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RESEARCH PAPER

Marketing dynamics of organic turmeric in Karnataka: An empirical study

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Abstract: Turmeric (*Curcuma longa*) is widely known as the 'Indian Saffron' and originates from Asia. India has been the largest producer, consumer and exporter of turmeric globally. In Karnataka, Belagavi and Bagalkot were the major districts which produce organic turmeric and only a few studies found on organic turmeric especially in that particular region and hence the present study aimed to analyse the marketing dynamics of organic turmeric in Belagavi and Bagalkot districts of Karnataka. A multistage purposive sampling technique was employed for the selection of sample respondents including market intermediaries using pre-tested, well-structured questionnaires. The results revealed that, in the marketing of organic turmeric two marketing channels were identified in Belagavi district comprises of Channel-I: Producer → Wholesaler-cum-Processor → Retailer → Consumer and Channel-II: Producer → Local trader → Company → Retailer→ Consumer and two channels in Bagalkot district consists of Channel-I: Producer → Wholesaler-cum-Processor → Retailer → Consumer and Channel-II: Producer → FPOs → Company → Retailer → Consumer. In Belagavi district, the producer's share in consumer's rupee was higher in Channel-I (46.16%) as compared to Channel-II (39.65%). The marketing efficiency was also found to be highest in Channel-I (1.67) compared to Channel-II (1.28). In Bagalkot district also the producer's share in consumer's rupee was higher in Channel-I (44.50%) as compared to Channel-II (39.16%) and the Channel-I (1.53) was more efficient than that of Channel-II (1.15). Majority of the cost has been incurring on processing and transportation and hence, there is a scope for the farmers to process the turmeric themselves then send to intermediaries for realisation of higher price rather than selling bulbs or fingers. Hence, policymakers could give emphasis on investment in establishment of turmeric processing units in the study area.

Key words: Company, Marketing channels, Marketing cost, Marketing efficiency, Producer

Introduction

Turmeric is an ancient spice derived from the rhizomes of *Curcuma longa*, a member of the ginger family *Zingiberaceae*, often known as the "Indian Saffron" due to its vibrant yellow colour and it is native to Asia and India. While turmeric is naturally an erect perennial crop, it is commonly cultivated as an annual crop. The primary tuber at the base of the aerial stem bears rhizome, which is the economic part known as bulb and finger. The turmeric rhizome contains curcumin, a yellow pigment that serves as the key active ingredient and primary colouring agent (Khodang and Sharma, 2022). Curcumin possesses medicinal properties and is widely used for various purposes. Curry powder, which is one of the essential components in Indian cuisine, consists of a minimum 5 per cent to maximum of 30 per cent of turmeric powder in its total content (Patil *et al,* 2009).

Turmeric can be cultivated both in the tropical and subtropical countries and mainly cultivated in India, China, Pakistan, Sri Lanka, Bangladesh and Taiwan. India is the largest producer, consumer and exporter of turmeric in the world. During 2021-22, India has an acreage of 3.5 lakh ha under turmeric with the production of 13.31 lakh tonnes (Anonymous, 2022a). The major trading hubs of turmeric in India are mainly Nizamabad (Telangana), Duggirala (Andhra Pradesh), Sangli (Maharashtra) and Salem, Erode, Dharmapuri and Coimbatore (Tamil Nadu). Karnataka is the third largest producer of turmeric in India after Maharashtra and Telangana and having an area of 21,310 ha, with the production of 1.3 lakh tonnes and productivity of 6,091 kg/ha during 2021-22 (Anonymous, 2022b). The major turmeric producing districts in Karnataka are Chamrajnagar, Belagavi, Bagalkot and Mysuru.

Due to increase in consumption demand coupled with rise in health consciousness of consumers in certain parts of Karnataka, farmers prefer to cultivate organic turmeric. Hence, organic turmeric is fetching higher prices leading to higher profitability. The government is also encouraging farmers to go for organic turmeric cultivation. Marketing channels play a crucial role in the distribution and sale of organic turmeric. In light of these considerations, the objective of the present study is to investigate the marketing of organic turmeric in Belagavi and Bagalkot districts of Northern Karnataka.

Material and methods

In Karnataka, Belagavi and Bagalkot were the major districts which produce organic turmeric and only a few studies found on organic turmeric especially in that particular region and hence the present study aimed to analyse the marketing dynamics, including the prevailing marketing channels and marketing efficiency of organic turmeric in Belagavi and Bagalkot districts of Karnataka. Multistage purposive sampling technique was employed for the selection of market intermediaries in Belagavi and Bagalkot districts. In the first stage, two major turmeric producing districts namely Belagavi and Bagalkot under UAS, Dharwad jurisdiction were selected purposively. In the second stage, from each selected district 20 market intermediaries were

selected and thus a total sample size was 40. The present study is based on primary data collected by using pre-tested schedule with the help of personnel interview method by contacting different marketing agencies like producers, Farmer Producer Organizations (FPOs), local traders, companies, wholesaler-cum-processors and retailers for the crop year 2021-22.

Shepard's marketing efficiency (Khodang and Sharma, 2022) and descriptive statistics were the analytical tools employed to analyse the data. The simple statistical tools like averages and percentages were also used to interpret the results. Price spread was estimated by calculating the difference between price paid by the consumer and price received by the producer. Producer's share in consumer's rupee was computed by the ratio of net price received by producer to the price paid by consumer.

The Shepard's marketing efficiency was calculated using following equation:

$$ME = \frac{V}{I} - 1$$

Where,

ME = Index of marketing efficiency

V = Value of the goods sold (Consumer's price)

I = Total marketing cost

Results and discussion

Two major channels for marketing of organic turmeric were identified in each district of Belagavi and Bagalkot.

Belagavi district

Channel-I: Producer →Wholesaler-cum-Processor → Retailer → Consumer

Channel-II: Producer→ Local trader → Company → Retailer→ Consumer

Bagalkot district

Channel-I: Producer → Wholesaler-cum-Processor → Retailer →Consumer

Channel-II: Producer → FPOs → Company → Retailer → Consumer

Quantity of organic turmeric sold through different marketing channels

The details of quantity of organic turmeric sold through different marketing channels in Belagavi and Bagalkot districts are given in Table 1. In Belagavi district, the quantity of organic turmeric sold through Channel-II (912.50 q) surpasses that of Channel-I (80.96 q). This could be attributed to the better services offered by local traders (Channel-II) in the district. Specifically, in Channel-II, local traders extended group certification services and provide storage facilities to farmers. As a result, the volume of transaction in Channel-II was more compared to that of Channel-I. While, similar trend was observed in Bagalkot district as well. The volume of transaction was higher in Channel-II (850.10 q) compared to Channel-I (90.12 q). In this scenario, group certification services from FPOs in Channel-II played a key role and this encouraged a large quantity of organic turmeric sold through this channel.

Table 1. Quantity of organic turmeric sold through different marketing channels in Belagavi and Bagalkot districts of Karnataka

District	Channels	Quantity (quintals)	Per cent
Belagavi	Channel-I	80.96	8.15
	Channel-II	912.50	91.85
	Total	993.46	100.00
Bagalkot	Channel-I	90.12	9.58
	Channel-II	850.10	90.42
	Total	940.22	100.00

Note: 1. Belagavi: Channel-I - Producer → Wholesaler-cum-Processor →Retailer→Consumer Channel-II - Producer →Local trader → Company → Retailer → Consumer 2. Bagalkot: Channel-I - Producer →Wholesaler-cum-Processor → Retailer → Consumer Channel-II - Producer → FPOs → Company → Retailer→ Consumer

Marketing cost incurred by various intermediaries

The details of the marketing cost incurred by different market intermediaries in organic turmeric marketing in Belagavi and Bagalkot districts are presented in Table 2 and Table 3 respectively. In Belagavi district, the marketing cost incurred by company (Channel-II) was highest (₹ 6,350/q) followed by farmer (₹ 1,450/q), retailer (₹ 1,300/q) and local trader (₹ 950/q). It was mainly due to transportation cost and processing charges, further it was also observed that high amount of transportation cost (₹ 3,500/q) and processing charges (₹ 2,000/q) were paid by the company. In Channel-I, the marketing cost incurred by wholesaler-cum-processor was higher (₹ 4,550/q) followed by farmer (₹ 1,450/q) and retailer (₹ 1,300/q). The similar results were found in the study conducted by Papang *et al.* (2016) wherein, among the total cost (₹ 1,755.28/q) incurred in marketing of turmeric, major share was attributed to weight loss (33.33 %), processing charges and transportation charges.

Table 2. Marketing cost of different stakeholders in organic turmeric marketing in Belagavi district of Karnataka (₹ /q)

Particulars	Producer	Wholesaler-cum-processor	Local trader	Company	Retailer
Transportation cost	1,000(68.97)	1,700(37.36)	-	3,500(55.12)	600(46.15)
Loading and unloading	100(6.89)	200(4.40)	-	100(1.57)	100(7.69)
Packing	250(17.24)	300(6.59)	-	350(5.51)	360(27.69)
Storage	-	200(4.40)	200(21.05)	200(3.15)	100(7.69)
Commission	-	-	500(52.63)	-	-
Rent and electricity	-	50(1.10)	100(10.53)	50(0.79)	50(3.85)
Weighment	50(3.45)	50(1.10)	50(5.26)	50(0.79)	50(3.85)
Processing	-	2,000(43.96)	-	2,000(31.50)	-
Miscellaneous	50(3.45)	50(1.10)	100(10.53)	100(1.57)	40(3.08)
Total	1,450(100.00)	4,550(100.00)	950(100.00)	6,350(100.00)	1,300(100.00)

Note: Figures in parentheses indicate percentage to the total

Table 3. Marketing cost of different stakeholders in organic turmeric marketing in Bagalkote district of Karnataka (₹ /q)

Particulars	Producer	Wholesaler-cum-processor	FPOs	Company	Retailer
Transportation cost	1,100(70.97)	1,800(37.04)	-	3,700(56.75)	650(46.43)
Loading and unloading	100(6.45)	200(4.12)	-	120(1.84)	100(7.14)
Packing	250(16.13)	280(5.76)	-	350(5.37)	400(28.57)
Storage	-	220(4.53)	200(21.05)	200(3.07)	100(7.14)
Commission	-	-	500(52.63)	-	-
Rent and electricity	-	60(1.23)	100(10.53)	50(0.77)	50(3.57)
Weighment	50(3.23)	50(1.03)	50(5.26)	50(0.77)	50(3.57)
Processing	-	2,200(45.27)	-	2,000(30.67)	-
Miscellaneous	50(3.23)	50(1.03)	100(10.53)	50(0.)	50(3.57)
Total	1,550(100.00)	4,860(100.00)	950(100.00)	6,520(100.00)	1,400(100.00)

Note: Figures in parentheses indicate percentage to the total

Similarly, in Bagalkot district the marketing cost incurred by company (Channel-II) was found to be highest (₹ 6,520/q), which was followed by farmers (₹ 1,550/q), retailers (₹ 1,400/q) and FPOs (₹ 950/q). In Channel-I, the marketing cost incurred by wholesaler-cum-processor was higher (₹ 4,860/q) followed by farmer (₹ 1,550/q) and retailer (₹ 1,400/q). One of the major costs incurred in turmeric marketing was transportation cost which accounts 24.56 per cent of the total marketing cost (Patil *et al.* 2009). The results of the present study were in line with the findings of Khodang and Sharma (2022) *i.e.,* the total marketing cost of organic turmeric incurred in Channel-II (Producer-Processor-Wholesaler) was highest (₹ 15.1/kg).

Marketing efficiency

To gain a comprehensive understanding of the marketing process, the price spread, the portion of the consumer's rupee that goes to the producer and the overall marketing efficiency was calculated and are presented in Table 4. In Belagavi, the

Table 4. Marketing efficiency in organic turmeric marketing through different marketing channels in Belagavi and Bagalkot districts of Karnataka (₹ /q)

Stake holders	Particulars	Belagavi		Bagalkot	
		Channel-I	Channel-II	Channel-I	Channel-II
Producer	Net price received	9,000	9,100	8,700	8,800
	Marketing cost	1,450	1,450	1,550	1,550
	Selling price	10,450	10,550	10,250	10,350
Wholesaler-cum-processor	Purchasing price	10,450	-	10,250	-
	Marketing cost	4,550	-	4,760	-
	Margin/Profit	1,550	-	1,580	-
	Selling price	16,550	-	16,590	-
Local trader	Purchasing price	-	10,550	-	-
	Marketing cost	-	950	-	-
	Margin/Profit	-	300	-	-
	Selling price	-	11,800	-	-
FPOs	Purchasing price	-	-	-	10,350
	Marketing cost	-	-	-	950
	Margin/Profit	-	-	-	250
	Selling price	-	-	-	11,550
Company	Purchasing price	-	11,800	-	11,550
	Marketing cost	-	6,350	-	6,520
	Margin/Profit	-	1,950	-	1,450
	Selling price	-	20,100	-	19,520
Retailer	Purchasing price	16,550	20,100	16,590	19,520
	Marketing cost	1,300	1,300	1,400	1,400
	Margin/Profit	1,650	1,550	1,560	1,550
	Selling price	19,500	22,950	19,550	22,470
Consumer	Final price paid by consumer	19,500	22,950	19,550	22,470
	Total marketing margins	3,200	3,800	3,140	3,250
	Total marketing costs	7,300	10,050	7,710	10,420
	Price spread	10,500	13,850	10,850	13,670
	Producer's share in consumers' rupee (per cent)	46.16	39.65	44.50	39.16
	Marketing efficiency index	1.67	1.28	1.53	1.15

Note: 1. Belagavi: Channel-I - Producer → Wholesaler-cum-Processor → Retailer →Consumer Channel-II - Producer → Local trader → Company → Retailer → Consumer. 2. Bagalkot: Channel-I - Producer → Wholesaler-cum-Processor → Retailer → Consumer Channel-II - Producer → FPOs Company →Retailer → Consumer

producer's share in consumer's rupee was higher in Channel-I (46.16 %) as compared to Channel-II (39.65 %). This was due to the fact that higher marketing cost incurred (₹ 10,050/q) and marketing margin (₹ 3,800/q) realised in Channel-II. When the producers need cash they could sell their produce in Channel-I, as the wholesaler-cum-processor give cash when the farmers sell their produce. The price spread was more in case of Channel-II (₹ 13,850/q) compared to Channel-I (₹ 10,500/q) and the Shepherd's marketing efficiency was worked out and it was showed that Channel-I (1.67) was more efficient than Channel-II (1.28) due to more number of market intermediaries involved in Channel-II as compared to Channel-I. But the volume of transaction in Channel-II was highest as compared to Channel-I due to the better services such as group certification for organic turmeric production, storage facilities provided by local traders in Channel-II. Similar results were observed in the study conducted by Dhok *et al.* (2020) wherein, the marketing Channel-I (Producer-Village trader- Consumer) was more efficient than Channel-II (Producer- Village trader- Wholesaler- Consumer) and Channel-III (Producer-Wholesaler-Consumer) since Channel-I had lowest price spread of ₹ 169.72 and highest producers share of 95.76 per cent.

In Bagalkot, the producer's share in consumer's rupee was higher in Channel-I (44.50%) as compared to Channel-II (39.16%). The results revealed that, the price spread was more in case of Channel II (₹ 13,670/q) compared to Channel I (₹ 10,850/q) and it was found that Channel-I (1.53) was more efficient than Channel-II (1.15). This is due to more number of market intermediaries involved in Channel-II compared to Channel-I. But the volume of transaction handled in Channel-II was also more as compared to Channel-I due to the extension of services like group certification for organic turmeric production, inputs, storage facilities as provided by FPOs in Channel-II. The results of the present study are in line with the study conducted by Devi (2020) wherein in turmeric marketing, the price spread was highest in Channel-V (Producer → Co-operative marketing society→ Wholesaler-cum-Processor → Retailer → Consumer) because of presence of wholesaler-cum-processor.

Conclusion

Considering the importance of marketing of organic turmeric in Belagavi and Bagalkot districts of Karnataka, the study aimed to analyse the marketing efficiency and it was found that the farmers in Belagavi district were getting benefited by using Channel-I with higher producer share of 46.16 per cent and marketing efficiency of 1.67. In Bagalkot district also the producer's share in consumer's rupee was highest in Channel-I (44.50%) and the Channel-I (1.53) was more efficient than that of Channel-II (1.15).

In all the identified marketing channels, the producer's share in consumer's rupee was found to be less than 50 per cent *i.e.,* majority of the cost has been incurring on processing and transportation. Hence, there is a scope for the farmers to process the turmeric themselves then send to intermediaries for realisation of higher price rather than selling bulbs or fingers. Hence, policymakers could give emphasis on investment in establishment of turmeric processing units in the study area. So that organic turmeric producers could reap the better economic benefits.

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