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Cost and Structure Analysis of Kathali Banana In Srivaikundam Taluk, Thoothukudi District

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ABSTRACT

The major banana producing state of Tamil Nadu, the area cultivated in 1,02,458 hectares with an annual production of 5 364.701 million tonnes. The productivity in Tamil Nadu is 52.36 tonnes per hectare in the year 2009-10. The selected areas of Srivaikundam taluk of Thoothukudi District with more than 70 per cent of the total population depend on agriculture and a lot of marketing business is going on in this area. This taluk is solely depending on agriculture. Majority of the farmers are cultivate kathali banana in this taluk. So a survey has been undertaken to study the cost and structure of kathali banana production. The development of poor people in Srivaikundam taluk is mainly depends on the production of banana especially kathali banana. To improve the production the government should take necessary steps to help the farmers by fulfilling their financial needs and other needs. Hence, it is concluded that the production of kathali banana has made a positive contribution to the development of the Srivaikundam taluk.
Keywords: *Banana Production, Cost Structure, Input-output, Ratio.*

1. INTRODUCTION

Bananas are the main fruit in international trade and the most popular one in the world. In terms of volume they are the first exported fruit, while they rank second after citrus fruit in terms of value. The global production of banana is around 2,62,17,000 MT of India contributes 37 per cent. Besides India, other major banana producing countries are Brazil, China, Philippines, Costa, Rica and Ecuador. The major banana producing states are Tamil Nadu, Maharashtra, Kerala, Gujarat, Assam, Andhra Pradesh and Karnataka. More than 40 per cent of production being in Southern States of India. In Tamil nadu banana is cultivated in 1,02,458 hectares with an annual production of 5 364.701 million tonnes. The productivity in Tamil Nadu is 52.36 tonnes per hectare in the year 2009-10.

The selected areas of Srivaikundam taluk of Thoothukudi District with more than 70 per cent of the total population depend on agriculture and a lot of marketing business is going on in this area. This taluk is solely depending on agriculture. Majority of the farmers are cultivate kathali banana in this taluk. So a survey has been undertaken to study the cost and structure of kathali banana production. However the present study would be appropriate to take up the study of kathali banana production in the region concerned and make the research work a worthwhile and a relevant one.

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2. OBJECTIVES OF THE STUDY

1. To study the input and output structure and ratio analysis of kathali banana in Srivaikundam taluk.
2. To discuss the cost and structure analysis of kathali banana in Srivaikundam taluk.
3. To give appropriate suggestions for policy makers.

3. METHODOLOGY

The aim of the present study is to make an attempt to analyse the cost and structure of kathali banana and suggests appropriate measures to improve the production of kathali banana in Srivaikundam Taluk of Thoothukudi District, Tamil Nadu. Thoothukudi District comprises of eight taluks, out of which the Srivaikundam taluk is selected for this study.

Multi-stage stratified random sampling technique has been adopted for the study taking Thoothukudi District as the universe, the taluk as the stratum, the village as the primary unit and banana cultivators as the ultimate unit. A list of banana cultivators in the selected villages was obtained from the records of the Joint Director of Agriculture, Thoothukudi District a total of 442 banana cultivators were selected for statistical investigation. The data collected were carefully processed, edited and tabulated for analytical purposes. This study is based on both primary and secondary data. The investigation was carried out during the period January 2019 to June 2019.

RESULT AND DISCUSSION

INPUT-OUTPUT STRUCTURE OF KATHALI BANANA

The input-output structure of different kathali banana cultivation per acre between small and medium cultivators is given in Table 1.

Thus table 1 shows an average yield per acre obtained by the small cultivators producing kathali banana variety is 13.25 tonnes while the medium cultivators an yield of 15.25 tonnes. There is a surplus of 2.00 tonnes of the yield per acre realized by small cultivators compared to the medium cultivators sharing kathali variety.

INPUT-OUTPUT STRUCTURE OF KATHALI BANANA CULTIVATION PER ACRE BY SMALL AND MEDIUM CULTIVATORS (PER ACRE)

PARTICULARS	SMALL CULTIVATORS	MEDIUM CULTIVATORS	T-VALUE
Human Labour in mandays	70.50	72.80	1.0014.
Chemical Fertilizers in kgs.	2846.25	2485.60	2.8944*
Farm manure in kgs.	7105.75	7985.50	1.1025
Pesticide Rs.per acre	1140.50	1640.50	2.0310
Irrigation Cost in Rs.	1450.75	1850.65	3.9785*
Propping Cost in Rs.	12200.50	13140.50	4.2455*
Cost of Suckers in Rs.	2080.50	2680.90	1.1451

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Yield in Tonnes	13.25	15.25	3.7654*
Sample Size	263	371	

Source: Field Survey
* Statistically significant at 5 per cent level

TABLE NO 1

Human labour employed by the small cultivators is about 70.50 mandays while it is 72.80 mandays for the medium cultivators. The difference in the mandays may be attributed to the more intensive use of family labour by the medium cultivators.

Small cultivators used 2,846.25 kgs. and medium cultivators 2,485.60 kgs. of chemical fertilizers per acre. The amount of farm manure applied by the small cultivators is 7,105.75 kgs. and by medium cultivators is 7,985.50 kgs. per acre. The average expenditure on pesticides per acre amounted to Rs.1,140.50 and Rs.1,640.50 and propping cost Rs.12,200.50 and Rs.13,14050 and suckers cost of Rs.2,080.50 and Rs.2,680.90 for small and medium cultivators respectively. The use of chemical fertilizers, irrigation cost, propping cost and yield is found statistically significant between the two groups of cultivators.

Thus, it is observed that the level of input application is greater for medium cultivators compared with the small cultivators in kathali banana. Therefore, the hypothesis that "there is no significant difference exists between the banana yield of small cultivators and medium cultivators" is invalid.

COST AND RETURN STRUCTURE OF KATHALI BANANA

Per acre cost and return structure of kathali banana cultivation is presented in Table 2.

COST AND RETURN STRUCTURE OF SMALL AND MEDIUM CULTIVATORS CULTIVATING KATHALI BANANA (PER ACRE)

SL. NO	ITEMS OF COST A	SMALL FARMER		MEDIUM FARMER	
		VALUE IN RS.	VALUE IN PERCENTAGE	VALUE IN RS.	VALUE IN PERCENTAGE
1.	Value of human labour including family labour	24675	34.15	25480	32.69
2.	Plantation Charges	8900	12.32	9200	11.80
3.	Chemical Fertilizers	2846	3.94	2486	3.19
4.	Pesticides	1141	1.58	1641	2.11
5.	Sucker Cost	2081	2.88	2681	3.44
6.	Farm Manure	7106	9.84	7986	10.24
7.	Cost of Irrigation	1451	2.01	1851	2.37
8.	Propping Cost	12201	16.89	13141	16.86
9.	Transport Cost	2900	4.01	3000	3.85
10.	Interest on Working Capital	1100	1.52	1150	1.48
	Cost A Total	64401	89.14	68616	88.02
	Cost C				
11.	Rent	6800	9.41	8200	10.52
12.	Interest on Fixed Capital, Land Revenue, Cess and	1045	1.45	1140	1.46

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	Tax, Depreciation of Implements and Machinery				
	Cost C Total	72246	100.00	77956	100.00
	Yield Per Acre in tonnes	13.25		15.25	
	Yield Per Acre in Rs. (bunches, suckers and leaves)	92750		106750	
	Net Income in Rs.	20504		28794	

Source: Field Survey

TABLE NO 2

Table 2 shows that the average yield per acre realized by the small cultivators cultivating kathali variety is 13.25 tonnes. They earn Rs.92,750 per acre. The net income earned by the small cultivators is Rs.20,504. The total cost incurred by small cultivators is Rs.72,246 with the operating cost of 89.14 per cent of the total cost. Human labour is 34.15 per cent forming the major item of the total cost. The other expenses are chemical fertilizers 3.94 per cent, propping cost 16.89 per cent, plantation cost 12.32 per cent, farm manure 9.84 per cent, pesticides 1.58 per cent and transport cost 4.01 per cent. The interest on working capital is 1.52 per cent (Rs.1,100) of the total cost.

The yield of medium cultivators amounts to 15.25 per acre and the monetary terms of Rs.1,06,750 being the net income received against the total cost incurred Rs.61,350. While the operating cost accounts for 88.02 per cent (Rs.68,616), human labour constitutes 32.69 per cent (Rs.25.480). The percentage share of chemical fertilizer is 3.19 per cent (Rs.2,486), propping cost 16.86 per cent (Rs.13,141), plantation cost 12.32 per cent (Rs.13,141), interest on working capital 1.48 per cent (Rs.1,150), cost of irrigation 2.37 per cent (Rs.1,851), transport cost 3.85 per cent (Rs.3,000), rent 10.52 per cent (Rs.8,200) and interest on fixed capital 1.46 per cent (Rs.1,140).

In Srivaikuntam taluk the medium cultivators cultivating kathali banana earn more income than small cultivators as the cost of cultivation charges with increase in the size of the land area. From the above analysis it is clear that the cost of cultivation for medium cultivators is higher than the cost incurred by the small cultivators. They earn more income than the small cultivators in cultivating kathali banana.

INPUT- OUTPUT RATIO OF KATHALI BANANA

The input-output ratio of kathali banana cultivation by the small and medium cultivators in the area under study is presented in Table 3.

ECONOMICS OF CULTIVATION OF KATHALI BANANA PER ACRE

SL. NO	ITEMS OF COST	SMALL FARMER (IN RS.)	MEDIUM FARMER (IN RS.)
1.	Output in tonnes (Acre)	13.25	15.25
2.	Gross Return	92750	106750
3.	Total Operating Cost (Cost A)	64401	68616
4.	Net Return over Cost A	28349	38134
5.	Cost C	72245	77956
6.	Net Return over Cost C	20505	28794
7.	Cost of Production/tonne (Cost A)	4860.45	4499.41

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8.	Cost of Production/tonne (Cost C)	5452.45	5111.87
9.	Input-Output Ratio (Cost A)	1.44	1.56
10.	Input-Output Ratio (Cost C)	1.28	1.37
11.	Benefit-Cost Ratio (Cost C)	0.28	0.37

Source: Field Survey

TABLE NO 3

The input-output ratio per acre of kathali banana cultivation in terms of operating cost was Rs.1.44 for the small cultivators and Rs.1.56 for the medium cultivators. The profit gained by the medium cultivators was greater than the benefit enjoyed by the small cultivators. Benefit-cost ratio reveals that the medium cultivators gained Rs.0.37 and the small cultivators gained Rs.0.28.

Thus, it is observed that the cost of production and output per acre for the medium cultivators is greater than small cultivators. The medium cultivators indeed, enjoyed greater monetary benefits than the small cultivators for kathali banana in the study area.

4. CONCLUSION

Banana is one of the most important major fruit crops grown in India. It is a nutritious food used by both the rich and the poor. The development of poor people in Srivaikundam taluk is mainly depends on the production of banana especially kathali banana. To improve the production the government should take necessary steps to help the farmers by fulfilling their financial needs and other needs. Hence, it is concluded that the production of kathali banana has made a positive contribution to the development of the Srivaikundam taluk. Thus cultivating banana can greatly enhance the income, employment and standard of living of the cultivators of this study area.

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