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Marketing scenario of apple Ber in Maharashtra

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Abstract
The present study was undertaken with the aim of examining the marketing cost, marketing margin and price spread of Apple Ber in the Solapur district of Maharashtra. The investigation encompassed six villages, with three located in Pandharpur and three in Sangola tehsils of the Solapur district. Various marketing channels were identified and classified according to their distinct roles and functions: Channel-I involves the flow from Producer - Consumer. In Channel-II, the progression is from Producer - Preharvest contractor - Wholesaler - Retailer - Consumer. Channel-III operates from Producer - Wholesaler - Retailer - Consumer. The marketing cost of Apple Ber per quintal for Channel-I was Rs.95.34, for Channel-II it was Rs.366.99 and for Channel-III, the costs were Rs.549.33 and Rs.634.68 through Solapur and Pune, respectively. Commission charges and transport expenses emerged as the principal items, making the most substantial contribution to the overall marketing cost.

Keywords: Marketing cost, margin, price spread, channel, marketing efficiency

Introduction
India's climatic diversity plays a pivotal role in producing a multitude of fruits and vegetables. However, production often falls short of meeting the demand. Effective marketing of agricultural produce holds great importance for farmers. The concept of marketing channels illustrates the progression of produce from producers to consumers through intermediary marketing entities and various marketing channels used in marketing of Apple Ber. The focus of the current study was to ascertain the marketing cost, marketing margin, and price spread of Apple Ber in the context mentioned above.

Material and Methods
Solapur district was intentionally chosen due to its significant cultivation area dedicated to the Apple Ber crop. The sampling design used for this research study was a two-stage purposive approach, involving the selection of Pandharpur and Sangola tehsils in Solapur district in proportion to the area under Apple Ber cultivation. Based on a sample of 90 Apple Ber growers, the data was collected from six villages-three in Pandharpur and three in Sangola tehsils of Solapur district, namely Bohali, Umbargaon, Korti, Akola (Vasud), Javla, and Kadlas. The selection of Apple Ber growers for the study was contingent upon the total cultivation area, with 30 individuals each from small (less than 0.40 ha), medium (0.41 to 0.80 ha), and large size farms (Above 0.81 ha). The collection of primary data occurred through a survey method in the year 2021-22. Marketing margin, price spread, marketing cost and marketing efficiency calculated by using following tools.

Marketing margin
$MT = \sum (Si - Pi)/Qi$
Where,
MT = Total marketing margin.
Si = Sale value of Apple Ber paid by ith firm.
Pi = Purchase value of Apple Ber paid by ith firm.
Qi = Quantity of Apple Ber handled by ith firm.

Price spread

Ps = Pc - Pf

Where,

Pc = Consumer's price (Rs.)

Pf = Price received by farmer (Rs.)

Total marketing cost

C = Cf + Cm1 + Cm2………+ Cmi

Where,

C = Total marketing cost (Rs.).

Cf = Cost paid by the grower (Rs.).

Cmi = Cost incurred by ith middleman (Rs.).

Marketing efficiency

The marketing efficiency of various markets has been worked out by using the modified method as suggested by Acharya and Agrawal (2001) [7] and the formulae used was as under.

MME = RP / (MC+MM)-1

Where,

MME = Modified measure of marketing efficiency

RP = Net price realized by producer (Rs.)

MC = Total marketing cost (Rs.)

MM = Net market margin

Where,

MM = RP - (MC + Net price received by the grower)

Results and Discussion

1. Marketing channels in apple Ber marketing

The total Apple Ber production reached 223.90 quintals, with 97.28% of the yield directed towards the market. The remained produce was allocated for consumption of home (0.93%), gratis distribution (0.72%), and declared unfit for consumption (1.56%). Different marketing channels were recognized and categorized according to their specific roles and functions: Channel-I involves the flow from Producer - Consumer. In Channel-II, the progression is from Producer - Preharvest contractor - Wholesaler - Retailer - Consumer and Channel-III operates from Producer - Wholesaler - Retailer - Consumer. At overall level, Channel-III (Producer - Wholesaler - Retailer - Consumer) was the predominant choice, facilitating the 64.69 per cent marketing of the total produce. Out of total produce 29.69 per cent quantity marketed through the Channel-II (Producer - Preharvest contractor - Wholesaler - Retailer - Consumer). Channel-I (Producer - Consumer) was the least preferred, handling only 5.62 per cent of total produce.

Table 1: Channel wise quantity sold of apple Ber (qtl/ha)

Sr. No	Channels	Small	Medium	Large	Overall
1	Channel-I (Producer - Consumer)	18.13(8.36)	10.82(4.97)	7.80(3.55)	12.25(5.62)
2	Channel-II (Producer - Preharvest contractor-Wholesaler-Retailer-Consumer)	103.85(47.91)	54.14(24.90)	36.02(16.42)	64.67(29.69)
3	Channel-III (Producer-Wholesaler-Retailer-Consumer)				
	Solapur	56.92(26.25)	72.12(33.17)	76.33(34.79)	68.45(31.43)
	Pune	37.86(17.47)	80.3(36..93)	99.19(45.22)	72.45(33.26)
	Total Quantity Sold	216.76(100.00)	217.38(100.00)	219.34(100.00)	217.82(100.00)

Table in parentheses are the per cent to the total

In instances involving smaller group sizes, the largest share of the total produce, accounting for 47.91%, was marketed through Channel-II (Producer - Preharvest contractor - Wholesaler - Retailer - Consumer). This was followed by Channel-III at 43.72% and Channel-I at 8.36%. In the context of Channel-III (Producer - Wholesaler - Retailer - Consumer), the Solapur market emerged as the more favored choice, accounting for 26.25% of the quantity sold, with the Pune market following at 17.47%.

In the category of medium-sized group Apple Ber growers, the predominant channel for sales was Channel-III (Producer - Wholesaler - Retailer - Consumer), representing 70.10% of the total produce, followed by Channel-II (Producer - Preharvest contractor - Wholesaler - Retailer - Consumer) at 24.90%. For the large-sized group, the predominant channel for marketing was Channel-III (Producer - Wholesaler - Retailer - Consumer), representing the highest quantity at 80.01% of the total produce. Following this was Channel-II (Producer - Preharvest contractor- Wholesaler - Retailer - Consumer) at 16.42%. In this group, the highest volume of sales occurred through Channel-III. Among the two markets

in Channel-III the highest quantity was sold through Pune market (45.22 per cent).

2. Channel wise marketing cost of Apple Ber

The determination of marketing costs per quintal for Apple Ber is articulated in Table 2, specifying expenses related to packing, grading, packaging material, transportation and commission charges across different marketing channels.

The Table illustrates that the marketing cost per quintal of Apple Ber for Channel-I was Rs.95.34, for Channel-II it stood at Rs.361.99 and for Channel-III, the costs were Rs.549.33 and Rs.634.68 through Solapur and Pune markets, respectively. Consequently, the marketing cost per quintal reached its peak in Channel-III (Producer-Wholesaler-Retailer-Consumer). Notably, commission charges and transport costs emerged as the primary components, contributing the largest share to the overall marketing cost. The transport charges contributed maximum cost in Channel-III. Mahesh bhong (2019) [1], similarly calculated channelwise marketing cost for Ber. Also worked out marketing cost, marketing margin and price spread.

Table 2: Channel wise marketing cost incurred by apple Ber farmer (Rs/Qtl)

Sr. No	Items of Cost	Channel-I	Channel-II	Channel-3	
				Solapur	Pune
1	Grading and Packaging	45.22(47.43)	62.12(17.16)	71.28(12.97)	86.32(13.60)
2	Packaging material charges	50.12(52.56)	55.69(15.380)	142.37(25.91)	156.54(24.66)
3	Transport charges		99.12(27.38)	170.35(31.01)	215.71(33.98)
4	Commission charges		100.01(27.62)	110.25(20.06)	115.8(18.24)
5	Hamali		45.05(12.44)	55.08(10.02)	60.31(9.50)
6	Total Marketing Cost	95.34(100.00)	361.99(100.00)	549.33(100.00)	634.68(100.00)

Table in parentheses indicates percentages to the total marketing cost

In instances of smaller group sizes, the predominant share of the total produce, at 47.91%, utilized Channel-II (Producer - Preharvest contractor - Wholesaler - Retailer - Consumer), while Channel-III accounted for 43.72% and Channel-I (8.36 per cent). Under Channel-III (Producer - Wholesaler - Retailer - Consumer) Solapur market more preferred through which 26.25 per cent quantity sold followed by Pune market (17.47 per cent).

In the category of medium-sized groups, the highest quantity of Apple Ber produce, comprising 70.10%, was sold through Channel-III (Producer - Wholesaler - Retailer - Consumer), with Channel-II (Producer - Preharvest contractor - Wholesaler - Retailer - Consumer) following at 24.90%.

The large-sized group witnessed the highest marketing activity, with 80.01% of the total produce being directed through Channel-III (Producer - Wholesaler - Retailer - Consumer), and Channel-II (Producer - Preharvest contractor - Wholesaler - Retailer - Consumer) contributing 16.42%. Quantity sold through Channel-III was highest in this group. Among the two markets in Channel-III the highest quantity was sold through Pune market (45.22 per cent).

3. Price spread and marketing efficiency in different marketing channels

Understanding price spread is crucial in assessing the dynamics of agricultural markets. The data from the Table. 3 reveals that the producer's net price varied across different channels. Net price for Channel-I was Rs.1322.64, it was Rs.1627.79 in Channel-II and in Channel-III, it amounted to Rs.1886.38 and Rs.2649.71 through Solapur and Pune markets, respectively. Notably, the highest net price realized by the producer was observed in the Pune market.

The minimal marketing expenses in Channel-I (Producer - Consumer) resulted in the lowest price spread. Channel-II had a price spread of Rs.1497.21, whereas Channel-III, notably in the Pune market, had the highest price spread at Rs.1575.83, followed by the Solapur market at Rs.1378.94. This price spread increase is directly linked to the elongation of the market chain. Deokate TB *et al.* (2020) [3] similarly investigated the interrelation between price spread and marketing efficiency. As per the findings, for Channel-III the price paid by the consumer was the highest in the Pune market (Rs. 4125.54) followed by the Solapur market (Rs.3265.32). Price paid for Channel-II was Rs.3125.00, and Channel-I had less consumer price paid, specifically Rs.1417.98. Mali *et al*. (2006) [5] conducted a study analyzing the marketing pattern and price spread of Ber, while Bhosale (2011) [2] focused on the marketing cost, market margin, and price spread in Ber.

As per the findings, the price paid by the consumer was the highest in Channel-III in the Pune market (Rs. 4125.54) followed by the Solapur market (Rs.3265.32). Price paid for Channel-II was Rs.3125.00, and Channel-I had less consumer price paid, specifically Rs.1417.98.

Table 3: Price spread and marketing efficiency of different channels (Rs/qtl)

Sr. No	Particulars	Channel-I	Channel-II	Channel-III	
				Solapur	Pune
1	Gross price received by farmer	1417.98	1989.78	2435.71	3284.39
	i) Marketing cost	95.34	361.99	549.33	634.68
	ii) Net price realized	1322.64	1627.79	1886.38	2649.71
2	Preharvest contractor				
	i) Price paid		1989.78		
	ii) Marketing cost		256.45		
	iii) Marketing margin		299.32		
	iv) Price received		2545.55		
3	Wholesaler				
	i) Price paid		2545.55	2435.71	3284.39
	ii) Marketing cost		205.12	298.45	325.12
	iii) Marketing margin		94.45	198.29	246.14
	iv) price received		2845.12	2932.45	3855.65
4	Retailer				
	i) Price paid		2845.12	2932.45	3755.65
	ii) Marketing cost		185.12	200.05	205.19
	iii) Marketing margin		94.76	132.82	164.7
	iv) Price received		3125.00	3265.32	4125.54
5	Consumer price paid	1417.98	3125.00	3265.32	4125.54
6	Price Spread	95.24	1497.21	1378.94	1575.83
7	MC + MM		1497.21	1378.94	1575.83
8	Marketing Efficiency	13.8	1.09	1.37	1.68

Table in parentheses is the per cent to the total

The assessment of marketing efficiency was conducted utilizing a modified approach recommended by Acharya and Agrawal (1999) [6]. Analysis of the Table data revealed that Channel-I exhibited the highest marketing efficiency (13.8), with Pune (1.68) and Solapur (1.37) markets in Channel-III following closely. Channel-II had a comparatively lower marketing efficiency at 1.09.

Conclusion
The marketing pattern of Apple Ber indicated a higher preference for Channel-III, denoting the Producer-Wholesaler-Retailer-Consumer pathway, compared to the other channels studied. Per quintal marketing cost of Channel-III was highest as distance markets preferred. For Channel-III highest price spread was seen, notably in the Pune market, at Rs.1575.83, followed by the Solapur market at Rs.1378.94. price spread increase was directly linked to the elongation of the market chain. Marketing efficiency of Channel-I (13.8) was highest. Though the Channel-I has highest marketing efficiency net price received by farmers highest in case of Channel- III.

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