

## **EXTENT OF ADOPTION OF RECOMMENDED GUAVA CULTIVATION PRACTICES**

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### **ABSTRACT**

*The present study was purposively conducted in Swai Madhopur Panchyat Samiti of Swai Madhopur District of Rajasthan. Six villages were selected for this study on the basis of maximum area under Guava cultivation: Numbers of Guava growers were decided by proportionate sampling and selection of respondents was made by simple random technique. In this way 54 small and 66 big guava growers were selected and thus sample consisted of 120 respondents. This study concludes that majority of the Guava growers were reported medium level of adoption followed by low and high level of adoption. The maximum adoption gap was found in irrigation system and vegetative propagation whereas minimum gap was reported in cultural practices and planting practices. The significant difference was found between small and big guava growers with regard to extent of adoption of major practice of recommended guava production technology.*

### **INTRODUCTION**

The requirement of fruit in India is rapidly increasing because of increasing population pressure and standard of living of the people. Though the area and production of fruits in India has increased but the per capita availability of fruits is still low in India. A number of agencies like Department of Horticulture, Krishi Vigyan Kendra and Regional Research Station are imparting technological know how to the needy farmers even then the guava production is less than the potential.

Several programmes which are helping the farmers in adoption of new technologies are in operation throughout the country, still exists a wide gap between technology available with the researchers and its adoption at farmers field particularly in guava.

Keeping this view in mind, an effort has been made in this study to find out the extent of adoption of recommended guava cultivation practices by the guava growers.

### **METHODOLOGY**

The present study was conducted purposively in selected Sawai Madhopur Panchayat Samity of Swai Madhopur district of Rajasthan. The criterion for selecting this Panchayat Samiti was the maximum area under guava fruits.

A list of guava growing villages was prepared in consultation with Department of Horticulture (Govt. of Rajasthan) and Tehsil personnels. Six villages were selected for the research study on the basis of maximum area under guava cultivation. Comprehensive lists of all guava growers were prepared in consultation with the Patwari and agriculture supervisors of the concerned villages. The number of guava growers' were decided for each village by proportionate sampling method. The farmers of each village were selected by simple random technique.

In this way a sample of fifty-four small and sixty six big guava growers were selected.

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Thus, the total study sample consisted of 120 respondents.

The responses of the respondents were recorded on standardized three point continuum scale i.e. fully adopted, partially adopted and not adopted with score 2, 1 and 0 respectively.

## RESULTS AND DISCUSSION

### Extent of adoption among small and big guava growers about IGCP:

Eight major recommended guava cultivation practices were used to find out the extent of adoption. The respondents were cautioned to provide the information about the practices, which were actually adopted by them in their orchards.

#### 1.1 Distribution of respondents according to their extent of adoption about IGCP

The respondents were grouped into three categories based on the extent of adoption of recommended guava cultivation practices. The categories of adoption for guava growers were formed on the basis of calculated mean and standard deviation. The results have been presented in table 1.

**Table 1 : Distribution of respondents according to their extent of adoption about improved guava cultivation practices**

S. No.	Adoption categories	Small guava growers (N = 54)		Big guava growers (N = 66)		Total (N = 120)	
		F	%	F	%	F	%
1.	Low (< 53)	24	44.44	00	00.00	24	20.00
2.	Medium (53 to 64)	30	55.56	46	69.70	76	63.33
3.	High (> 64)	00	00.00	20	30.30	20	16.67
	<b>Total</b>	<b>54</b>	<b>100.00</b>	<b>66</b>	<b>100.00</b>	<b>120</b>	<b>100.00</b>

The data in table 1 reveals that majority guava growers (63.33%) had medium level of adoption of recommended guava cultivation practices. This was followed by low adopters (20.0%) and high adopters (16.67%).

These findings are similar in line with the findings of Bhople *et al.* (1996) who found

that 62 per cent of orange growers had adopted recommended cultivation practices of orange to medium extent. Only 16 per cent of them were found to be higher adopters. It was also noted that 22 per cent of orange growers were found to be low adopter.

### Adoption gap among small and big guava growers with regard to improved guava cultivation practices

To find out the adoption gap among the guava growers about recommended practices of guava cultivation, it was felt imperative to calculate the extent of adoption among the guava growers. For this purpose, the mean per cent score of each major practice was reported separately as under;

The data presented in table 2 indicates that there exists a tremendous adoption gap among the guava growers. The highest adoption gap was found in irrigation system (44.44%) and vegetative propagation (43.83%). The medium adoption gap was reported in harvesting & marketing (40.68%), plant protection measures (33.82%), improved varieties (32.00%) and

manure & fertilizers (26.11%). It was further noted that lowest adoption gap was observed in cultural practices (4.58%) and planting practices (10.67%) among the guava growers. The over all adoption gap (29.52%) was calculated among the guava growers in the study area.

These findings are similar in line with the

**Table 2 : Adoption gap among small and big guava growers regarding improved guava cultivation practices**

Sr. No.	Practices	Small guava growers (N = 54)		Big guava growers (N = 66)		Total (N = 120)	
		MPS	AG	MPS	AG	MPS	AG
1.	Improved varieties	52.78	47.22	80.45	19.55	68.00	32.00
2.	Vegetative propagation	49.63	50.37	61.52	38.48	56.17	43.83
3.	Planting practices	87.78	12.22	90.61	9.39	89.33	10.67
4.	Irrigation system	50.00	50.00	60.10	39.90	55.56	44.44
5.	Manure & fertilizers	69.44	30.56	77.52	22.48	73.89	26.11
6.	Cultural practices	90.74	9.26	99.24	0.76	95.42	4.58
7.	Plant protection measures	62.65	37.35	69.06	30.94	66.18	33.82
8.	Harvesting & marketing	53.36	46.64	64.20	35.80	59.32	40.68
	<b>Over all</b>	<b>64.55</b>	<b>35.45</b>	<b>75.34</b>	<b>24.66</b>	<b>70.48</b>	<b>29.52</b>

MPS = Mean per cent score

AG = Adoption Gap

findings of Mohammad (1997), who found that maximum adoption of Mandarin production technology was found in varieties (100%). It was followed by cultural practices (96.44%), harvesting and marketing (91.81%), planting practices (88.14%) and plant protection measures (77.77%), comparatively less adoption was reported in propagation practice (64.44%).

#### **Significant difference between small and big guava growers with respect to their adoption about improved guava cultivation practices:**

The difference of adoption was analyzed with the help of 'Z' test. The obtained results have been presented in table 3.

It is clear from table 3 that calculated 'Z' value is greater than the tabulated 'Z' value at 5 per cent level of significance for all the practices of guava cultivation, this calls for rejection of null hypothesis, leading to a conclusion that there existed a significant difference between small and big guava growers regarding adoption of improved practices of guava cultivation recommended in the study area. Thus, this is evidently proved that the adoption of recommended guava production technology was more among the big guava growers as compared to small orchard growers.

It may be due to the large size of land holding, more cosmopolite orientation, resource availability and higher socio-

**Table 3 : Significant difference between small and big guava growers with respect to their extent of adoption about improved guava cultivation practices**

Sr. No.	Practices	Max. obtainable score	Mean score obtained		Mean diffi.	'Z' value
			Small growers (N=54)	Big growers (N=66)		
1.	Improved varieties	10	5.28	8.04	2.76	13.79*
2.	Vegetative propagation	10	4.96	6.15	1.19	8.78*
3.	Planting practices	10	8.78	9.06	0.28	3.22*
4.	Irrigation system	6	3.00	3.62	0.62	7.23*
5.	Manure of fertilizers	12	8.33	9.30	0.97	6.06*
6.	Cultural practices	8	7.28	7.94	0.66	4.69*
7.	Plant protection measures	12	7.52	8.29	0.77	4.91*
8.	Harvesting & marketing	16	8.54	10.27	1.73	12.06*

\* Significant at 5% level of significance

economic status of the big orchard growers, which might have enabled them to adopt the recommended practices in their orchard. On the other hand the small growers were deprived of such attributes there by resulting into the poor adoption of guava cultivation.

These findings are similar to the findings of Poonia (2002), where he found significant difference between small and big Kinnow orchard owners regarding adoption of all the five major practices of improved Kinnow cultivation recommended in the study area.

## CONCLUSION

The study concludes that 63.33 per cent guava growers were reported in medium category of adoption. This was followed by 20.0 per cent low and 16.67 per cent having high level of adoption of recommended guava cultivation practices.

The maximum adoption gap was found in irrigation system (44.44%) and vegetative propagation (43.83%). Where as, medium adoption gap was observed in harvesting & marketing (40.68%), plant protection measures (33.82%), improved varieties (32.00%) and manure & fertilizers (26.11%).

The minimum adoption gap was reported in cultural practices (4.58%) and planting practices (10.67%). The overall adoption gap was calculated 29.52 per cent among the guava growers of the study area.

The significant difference was found between small and big guava growers with regard to extent of adoption of all major practices of recommended guava production technology namely, improved varieties, vegetative propagation, planting practices, irrigation system, manure & fertilizers, cultural practices, plant protection measures, harvesting & marketing.

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