

Sapota – An Ideal Plant for Cropping System in Tuticorin District

S. Kayarkanni

Abstract

The major fruits grown in India include mango, banana, papaya, orange, mosumbi, guava, apple, pineapple, sapota, ber, pomegranate, strawberry, litchi etc. Sapota, also known as “Chikku” in North India, being a deep rooted and drought-resistant crop has been found to be an ideal plant for two tier cropping system with chillies as an intercrop in dry areas of Tuticorin district. This paper attempts to examine cost and returns of Sapota cultivation in Tuticorin District. The proportionate random sampling technique has been adopted to select 40 Sapota farmers from Kovilpatti and 40 Sapota farmers from Puthur blocks of Tuticorin district. Percentage analysis, averages, ranking method and standard deviation, chi square tests and probability analysis were used for the analysis. The results from this study were found that the net return that is cost of production over gross return was Rs.22430.50 in Kovilpatti and it was Rs.13182.80 in Puthur. Yield per acre in money term was Rs.29683.70 in Kovilpatti and Rs.17864.30 in Puthur. Net return figures also show a higher in Kovilpatti compared to Puthur. In Kovilpatti block, the most important problems in the production of Sapota were heavy investments, pest and disease and climatic factors which were ranked as first, second and third respectively. Long gestation period and inadequate credit facilities were ranked fourth and fifth. In Puthur block, it was clear from the analysis that the most important factor which severely affected mango production was the pest and disease, needs heavy investment and climate factors which were ranked 1st, 2nd and 3rd places. Inadequate credit facilities and Long gestation period were ranked fourth and fifth respectively. Based on the results of the present study it is concluded that there is a need for adequate attention towards mitigating various constraints for overall development of Sapota cultivation which has occupied a major place in cropping system in the study area, so as to improve the economic level of the rural people by providing employment. Thus, it could be concluded that investment in Sapota orchard was economically feasible and financially viable in both the blocks.

Keywords: Agriculture; Orchard; Horticulture; Intercrop; Indirect cost; Depreciation.

Introduction

India is endowed with wide agro climatic conditions that offer immense scope for cultivation of various kinds of fruit crops. This provides an excellent platform for the country to emerge as a leading producer of fruit crop. The horticulture scenario of the country is

rapidly changing. The production & productivity of horticulture crop have increased manifold. It is the fastest growing sector within agriculture thanks to the economic prosperity that has provoked market changes in the life styles & the consumption habits. Increase in area allocation under horticultural crops has often been suggested as a measure for agricultural diversification, increased employment and income (Malik, 1998).

India now ranks first in the world in the combined production of fruits and vegetables. Out of 370 million tons of fruit production in the world, India accounts for 30 million tons (Horticultural Statistics, 1999). India has produced 49,360,000 t fruits and 93,000,000 t

Author's Affiliation: *Asso. Professor of Economics, Sri Parasakthi College (Autonomous), Courtallam, Tamil Nadu, India.

Reprint's request: Dr. S. Kayarkanni, Asso. Professor of Economics, Sri Parasakthi College (Autonomous), Courtallam, Tamil Nadu, India.

E-mail: amuthajoe@gmail.com

vegetables during year 2009-2010. The major fruits grown in India include mango, banana, papaya, orange, mosumbi, guava, apple, pineapple, sapota, ber, pomegranate, strawberry, litchi etc. (Anonymous, 2010).

Sapota (*Achras sapota* Linn.) belongs to family Sapotaceae, and is one of the major fruit crops in India, Mexico, Guatemala and Venezuela. Sapota fruit is reported to contain sugars (Siddappa and Bhatia 1954), acids (Shanmugavelu and Srinivasan 1973), protein, amino acids (Selvaraj and Pal 1984), phenolics, viz., gallic acid, catechin, chlorogenic acid, leucodelphinidin, leucocyanidin and leucopelargonidin (Mathew and Lakshminarayana 1969), carotenoids, ascorbic acid, and minerals like potassium, calcium and iron (Selvaraj and Pal 1984).

India is the largest producer of Sapota followed by Mexico, Guatemala and Venezuela. Area under Sapota in India is estimated to be 1.40 lakh hectares, with an annual production of 11.17 lakh tonnes (www.apeda.com). India has about 162 thousand hectares of land under cultivation of Sapota and produces about 1358 thousand tonnes of Sapota per year (Ministry of Commerce and Industries, 2009-10).

Sapota fruits are used for making jams, jellies, osmodehydrated slices and squash (Reddy, 1959). Products like sweet chutney, dried sapota pieces, sapota milk shake, nectar, blended sapota drinks, pickle, preserve and candy can also be prepared with good sensory quality (Sawant, 1989). Even wine can be prepared from Sapota fruit (Gautam and Chundawat, 1998). Sapota, also known as "Chikku" in North India, being a deep rooted and drought-resistant crop has been found to be an ideal plant for two tier cropping system with chillies as an intercrop in dry areas of Tuticorin district. This paper attempts to examine cost and returns of Sapota cultivation in Tuticorin District.

Objectives of the Present Study

The objectives of the present study are:

1. To collect data on the socio-economic structure of Sapota cultivators in Tuticorin District.
2. To identify the cost and returns of Sapota cultivation in Tuticorin District.
3. To study various problems of cultivation of Sapota in the study area.

Methodology

The present study is based on primary data covered only six months period (2014). Primary data has been collected through interview schedule. The total household sample is 120. The proportionate random sampling technique has been adopted to select 40 Sapota farmers from Kovilpatti and 40 Sapota farmers from Puthur blocks of Tuticorin district. A separate interview schedule was designed, pilot tested and used for data collection. This is purely a descriptive study. Percentage analysis, averages, ranking method and standard deviation chi square tests and probability analysis were used for the analysis.

Discussion and Analysis

The information on Sapota cultivation was collected by survey method through personal interview with the sample farmers, confined to a particular area. The present study has covered Tuticorin District. The study area has about 302 acres under Sapota cultivation though effective area is only 263-298 acres. There were 238 farmers cultivating Sapota. Due to lack of money, energy and lack of time, the researcher has collected the data from 80 respondents in the study area for the purpose of analysis and discussion.

Results and Discussion

The socio-economic characteristics of sample Sapota cultivating farmers from Kovilpatti and Puthur blocks of Tuticorin district were analyzed and presented in the above table. It

Table 1: Socio-Personal Characteristics of Respondents

Variable	Categories	Kovilpatti block (n=40)	Puthur block (n=40)
		Percentage	Percentage
Sex	Male	62	59
	Female	38	41
Age	Young (15-30)	21	28
	Middle (30-45)	48	46
	Old (45-60)	26	24
	Above-60	5	2
	Illiterate	9	7
Education	Primary	26	28
	Secondary	18	19
	Hr. Sec	36	38
	Graduate	11	8
Family Size	Less than 3	14	12
	Low (3-6)	60	62
	Medium (6-9)	18	20
Family Type	Large (9-12)	8	6
	Nuclear Family	88	92
	Joint Family	12	8
Marital Status	Married	94	84
	Unmarried	6	16
Land Holdings	Small Farmers	62	68
	Medium Farmers	28	24
Livestock	Large Farmers	10	8
	Goat	14	28
Livestock	sheep	52	14
	Cattle	6	22
	buffaloes	28	36
Occupation	Landless labour	9	6
	Agriculture	57	62
	Agriculture+ allied	34	32
	Below 5	40	28
Experience in years	5-10	14	18
	10-15	19	10
	Above 15	27	44

Source: Survey Data

is evident from the results that in Kovilpatti block the percentage of male is more i.e., 62% and in Puthur block it was also more i.e., 59%.

In case of Kovilpatti block the percentage of middle age respondents is more i.e., 48% and in Puthur block it was also more i.e., 46%. As per the survey middle age group's involvements is higher than that of old and young aged groups and mean size of the family worked out to be 40.01 years in Kovilpatti block

and 39.52 years in Puthur block of the study area.

Further, results revealed that in Kovilpatti block 26% of the respondents had primary education, about 18% had high school education, about 36% possessed higher secondary level education and only about 11% had pursued degrees. Further, 9% remained illiterate. In Puthur block 28% of the