

## TECHNOLOGICAL GAPS AND SUGGESTED STRATEGIES TO BOOST GUAVA PRODUCTION IN SAWAI-MADHOPUR DISTRICT

K.C. Sharma\* and B.S. Mitharwal\*\*

### ABSTRACT

Sawai Madhopur district of Rajasthan covers about 35% of Guava area, while the average production per plant (90-100 kg.) is low in the district. The area of Guava in the district is 3500 ha. and production is 40,000 MT (2010-11). The present study was undertaken to identify the technological gaps perceived by guava growers and to suggest appropriate strategies to boost Guava production & export in Sawai Madhopur. The size of the sample was 80 respondents which were purposively selected from four villages. The study revealed that technological gaps as Non-availability of cold storage facilities and processing units at district level (Ist & IInd rank), Zinc deficiency results in poor quality fruits (IIIrd rank), Water stress during summer (IVth rank), High cost of transportation (Vth rank), High cost of plant protection chemicals (VIth rank), Middle man causes marketing problem (VIIth rank), High attack of diseases and pests (VIIIth & IXth rank), High cost of fertilizers (Xth rank), Lack of e-chaupal facility at village level (XIth rank), Bahar treatment of and labour management at harvesting (XIIth rank), Fluctuation in market prices (XIIIth rank), High cost of micronutrients (XIVth rank) and Distant location of Market (XVth rank). The technological constraints as Non-availability of true to type planting material and inadequate technical guidance were perceived as least important technological gaps (XVIth & XVIIth rank). Based on the technological gaps perceived by the guava growers, opinion of the experts and experience of the researcher the important strategies to boost guava production and export are :- (a) Spray of Zinc Sulphate (6 gm.) and Hydrated lime (4 gm.) dissolved in 1 litre water in April and June month results in quality fruit production, (b) Establishment of cold storage and processing units at district level with financial assistance from government, and (c) Formation of Guava growers committees at village and block level and providing technical know-how through experts from time to time will result in boosting guava production.

### INTRODUCTION

Guava (*Psidium guajava* Linn) is one of the most popular fruit crops of Sawai Madhopur district of Rajasthan. Besides this it is commercially cultivated in Jaipur, Ajmer, Udaipur Bundi and Dholpur districts of Rajasthan on large scale. The total area of this fruit in Sawai Madhopur district was 3500 ha. and production was 40,000 MT in the year 2010-11. The ripened fruits are best relished by the rich and poor alike. It is rich source of vitamin 'C' which is two to five times more than fresh orange juice and a fair source of vitamin 'A', Calcium, Phosphorus, Pantothenic acid, Riboflavin, Thiamin and Niacin. Guava is best for making jelly as it is rich in pectin. The leaves of guava also have medicinal values for curing diarrhoea. The yield per

hectare in the area is comparatively lower (90-100 Kg. per plant) than leading districts of the country because of lack of technical know-how about guava production technology among farmers. The fluctuating demand of guava in the market and its perishable nature is also responsible for poor production in the area. Keeping these points in view an attempt was made to find out the factors responsible for low production of guava fruits and strategies to increase production with following specific objectives :-

1. To identify the technological gaps perceived by selected guava growers of Sawai Madhopur district of Rajasthan.
2. To suggest appropriate strategies to boost guava production and export.

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\* Associate Professor (Agri.Extension), Directorate of Extension Education, SKRAU, Bikaner.

\*\* Senior Technical Assistant (Entomology), Directorate of Extension Education, SKRAU, Bikaner.

## RESEARCH METHODOLOGY

Guava is mainly cultivated in 15 villages of Sawai Madhopur block of Sawai Madhopur district in Rajasthan. Out of which 4 villages namely, Karmoda, Pachipura, Khatupura and Dondari were purposively selected by KVK because large number of orchards are situated in these villages and these villages are near to KVK, Sawai Madhopur. Responses were collected from 80 farmers of selected villages. They were equally distributed in these villages i.e. 20 farmers from each village. Data were collected by structured personal interview technique. Thus, the technological gaps were analyzed and interpreted.

**Table 1. Technological gaps perceived by guava growers**

(n=80)				
S. No.	Technological gaps	No. of Farmers	Percentage	Rank
1.	Non-availability of cold storage facilities at district level	75	93.75	I
2.	Non-availability of processing units at district level	73	91.25	II
3.	Zn deficiency results in poor quality fruits	70	87.5	III
4.	Water stress during summer	67	83.75	IV
5.	High cost of transportation	64	80	V
6.	High cost of plant protection chemicals	63	78.75	VI
7.	Middleman causes marketing problem	60	75	VII
8.	High attack of diseases	57	71.25	VIII
9.	High attack of pests	55	68.75	IX
10.	High cost of fertilizers	53	66.25	X
11.	Lack of e-chaupal facility at village level	51	63.75	XI
12.	Bahar treatment and labour management at harvesting	50	62.5	XII
13.	Fluctuation in market prices	49	61.25	XIII
14.	High cost of micronutrients	47	58.75	XIV
15.	Distant location of market	44	55	XV
16.	Non-availability of true to type planting material	41	51.25	XVI
17.	Inadequate technical guidance	35	43.75	XVII

High attack of pests (68.75%, IX rank), High cost of fertilizers (66.25%, X rank), Lack of e-chaupal facility at village level (63.75%, XI rank), Bahar treatment and labour management of harvesting (62.5%, XII rank), Fluctuation in market prices (61.25%, XIII rank), High cost of micronutrients (58.75%, XIV rank), Distant location of markets (55% XV rank), Non availability of true to type planting material (51.25%, XVI rank), and Inadequate technical guidance (43.71% XVII rank). The findings are in line with the findings as reported by Chandra et. al. (1990), Ravishankar & Katteppa (1998), Pawar and Gunjal (1999), Saxean et. al. (1999) and Kadam

## RESULTS AND DISCUSSION

The findings on the technological gaps perceived by the respondents related to production, storage processing and marketing is given in table -1. A perusal of the table reveals that the constraints as Non-availability of cold storage facilities at district level (93.75%, I rank), Non availability of processing units at district level (91.25%, II rank), Zinc deficiency results in poor quality fruits (87.5%, III rank), water stress during summer (83.75%, IV rank), High cost of transportation (80%, V rank), High cost of plant protection chemicals (78.75%, VI rank), Middleman causes marketing problem (75%, VII rank), High attack of diseases (71.25%, VIII rank),

et. al. (2007).

## STRATEGIES

Based on the technological gaps perceived by the guava growers, discussion with experts, experiences of the researchers here are some strategies to boost guava production and export.

1. Supply of true to type plants to farmers by Government Departments and authorized agencies at district level at reasonable prices.
2. Spraying of micronutrients in April and June months especially Zinc Sulphate (6 gm.) and

- Hydrated lime (4 gm.) dissolved in 1 liter water will result in good quality production of fruits.
3. Regional and state level efforts be made to give helping hands to the interested growers for export. The facilities given to cooperative sector should also be given to private and public limited companies.
  4. Financial help and technical know-how must be provided for the development of infrastructural facilities like - cold storage, establishment of processing units, regular supply of electricity at subsidized rates.
  5. Popularization of use of vermi-compost @ 5kg./plant will result in higher production of quality fruits. Recommended doses of fertilizers must be applied timely. It is beneficial to take winter season crop because fruits are sweet and free from diseases and pests. For taking winter season crop apply FYM, full dose of Superphosphate and Potash and ½ dose of Urea in April month and ½ dose of Urea in the month of September.
  6. Research studies must be undertaken on regular basis to find out the barriers in guava production and also to encourage other interested farmers to adopt scientific guava production technology. It will ultimately result in increase in production and exports.
  7. Formation of guava growers committee of interested and educated farmers at village/block level and by providing scientific technical know-how through experts from time to time will result in boosting the production and export of guava.

## CONCLUSION

The results of the study revealed that lack of storage and processing facilities, Zinc deficiency and water stress during summer, high cost of transportation and plant protection chemicals were the major technological gaps. Similarly, Lack of e-chaupal facility at village level, Bahar treatment and labour management at harvesting, High cost of fertilizers and micronutrients, High attack of diseases and pests were also the important constraints. Fluctuation in market prices, Distant location of market, Non-availability of true to type planting material and Inadequate technical guidance were the least important constraints perceived by the guava growers.

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