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Marketing efficiency of organic guava in Hisar district of Haryana

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Abstract

This study was designed to measure marketing efficiency in organic guava in Hisar district of Haryana state. The functionaries involved in marketing of organic guava were pre-harvest contractor, commission agent, wholesaler and retailer. The marketing efficiency of different marketing channels was worked out by using the three methods conventional method, shepherd's method and Acharya's method and the Acharya's method was found the ideal measure of marketing efficiency and this method takes care of the limitations of the above two methods. In this method it has been emphasized that the farmer's share in consumer's rupee is a measure of marketing efficiency. The efficiency index revealed that channel-V was the most efficient of all marketing channels.

Keywords: Marketing channel, marketing efficiency and market functionaries

Introduction

Agriculture is vital to the Indian economy, with horticulture serving as a significant sector that contributes to income generation and employment opportunities. Guava (*Psidium guajava*) is a widely cultivated and nutritious fruit in India. Guava, recognised for its high vitamin C content and adaptability to various agro-climatic conditions, is cultivated widely in several states, including Haryana. The Hisar district has become notable for guava cultivation, as numerous farmers transition to organic farming practices to satisfy the increasing consumer demand for chemical-free produce.

Organic farming has become more popular in recent years, driven by heightened awareness of health benefits, environmental sustainability, and the higher prices linked to organic products. There is a growing consumer preference for organic fruits, such as guava, due to perceptions of enhanced health benefits and the absence of harmful pesticides and chemical residues. Despite the potential for significant market demand, the marketing efficiency of organic guava in the Hisar district is a critical issue. Effective marketing systems are crucial for enhancing price realisation for farmers, reducing post-harvest losses, and sustaining a consistent supply chain from producers to consumers.

Marketing efficiency denotes the capability of a marketing system to transport agricultural products from producers to consumers with minimal costs, simultaneously optimising returns for farmers. In Hisar, the marketing efficiency of organic guava is affected by various factors, such as market structure, price realisation, supply chain mechanisms, government policies, and consumer preferences. Traditional marketing channels, such as wholesalers, commission agents, and local markets, often pose challenges for organic farmers, leading to price volatility and lower profit margins. Conversely, direct marketing channels like farmers' markets, online platforms, and organic certification programs provide opportunities for improved price realisation and enhanced consumer trust.

The examination of marketing efficiency in organic guava cultivation within the Hisar district is crucial for pinpointing bottlenecks and recommending policy interventions aimed at increasing farmers' income and fostering sustainable agriculture. This research evaluates existing marketing channels, price fluctuations, and consumer preferences to provide insights for enhancing the efficiency of organic guava marketing. Furthermore, analysing the contributions of government initiatives, cooperatives, and private stakeholders within the organic guava supply chain is essential for developing strategic recommendations aimed at enhancing the marketing framework.

The examination of marketing cost, margin, and price spread is crucial for understanding the nature, extent, and authenticity of a variety of marketing charges.

The study of marketing margin, marketing costs and price spread can be utilized to develop appropriate price policy that aims to provide incentive prices to producers and assures them of a reasonable share in consumer's rupee. It is also helpful in the development and evaluation of the market policies like the regulation of the market charges for

different market functionaries and performing various market functions. This research aims to enhance the sustainability and profitability of organic guava farming in the region through a detailed analysis of market trends, pricing patterns, and consumer preferences.

Materials and Methods

To find out the marketing margins and costs for different channels the relevant data was collected with the help of pre tested, well designed schedule. Information regarding marketing aspects of organic crops were collected from the producers, pre-harvest contractor, wholesaler and the retailers in order to find out the producer's share in the price paid by the consumers. The marketing margin refers to the difference between the price at which a good is purchased from another intermediate and the price at which it is sold to the consumer.

Absolute and per cent margin

$$\text{Absolute margin} = P_{Ri} - (P_{Pi} + C_{Mi})$$

$$\text{Percentage margin} = \frac{P_{Ri} - (P_{Pi} + C_{Mi})}{P_{Ri}} \times 100$$

Where,
P_{Ri} = Total value of receipts (sale price)
P_{Pi} = Total purchase value of goods (purchase price), and
C_{Mi} = Cost incurred in marketing

Producer's share in consumer's rupee

The producer's share in the consumer's rupee was worked out as under:

$$Ps = \frac{P_F}{P_C} \times 100$$

Where,
P_s = Producer's share in consumer's rupee,
P_F = Price of the produce received by the farmer and
P_c = Price of the produce paid by the consumer

Marketing efficiency

The marketing efficiency of different marketing channels was worked out by using the following method.

(a) Conventional method

$$ME = [O/I] \times 100$$

Where
O = Output is the value added
I = Input is the real cost of marketing
ME = Marketing efficiency

(b) Shepherd's method

$$ME = RP \div MC$$

Where
RP = Retailer's sale price or consumer's purchase price
MC = Total marketing costs

(c) Acharya's method

$$MME = FP \div (MC+MM)$$

Where,
FP = Net price received by farmer
MC = Total marketing costs
MM = Total net margins of intermediaries

Results

The assessment of marketing margins, expenses, and price spread for each of the main marketing channels in the research area is covered in this part. An key driver of organic farming in India is the expanding market. Numerous studies have shown that customers in nations like the USA and even India are prepared to pay up to 10% more for organic items. India's market for organic products is now dominated by metro areas.

It is estimated that around 95 per cent of the organic brand market exists in the top 10 metropolitan cities e.g., Delhi (NCR), Kolkata, Mumbai, Pune, Chennai, Bengaluru, Hyderabad, Ahmedabad, Surat, Jaipur and vishakhapattnam and the other Tier-II cities - e.g. Indore, Nasik and Nagpur. In future, organic market is expected to expand rapidly with penetration to other cities of the country. In addition to the domestic market, export of organic products is forecast to continue be the growth driver for the Indian organic products industry. India mainly exports organic processed food products, organic rice, beverages, other cereals and millets to USA, Canada, Europe, and select South East Asian countries. In India, there are three categories of organic producers: private companies that either own their own farms or run extensive conversion programs with growers; commercial farmers who have excess produce and export it through various channels; and traditional organic growers who cultivate for their own subsistence needs (Yussef and Willer, 2003) [6]. The primary benefits of Indian organic goods are high-quality production using traditional methods, little use of chemical inputs in mountain and tribal areas, easy access to inexpensive labor, NGO interventions, and different forms of government support. However, some of the barriers to selling organic products abroad include high price expectations, supply delays, quality limitations, and the absence of appropriate and costly certification and marketing networks (Singh, 2003) [3].

Marketing channels for disposal of organic produce

Following five major marketing channels were identified in the study area in marketing of organic guava.

1. Producer→ Pre-harvest contractor→ Commission agent→ Wholesaler→ Retailer→ Consumer
2. Producer → Pre-harvest contractor → Commission agent→ Retailer→ Consumer
3. Producer → Commission agent → Wholesaler → Retailer → Consumer
4. Producer → Commission agent → Retailer → Consumer

5. Producer →Consumer

In Hisar district, the organic guava was sold through five marketing channels and the most prominent market channel in sale of guava was found channel-II. The price per quintal as paid by the consumer varied in all five marketing channels and it was highest in marketing channel-I (`5150) followed by channel-II (`4504), channel-III (`4430), channel-IV (`4094) and lowest in channel-V (`3525). The share of price received by producer in consumer' price was found uppermost (95.11%) in channel-V (`3352.79) as there was no market intermediaries and producer sold directly produce to consumer, followed by channel-IV (60.70%), channel-III (55.60%), channel-II (52.75%) and the lowest was found in channel-I (`2375.74) which is 46.13 percent of the consumer's price. Based on a predetermined rate, the producer turned over the orchard to the pre-harvest contractor, who then handled all marketing-related tasks, such as the ward and watch.

Item wise per quintal cost of marketing of organic guava incurred by different intermediaries in different channels of Hisar market was calculated and presented in table 1. The cost incurred by the producer was `321.82 per quintal in channel-III, 322.95 in channel-IV and 172.41 per quintal in channel V. It was observed that, the proportionate share in the purchase price of consumer was highest in plucking, grading and packing cost (2.83%) followed by packing material cost (2.07%), watch and ward cost (0.99%), transportation cost (0.85%), post-harvest losses (0.64%) and loading and unloading charges (0.51%) in channel III. In channel-IV, maximum share was on plucking, grading and packing cost (2.62%) followed by packing material cost (1.90%), watch and ward cost (0.88%), transportation cost (0.79%), post-harvest losses (0.61%) and loading and unloading charges (0.45%) and the total cost of marketing by the producer for this channel was `322.95. The total cost of marketing for channel V was `172.41 and maximum share was on plucking, grading and packing cost (3.67%) followed by watch and ward cost (1.22%). The cost incurred by the pre-harvest contractor was `321.58 per quintal in channel-I, and `320.73 per quintal in channel II. It was observed that, the proportionate share in the purchase price of consumer was highest on plucking, grading and packing cost (2.25%) followed by packing material cost (1.63%), watch and ward cost (0.76%), transportation cost (0.70%), post-harvest losses (0.52%) and loading and unloading charges (0.39%) in channel I and in channel-II, the maximum share was on plucking, grading and packing cost (2.57%) followed by packing material cost (1.84%), watch and ward cost (0.89%), transportation cost (0.79%), post-harvest losses (0.59%) and loading and unloading charges (0.43%). The net margin of pre-harvest contractor in channel I and II were `166.33 and `59.53 respectively, which were 3.23 and 1.32 per cent of the consumer's purchase price. In regard to marketing cost incurred by wholesaler in channel-I and III, it was `336.35 and `331.10 per quintals. Proportionate share in consumer's rupee, on commission charge was the highest as (4.45%) per cent, followed by plucking, grading and repacking cost (1.39%) spoilage and losses (0.42%) and loading, unloading and transportation cost (0.26%),in channel I and in channel-III, the maximum share was on commission charge was the highest as (5.03%) per cent, followed by plucking, grading and repacking cost (1.60%) spoilage and losses (0.42%) and loading, unloading and transportation cost (0.34%). The net margin of wholesaler in channel I and III were `194.99 and `186.22 respectively, which were 3.79 and 4.20 per cent of the consumer's purchase price. Per quintal cost incurred by retailer in channel-I, channel-II, channel-III and channel IV was calculated and presented in table 1. The result revealed that the cost incurred by retailer was ` 115.28, `116.09, `116.97 and `115.08 in channel-I, channel-II, channel-III and channel-IV respectively. In which share in consumer's rupee of spoilage and losses was highest (0.81%) followed by transportation cost (0.58%), packing material cost (0.54%) and loading and unloading charges (0.31%) in channel I. In channel-II, maximum share was spoilage and losses was highest (0.93%) followed by transportation cost (0.69%), packing material cost (0.63%) and loading and unloading charges (0.33%). In channel-III, maximum share was spoilage and losses was highest (0.95%) followed by transportation cost (0.68%), packing material cost (0.65%) and loading and unloading charges (0.37%) and in channel-IV, maximum share was spoilage and losses was highest (1.02%) followed by transportation cost (0.72%), packing material cost (0.68%) and loading and unloading charges (0.39%). The net margin of retailer in channel I, II, III and IV were `1639.72, `1631.91, `1011.03 and `1171.06 respectively, which were 31.84, 36.23, 22.82 and 28.60 per cent of the consumer's purchase price respectively.

Table 1: Price spread for organic guava marketing in Hisar district of Haryana

Sr. No.	Particulars	Channel-I	Channel-II	Channel-IIII	Channel-IV	Channel-V
1	Net Price received by producer/ purchase price of pre-harvest contractor	2375.74 (46.13)	2375.74 (52.75)	2462.86 (55.6)	2484.91 (60.7)	3352.79 (95.11)
2	Cost incurred by the pre-harvest contractor	321.58 (6.24)	320.73 (7.12)	321.82 (7.26)	322.95 (7.89)	172.41 (4.89)
	I. Watch and ward	39.06 (0.76)	40.21 (0.89)	39.19 (0.88)	40.45 (0.99)	42.96 (1.22)
	II. Plucking, grading and packing cost	116.07 (2.25)	115.78 (2.57)	116.22 (2.62)	116 (2.83)	129.45 (3.67)
	III. Packing material	83.86 (1.63)	83 (1.84)	84.26 (1.9)	84.78 (2.07)	-
	IV. Transportation charges	35.98 (0.7)	35.8 (0.79)	35 (0.79)	35 (0.85)	-
	V. Loading and unloading charges	19.87 (0.39)	19.29 (0.43)	20.01 (0.45)	20.72 (0.51)	-
	VI. Post harvest losses	26.74	26.65	27.14	26	-

		(0.52)	(0.59)	(0.61)	(0.64)	
3	Net margins of pre-harvest contractor	166.33 (3.23)	59.53 (1.32)	-	-	-
4	Sale price of pre-harvest contractor/ purchase price of wholesaler	2863.65 (55.6)	-	2784.68 (62.86)	-	-
5	Cost incurred by the wholesaler	336.35 (6.53)	-	331.1 (7.47)	-	-
	I. Commission @ 8 per cent	229.09 (4.45)	-	222.77 (5.03)	-	-
	II.Loading, unloading and transportation charges	13.59 (0.26)	-	14.95 (0.34)	-	-
	III. Grading and repacking charges	71.84 (1.39)	-	70.75 (1.6)	-	-
	IV. Spoilage and losses	21.83 (0.42)	-	22.63 (0.51)	-	-
6	Net margin of wholesaler	194.998 (3.79)	-	186.22 (4.2)	-	-
7	Sale price of wholesaler/ purchase price of retailer	3395 (65.92)	2756 (61.19)	3302 (74.54)	2807.86 (68.58)	-
8	Cost incurred by the retailer	115.28 (2.24)	116.09 (2.58)	116.97 (2.64)	115.08 (2.81)	-
	I. Transportation charges	29.64 (0.58)	31.1 (0.69)	30.01 (0.68)	29.44 (0.72)	-
	II. Loading and unloading charges	15.78 (0.31)	14.96 (0.33)	16.33 (0.37)	15.78 (0.39)	-
	III. Packing material	27.98 (0.54)	28.15 (0.63)	28.75 (0.65)	27.98 (0.68)	-
	IV. Spoilage and losses	41.88 (0.81)	41.88 (0.93)	41.88 (0.95)	41.88 (1.02)	-
9	Net margin of retailer	1639.72 (31.84)	1631.91 (36.23)	1011.03 (22.82)	1171.06 (28.6)	-
10	Sale price of retailer/ purchase price of consumer	5150 (100)	4504 (100)	4430 (100)	4094 (100)	3525.2 (100)

(Figure in parenthesis is the percentage to the consumer's price)

Marketing efficiency of guava in different channels in Hisar

The marketing efficiency of guava across various marketing channels is shown in Table 2. According to Acharya's technique, the marketing efficiency for each of the following marketing channels—channel I, channel II, channel III, channel IV, and channel V—was 0.86, 1.12, 1.25, 1.54, and 19.45, respectively. It is evident from this efficiency index that, out of all the marketing channels, channel V was the most effective. The reason for this was that there were no middlemen in channel-V. Additionally, as the number of market middlemen between producers and consumers dropped, marketing efficiency improved. Using the traditional approach, the marketing efficiency for each of the following channels—channel I, channel II, channel III, channel IV, and channel V—was 3.59, 4.87, 2.56, 3.67, and 1.00, respectively. It is clear from this efficiency index that, out of all the marketing channels, channel-II was the most effective. Shepherd's technique showed that the marketing efficiency under each of the following marketing channels—channel I, channel II, channel III, channel IV, and channel V—was 6.66, 10.31, 5.75, 9.35, and 20.45, respectively. Out of all the marketing channels, channel-V was the most effective, according to this efficiency assessment.

Table 2: Marketing efficiency of organic guava in different marketing channels in Hisar

Sr. No.	Particulars	Unit	Channel-I	Channel-II	Channel-III	Channel-IV	Channel-V
1.	Consumer purchase price (RP)	`/q	5150	4504	4430	4094	3525.2
2.	Total marketing cost (MC)		773.21	436.82	769.89	438.03	172.41
3.	Total net margin of intermediaries (MM)		2001.04	1691.44	1197.24	1171.06	0
4.	Net price received by farmers (FP)		2375.74	2375.74	2462.86	2484.91	3352.79
5.	Value added (1-4)		2774.26	2128.26	1967.14	1609.09	172.41
	Index of marketing efficiency						
A	Acharya's method (MME) (4÷2+3)	Ratio	0.86	1.12	1.25	1.54	19.45
B	Conventional method (E) (5÷2)		3.59	4.87	2.56	3.67	1.00
C	Shepherds method (ME) (1÷2)		6.66	10.31	5.75	9.35	20.45

Price spread and marketing efficiency were evaluated using Acharya's technique for the selected marketing channel in a similar research by Anjugam and Alagumani (2019) on marketing practices and marketing efficiency of organic minor millets in Tamil Nadu, India.

Similar study was conducted by Singh (2013) [4] in Uttarakhand, they focused on the prevalent marketing practices adopted by the farmers for organic crops and to

ascertain marketing related problems perceived by them with reference to organic crops. Archana Dadhe (2013) [1] in her study also identified the marketing practices adopted by the farmers in Nagpur Region, to study the distribution channels, Place of marketing & their satisfaction with the price offered for their product. Malanoor *et al* (2016) [5], in their study, concluded that if proper marketing can be gained in organic sector, the profits will go up by 38 per cent. Chanderkala and Deepalakshmi (2018) [2] based on the results of their study, has found that the organic farmers who have achieved in the organic farming are using renowned traditional method of farming with modern techniques of marketing. It has been found that the foremost important factor to be considered at the time of marketing the organic produce is Quality followed by availability of the crop and price and the least importance is given for packing by receiving Kendall's Coefficient of Concordance (W) value= 0.766 shows that there is more similarity among the respondent

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