



ECONOMIC ANALYSIS OF PRICE SPREAD OF ORGANIC AND INORGANIC TURMERIC PRODUCTION IN ERODE DISTRICT, TAMIL NADU

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ABSTRACT

Turmeric (*curcuma longa* L.,) the ancient and sacred spice of India, is a major rhizomatous spice produced and exported from India. India is cultivated wide variety of spices with premium quality since ancient times. Turmeric is the ancient and sacred spice of India known as ‘Indian Saffron’ is an important commercial spice crop grown in India. India is the largest producer, consumer and exporter of turmeric. Other producers in Asia include Bangladesh, Pakistan, Sri Lanka, Taiwan, China, Myanmar (Burma), and Indonesia. India is the largest producer of turmeric and apparently accounts for more than 80% of the world’s production. Erode district is one of the major turmeric growing district in Tamil Nadu. It ranks first in area and production in the state followed by Salem and Erode districts. The specific objectives of the study were, to identify the different marketing channels of organic and inorganic turmeric in the study area. The marketing margin of Channel I of inorganic turmeric was higher (Rs.7565/q) than marketing margin of the Channel II (Rs.6600/q) and Channel III (Rs.1550/q). Further it showed that the producer's share in consumer's rupee for Channel I, II and III of inorganic turmeric were 36.74, 34.41 and 45.91% respectively. The marketing cost and marketing margin incurred in the Channel I of organic turmeric is 10150/q (48.11%) and Rs.3000/q (14.12%) respectively. Further it showed that the producer's share in consumer's rupee for channel I of organic turmeric was the 31.7%.

Keywords: Marketing Channel, Organic turmeric, Inorganic turmeric, Marketing Cost, Marketing Margin

I. INTRODUCTION

India is cultivated wide variety of spices with premium quality since ancient times. It is known as the ‘land of spices’. Spices with superior and diversity were traded during that period attracted to the foreigners to India. As per the definition of International Spice Group, “Spices are any of the flavoured

or aromatic substances of vegetable origin obtained from the tropical or other plants, commonly used as condiments or employed for the other purposes on account of their fragrance preservation or medicinal qualities”.

Turmeric (*Curcuma longa*) the ancient and sacred spice of India is a major rhizomatous spice produced and exported from India. Also called `The Indian Saffron`. It is also known as the `Golden Spice of life` and it is one of the most essential spices used as an important ingredient in culinary all over the world. Turmeric is cultivated as annual kharif crop in India. Its crop duration is generally 7-9 months depending on variety.

India shares around 79% of the global turmeric production. India has 238.0 thousand hectares under turmeric cultivation with a total production of 943.0 thousand tonnes and a yield of 4.8 tonnes per hectares during the year 2019-20. Turmeric production is largely concentrated in southern states like Andhra Pradesh, Telungana and Tamil Nadu accounting for nearly 80% of total output in the country. Telungana is the single largest producer of turmeric accounting for more than 60% of total turmeric produced in the country. Tamil Nadu is the second largest producer contributing for about 17% of output in the country followed by Odisha, West Bengal and Karnataka.

1.1 Organic Turmeric

Organic turmeric cultivating in India with high curcumin content, free of aflatoxin and pesticide residues has high export potential in global market. Spices Board and Indian Institute of Spices Research (IISR) encourage the farmers to involve in organic turmeric production through awareness programmes and scientific assistance. Spices Board help the farmers for registration of organic turmeric production. Organic certification ensures the better quality of the product. Certified organic turmeric has higher price in the markets.

1.2 G.I. Tag for Erode Turmeric

Geographical Indication or GI is a sign used on products that have a specific geographical origin and possess qualities or a reputation that are due to that origin. The Geographical Indications Registry granted the GI tag to Erode turmeric in March, 2019. Widely cultivated in the Kodumudi, Sivagiri, Bhavani, Gobichettipalayam, Anthiyur, Chennampatti, Sathyamangalam and Thalavady regions in Erode district, besides in parts of Coimbatore and Tirupur districts, there are two main varieties of turmeric, namely the Chinna Nadan and Perum Nadan. Farmers in Erode, however, are known to raise only the Chinna Nadan variety, which is known for its colour, aroma, yield and disease tolerance. The variety is also called as “Erode Local”.

Hence Erode district is one of the major turmeric growing district in Tamil Nadu. Turmeric produced in Erode district is sent throughout the country. It ranks first in area and production in the state followed by Salem and Erode districts. The area under turmeric in Erode district is 26.46% of total state area and total production is 35.81% of total state production with productivity of 4.89 tonnes

per hectare. The specific objectives of the study were, to estimate the different marketing channels of organic and inorganic turmeric in the study area.

II. METHODOLOGY

Erode district was purposively selected for the present study in the first stage since it occupied the first position in area and production of turmeric in the state of Tamil Nadu. In the second stage, among the blocks in Erode district based on area under turmeric Kodumudi block was selected purposively for the present study. The total number of respondents was fixed as 90, in consideration of time and other resource limitations available with the researcher. The selected revenue villages were arranged in the ascending order based on the proportion of turmeric cultivation area to the total cropped area and farmers were selected at random from the selected six revenue villages, thus constituting a total sample size of 90 farmers. The primary data were collected from the sample respondents during the months of January-February, 2019 and the data collected were relating to the agriculture year of 2019-2020.

2.1 Tools of Analysis

2.1.1. Price Spread Analysis

Information on prices prevailed and the cost involved in marketing of turmeric at different stages of marketing channel were collected from the farmers and traders. The cost of marketing includes transport, loading and unloading, storage and other incidental expenses incurred for marketing the produce.

In the process of marketing of turmeric, the difference between price paid by the consumer and the price received by the turmeric producer for an equivalent quantity of turmeric was defined as “price spread”. Data on profits of the various market functionaries involved in moving the produce from the initial point of production till it reached the ultimate consumer were collected. In this study, sum of average gross margin method was used in the estimation of price spread.

A. Sum-of-Average Gross Margin Method

The average gross margins of all the intermediaries were added to obtain the total marketing margin as well as the break-up of the consumer’s rupee.

$$MT = \sum_{i=1}^N \frac{S_i - P_i}{Q_i}$$

where,

MT = Total Marketing Margin.

S_i = Sale value of a product for i^{th} intermediary. P_i
= Purchase value paid by the i^{th} intermediary.

Q_i = Quantity of the product handled by the i^{th} intermediary. $i = 1, 2, 3 \dots N$ (Number of intermediaries involved).

B. Farmer’s Share in Consumer Rupee

Further, the Farmer’s share in consumer rupee was calculated with the help of the following formula.

$$F_s = (F_p/C_p) \times 100$$

where,

$$F_s = \text{Farmer's share in consumer rupee (percentage)}$$

$$F_p = \text{Farmer's price}$$

$$C_p = \text{consumer's price}$$

III. RESULT AND DISCUSSION

3.1 Price Spread Analysis of Turmeric

3.1.1. Marketing Channels

In Erode district turmeric has been cultivated traditionally for more than 70 years. In earlier days the producers of turmeric marketed their produce mainly through commission agents. To regulate the marketing of turmeric, the government started the regulated market, which resulted in significant benefits to farmers in easily marketing their produce. The Erode Co-operative Marketing Society is also involved in marketing of turmeric. In order to understand the marketing practices and problems in marketing of turmeric, the market channels through which it was marketed was traced and the price spread was worked out.

3.1.2. Marketing Channels for Inorganic Turmeric

Channel I

Producer → Regulated Market / Co-operative society wholesaler cum processor →
→ Retailer → Consumer

Channel II

Producer → wholesaler cum processor → Retailer → Consumer

Channel III

Producer → Cooperative Marketing Society and processing → Retailer → Consumer

3.1.3. Marketing Channel for Organic Turmeric

Channel I

Producer → wholesaler cum processor → Retailer → Consumer

Table 1 Price Spread, Marketing Costs and Margins of Inorganic Turmeric (Rupees per quintal)

S. No	Items	Channel I	Channel II
I	Gross price received by the producer	6535 (38.44)	6050 (35.58)
	Net price received by Farmer	6245 (36.74)	5850 (34.41)
	Marketing Cost Incurred by Producer		
	Polishing and Packing Charges	160 (0.94)	160 (0.94)
	Transportation Charges	70 (0.41)	40 (0.24)
	Unloading and Sampling and weighing fee in Regulated market / cooperative society	60 (0.35)	-
	a) Marketing cost (Farmer)	290 (1.71)	200 (3.00)
II	Regulated Market / Cooperative Marketing Society		
III	Marketing Cost Incurred by Wholesaler		
	Transportation Charges	50 (0.29)	25 (0.15)
	Loading and Unloading	50 (0.29)	25 (0.15)
	Storage and Maintenance	100 (0.59)	100 (0.59)
	Processing and Packaging Cost	5000 (29.41)	5000 (29.41)
	Miscellaneous Charges	500 (2.94)	500 (0.50)
	b) Marketing cost- Wholesaler	5700 (33.53)	5650 (33.24)
	Purchase Price	6535 (38.44)	6050 (35.59)
	Selling price	16000 (94.12)	15900 (93.53)
	Marketing Margin- Wholesaler	3765 (22.15)	4200 (24.71)
IV	Marketing Cost Incurred by Retailer		
	Transportation Charges	100 (0.59)	100 (0.59)
	Loading and unloading	50 (0.29)	50 (0.29)
	Storage and maintenance	50 (0.29)	50 (0.29)
	Miscellaneous Cost	50 (0.58)	50 (0.75)
	c) Marketing cost- Retailer	250 (1.47)	250 (1.47)
	Purchase price	16000 (85.30)	15900 (90.00)

	Marketing Margin- Retailer	3800 (22.36)	2400 (14.12)
V	Consumer's price	17000 (100.00)	17000 (100.00)

Table- 2 Consolidated statement of Price Spread for Channel I&II (Rupees per quintal)

S.No	Particulars	Channel I	Channel II
1.	Gross price received by Farmer	6535 (38.44)	6050 (35.58)
2.	Net price received by farmer (Farmer's share)	6245 (36.74)	5850 (34.41)
3.	Total Marketing cost	6240 (36.71)	6110 (37.71)
4.	Total Marketing Margin	7565 (44.51)	6600 (38.83)
6.	Consumer's Price	17000 (100.00)	17000 (100.00)
7.	Producer's share in consumer rupee (Farmer's share/consumer price)	36.74	34.41

Table – 3 Price Spread of Inorganic Turmeric in Market channel III (Rupees per quintal)

S.No	Particulars	Amount (in Rs)	Percentage
1.	Producer		
A	Gross price received	6950.00	55.6
i	Polishing	140.00	1.12
ii	Packing	20.00	0.16
iii	Loading and unloading	15.00	0.12
iv	Transport cost	30.00	0.24
v	Commission Charges	50.44	0.40
b	Marketing cost	255.44	2.04
c	Net price received	6694.56	53.56
2.	Cooperative Marketing Society		
a	Purchase price	6950.00	55.6
I	Processing cost	2000.00	16
ii	Packing	1000.00	8
b	Marketing cost	3000.00	24
c	Marketing Margin	950	7.6
d	Sale price	11000.00	88
4.	Retailer		

a	Purchase price	11000.00	88
I	Transport cost	500.00	4
ii	Miscellaneous cost	400.00	3.2
b	Marketing cost	900.00	7.2
c	Marketing Margin	600.00	4.8
d	Sale price	12500	100
5.	Price paid by the Consumer	12500	100.00
6.	Price Spread	5805.44	45.91

It could be seen from the three tables above calculated, that the net price received by the farmer for Channel I, II and III were, Rs.6245, Rs.5850 and Rs.6694.56 for one quintal of inorganic turmeric which constituted about 36.74, 34.41 and 45.91 percent of the consumer's price respectively. The marketing cost incurred by Channel I (Rs 6240/q) was higher than the Channel I (Rs. 6110/q) and Channel III (4215.44/q). The marketing margin of Channel I was higher (Rs.7565/q) than marketing margin of the Channel II (Rs.6600/q) and Channel III (Rs.1550/q). Further it showed that the producer's share in consumer's rupee for Channel I, II and III were 36.74, 34.41 and 45.91 percent respectively. It indicates that the producer's share in consumer's rupee was high in Channel III due to less marketing margin. This is due to Erode Cooperative Marketing Society set up a processing unit to make the turmeric powder from purchased turmeric in 2017. The turmeric powder is available in the brand name "Mangalam", which is marketed throughout the Tamil Nadu with the price of Rs.130/ Kg, where as popular private merchants sell the turmeric powder with the price of Rs.230/Kg. This good initiative increases the Producer's share in consumer's rupee by reducing marketing cost and marketing margin.

Table – 4 Price Spread of Organic Turmeric (Rupees per quintal)

S. No	Particulars	Amount (in Rs)	Percentage
1.	Producer		
A	Gross price received	7950	37.70
I	Polishing	140	0.66
ii	Packing	20	0.09
iii	Loading and unloading	15	0.07
Iv	Transport cost	30	0.14
V	Commission Charges	50.44	0.24
B	Marketing cost	315.44	1.49
C	Net price received	6694.56	31.70
2.	Wholesaler cum processor		
a.	Purchase price	7950	37.70
i.	Transportation Charges	50	0.24
ii.	Loading and unloading	1000	4.74

iii.	Storage and maintenance	1000	4.74
iv.	Processing cost	6000	28.40
V	Packing	2000	9.48
b.	Marketing cost	9250	43.84
C	Marketing Margin	2000	9.48
D	Sale price	19200	91.00
4.	Retailer		
A	Purchase price	19200	91.00
I	Transport cost	500	2.37
II	Miscellaneous cost	400	1.90
B	Marketing cost	900	4.27
C	Marketing Margin	1000	4.74
D	Sale price	21100	100.00
5.	Price paid by the Consumer	21100	100.00
6.	Price Spread	14405.44	68.30

The table 4 showed that the net price received by the organic turmeric farmer through this Channel was Rs.6694.56 for one quintal, which constituted about 31.7% of the consumer's price respectively. The marketing cost incurred in this Channel is 10150 /q (48.11%). The marketing margin of Channel was higher Rs.3000/q (14.12%). Further it showed that the producer's share in consumer's rupee was the 31.7%. It indicates that the producer's share in consumer's rupee was lower in this Channel due to high marketing cost.

Table – 5 Summary of Price Spread (Rupees per quintal)

S. No	Particulars	Inorganic Turmeric			Organic Turmeric
		Channel-I	Channel-II	Channel-III	
1.	Farmer's Price	6245	5850	6694.56	6694.56
2.	Marketing Cost	6240	6110	4215.44	6500.56
3.	Marketing Margin	7565	6600	1550	3000
4.	Price paid by the consumer	17000	17000	12500	21100

Form Table – 5 mentioned above, we concluded that all the marketing channels except channel- III of Inorganic turmeric had lower Producer's share in consumer rupee.

IV. CONCLUSION

All the marketing channels have lower Producer's share in consumer's rupee. It is due to high Marketing cost and Marketing margin. Erode Cooperative Marketing Society set up a processing unit to

make the turmeric powder from purchased turmeric in 2019. The turmeric powder is available in the brand name “**Mangalam**”, which is marketed throughout the Tamil Nadu with the price of Rs.130/ Kg, where as popular private merchants sell the turmeric powder with the price of Rs.230/Kg. This good initiative increases the Producer’s share in consumer’s rupee (Marketing Channel-III). Government may encourage good initiative like this will increase the Producer’s share in consumer’s rupee. Government must set up proper marketing channel for Organic turmeric which will help the organic farmers to get the high price for their product.

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