

## A Study of Marketing Efficiency of Banana in Tuticorin District

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### Abstract

The study aims to find the cost and returns of banana cultivation and also to find the efficiency of marketing banana in Srivaikuntam and Tiruchendur taluk of Tuticorin district. It is understood that the banana farmers produced 181.61 kgs of banana and earned Rs.7371.53 per acre while their net returns per acre were Rs.4,760.81. The cost analysis reveals that per acre total cost, that is operational cost of cultivation for banana farmers, worked out to Rs.2338.42. Next to human labor, the amount spent on the use of chemical fertilizers occupied the major portion in the total cost of production. It came behind the cost of farm manure, cost of irrigation, pesticides, seed cost and bullock labor. Thus, it is inferred from the analysis that the banana farmers were found more efficient, both cost-wise and return wise. It can be observed that the ratio of Marketing Efficiency (ME) was more or less equal in both Srivaikuntam and Tiruchendur taluks. It was worked out to 2.94 in Srivaikuntam and 2.91 in Tiruchendur. It indicates that there is no difference regarding the marketing efficiency between two taluks. It is to be noted that much of the variations in the shares of the producer-sellers as well as retailer were explained by the consumer's price as indicated by the values of  $R_2$  which ranged from 0.91 to 0.94 per cents. The F-values show that the regression model is statistically significant at one per cent level. The study shows that the important marketing problems were inadequate credit facilities, high commission charges, high marketing cost, lack of transport facilities and lack of storage facilities which were ranked as first, second, third, fourth and fifth respectively.

**Keywords:** Marketing Efficiency; Cost Analysis; Irrigation; Pesticides; Storage Facilities.

### Introduction

Banana is mainly significant fruit crop in India and has greater socio-economic significance accounting for 31.7 per cent of total fruit production. Owing to its multifaced uses and high economic returns it is referred to as "Kalpatharu" a plant of virtues (Banana production technology, 2002). The United Nations Food and Agriculture Organization, rank bananas as the world's fourth most important crop after the major cereals [FAO, 2004]. Other important fruit crops such as mango, litchis, jackfruits and pineapples have the disadvantages of

being seasonal in nature (USAID 1969). The optimum time of planting of the different variety is September-October (Haque 1983). The space between the young plants especially during the first few months of crop growth provides a scope for temporal and spatial complementarity by growing short duration, early maturing winter cash crops (Shil and Mondal 1990). Latha Bastine and Radhakrishnan (1988) in their study on economics of plantain cultivation in Kerala found that the cost of cultivation per hectare was Rs.36,249. The returns worked out to be Rs.45,068 and the main items of expenditure were cost of the family and hired labor and manure per hectare of plantain cultivation. Tewari and Sharma (1986) assessed the impact of technical change in terms of significant differences in input-output relationship on different types of farms. Samban (1991) in his study on economics of banana cultivation in Tiruchirapalli District of Tamilnadu used the Cobb-Douglas production function to assess the efficiency of inputs and the plantain yield which was influenced by size of land, sucker and supporting poles that had shown diminishing marginal returns to their application. The study aims to find the cost and returns of banana

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cultivation and also to find the efficiency of marketing banana in Srivaikuntam and Tiruchendur taluk of Tuticorin district.

#### *Objectives of the Study*

1. To analyze the cost and returns of banana cultivation in Tuticorin district,
2. To assess the efficiency of marketing banana in Srivaikuntam and Tiruchendur taluk,
3. To examine the problems in marketing of Banana.

#### **Methodology and Research Design**

Banana is cultivated in an area of over 8037 hectares in Tuticorin District. This district is one of the major cultivators of banana in the state

next to Trichy district. Srivaikuntam and Tiruchendur Taluks are the major cultivators of banana in the district. A major portion of this crop is marketed to other districts / neighboring state, Kerala. The present study is empirical and hence field survey method and personal interview technique were adopted. For the present study, two Taluks namely, Srivaikuntam and Tiruchendur Taluks from Tuticorin district have been selected. In Tamilnadu, Tuticorin district has produced remarkable under mango cultivation and one among major growing mango districts in Tamilnadu. In each block, the first five villages were selected which account for more than 75 per cent of the total area of mango is these blocks. The proportionate probability random sampling technique has been used to select 150 orchards in each block from the selected villages. The primary data collection pertains to the agricultural year 2014-15.

#### *Analysis And Interpretation*

**Table 1:** Per acre average cost and returns structure of farmers cultivating banana

SI. No.	Cost Component	Banana Farmers
1.	Human labour (including family labour)	996.25
2.	Bullock labour	264.99
3.	Chemical fertilizer	331.30
4.	Pesticide cost	162.12
5.	Seed cost	141.24
6.	Farm manure	182.49
7.	Cost of Mechanical Power	77.80
8.	Interest on working capital	182.23
	Cost A	2338.42
9.	Rent	163.17
10.	Interest as fixed capital (excluding land cost) land revenue, less and taxes, depreciation of implements and machinery	109.13
	Total – Cost C (total)	2610.72
	Yield per acre in kg	181.61
	Gross Returns (Rs.)	7371.53
	Net Returns (Rs.)	4760.81

Source: Primary Data

It is understood from table 1 that the banana farmers produced 181.61 kgs of banana and earned Rs.7371.53 per acre while their net returns per acre were Rs.4,760.81. The cost analysis reveals that per acre total cost, that is operational cost of cultivation for banana farmers, worked out to Rs.2338.42. Next to human labor, the amount spent on the use of

chemical fertilizers occupied the major portion in the total cost of production. It came behind the cost of farm manure, cost of irrigation, pesticides, seed cost and bullock labour. Thus, it is inferred from the analysis that the banana farmers were found more efficient, both cost-wise and return-wise.

## Marketing Efficiency

The movement of produce from producers to consumers at the lowest possible cost, consistent with the provision of the services desired by the consumer may be termed as efficient marketing (S.S. Acharya and N.L. Agarwal, 1987). Marketing efficiency is the

ratio of market output (consumer's price) to marketing input (total cost of marketing). An increase in this ratio represents improved efficiency and a decrease denotes reduced efficiency. In order to evaluate the marketing efficiency (M.E), the Shepherd's formula was used and the calculated results are given in Table 2.

**Table 2:** Marketing efficiency of banana market in srivaikuntam and tiruchendur taluk

Sl. No.	Particulars	Srivaikuntam	Tiruchendur
1.	Value of the produce sold (V) (Consumer's price Rupee/Metric tonne)	4065.44	3212.63
2.	Marketing cost (I) (Rupee/Metric tonne)	1382.96	1105.10
3.	Marketing Efficiency (M.E)	2.94	2.91

**Table 3:** Effects of variation in consumer's price on the shares of the producer-seller

Sl. No.	Taluk	Regression Coefficients		R <sub>2</sub>	F-value
		$\alpha_1$	B <sub>1</sub>		
1.	Srivaikuntam	1.68	-0.79* (-2.47)	0.92	116.24
2.	Tiruchendur	1.75	-0.87* (-3.02)	0.91	214.15

Note: Figures in the parentheses are the percentages.

\* indicates that the coefficients are significant at 5 per cent level.

**Table 4:** Effects of variation in consumer's price on the shares of the retailer

Sl. No.	Taluk	Regression Coefficients		R <sub>2</sub>	F-value
		$\alpha_1$	B <sub>1</sub>		
1.	Srivaikuntam	-2.35	1.34* (4.14)	0.93	135.49
2.	Tiruchendur	-2.49	1.19* (2.79)	0.94	179.39

Note: Figures in the parentheses are the percentages.

\* indicates that the coefficients are significant at 5 per cent level.

It can be observed from Table 2 that the ratio of Marketing Efficiency (ME) was more or less equal in both Srivaikuntam and Tiruchendur taluks. It was worked out to 2.94 in Srivaikuntam and 2.91 in Tiruchendur. It indicates that there is no difference regarding the marketing efficiency between two taluks.

From the Tables 3 and 4, the significant regression coefficients indicated that the shares of the producer-sellers and retailers in the consumer's rupee were affected by the changes in the consumer's price. As indicated by the signs of the regression coefficients the producer's share was inversely related to the consumer's price while retailer's share was positively related. It implies that one per cent increase in the consumer's price the share of the producers of Banana decreased by 0.79 per cent and 0.87 per cent in Srivaikuntam and Tiruchendur area respectively. On the other hand, one per cent increase in the

consumer's price, the shares of the retailers increased by 1.34 and 1.19 per cents in Srivaikuntam and Tiruchendur respectively. It is to be noted that much of the variations in the shares of the producer-sellers as well as retailer were explained by the consumer's price as indicated by the values of R<sub>2</sub> which ranged from 0.91 to 0.94 per cents. The F-values shows that the regression model is statistically significant at one per cent level.

### Problems of Marketing

There existed a well established market channel for Bananas (Producer – Commission Agents cum Wholesaler – Retailers – Consumers). However, there are several inherent problems in it. The details regarding the various problems of marketing are presented below:

*(i) Lack of Transport Facilities*

Lack of transport facilities was reported to be their main problem. Transport of Bananas by cart, van, tractor and lorry was common in both Srivaikuntam and Tiruchendur areas. Immediate non-availability of such mode of transports at the time of harvesting in this region leads to pay more for transport to send their produce to the marketing centres. This is also one among the reasons for high marketing cost.

*(ii) Lack of Storage Facilities*

Banana cannot be stored for a long time. But it can be preserved for few days. In the study region, the producers have to sell their produce immediately at the prevailing price due to the lack of storage facilities. Immediate disposal after harvesting will often fetch unfavourable price to Banana producers.

*(iii) High Marketing Cost*

Marketing cost is quite important. Unlike fixed cost, it is the paid out cost. The marketing costs form a considerable part of the total cultivation costs and thereby affect the returns realised by the cultivators and also the cost of production. The high marketing costs are because of lack of proper infrastructural facilities and high commission charges of the middlemen.

*(iv) Finance*

Another important problem is finance. In fact, almost all banks do not provide loans at Banana cultivators. So most of the orchardists relied on money lenders and contractors who advanced credit on a long term basis with an informal but explicit understanding that once the crop commences yielding the orchards will be leased out to them. The interest rate charged by them was stated to be exorbitant. Subsequently, the price offered was also very low.

*(v) Processing Industry and Regulated Markets*

Fruit processing industries are situated in distant places which is inconvenient to the Banana cultivators to sell their produce directly to them. So they sell their produce only through commission agents to fruit processing firms located in different places. Recently, government has included Banana fruit as one among the notified commodity so as to sell it through the regulated markets. But, it was observed in the study regions that almost all the orchardists do not know anything about regulated markets.

**Problems in Banana Marketing**

In order to analyze the problems in marketing of Banana, five factors that were limiting Banana marketing were identified and the farmers were asked

**Table 5:** Problems in banana marketing

Sl. No.	Factors	Mean score	Rank
1.	Inadequate credit	42.86	I
2.	High commission charges	39.09	II
3.	High marketing cost	27.32	III
4.	Lack of transport	22.57	IV
5.	Lack of storage facilities	13.82	V

to rank the factors. The order of merit thus given by the farmers was converted into rank by using Garrett ranking technique and the ranks assigned are presented in table 5.

The Table 5 shows that the important marketing problems were inadequate credit facilities, high commission charges, high marketing cost, lack of transport facilities and lack of storage facilities which were ranked as first, second, third, fourth and fifth respectively.

**Conclusion**

In the areas chosen for the research, two-third of the population are agriculturists. Their agricultural lands depend on monsoon rains. The majority of the

lands are rain-fed areas. If the monsoon fails, then the farmers will be in trouble. In this situation, the Government should give financial support to farmers, especially to the small and medium farmers. The crop insurance is one of the measures suggested that has to be extended to all the farmers. Steps should be taken to reduce the losses arising out of high moisture content of the banana. The banana is also seriously affected by various diseases. Therefore, a permanent research station may be set up to protect the banana from disease.

Adequate transport facilities at low cost and other infrastructural facilities are indispensable for proper marketing. Lacks of these facilities are resulting in poor returns in the study region. It could also be observed that most of the orchardists sell their produce

only through commission agents cum wholesalers who have charged a higher rate of commission. Thus, to improve the marketing channels and also fix reasonable commission charges. Further, market committee officials can take steps to propagate the marketing of bananas through the regulated markets in the study areas.

### References

1. Banana production technology, National Research centre for Banana, Trichy, 2002, p.3.
  2. FAO (Food and Agricultural Organization). 2004. Production Yearbook 2003, Rome, Italy.
  3. Latha Bastine.C. and Radhakrishnan.V., "Economics of Banana Cultivation in Irinjakkuda Block and Trissur District of Kerala", Indian Journal Agricultural Economics, Vol. XLIII, No.3, July-September 1988: p.514.
  4. Samban.T., "Economics of Banana Cultivation in Tiruchirapalli District of Tamil Nadu, Unpublished Ph.D. Thesis, Bharathidasan University, Triuchirapalli, 1991.
  5. Shil NC and Mondal MF (1990). Intercropping in Banana with Some Short Duration Crops', Bangladesh Journal of Extension Education 5 (1&2): 75-80.
  6. Tewari. R. and Sharma, High Density orcharding in Fruit crops, Agro India, June-July1999: p.122.
  7. USAID (1969). Study of Perishable Food Marketing, East Pakistan' United States Agency for International Development, July 1969.
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