

ECONOMIC STUDY ON SUGARCANE CULTIVATION IN DHARMAPURI DISTRICT

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Abstract: In Tamil Nadu sugarcane crop is cultivated mainly in the Cauvery belt areas of Erode, Coimbatore, Namakkal and Tiruchirappalli districts. About 84 percent of the production comes from the five districts of Coimbatore, North and South Arcot, Salem, Dharmapuri and Tiruchchirappalli. The main purpose of the present study is to measure and examine the economics of sugarcane production in a selected area and also the study concentrates on the socio economic status of the sugarcane producers during the study period. The present analysis observed that the growth rate of area and production in the two selected taluks of Dharmapuri district has registered highest growth rate whereas lower growth rate in productivity. Due to the labour shortage the farmers are in the position to pay higher wages to the available labourers. The cost of cultivation in the both Dharmapuri and Palacode taluks are high. Hence the Government should take proper measures to control the high and increasing cost of sugarcane cultivation and also take necessary policies to increase the Minimum Support Price for sugarcane.

Index Terms: Sugarcane, Employment, Cultivation, Cost and Income.

Introduction

The sugar industry in India plays an important role towards socio-economic development in the rural areas by mobilising rural resources and generating considerable income and employment opportunities. India is the origin of sugarcane cultivation and sugar production. Sugarcane is one of the major cash crops in India. Sugarcane is one of the most important crops which is the raw material for the sugar industries. Sugarcane is grown in almost all states under diverse conditions of climate and soil in India. In Tamil Nadu sugarcane crop is cultivated mainly in the Cauvery belt areas of Erode, Coimbatore, Namakkal and Tiruchirappalli districts. About 84 percent of the production comes from the five districts of Coimbatore, North and South Arcot, Salem, Dharmapuri and Tiruchchirappalli. Though numbers of studies are available pertaining to the sugarcane production still the sugarcane cultivation has attracted the attention of the academician and researchers to focus on sugarcane cultivation. In order to study the sugarcane cultivation in a particular district in detail the researcher made an attempt to study the economics of sugarcane cultivation in Dharmapuri district.

Statement of Problem

The importance of agriculture to economic growth in a country depends upon the level of agricultural incomes which in turn depends on the level of the farm efficiency. The main purpose of the present study is to measure and examine the economics of sugarcane production in a selected area and also the study concentrates on the socio economic status of the sugarcane producers during the study period. In this situation the researcher attempts analyse the cost and return of the sugarcane production. Sugarcane is the most important commercial crop next to cotton in India and so farmers who cultivate sugarcane have the motive to maximize their profits. The present study could help them to choose the best way of cultivation for getting high yield and to use the resources available to get maximum profit at a minimum cost. Further the findings here may help the government to make policy recommendations with regard to ceilings on land holdings and land reforms.

Objectives of the Study

1. To examine the socio economic conditions of sugarcane cultivators of the study region.
2. To analyse the cost components of sugarcane cultivation and estimate the income generated through the sugarcane production.

3. To offer suggestions for the development of sugarcane production in future.

Selection of the Study Area

The study has been undertaken by the researcher after identifying the issue and research gap in the field of sugarcane cultivation and problems encounter by the sugarcane cultivators' during the field survey. The researcher aware that nearby Dharmapuri District Cooperative Sugar Mills at Palacode and Subramania Siva Cooperative Sugar Mills Ltd., at Pappireddipatty are the main sources for procurement of sugarcane and because of these sources the cultivators cultivate sugarcane in a large level in this district. The researcher also felt that it is appropriate to select purposively Dharmapuri district for the present study in sugarcane is cultivated in 11,971 hectares of land which comes 7.10 of the total cultivable land of the district.

Selection of Respondents

Dharmapuri District is come into existence from 2nd October 1965. It consists of 5 taluks namely Dharmapuri, Palacode, Pennagaram, Harur and Pappireddipatty. Among the five taluks the researcher select two taluks viz. Dharmapuri and Palacode in which sugarcane cultivated in wider range. In Palacode taluk totally 325 farmers are involved in the sugarcane cultivation and in Dharmapuri taluk 275 farmers are involved in sugarcane cultivation. In the selected two taluks totally 100 respondents are randomly selected from the taluks i.e., 50 from Dharmapuri and 50 from Palacode district.

Sources of data

Both primary and secondary data were collected for the present study. Primary data were collected from the 100 selected respondents with the help of pre-tested interview schedule. The secondary data were collected from the various issues of Cooperative Sugars, Dharmapuri district profile and Tamil Nadu Agricultural Department.

Limitation of the Study

The present study was conducted through survey method by personal interviews with pre-tested interview schedule, and it therefore, suffers from ascertain degree to recall bias.

Statistical Tools Used

The researcher used conventional statistical tools like tabulation, diagram, simple average, Compound Growth Rate and percentage analysis in the present study.

Review of Literature

Malik and Singh (1999)¹ have analyzed the cost of sugarcane cultivation per hectare and observed that it was higher at the high level of adoption followed by medium and low level in both reserve and free areas. Although due to increasing, study inferred that the sugarcane cultivation was more beneficial in adjoining area of sugar mill as on the high level of adoption should be enhanced in general and particularly in the after region of sugar factory.

Xavier Paul Raj (2005)² indicated that the crop which is cultivated in between the space available in main crop without any hindrance to it in terms of water, food and sunlight is called inter-crop sugarcane which is one of the most important commercial crops cultivated in Tamil Nadu and elsewhere for supplying to sugar factories as well as for making jaggery. Hence cultivating soyabean as inter-crop in sugarcane is a viable option to farmers to earn additional income within a short period.

Anbazhagan (2010)³ studied the economic analysis of sugar production in Tamil Nadu. Found that the sugarcane in India is the third largest crop, next to rice and wheat. The sugar yield capacity is not only related to the industries' producing capacity, but also to the availability of sugarcane. The erratic monsoon and fluctuating price levels are also vital factors.

Mohapatra (2011)⁴ studied the farmers' education and profit efficiency in sugarcane production. In a globally competitive environment where everything is commercialized, agriculture is no exception. The

¹ Malik, S.K. and Singh, R.P. (1999), "Break up of cost and Returns of Sugarcane Production in Reserve and Free Areas of Sugar Mills", Agricultural Situation in India, Vol.LV, No.12.

² M.Xavier Paul Raj (2005), "Soya bean as intercrop in Sugarcane", Kissan world, Vol.32 No.3.

³ Anbazhagan, K. (2010), "An Economic Analysis of Sugar Production in Tamilnadu", Kisan World, Vol.37, No.7, pp.15-17.

⁴ Mohapatra, Rangalal (2011), "Farmers' Education and Profit Efficiency in Sugarcane Production: A Stochastic Frontier Profit Function Approach", The IUP Journal of Agricultural 20 Economics, Vol. VIII, No.2, pp. 17-35.

results of the joint estimation of parameters of profit function and the inefficiency components suggest that 93 percent differences in the efficiency scores are due to profit inefficiency, and profit inefficiency reduces significantly with higher education. A grassroots level farming practice awareness program both by government and private agencies as well as the reorientation of the formal education curriculum toward farm-oriented curriculum are highly recommended.

Discussion and Analysis

In the present study the researcher collected primary data from 100 randomly selected sugarcane cultivators each 50 from two taluks of Dharmapuri district. The collected data were classified and analysed with the view to draw conclusions with respect to each of the specific objectives of the study.

TABLE 1
EDUCATIONAL STATUS

Level of Education	No. of Respondent	Percentage
Illiterate	00	00
Primary	33	33
High School	63	63
College	04	04
Total	100	100

Source: Primary data

From the above tabular and percentile analysis it is surprised to found that all the selected sugarcane cultivators are educated. Among the 100 respondents 63% are having high school education. 33 (33%) respondents are having primary level education. Remaining 04 (04%) respondents are studied college education.

TABLE 2
COMMUNITY WISE CLASSIFICATION

Community	No. of Respondents	Percentage
Backward	45	45
Most Backward	43	43
SC/ST	12	12
Total	100	100

Source: Primary data

It is found from the above table that among 100 selected sugarcane cultivators 45 (45%) are belongs Backward Community. 43 (43%) of the sugarcane cultivators are belongs to Most Backward Community. Remaining 12 (12%) of the respondents are belongs to SC/ST community.

TABLE 3
OCCUPATIONAL PATTERN

Name of occupation	No. of Respondents	Percentage
Agriculture alone	80	80
Agriculture and Business	12	12
Employed	08	08
Total	100	100

Source: Primary data

It can be noticed from the above tabular analysis that among the 100 selected respondents 80 (80%) of them are engaged only in agriculture. 12% respondents are involved both agriculture and business. Remaining 8% respondents are employed persons involved in agriculture.

TABLE 4
SUGARCANE YIELD PER ACRE

Yield per acre (Tonnes)	No. of Respondents	Percentage
40 – 45	16	16
46 – 50	64	64
51 – 55	12	12
Above 55	08	08

Total	100	100
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Source: Primary data

From the above table it is noted that 64 (64%) of the respondents mentioned that their sugarcane yield per acre was 46-50 tonnes. 12% of the respondents' yield of sugarcane per acre was estimated as 51-55 tons. 16% of the respondents' yield per acre was lies between 40 and 45 tonnes. Remaining 8% are having more than 55 tons of yields per acre during the study period.

TABLE 5
SOURCES OF SUPPLY OF SUGARCANE

Sources of supply	No. of Respondents	Percentage
Jaggery Units	48	48
Sugar Mills	52	52
Total	100	100

Source: Primary data

It is identified from the above table out of 100 selected sugarcane growers 48 of the respondents supply their sugarcane to the jaggery units. Remaining 52 of them supply their products to the nearby sugar mills.

TABLE 6
ESTIMATION OF COST-NET INCOME OF SUGARCANE PRODUCTION (PER ACRE)

Cost Mechanism	In Rs.	Percentage
Cost on Seed	12400.00	20.98
Harvesting and bundling cost	14600.00	24.70
Cost on Chemical Fertilizers	4800.00	08.12
Cost on Human Labour	6400.00	10.83
Cost on Pesticides	700.00	01.18
Cost on Bullock labour	3200.00	05.41
Cost on Farm manure	1600.00	02.71
Transportation cost	4000.00	06.77
Rent on Land	8400.00	14.22
Interest cost	3000.00	05.08
Total Cost (A)	59100.00	100
Average yield per acre in tonnes	40	
Average Price per tonne. (in Rs.)	2200.00	
Total Income/per acre (in Rs.)	88,000.00	
Net Income per acre	28,900.00	

Source: Compiled from primary data.

It is noted from the above tabular and percentile analysis that the cost of production of sugarcane per acre is Rs. 59100.00. The average yield per acre is estimated as 40 tons per acre. Average price per tonne of sugarcane is calculated as Rs.2200.00 during the study period. The net income earned per acre is estimated as Rs.28,900.00.

Summary of Results

Among the 100 respondents 63% are having high school education. 33 (33%) respondents are having primary level education. Remaining 04 (04%) respondents are studied college education.

It is found from the analysis that among 100 selected sugarcane cultivators 45 (45%) are belongs Backward Community. 43 (43%) of the sugarcane cultivators are belongs to Most Backward Community. Remaining 12 (12%) of the respondents are belongs to SC/ST community.

It can be noticed from the analysis that among the 100 selected respondents 80 (80%) of them are engaged only in agriculture. 12% respondents are involved both agriculture and business. Remaining 8% respondents are employed persons involved in agriculture.

It is noted that 64 (64%) of the respondents mentioned that their sugarcane yield per acre was 46-50 tonnes. 12% of the respondents' yield of sugarcane per acre was estimated as 51-55 tons. 16% of the respondents' yield per acre was lies between 40 and 45 tonnes. Remaining 8% are having more than 55 tons of yields per acre during the study period.

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Suggestions

- Government should arrange frequent research and training to produce high yielding and high recovery rate sugarcane and also provide easy credit to them.
- Proper infrastructure facilities are supplied to the rural agricultural people engaged in the sugarcane production.

Conclusion

The present research study highlighted the sugarcane cultivation in India during the post-reform period detected that the productivity registered positive growth at the same time the negative growth was found in the area and production. The negative situation in area and production has not affected the productivity that much in the Indian states, because the Indian sugarcane cultivators are have good knowledge about the cultivation method and they use the new technology as a result of high productivity. The same conditions also prevailed in the Tamil Nadu districts in the post reform period.

The present analysis observed that the growth rate of area and production in the two selected taluks of Dharmapuri district has registered highest growth rate whereas lower growth rate in productivity. Due to the labour shortage the farmers are in the position to pay higher wages to the available labourers. The cost of cultivation in the both Dharmapuri and Palacode taluks are high. Hence the Government should take proper measures to control the high and increasing cost of sugarcane cultivation and also take necessary policies to increase the Minimum Support Price for sugarcane.

References

1. Sharma et. al. "Dynamics of Sugarcane Production in Vindhya Plateau of M.P." Co- operative sugar, May 1990.
2. Durai, R "Studies on Weed control in Sugarcane" Co-operative Sugar, June 1990.
3. Debutt Behura et al., "Sugarcane Production in Orissa", Kissan World, Vol.21, No.8, 1994.
4. Manoharan et.al. "A New High Yielding Sugarcane Variety Suitable for Cauvery Delta Zone" Co-operative Sugar, March 1995.
5. Ganesan.K.P., "Cultivation of sugarcane an innovative approach" Kissan World, Vol.32, No.2, 2005.