

Evaluation of Sapota Varieties in Nalgonda District of Telangana

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ABSTRACT

Twelve varieties of Sapota (*Achras sapota* L.) were evaluated for fruit yield and from 2001-2007 at Arid Horticulture Research Station, Kondamallepally, Nalgonda district of Telangana. The varieties tested are Cricket Ball, Guthi, Kalipatti, Singapoor, Kirthibatti, PKM-1, Badami, Gavarayya, Pala, Pakala, Simhowdi and Calcutta round. Critical examination of the data revealed that the variety Guthi has exhibited the highest cumulative yield (189.1 kg/Tree) over seven years followed by Kalipatti with 161.1 kg/Tree.

Key words: Sapota, Varietal evaluation, Chalka soils, Fruit yield.

INTRODUCTION

Sapota (*Achras sapota* L.) is popularly known as Chiku and belongs to family Sapotaceae. The sapota fruit is an energy rich fruit with high total soluble solids (20-25%) and good source of digestible sugars and has appreciable amount of proteins, fat, fibre and minerals like calcium, phosphorus, iron (Shanmugavelu and Sreenivasan, 1973). The latex of sapota tree is used in the manufacture of chewing gum and also many value added products like jam, dried flakes, squashes, fruit bars and wine are

prepared from the fruits. This crop is drought tolerant and comes up well in rainfed condition in soils of high pH value with less plant protective measures. In India, Sapota is mainly cultivated in Gujarat, Maharashtra, Karnataka, Tamil Nadu, Andhra Pradesh, and Kerala. There are so many varieties and performance of these varieties varies from region to region. The present study was conducted to identify the suitable variety for conditions in Nalgonda district where the soils are shallow and calcareous.

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MATERIALS AND METHODS

The present study was conducted at Dr.YSR Horticulture University, Arid Horticulture Research Station, Konda Malleshpally, Nalgonda district during the period from 2001 to 2008. The Station falls under southern zone of Telangana (Latitude 17.0586693 and Longitude 17.265585) with average rainfall of 560 mm and mean temperatures of 17°C minimum and 40°C maximum. The soils are calcareous shallow and red chalka type. The trail was conducted in non replicated model with 12 varieties consisting of 5 plants in each row with a spacing of 7x7 meters. Recommended package of practices were followed to grow the trees. The varieties *viz.*, Cricketball, Guthi, Kalipatti, Singapoor, Kirtibarathi, PKM-1, Badami, Gavarayya, Pala, Pakala, Simhowdi, and Calcutta round. These varieties were planted during August 1995-96. The data on fruit yield was recorded from 2001-2008 and the cumulative yield data was collected.

RESULTS AND DISCUSSION

Perusal of the data (Table.1) revealed that the cumulative fruit yield over seven years ranged from 37.9 kg to 189.1 kg/tree. The variety, Guthi has recorded the highest cumulative fruit yield (189.1 kg/plant) followed by Kalipatti (161.1 kg/plant), Singapoor (117.8 kg/plant), Cricket Ball (111.5 kg/plant), Kirtibarathi (108.0 kg/ plant), PKM-1 (91.0 kg/tree), Calcutta round (50.4 kg/tree), Simhowdi (41.1 kg/tree), Pala (40.1 kg/tree), Gavarayya (40.0 kg/tree) and the lowest was recorded in Badami and Pakala (37.9 kg/tree). There is a lot of variation in yield performance among the varieties due to climatic adaptability and nutrient absorption capacity also varies from variety to variety. Similar variations in yield traits in different varieties of sapota were also reported by Chundawat and Bhuva(1982) and Shirol *et al* (2007).The superior performance of Guthi variety might be due to it's well adaptation to the local climatic and soil conditions.

Table. 1: Cumulative fruit Yield of Sapota varieties (2001-2007)

S. No	Name of Variety	Average fruit yield (kg/Tree)							Cumulative fruit yield (kg/Tree) (2001-2007)
		2001	2002	2003	2004	2005	2006	2007	
1	Cricket Ball	8.5	16.2	20.2	22.6	16.4	11.4	16.2	111.5
2	Guthi	14.0	32.6	35.5	43.6	25.6	14.4	23.4	189.1
3	Kalipatti	7.6	25.2	30.2	36.8	18.2	17.8	25.8	161.1
4	Singapoor	8.0	20.8	24.6	22.4	15.3	11.2	15.5	117.8
5	Kirtibarathi	9.2	16.4	20.2	21.6	14.6	10.0	16.0	108.0
6	PKM-1	5.0	17.2	18.9	19.2	13.1	6.1	11.5	91.0
7	Badami	-	6.7	8.2	8.8	6.0	3.4	4.8	37.9
8	Gavarayya	-	6.2	9.0	6.6	5.8	6.2	6.2	40.0
9	Pala	-	5.5	7.4	6.5	6.2	6.5	8.0	40.1
10	Pakala	-	5.8	6.8	7.6	5.4	4.8	7.5	37.9
11	Simhowdi	-	6.1	7.0	8.1	6.7	5.1	8.1	41.1
12	Calcutta round	-	7.0	8.6	10.4	8.3	6.9	9.2	50.4

CONCLUSION

From this study, it can be concluded that the variety Guthi may be recommended for cultivation followed by Kalipatti under the calcareous soils of southern zone of Telangana as it has exhibited superior performance over all the other varieties.

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