



ISSN Print: 2664-844X
ISSN Online: 2664-8458
NAAS Rating (2026): 4.97
IJAFA 2026; 8(9): 15-18
www.agriculturaljournals.com
Received: 12-06-2026
Accepted: 15-07-2026

Rutuja J Wagh
PG student, Department of
Agricultural Economics, Post
Graduate Institute, Dr.
Panjabrao Deshmukh Krishi
Vidyapeeth, Akola,
Maharashtra, India

AA Bhopale
Field officer/ Assistant
Professor, Department of
Agricultural Economics, Post
Graduate Institute, Dr.
Panjabrao Deshmukh Krishi
Vidyapeeth, Akola,
Maharashtra, India

VK Khobarkar
Professor, Department of
Agricultural Economics, Post
Graduate Institute, Dr.
Panjabrao Deshmukh Krishi
Vidyapeeth, Akola,
Maharashtra, India

UA Raut
Associate Professor,
Department of Agricultural
Economics, Post Graduate
Institute, Dr. Panjabrao
Deshmukh Krishi Vidyapeeth,
Akola, Maharashtra, India

UR Chinchmalatpure
Professor, Department of
Agricultural Economics, Post
Graduate Institute, Dr.
Panjabrao Deshmukh Krishi
Vidyapeeth, Akola,
Maharashtra, India

Corresponding Author:
Rutuja J Wagh
PG student, Department of
Agricultural Economics, Post
Graduate Institute, Dr.
Panjabrao Deshmukh Krishi
Vidyapeeth, Akola,
Maharashtra, India

Marketing of lemon in Akola district of Maharashtra

Rutuja J Wagh, AA Bhopale, VK Khobarkar, UA Raut and UR Chinchmalatpure

DOI: <https://www.doi.org/10.33545/2664844X.2026.v8.i9a.1850>

Abstract

The present study analysed the marketing of lemon in Akola district of Maharashtra. Three marketing channels were identified, namely Producer-Retailer-Consumer, Producer-Wholesaler-Retailer-Consumer and Producer-Pre-harvest Contractor-Wholesaler-Retailer-Consumer. The total marketing cost was lowest in Channel I at Rs. 535.35 per quintal and highest in Channel III at Rs. 1,479.24. The price spread ranged from Rs. 2,399.35 to Rs. 3,150.00 per quintal, while the total marketing margin ranged from Rs. 1,584.00 to Rs. 2,030.76 per quintal. The producer's share in the consumer's rupee was highest in Channel I at 61.30 per cent, followed by Channel II at 55.44 per cent and Channel III at 55.20 per cent. Overall, Channel I was comparatively more favourable to lemon growers due to its lower marketing cost and price spread and higher producer's share.

Keywords: Price spread, marketing cost, margin, marketing channel

Introduction

Lemon (*Citrus limon*) is one of the important commercial citrus fruits belonging to the family Rutaceae. It is widely cultivated in tropical and subtropical regions because of its regular demand and diverse uses in household consumption, beverages, food processing and traditional medicine. Lemon is a rich source of vitamin C, flavonoids, antioxidants, dietary fibre and other bioactive compounds, which contribute to its nutritional and medicinal importance. The fruit and its peel are also used for the preparation of juices, pickles, squashes, essential oils and other value-added products. The presence of vitamins, flavonoids and essential oils makes lemon an economically and nutritionally important fruit crop. Tamara S. 2018 reported the medicinal, nutritional and commercial importance of lemon and its wide range of applications.

Maharashtra is an important citrus-producing state, particularly in the Vidarbha region. During 2024-25, the state had about 27.83 thousand hectares under lemon and lime cultivation, with production of approximately 291.85 thousand metric tonnes and productivity of 10.49 metric tonnes per hectare. Nagpur, Amravati, Wardha and Akola are important citrus-producing districts of Vidarbha. Among these, Akola has developed a distinct identity for lemon cultivation, particularly Kagzi lime. Akola Kagzi Lime has also received Geographical Indication registration, reflecting its distinct regional and commercial identity.

Akola district has about 2,360 hectares under lemon and lime cultivation, with total production of approximately 12,144 metric tonnes and productivity of about 10 metric tonnes per hectare. Patur is the leading tahsil with about 1,050 hectares under cultivation, followed by Balapur with 710 hectares, Akola with 209 hectares, Barshitakli with 170 hectares, Murtizapur with 79 hectares, Telhara with 72 hectares and Akot with 70 hectares. The concentration of lemon cultivation in these tahsils demonstrates the importance of the crop as a commercial enterprise and an important source of farm income in the district.

The profitability of lemon cultivation depends not only on production and productivity but also on the efficiency of the marketing system. Lemon is a perishable commodity and requires timely harvesting, grading, packing, transportation and marketing. The produce generally passes through different market functionaries such as producers, pre-harvest contractors, wholesalers and retailers before reaching consumers. Consequently, marketing costs, intermediary margins and the length of marketing channels influence the price

received by farmers and the price paid by consumers. Inefficient marketing arrangements may result in higher marketing costs and a lower share of the consumer's rupee accruing to producers.

Objective

To study Marketing of lemon

Methodology

Materials and methods

The primary data for the year 2024-25, were collected from the 120 lemon growers as well as intermediaries by survey method with the help of specially designed questionnaire. 40 sample cultivators from each three tahsil were selected and two villages from each tahsil selected. 20 cultivators were selected from each village. Thus, in all 120 sample cultivators was selected randomly for the present study. Data Analysis for calculating of marketing margin, price spread and marketing cost following tools were used.

Marketing cost: It is the actual expenses required in bringing goods and services from the point of production to the point of consumption. Marketing cost may be computed as follows,

$$C = C_f + C_{m1} + C_{m2} + \dots + C_{mi}$$

Where,

- C = Total marketing cost
- C_f = Cost paid by the producer
- C_{mi} = Cost incurred by i^{th} middleman

Net margin

$$N_{mi} = P_{ri} - (P_{pi} + C_{mi})$$

Where,

- N_{mi} = Net margin of i^{th} type of market middlemen
- P_{ri} = Total value of receipt per unit
- P_{pi} = Per unit purchase price of produce by the i^{th} middlemen

Price spread

Price spread of the produce show the difference between net price received by the producer in the assembling market and price paid by ultimate consumer to produce in the retail market. It includes all the market charges incurred by

producer, wholesaler and retailer as well as profit margin at wholesaler and retailer.

$$P_{sd} = P_c - P_f$$

Where,

- P_{sd} = Price spread
- P_c = Price paid by the consumer
- P_f = Net price received by the grower/producer

Result and Discussion

Marketing Channels of Lemon

The investigation revealed that lemon farmers engaged in different marketing channels for the disposal of their produce. The major channels identified in the study area are as follows:

- **Channel I:** Producer → Retailer → Consumer
- **Channel II:** Producer → Wholesaler → Retailer → Consumer
- **Channel III:** Producer → Pre-harvest Contractor → Wholesaler → Retailer → Consumer

These channels differ with respect to the number of intermediaries involved and the marketing costs and margins incurred at each stage. The selection of a particular channel by farmers depends on factors such as quantity of produce available for sale, market accessibility, availability of buyers, and expected net returns.

Marketing cost of lemon

The marketing cost of lemon varied across the three marketing channels. The total marketing cost was lowest in Channel I at Rs. 535.35 per quintal, followed by Channel II at Rs. 1,399.35 per quintal, and highest in Channel III at Rs. 1,479.24 per quintal. In Channel I, the producer incurred Rs. 279.35 per quintal and the retailer incurred Rs. 256.00 per quintal. In Channel II, the producer, wholesaler and retailer incurred Rs. 516.55, Rs. 522.50 and Rs. 258.00 per quintal, respectively.

In Channel III, the pre-harvest contractor, wholesaler and retailer incurred Rs. 530.00, Rs. 540.00 and Rs. 259.24 per quintal, respectively, in addition to the producer's marketing expenses. The higher marketing cost in Channels II and III was mainly due to the involvement of additional intermediaries and increased marketing operations. Thus, Channel I was the most economical marketing channel for lemon in the study area.

Table 1: Marketing cost of lemon

Sr. No.	Particulars	Channel I	Channel II	Channel III
A	Marketing cost incurred by producer			
1	Packing material	80.00	80.00	-
2	packing	20.35	20.35	-
3	Commission charges	0	247.20	-
4	Loading and unloading charges	60.50	60.50	-
5	Transportation	105.00	100.00	-
6	Weighing charges	8.50	8.50	-
7	other	5.00	0.00	-
	Marketing cost	279.35	516.55	-
	Selling price of producer	4080.00	4120.00	4150.00
B	Marketing cost incurred by pre-harvest contractor			
1	Packing material	-	-	140.00
2	packing	-	-	50.00
3	Commission charges	-	-	80.00

4	Loading and unloading charges	-	-	90.00
5	Transportation	-	-	155.00
6	Weighing charges	-	-	15.00
7	other	-	-	0.00
	Marketing cost	-	-	530.00
	Selling price of pre-harvester	-	-	5500.00
C	Marketing cost incurred by Wholesaler			
1	Packing material	-	120.00	120.00
2	Packing	-	30.00	30.00
3	Commission charges	-	98.50	98.50
4	Loading and unloading charges	-	86.00	86.00
5	Market fee	-	25.00	25.00
6	Shop rent	-	20.00	20.00
7	Transportation	-	130.50	148.00
8	Weighing charges	-	12.50	12.50
9	other	-	0.00	0.00
	Marketing cost		522.50	540.00
	Selling price of wholesaler		5400.00	6600.00
D	Marketing cost incurred by Retailer			
1	Packing material	100.00	100.00	100.00
2	Loading and unloading charges	60.00	60.00	60.00
3	Transportation	50.00	52.00	53.24
4	Shop rent	21.00	21.00	21.00
5	Weighing charges	15.00	15.00	15.00
6	other	10.00	10.00	10.00
	Marketing cost	256.00	258.00	259.24
	Selling price of Retailer	6200.00	6500.00	7500.00
E	Total marketing cost	535.35	1399.35	1479.24

Price spread and Producers share in consumer rupees in marketing of lemon

Table 2: Price spread and total margin in different channel of lemon marketing

Sr. No.	Particulars	Channel I	Channel II	Channel III
A	Producer			
	Gross Price received by Producer	4080.00	4120.00	4150.00
	Marketing cost incurred	279.35	516.55	0.00
	Net price received by producer	3800.65	3603.45	4140.00
B	Pre-harvest contractor			
	Purchased price	-	-	4140.00
	Marketing cost incurred	-	-	530.00
	Net margin	-	-	830.00
	Selling price	-	-	5500.00
C	Wholesaler			
	Purchased price	-	4120.00	5500.00
	Marketing cost incurred	-	522.50	540.00
	Net margin	-	757.50	560.00
	Selling price	-	5400.00	6600.00
D	Retailer			
	Purchased price	4080.00	5400.00	6600.00
	Marketing cost incurred	256.00	258.00	259.24
	Net margin	1864.00	842.00	640.76
	Selling price	6200.00	6500.00	7500.00
E	Consumer			
	Purchasing price	6200.00	6500.00	7300.00
	Net price received by producer	3800.65	3500.65	4140.00
	Price spread	2399.35	2999.35	3150.00
	Total margin	1584.00	1864.00	2030.76
	Producers share in consumer rupees	61.30	55.44	55.20

The analysis of price spread and marketing margins revealed considerable variation among the three marketing channels. The producer's share in the consumer's rupee was highest in Channel I at 61.30 per cent, followed by Channel II at 55.44 per cent and Channel III at 55.20 per cent. The price spread was lowest in Channel I at Rs. 2,399.35 per quintal, whereas it increased to Rs. 2,999.35 in Channel II and reached the highest level of Rs. 3,150.00 per quintal in Channel III.

Similarly, the total marketing margin increased from Rs. 1,584.00 per quintal in Channel I to Rs. 1,864.00 in Channel II and Rs. 2,030.76 in Channel III.

The results indicate that Channel I was comparatively more efficient and favourable to lemon producers because it involved fewer intermediaries and resulted in the highest producer's share and lowest price spread. In contrast, Channels II and III involved wholesalers and, in Channel

III, a pre-harvest contractor, resulting in higher intermediary margins and a lower share of the consumer's rupee received by the producer. Thus, the channel I provided better price realization to lemon growers and reduced the difference between the producer's net price and the consumer's purchase price.

Conclusion

Hence the study revealed that three marketing channels were prevalent in Akola district, namely Producer-Retailer-Consumer, Producer-Wholesaler-Retailer-Consumer and Producer-Pre-harvest Contractor-Wholesaler-Retailer-Consumer. The total marketing cost was lowest in Channel I at Rs. 535.35 per quintal, followed by Channel II at Rs. 1,399.35 and highest in Channel III at Rs. 1,479.24 per quintal. The higher marketing cost in the longer channels was mainly due to the involvement of additional intermediaries and higher marketing expenses.

The price spread was lowest in Channel I at Rs. 2,399.35 per quintal, followed by Channel II at Rs. 2,999.35 and highest in Channel III at Rs. 3,150.00 per quintal. The total marketing margin was Rs. 1,584.00, Rs. 1,864.00 and Rs. 2,030.76 per quintal in Channels I, II and III, respectively. The producer's share in the consumer's rupee was highest in Channel I at 61.30 per cent, followed by Channel II at 55.44 per cent and Channel III at 55.20 per cent. Overall, Channel I was comparatively more efficient and favourable to lemon growers due to its lower marketing cost and price spread and higher producer's share in the consumer's rupee.

References

1. Deokate TB, Raut HG, Yadav DB. Marketing of Kagzi lime in Jalna district of Maharashtra. *Journal of Pharmacognosy and Phytochemistry*. 2020;9(Special Issue 2):12-14.
2. Gunwant V. Marketing of sweet orange Malta in India. *International Journal of Emerging Research in Management and Technology*. 2013;2(3).
3. Jadhao SK, Khobarkar VK, Shende NV, Patil SR. Marketing of orange in Amravati district of Maharashtra. *International Journal of Statistics and Applied Mathematics*. 2024;9(Special Issue 5):5-7.
4. Kalita N, Deka D, Kalita B. Price spread and marketing efficiency analysis of Kaji Nemu (Assam lemon) under different marketing channels. *Journal of Neonatal Surgery*. 2025;14(7):1262-1268.
5. Saxena A, Singh A. Marketing of sweet orange (Malta) in Uttarakhand. *International Journal of Commerce & Business Management*. 2015;8(2):290-295.
6. Thejeswini R, Kiresur VK, Gracy CP. Marketing and seasonal price variation of acid lime in Vijayapura district. *Indian Journal of Economics and Development*. 2016;12(1A):43-46.