



Marketing Cost, Producer's Share, and Marketing Efficiency in Different Marketing Channels of Persimmon Crop in Kullu District of Himachal Pradesh

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Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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ABSTRACT

This study examines the marketing channels and associated costs in the persimmon industry, focusing on the producer's share in consumer rupees and marketing efficiency. The research analyzes different marketing channels involving wholesalers, retailers, and pre-harvest contractors. The findings reveal the marketing costs incurred by various stakeholders, with variations observed

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across channels. The producer's marketing cost ranged from ₹187.40 to ₹245.86 per quintal, while wholesalers, pre-harvest contractors, and retailers incurred significant costs in terms of commissions, transportation, taxes, and other expenses. The analysis of price spread among channels highlights the net price received by the producer, consumer's price, and marketing margins. Moreover, the study evaluates the marketing efficiency of each channel, indicating their effectiveness in terms of cost management and value delivery. The marketing efficiency values obtained for Channel-1, Channel-2, and Channel-3 are 5.48, 3.10, and 2.44, respectively. These results provide insights into the distribution of profits and costs among different stakeholders in the persimmon industry, aiding in understanding the overall performance of marketing channels.

Keywords: Marketing cost; producer share; consumer rupees; marketing efficiency; marketing channels.

1. INTRODUCTION

Persimmon (*Diospyros kaki*) is a highly valued fruit crop known for its unique flavour, nutritional properties, and increasing global demand. This research paper provides an introduction to the persimmon crop, encompassing both global and state-level data. On a global scale, persimmon production has witnessed significant growth, with several countries contributing to its cultivation. Total persimmon production reached 4,332,167 tonnes in 2021 in the World according to Faostat. This is 2.35 % more than in the previous year and 8.80 % more than 10 years ago [1-4]. Major producing nations include China, South Korea, Brazil, Japan, Spain, and the United States. The rising popularity of persimmons can be attributed to their versatility in culinary applications, high antioxidant content, and potential health benefits [5-8]. Persimmon is being cultivated in different parts of the world. Although often regarded as strictly temperate species, persimmon appears to be readily adapted to a wide range of climatic conditions and its cultivation is extending to newer areas. In India, though introduced in 1921 with few cultivars from other countries and some recommendations have been made but its cultivation could not get impetus [9-13]. Persimmon cultivation in India suffers from lack of organized planting; inadequate plant materials from vegetative propagation, lack of suitable cultivars and standardization of training and pruning, and other orchard management practices. Besides, problems of poor fruit set, heavy drop of young fruits, astringent nature, and lack of sufficient knowledge regarding fruit maturity and its consumption also mired its cultivation [14-17]. With the efforts being made in recent years to overcome the problems, and with the diversification in fruit culture, its cultivation seems to be gaining importance and more areas are being opened for its cultivation (Mehta et al. 2005). At the state level, persimmon cultivation

has gained prominence in various regions, including Himachal Pradesh in India, known for its picturesque landscapes and favourable climatic conditions, Himachal Pradesh has emerged as a significant persimmon-producing region within the country [18-25]. The state's Kullu district, in particular, has shown substantial potential for persimmon cultivation, attracting farmers and investors due to its conducive agro-climatic factors and suitable soil conditions. In Himachal Pradesh, total fruits are cultivated on an area of 2,30,852 ha with a production of 4,95,362 MT [26-29]. Out of this, Persimmon occupies an area of 528 ha with a production of 990 MT. Kullu district leads in the production of persimmon (840 MT) spread over an area of 167 ha (HPSAMB).

This study examines the marketing channels and associated costs in the persimmon industry. A marketing channel refers to the path through which a product moves from the producer to the final consumer, involving various intermediaries. In the study area, the persimmon marketing channels involved wholesalers, retailers, and pre-harvest contractors. The aim of this research is to analyse the marketing costs incurred by different stakeholders, determine the producer's share in the consumer's rupees, and evaluate the marketing efficiency of each channel. This study presents the results and discussion based on the analysis of the marketing channels and costs.

2. RESEARCH METHODOLOGY

2.1 Selection of Study Area

The main objective of the study was to examine the production and marketing aspect of persimmon and attempts to describe the various facets of persimmon farming in the study area,

Kullu district of Himachal Pradesh was selected for the present study as it has a significant contribution with respect to the area and production of persimmon.

Selection of the districts: The state comprises 12 districts, among these districts, Kullu District was selected for the study of persimmon for present study.

Selection of blocks: There are 5 blocks in Kullu District. Out of them 2 blocks, Kullu and Naggar blocks were selected for this study.

Selection of villages: A complete list of all villages was prepared with the help of the Block Development Officer. This list was arranged in ascending order of the total villages 5% was selected randomly.

2.2 Selection of Sample

Stratified random sampling was followed to choose a sample of 60 persimmon growers from the Kullu and Naggar blocks of Kullu. Out of which 10 panchayats are selected. A list of persimmon growers was procured from different sources. Out of the list, six respondents were selected from each panchayat, based on the size of holding farmers were classified into three groups.

2.3 Marketing Costs

The total cost, incurred on marketing by the persimmon growers and various intermediaries involved in the sale and purchase of the commodity till the commodity reaches to the ultimate consumer will be calculated as:

$$TC_m = C + \sum_{i=1}^n MC_i$$

Where,

TC_m = Total cost of persimmon marketing,

C_g = Cost paid by the grower in the marketing of his produce

MC_i = Marketing costs incurred by i^{th} middleman.

2.4 Marketing Margin

Marketing Margin of middle-man calculated as the difference between the total payments (marketing cost + purchase price) and receipts (sale price) of the middlemen and calculated as follows.

$$A_{mi} = P_{Ri} - (P_{pi} + C_{mi})$$

Where,

A_{mi} = Absolute margin of middlemen

P_{Ri} = Total value of receipts per unit (sale price)

P_{pi} = Purchase value of goods per unit

C_{mi} = Cost incurred on marketing per unit

GMM (Rs) = Consumer's price – Producers

2.5 Marketing Efficiency

Acharya's Formula (Acharya and Agrawal, 2001) will be used for estimating the marketing efficiency which is given as:

$$Marketing\ Efficiency = \frac{FP}{(MC + MM)}$$

where,

FP = Price received by the farmer

MC = Total Marketing Cost

MM = Net Market Margins.

2.6 Producer's Share in Consumer's Rupee

It is the ratio of price received by the farmer to the retail price. It will be calculated by using the formula:

$$PS = \frac{PF}{RP} \times 100$$

where,

PS = Producer's share in consumer's rupee

PF = Farmer's price (i.e. price received by the farmer/ producer per unit of output)

RP = Retail price (consumer's price) per unit of output

MM = Total marketing margins

Table 1. Sample selection based on different parameters

S. No	Category of farmers	Size of land holding	No. of farmers
1	Marginal	<1	40
2	Small	1-2	14
3	Medium	2-10	6
	Overall		60

3. RESULTS AND DISCUSSION, MARKETING CHANNELS

3.1 Marketing Channel

A marketing channel is a path through which a product moves from the producer to the final consumer. Due to the existence of several agencies functioning as intermediaries between producers and consumers, there are various marketing channels in the study area. The agents involved in the study area of persimmon marketing are wholesalers and retailers. In the areas under study, the following marketing channels were seen in Table 2.

3.2 Marketing Costs

i) Cost incurred by producers: Table 4 depicts the marketing cost and margins of various functionaries working in various marketing channels. The overall marketing cost borne by the producer in the case of Channel-1 was ₹ 187.40 per quintal, according to the data. The producer in channel 2 sold their products in the market through a wholesaler, and the producer marketing cost was ₹ 245.86 per quintal. Producers in channel 3 sell their produce to the pre-harvest contractor. Farmers had no marketing costs since the pre-harvest contractor either purchased the fruits on the tree or collected the produce from the producers' doorsteps before grading and packing.

Table 2. Marketing channels followed by farmers in the study area

Marketing Channels	Marketing Intermediaries
Channel-1	Producer → Retailer → Consumer
Channel-2	Producer → Wholesaler → Retailer → Consumer
Channel-3	Producer → Pre harvest contractor → Wholesaler → Retailer → Consumer

Table 3. Farm category wise marketing channels followed by sampled household

Marketing Channels	Marketing intermediaries	% Share in total in Quantity marketed
Channel-1	Producer → Retailer → Consumer	8.92
Channel-2	Producer → wholesaler → Retailer → Consumer	44.30
Channel-3	Producer → Pre-harvest contractor → Wholesaler → Retailer → Consumer	46.78

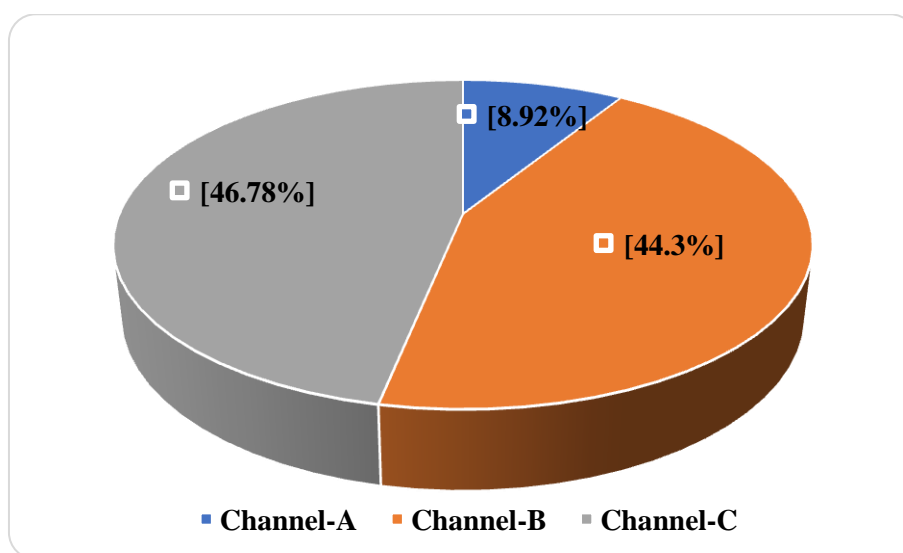


Fig. 1. Per cent share in total quantity transacted through different marketing channels

Table 4. Marketing costs and margin of different functionaries in the different marketing channels of persimmon

S. No.	Particulars	1	2	3
I. Marketing cost incurred by producers				
1	Net price received by farmer	6612.60	7054.14	6900.00
2	Transportation cost	77.00	115.36	
3	Packing material cost	95.00	95.00	
4	Loading / unloading	15.40	35.50	
5	Commission charge	-	-	
6	Mandi Tax	-	-	
	Total	187.40	245.86	
	Farmer's selling price	6800.00	7300.00	6900.00
II. Marketing cost incurred by pre-harvest contractor				
A	Gross price paid by pre-harvest contractor			6900.00
1	Loading / unloading			23.10
2	Packing material cost			95.00
3	Commission charge			414.00
4	Transportation cost			70.25
5	Mandi Tax			138.00
B	Total			740.35
C	Pre-harvest contractor Margin			184.65
D	Pre-harvest contractor Selling price/ Wholesaler purchase price			7825.00
III. Marketing cost incurred by Wholesaler				
A	Gross price paid by Wholesaler		7300.00	7825.00
1	Loading / unloading		26.95	23.10
2	Room rent		340.25	340.25
3	Transportation cost		115.50	115.50
4	Mandi Tax		146.00	156.50
5	Commission charge		438.00	469.50
C	Total		1066.70	1104.85
D	Wholesalers Margin		173.55	147.70
E	Wholesaler Selling price/ Retailer purchase price		8540.25	9077.55
IV. Marketing cost incurred by Retailer				
A	Gross price paid by Retailer	6800.00	8540.25	9077.55
B	Cost components of Retailer			
1	Loading / unloading	19.25	19.25	19.25
2	Transportation cost	53.90	53.90	53.90
3	Mandi Tax	136.00	170.8	181.55
4	Commission charge	408.00	512.42	544.65
	Total	617.15	756.37	799.35
C	Retailer Margin	400.00	400.00	400.00
D	Retailer Selling price	7817.15	9696.62	10276.90
V.	Consumer's Purchase Price	7817.15	9696.62	10276.90

ii) **Cost incurred by wholesaler:** The wholesaler was found in marketing channels 2 and 3. The most significant marketing costs were commissions, transportation, and tax. The most significant marketing expenditures were commissions, transportation, and tax. Wholesalers paid ₹ 1066.70 and ₹ 1104.85 per quintal total marketing costs in these channels.

iii) **Cost incurred by the pre-harvest contractor:** The total marketing cost borne by the pre-harvest contractor is calculated at ₹ 740.35 per quintal. The main cost items were ₹ 414.00 commission per quintal, ₹ 95.00 packaging material and ₹ 70.25 transportation cost.

iv) **Marketing cost incurred by retailer:** The retailer was found in all three channels.

Retailers incurred marketing costs of ₹ 617.15, 756.37, and 799.35 per quintal in channels 1, 2, and 3, respectively. The major cost components observed were commission charges, mandi tax and transportation fees.

However, there was not much difference between marginal, small, medium, and overall categories in marketing costs and margins of different functionaries in the different marketing channels of persimmon. Hence, the overall category results are shown in Table 4.

v) Price spread among different marketing channels: The distribution of prices in pink marketing among different channels is shown in Table 5. From the Table 5 it can be observed that the net price received by the producer ranges from ₹ 6612.60 in channel-1 to ₹ 7054.14 in channel-2. The highest producer's share in consumer rupee was found in channel-1 (84.59 %) followed by channel- 2 (72.75 %) and channel-C (67.14 %). Marketing margins range from 5.11 per cent in Channel-1 to 5.33 per cent in Channel-3. Marketing costs range from 10.29 to 25.73 per cent according to different channels.

vi) Marketing efficiency of different marketing channels: Marketing efficiency which is an indicator of the efficiency of marketing channels overall performance was analyzed and

presented in Table 6. The Table 6 indicates highest efficiency in channel 1 (5.48) followed by channels 2 (3.10) and 3 (2.44).

4. SUMMARY

Based on the results and discussion presented, the following conclusions can be drawn regarding the marketing channels and costs in the persimmon industry:

Marketing Channels: The study identified three main marketing channels followed by farmers in the study area. These channels are as follows:

- Channel-1: Producer → Retailer → Consumer
- Channel-2: Producer → Wholesaler → Retailer → Consumer
- Channel-3: Producer → Pre-harvest contractor → Wholesaler → Retailer → Consumer

Marketing Costs Incurred: Producer's Marketing Costs: The marketing costs incurred by producers varied across the different channels. In Channel-1, the producer's marketing cost was ₹187.40 per quintal, while in Channel-2, it was ₹245.86 per quintal. Producers in Channel-3 did not incur any marketing costs as the pre-harvest contractor took care of purchasing, grading, and packing the produce.

Table 5. Price spread of persimmon among the different marketing channels

Particulars	1	2	3
Producer price (₹)	6612.60	7054.14	6900.00
Consumer's price (₹)	7817.15	9696.62	10276.9
Gross marketing margin(GMM) (₹)	1204.55	2642.48	3376.90
Total marketing cost (₹)	804.55	1701.46	2277.08
Net market margin (₹)	400.00	573.55	547.70
Total gross marketing margin (%)	15.40	27.25	32.85
Marketing cost (%)	10.29	21.34	25.73
Marketing margin (%)	5.11	5.91	5.33
Producer's shares	84.59	72.75	67.14

Table 6. Marketing efficiency of different marketing channels followed in study area

Particulars	Marketing Channels		
	1	2	3,
Total marketing cost	804.55	1701.46	2277.08
Producer price	6612.60	7054.14	6900.00
Net marketing margin	400.00	573.55	547.70
Marketing efficiency	5.48	3.10	2.44

(₹/quintal)

Wholesaler's Marketing Costs: Wholesalers, present in Channel-2 and Channel-3, incurred significant marketing costs, including commissions, transportation, and taxes. The total marketing costs borne by wholesalers in these channels were ₹1066.70 and ₹1104.85 per quintal, respectively.

Pre-harvest Contractor's Marketing Costs: The pre-harvest contractor incurred a total marketing cost of ₹740.35 per quintal, with major costs attributed to commissions, packaging materials, and transportation.

Retailer's Marketing Costs: Retailers, present in all three channels, had marketing costs ranging from ₹617.15 to ₹799.35 per quintal. The main cost components for retailers were commission charges, mandi tax, and transportation fees.

Price Spread among Different Channels: The price spread analysis revealed that the net price received by the producer varied across channels, ranging from ₹6612.60 in Channel-1 to ₹7054.14 in Channel-2. The highest producer's share in the consumer's price was observed in Channel-1 (84.59%), followed by Channel-2 (72.75%) and Channel-3 (67.14%). Marketing margins ranged from 5.11% in Channel-1 to 5.33% in Channel-3, while marketing costs ranged from 10.29% to 25.73% across different channels.

Marketing Efficiency: The study also analyzed the marketing efficiency of different channels. Channel-1 exhibited the highest efficiency with a value of 5.48, followed by Channel-2 (3.10) and Channel-3 (2.44). The higher the marketing efficiency value, the more efficient the channel is considered to be in terms of overall performance.

5. CONCLUSION

The study highlights the presence of multiple marketing channels in the persimmon industry and provides insights into the costs incurred by different intermediaries. It emphasizes the importance of understanding marketing costs and efficiencies to optimize the distribution and pricing of persimmons in the market.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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