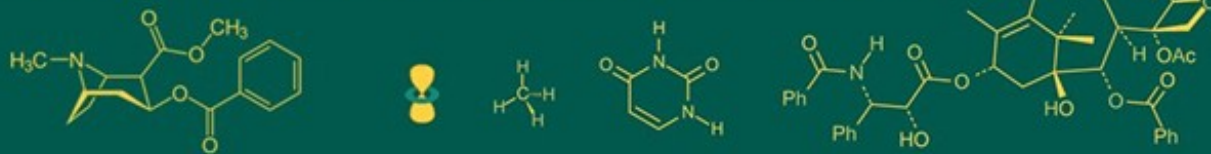


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Aishwarya D B

Department of Agricultural
 Economics, University of
 Agricultural Sciences,
 Raichur, Karnataka, India

Amrutha T Joshi

Professor of Agricultural
 Economics, University of
 Agricultural Sciences, Raichur
 , Karnataka, India

Lokesh G B

Professor of Agricultural
 Economics, University of
 Agricultural Sciences,
 Raichur, Karnataka, India

D. G. Satihal

Senior Farm Superintendent
 and Head ARS
 Bheemaranagudi, University
 of Agricultural Sciences,
 Raichur, Karnataka, India

Jyothi R

Scientist (Horticulture), ICAR-
 KVK, Gangavathi, University
 of Agricultural Sciences,
 Raichur, Karnataka, India.

Corresponding Author:**Aishwarya D B**

Department of Agricultural
 Economics, University of
 Agricultural Sciences,
 Raichur, Karnataka, India

Economic analysis of marketing of guava in Bengaluru district of Karnataka

Aishwarya D B¹, Amrutha T Joshi², Lokesh G B³, D. G. Satihal⁴, Jyothi R⁵

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ABSTRACT

Present study was conducted in Bengaluru (R) district of *Karnataka*. To study the marketing cost and price spread of different varieties, five pre-harvest contractor, five wholesalers and five retailers were randomly selected from Bengaluru (R) district. The objective of the study was to identify the marketing channels and to analyze the marketing efficiency and price spread in guava marketing in selected markets. The statistical tools like descriptive statistics; Shepherd's and Acharya's formulae were used for the study. Guava in the study area was marketed through different channels from the producer-sellers to ultimate consumers. Majority of the farmers preferred Channel-I to sell their produce because this channel was convenient in the study area. The results revealed that the price spread of Allahabad safeda in channel-II (11.41%) was less compared to channel-I (23.48%) which showed that producer received higher returns in channel-II. In Taiwan pink, the price spread of Taiwan pink in channel-III (12.32%) was less compared to channel-I (28.13%) and channel-II (23.27%) which showed that producer received higher returns through channel-III. Therefore, channel-II of Allahabad safeda and channel-III of Taiwan pink were found to be efficient from the point of view of producers. In the Shepherd's approach, the greater the ratio, higher the efficiency for Allahabad safeda was showed by channel II (11.02), in Taiwan pink channel III (14.27) was most efficient followed by channel II (8.18). While in Acharya & Agarwal method accounted for a highest efficiency of Allahabad safeda was showed by channel II (7.76), whereas for Taiwan pink channel III (7.11) was found to be the most efficient channel.

Keywords: Marketing channel, Marketing efficiency, Price spread

Introduction

Fruit growing has been a traditional practice in India for centuries. Many fruits are excellent sources of vitamins, minerals, and protein. Guava, known as the "apple of the tropics," is one such fruit. It is also known as "poor man's fruit crop." Guava, botanically known as *Psidium guajava* is a member of the Myrtaceae plant family. This is a Native to tropical America, it is now cultivated all over the Tropics and subtropics. It has been grown in India since early 17th century and is one of the most common fruits in India.

Guava production relies heavily on marketing as a necessary component. In the marketing process, the producer must incur a variety of marketing costs. These costs are determined by the producer's performance and the efficiency of various marketing functions, which influences growers' returns. In this context, the study of marketing costs takes on greater significance. Such studies benefit both producer-sellers and consumers because farmers want to get a higher price, while consumers want desirable products at a reasonable price.

Methodology

The present study was conducted in Bengaluru (R) districts of *Karnataka*. The main guava growing districts in *Karnataka* are Bangalore (R), Bangalore (U), Koppal, Chikkaballapura and Kolar. In Bengaluru (R) traditional method of planting was followed. Two varieties were chosen to compare the performance of varieties within planting method. To study the marketing cost and price spread of different varieties, five pre-harvest contractor, five wholesalers and five retailers were randomly selected from Bengaluru (R) district.

Marketing efficiency

Marketing channels involved in guava fruit sale was studied and its efficiency was worked out. Marketing efficiency is a measure of market performance. The movement of guava from producers to the ultimate consumers at the lowest possible cost consistent with the provision of service desired by the consumers is termed as efficient marketing. Lower the number of market intermediaries more efficient is the channel. Marketing efficiency is directly related to the cost involved in moving goods from producer to the consumer and the quantity of services offered. If the cost incurred is lower than the services rendered, it will be efficient marketing. The improvement in marketing efficiency means the reduction of marketing cost without re

ducing quantum of services offered to the consumer. The following marketing efficiency measures are used in the study to access the efficiency of existing guava marketing system.

- 1) Shepherd's method
- 2) Acharya & Aggarwal's method

1. Shepherd's method

Shepherd's has suggested that the ratio of total value of guava sold in the market and the total marketing cost is to be used as a measure for estimating marketing efficiency. According to him, the greater the ratio, the higher the efficiency and vice versa. Shepherd's formula for marketing efficiency is as follows

$$ME = (V/I) - 1 \quad (1)$$

Where,

- ME = Marketing efficiency
- V = Value of guava sold or consumer price
- I = Total marketing cost

2. Acharya & Aggarwal's method

The formula for computing efficiency is as follows:

$$E = (O/I) \times 100 \quad (2)$$

Where,

- E = Efficiency
- O = Output of the marketing system
- I = Cost of marketing including margin of intermediaries

According to Acharya & Aggarwal's methods, which indicates higher value denotes higher level of efficiency and vice versa.

3. Price spread

The difference between the price paid by consumer and price received by the producer is the marketing margin or price spread.

$$\text{Price spread} = P_c - P_p \quad (3)$$

Where,

P_c = prices paid by the consumer
 P_p = prices received by the producer

Results and Discussion

The sale of guava through different marketing channels has been depicted in table 4.16. Of the total guava produced, the majority of guava was marketed through channel-I. A total of 83.48 per cent of Allahabad safeda was marketed through channel-I, followed by channel-II (16.52%). Similarly, in Taiwan pink 76.91 per cent of produce was sold through channel-I followed by channel-II (14.87 %) and channel-III (8.22).

Table 1. Disposable pattern of guava through different marketing channels

Sl. No.	Marketing channels	Quantity (tonne)	%
A	Allahabad safeda		
1	Producer → Pre-harvest contractor → Wholesaler → Retailer → Consumer	49.50	83.48
2	Producer → Retailer → Consumer	9.80	16.52
	Total	59.30	100
B	Taiwan pink		
1	Producer → Pre-harvest contractor → Wholesaler → Retailer → Consumer	56.15	76.91
2	Producer → Wholesaler → Retailer → Consumer	10.85	14.87
3	Producer → Retailer → Consumer	6.00	8.22
	Total	73.00	100

Price spread is one of the most important measures of marketing and supply chain efficiency. It is the difference in the amount that the consumer ultimately pays and the amount that the producer gets paid for their produce. The spread accounts for both the intermediaries' margin incurred and marketing expenses. It is one of the key indicators of marketing and supply chain efficiency.

Table 2 represents the price spread and marketing costs incurred by various intermediaries in both varieties i.e., Taiwan pink and Allahabad safeda through various channels. In Allahabad safeda variety, farmers sold guava through channel -I and channel -II and the net price realized by farmers per quintal of guava was worked out to be Rs.3215 and Rs.3578.56 respectively. The price spread was found to be higher in channel-I (23.48%) compared channel-II (11.41%). In channel-I, marketing cost was found to be of marginally higher (19.10%) compared to channel-II (8.32%). On an average, out of price spread, the total marketing margin accrued by the different market intermediaries formed major components (10.71% to 3.09%) in both the channels. Likewise, in Taiwan pink variety three channels were identified in which total marketing cost was highest in channel-I (18.43%) compared to channel-II (10.89%) and channel-III (6.55%). The total marketing margin for channel-I, channel-II and channel-III were, 9.69 per cent, 12.38 per cent and 5.77 per cent respectively. Pre-harvest contractor were dominant in marketing of guava across the study area and they incurred marketing cost of 8.21 per cent and 7.45 per cent in both varieties by marketing through channel-I and channel-II respectively.

With respect to wholesaler, in Allahabad safeda the marketing cost incurred by them in channel-I was Rs.160.12 and margin of Rs.125.00. Further, retailer incurred marketing cost of Rs.104.79 and Rs.140.43 in channel -I and channel-II with the margin of Rs.140.97 and Rs.124.72 respectively. In case of Taiwan pink wholesaler incurred marketing cost of Rs. 270.54 and Rs. 270.64 in channel-I and channel-II, marketing margin incurred was Rs. 197.68 and Rs. 254.78 in channel-I and channel-II. Further, marketing cost incurred by retailer was relatively higher in channel-III (Rs.170.85) compared to channel-I (Rs.125.60) and channel-II (Rs.121.56).

The price spread for Allahabad safeda in the traditional planting region was found to be marginally greater in channel I (23.48%) than channel II (11.41%). In the case of Taiwan pink guava, it was discovered that channel -I (28.13%) had a greater price spread than channel -III (12.32%). In the Allahabad safeda, the producer share was comparatively larger in channel II (88.59%). In contrast, the Taiwan pink producer share was higher in channel-III (87.68%). Overall, Taiwan Pink tends to command higher prices and margins across various

stages of the supply chain compared to Allahabad Safeda. The price spread is larger for Taiwan Pink, reflecting greater mark-ups.

Table 2. Price spread in marketing of guava produced

Sl. No	Particulars	Allahabad safeda				Taiwan pink					
		Channel I		Channel II		Channel I		Channel II		Channel III	
		Amount (Rs.)	%	Amount (Rs.)	%	Amount (Rs.)	%	Amount (Rs.)	%	Amount (Rs.)	%
I Farmers											
	Net price received by farmer	3215.00	76.52	3578.56	88.59	3668.05	71.87	3875.05	76.73	4570.53	87.68
	Marketing cost	192.70	4.59	195.74	4.85	164.34	3.22	157.95	3.13	170.60	3.27
II Pre-harvest contractor											
	Price paid by pre-harvest contractor	3407.70	81.10	-	-	3832.39	75.09	-	-	-	-
	Marketing cost	345.00	8.21	-	-	380.30	7.45	-	-	-	-
	Marketing margin	184.00	4.38	-	-	167.45	3.28	-	-	-	-
III Wholesaler											
	Price paid by Wholesaler	3936.70	93.70	-	0.00	4380.14	85.83	4033.00	79.86	-	-
	Marketing cost	160.12	2.98	-	0.00	270.54	5.30	270.64	5.36	-	-
	Marketing margin	125.00	3.81	-	0.00	197.68	3.87	254.78	5.04	-	-
IV Retailer											
	Price paid by Retailer	4096.82	97.51	3774.30	93.44	4848.36	95.00	4558.42	90.26	4741.13	90.95
	Marketing cost	104.79	3.36	140.43	3.48	125.60	2.46	121.56	2.41	170.85	3.28
	Marketing margin	140.97	2.49	124.72	3.09	129.54	2.54	370.27	7.33	300.98	5.77
	Sale price of retailer	4201.61	100.00	4039.45	100.00	5103.50	100.00	5050.25	100.00	5212.96	100.00
VI Price spread		986.61	23.48	460.89	11.41	1435.45	28.13	1175.20	23.27	642.43	12.32
	Total marketing cost	802.61	19.10	336.17	8.32	940.78	18.43	550.15	10.89	341.45	6.55
	Total market margin	449.97	10.71	124.72	3.09	494.67	9.69	625.05	12.38	300.98	5.77

The marketing efficiency of the identified channels were worked out under Shepherd's approach and Acharya & Agarwal method and is presented in Table 3. In the Shepherd's approach, the greater the ratio, higher the efficiency for Allahabad safeda was showed by channel II (11.02), in Taiwan pink channel III (14.27) was most efficient followed by channel II (8.18). While in Acharya & Agarwal method ac-

counted for a highest efficiency of Allahabad safeda was showed by channel II (7.76), whereas for Taiwan pink channel III (7.11) was found to be the most efficient channel. Though price spread was less in channel-III in all varieties, farmers still choose channel-I for marketing due to risk of non-availability of assured market and perishability of fruit.

Table 3. Channel wise marketing efficiency of guava

Sl.no	Particulars	Allahabad safeda		Taiwan pink		
		Channel I	Channel II	Channel I	Channel II	Channel III
1	Sale price of retailer(Rs./ quintal)	4201.61	4039.45	5103.50	5050.25	5212.96
2	Total marketing cost (Rs./quintal)	802.61	336.17	940.78	550.15	341.45
3	Total marketing margin (Rs./quintal)	449.97	124.72	494.67	625.05	300.98
4	Shepherd's method	4.23	11.02	4.42	8.18	14.27
5	Acharya and Agarwal's method	2.57	7.76	2.56	3.30	7.11
6	Producer share in consumer's rupee (%)	76.52	88.59	71.87	76.73	87.68

Note: Marketing channels referring to Table 1

Conclusion

Marketing of guava was transacted mostly by different channels. Majority of the producer-seller preferred channel-I to sell their guava produce because this channel is convenient for farmers in study area. As the number of intermediaries increased, the producer's share in consumer's rupee decreased. The price spread of Allahabad safeda in channel-II (11.41%) was less compared to channel-I (23.48%) which showed that producer received higher returns in channel-II. In Taiwan pink, the price spread of Taiwan pink in channel-III (12.32%) was less compared to channel-I (28.13%) and channel-II (23.27%) which showed that producer received higher returns through channel-III. Therefore, channel-II of Allahabad safeda and channel-III of Taiwan pink were found to be efficient from the point of view of producers.

References

1. Chaluvadi P, Guledagudda SS. Economic analysis of marketing of guava in Dharwad district. *J.Farm Sci.* 2019;32(02):196-200.
2. Kumbhar JS, Pawar PP, Patole SD, Gawali AS. Economics of production and marketing of guava in Maharashtra. *International Journal of Agriculture Sciences.* 2014;10(2):592-599.

3. Manna P, Mishra AA, Shukla RN. Production, Marketing and Value chain analysis of Guava in Allahabad District of Uttar Pradesh, India. *International Journal of Environment, Agriculture and Biotechnology.* 2016;1(2):119-121.
4. Rani S, Lal C, Kait R. Marketing Costs and Price Spread for Selected Fruit Crops in Haryana State: A Study of Selected Districts. *Economic and Regional Studies/Studia Ekonomiczne i Regionalne.* 2022;15(4):533-547.
5. Sain V, Luhach VP, Mehla MS, Jyoti. Marketing of Guava in Districts of Haryana State. *IOSR Journal of Agriculture and Veterinary Science.* 2013;5(5):12-16.

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