfan, Monochrotophos	17	21.75
	(b) common disease and their control in mango		
	(i) Bavistin	24	30.00
	(ii) Sulphur	06	7.50
6.	Selection & Grading	12	15.00

to the extent of 11.56 per cent and 13.75 per cent respectively. As far as extent of adoption of farmers about different aspects of improved practices of mango cultivation was concerned, these were analyzed separately and have presented in Table-4.

### Conclusion

Adoption of farmers towards mango cultivation may be directly or indirectly related to adoption of farmers about mango cultivation. Hence, it was considered necessary to assess the adoption of the farmers about mango cultivation. From the findings it was clear that majority of the respondents had low to medium adoption level regarding improved practices like mango hybrids and fruit drop control, plant protection measures in mango cultivation. The low to medium adoption level might be attributed to fear among the farmers about innovations, less exposure to information sources and less contact with extension personnel

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