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Marketing and constraints of pomegranate in Washim district: An economic analysis

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Abstract
Marketing of pomegranate is a multifaceted activity it also includes delivery of fruits from the grower's field to the consumers. The distribution system involves complex links of producers, traders, transporters and consumers known as a marketing channel. The study revealed that most of quantity was sold through the channel II while less quantity was sold through channel I. Price paid by consumer was worked to ` 5605.49 and ` 5952.77 in channel I and channel II, respectively. In second channel the expenses incurred by producer was `110.12 in which the market expenses were not involved. It can be conclude that in channel II producers share in consumers rupee was more and consumer obtain the product at cheaper rate than other channel. In marketing of pomegranate mostly followed marketing channel was - Producer-Wholesaler cum-commission agent-Fruit trader-Retailer-Consumer. The producer share in consumers' rupee was 90.88 per cent in channel I which was more than channel II. Lack of cold storage facilities and high rate of commission were the major constraint's in marketing of pomegranate.

Keywords: Marketing, pomegranate, constraints

Introduction

Marketing is a very important stage at which the producer will be in a position to get the best outcome of his efforts. Maharashtra is the leading producer of pomegranate followed by Karnataka, Andhra Pradesh, Gujarat and Tamil Nadu. Ganesh, Bhagwa, Ruby, Arakta and Mridula are the different varieties of pomegranates produced in Maharashtra. In India, pomegranate is commercially cultivated in Solapur, Sangli, Nasik, Ahmednagar, Pune, Dhule, Aurangabad, Satara, Osmanabad and Latur districts of Maharashtra; Bijapur, Belgaum and Bagalkot districts of Karnataka and to a smaller extent in Gujarat, Andhra Pradesh and Tamil Nadu. Pomegranates are commonly used as decorations during the fall and winter seasons. They can be displayed fresh and used later for consumption, or they can be dried (Pomegranate Council, 2011).

Distribution of produce (Pomegranates) from primary to terminal market grown in different parts of country are transported to the big cities for marketing. The fruits produced in Maharashtra, Karnataka, Andhra Pradesh and Tamil Nadu find market in Mumbai, Nagpur and Kolkata. The important whole sale markets of pomegranate in India are Kolkata, Delhi, Mumbai, Chennai, Bangalore, Nagpur, Pune and Ahmedabad. Pomegranates for these big markets are usually collected at the central places in all pomegranate growing areas. From Mumbai and Kolkata ports the pomegranate is exported to the destination markets. Pomegranate co-operative societies from Maharashtra state have formed an apex cooperative namely Maha Anar. Bhagwa variety has high acceptance in European market.

The post-harvest sector of pomegranate is characterized by its linkages or relationships between producers and consumers as well as between urban and rural areas. And the intermediates operating between the producer and the final buyer play a significant role in regulating these linkages. The functions of intermediaries are buying, selling and risk taking. The costs of fruits are often determined by the performance and efficiency of different intermediaries or functionaries in various marketing channels. Marketing of pomegranate is a multifaceted activity it also includes delivery of fruits from the grower's field to the consumers. The distribution system involves complex links of producers, traders, transporters and consumers known as a marketing channel. It explains that how produce passes through different stages from producers to the consumers. The time required to complete marketing channel ranges from a few hours to few days depends on the type of market chosen by the grower. There are permutations and combinations of sales channels.

Objectives

1. To study the marketing of pomegranate.
2. To identify the constraints in marketing of pomegranate.

Materials and Methods

Data for the present study were collected from two tahsils of Washim district *viz*., Mangrulpir and Manora. In Washim district two tahsils *viz*., Mangrulpir and Manora were selected purposively according to area under pomegranate. In all six villages, three villages from each tahsil, were selected randomly and from six villages 90 pomegranate farmers were selected.

Selection of Area

Data for the present study were collected from Washim district. The selection of tahsils was purposely made taking into consideration the availability of data and concentration of pomegranate in the district. For this study two tahsils *viz*., Mangrulpir and Manora from washim district were selected. Three villages were selected from each tahsil. 90 farmers from these villages were selected for the study.

Selection of farmers

Study is based on primary data collected from selected farmers of mangrulpir and manora tahsils. Farmers from villages under consideration were selected randomly. About 90 pomegranate growers from six villages were selected. They were grouped into three groups based on age of pomegranate orchard. The distribution of selected pomegranate growers is given in table 1.

Table 1: Distribution of selected pomegranate growers in different groups.

S. No.	Groups	No. of growers	Total area (ha)	Average area (ha)
1.	Group I	47 (52.22)	33 (53.63)	1.09
2.	Group II	36 (40)	20 (32.45)	0.84
3.	Group III	7 (7.7)	8.53 (13.86)	0.52
	Total	90 (100)	61.53 (100)	

(Figures in parentheses indicate percentages to total)

Group I - Up to 3 Years
Group II - 3 to 8 Years
Group III - Above 8 Years

For the purpose of estimating Marketing cost of Pomegranate only Group II and Group III has been considered. All the relevant data required for study purpose was collected by survey method with the help of schedule designed specially for the purpose. Collection of data was done by personal interview method. Information pertaining to input utilization, marketing and constraints was collected for the year 2011-12. Marketing cost, Marketing channel and price spread was worked out. All the 90 pomegranate farmers were categorized into three different groups according to age of orchard. Group I involve the farmers who were having orchards of age from 1 year to 3 years, Group II contain the orchard of age from 3 year to 8 years and finally in Group III the farmers having orchard of above 8 years were taken. For studying the problems in marketing of pomegranate, simple statistical tools (averages, percentages) were used. The summarized findings of this study are as follows.

Marketing of Pomegranate

a) Assembling

This operation consists of collection fruits from different farm scattered all over the cultivated area to the central place and from this place the fruits were taken to the market for sale. Mangrulpir and Manora were the assembling center in study area.

b) Grading

Grading is sorting of produce in to different grades according to size, shape, colour and volume to fetch high price in market. Grading of fruits after harvesting is an essential step in post-harvest management. Grading were done on the basis of physical characteristics like weight, size, colour, shape and freedom from diseases. Grading enhanced to set good price for graded products. Grading of fruits is in the fresh form is essential for quality, as the people are becoming quality conscious day by day.

Pomegranate were graded under

Grade I: Superior quality, attractive, large sized (Approx. wt. 400 gm)

Grade II: Good quality, attractive, medium sized (Approx. wt. 250-400 gm)

Grade III: Less attractive, small sized, with one or two defects/patches.

(Approx. wt. less than 250 gm).

Table 2: Grade wise quantity of pomegranate sold (ha^{-1})

S. No.	Grade	Channel I	Channel II	Overall
1	I	23.13 (53.63)	37.53 (60.69)	30.33 (57.79)
2	II	14.87 (34.48)	16.47 (26.63)	15.67 (29.86)
3	III	5.13 (11.89)	7.84 (12.68)	6.48 (12.35)
4	Net quantity sold	43.13 (100)	61.84 (100)	52.48 (100)

(Figures in parentheses are percentage to net quantity sold)

At overall level, per hectare quantity of pomegranate sold by sample farmers was 52.48 quintals. Out of these total quantity sold, maximum quantity 57.79 per cent was of Grade I which was followed by Grade II 29.86 per cent and Grade III 12.35 per cent. Maximum quantity sold through channel II i.e. 60.69 per cent of Grade I and in channel I 53.63. Per cent of quantity sold of Grade I.

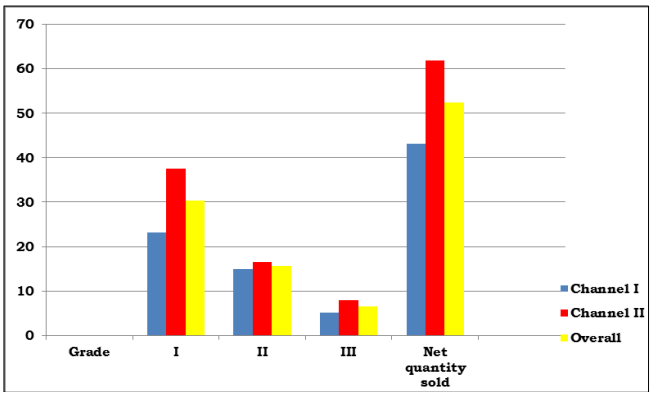

Fig 1: Grade wise quantity of pomegranate sold

c) Packaging

Packaging of fruits is one of the most important steps in the long and complicated journey from grower to consumer. Packaging protects the produce from mechanical damage and poor environmental conditions during handling and distribution. Packing material like Anar boxes, card board boxes, wire bound crates, wooden and fiber crates, corrugated fiber boxes were used for packaging. Most of farmers used fiber crates which were taken by him by hiring it at the rate of 5 per crates, of capacity about 20 kg per crates. Sometimes crates having capacity of 25 kg and 50 kg also used to carry the fruits, but mostly crates having capacity of 20 kg were used for transportation purpose.

d) Transportation

In case of pomegranate, transport means like minitruck, tempos, minidore were used for transportation of produce by farmer to the local market. At distant market like Mumbai, Nagpur, Bangalore tempos and trucks were used for transportation purpose.

e) Buying and selling

1. **Selling Method:** In secondary market like Akola and Washim farmer bring their produce through their own or hired means of transport and sale their produce to the wholesalers. The crates are opened at randomly in respect of every producer for inspection of produce by purchasers who are mostly wholesaler or retailer. After inspection by open auction sale prices are fixed. At some places bargaining of the prices done and then selling of produce take place.
2. **Payment system:** In local markets, payment is done immediately after sale of produce. Producers who sale their produce in Akola and Washim markets get payment within 6-7 days. Farmer first received a receipt having all details of commission charges, loading and unloading charges and transport charges. This receipt producer has to show to local agent of that wholesaler and then producer get his payment.

Marketing cost of pomegranate

Total marketing cost-

C = Cf + Cm1 + Cm2…….Cmn

Where

C = Total Marketing cost

Cf = Cost paid by the producer from the time theproduce leaves the farm till he sells it.

Cmi = Cost incurred by ith middleman in the processof buying and selling the product.

Marketing margin

MT= ∑ (Si-Pi)/Qi

Where,

MT=Total marketing margin

Si =Sale value of a product paid by i^{th} firm

Pi =Purchase value of a product paid by i^{th} firm

Qi =Quantity of product handled by its firm

Price spread

Price spread = Consumer's price – price received by farmer

Ps = Cp – Pf

Where,

Cp=Consumer's price

Cf =Price received by farmer

For studying the problems in marketing of pomegranate, simple statistical tools (averages, percentages) were used (Source: Acharya and Agrawal).

Results and Discussion

1. Marketing channels in pomegranate marketing

1. It was observed that, sample farmers sold their produce mainly through following channels. Two marketing channels were observed in marketing of pomegranate *viz.*,
2. Producer -Wholesaler -Retailer - Consumer
3. Producer- Wholesaler cum Commission agent- Fruit trader-Retailer-Consumer

Following channels were observed in Mangrulpir and Manora markets. As regard the first channel the wholesaler purchase the pomegranates from producer and sell it to consumers. Retailer also purchase pomegranates from producer and sell it to consumers. In marketing of pomegranate few numbers of intermediaries were involved. The channel second was commonly followed channel in study area.

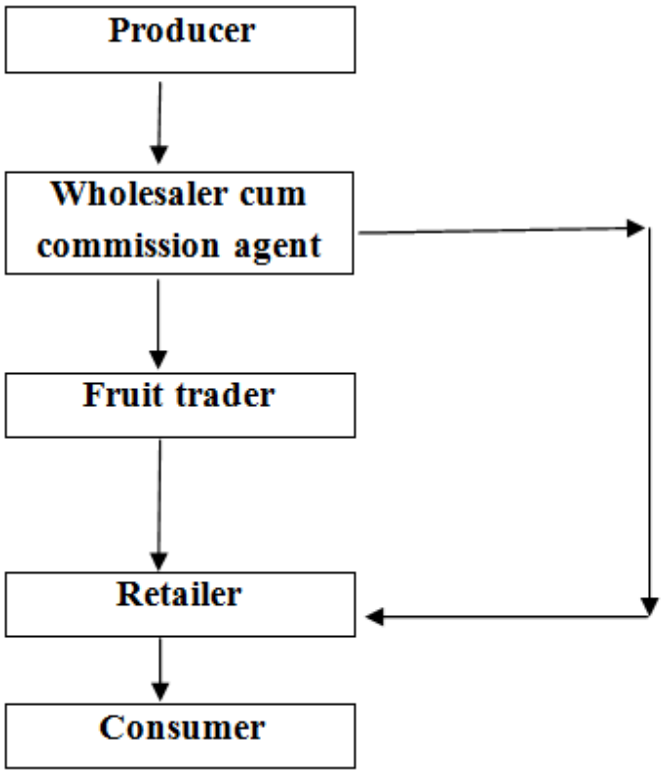

Fig 2: Marketing channels in pomegranate marketing

Table 3: Total quantity sold through different marketing channels (q/ha)

S. No.	Channels	Group I	Group II	Overall
1.	I	16.01 (37.12)	12.68 (20.50)	14.34 (27.32)
2.	II	27.12 (62.88)	49.16 (79.50)	38.14 (72.68)
	Total	43.13 (100)	61.84 (100)	52.48 (100)

(Figures in parentheses are percentage to total)

Table 3 reveals that the quantity sold through channel I was worked to 16.01 quintals and 12.68 quintals per hectare which accounted to 37.12 per cent and 20.50 per cent by Group II and Group III. While the quantity sold through channel II was worked out to 27.12 quintals and 49.16 quintals per hectare which accounted to 62.88 per cent and 79.50 per cent of total quantity sold by Group II and Group III, respectively. At overall level about 14.34 quintals and 38.14 quintals were sold through channel I and channel II respectively which were accounted to 27.32 per cent and 72.68 per cent, respectively. From above discussion we can say that most of quantity was sold through the channel II while less quantity was sold through channel I.

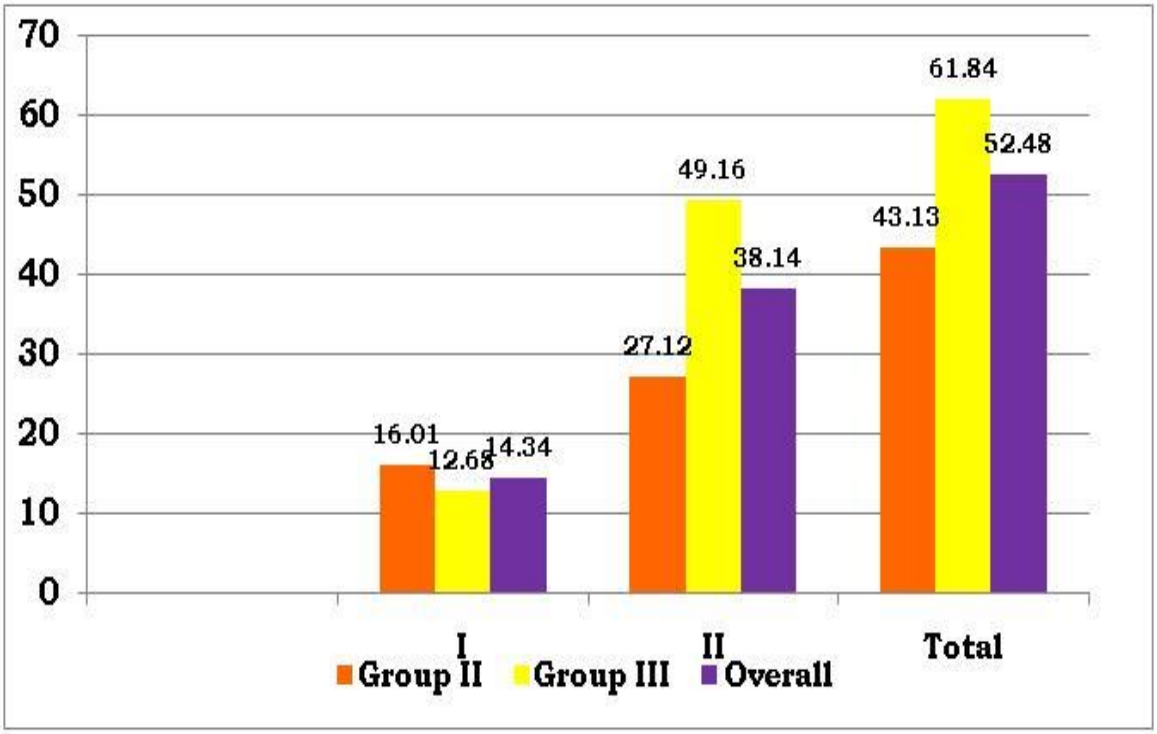

Fig 2: Total quantity sold through different marketing channels

2. Marketing cost of pomegranate

Marketing of horticultural products is more expensive than the marketing of manufactured goods, due to certain peculiar features of horticultural products. It was observed from Table 4 that for Group II total marketing cost was 1590.8 and in Group III it was 1377.21. At overall level it was 1484.

This cost is followed by transportation cost, packing cost and grading cost in both groups. The marketing cost for fruit trader was 152.21 and ` 217.28 in Group II and Group III, respectively. At overall level it was 184.74.

Commission charges of wholesaler at overall level were 295.85. The marketing cost of wholesaler in Group II and Group III was 1088.87 and ` 794.51, respectively. At overall level it was 941.51. The marketing cost for producer was ` 256.12 and 232.17 in Group II and Group III, respectively. At overall level marketing cost for producer was ` 244.14. It is important to note from Table 3 that, producer had not taken part in marketing process and they sold their produce at farm itself to pre-harvest contractor and some farmer sell their produce at taluka market with the help of own transport means which includes transportation cost and packing cost.

Table 4: Marketing cost of pomegranate (`/qts)

S. No.	Particulars	Group II	Group III	Overall
A	Marketing cost incurred by farmer	110 (6.91)	90 (6.53)	100 (6.72)
1	Cost of packing	46.12 (2.90)	42.17 (3.06)	44.14 (2.98)
2	Cost of transport	100 (6.29)	100 (7.26)	100 (6.77)
	Total	256.12 (16.12)	232.17 (16.86)	244.14 (16.48)
B	**Marketing cost incurred by Wholesaler cum commission agent**			
1	Grading charges	59.39 (3.39)	43.43 (3.15)	51.41 (3.34)
2	Cost of packing	78.94 (4.96)	57.89 (4.20)	64.41 (4.58)
3	Transport charges	575 (36.15)	411.11 (29.85)	493.05 (33)
4	Hamali	33.83 (2.12)	25.83 (1.88)	29.83 (2.00)
5	Other charges (octroi)	3.38 (0.21)	2.52 (0.18)	2.59 (0.19)
6	Commission	338.33 (21.3)	253.38 (18.40)	295.85 (19.85)
	Total	1088.87 (68.45)	794.16 (57.7)	941.51 (63.07)
C	**Cost incurred by fruit trader**			
1	Shop rent	24.81 (1.56)	35.41 (2.6)	29.79 (2.08)
2	Miscellaneous	5.64 (0.35)	8.04 (0.58)	6.84 (0.46)
3	Transportation charges	3.38 (0.21)	4.83 (0.35)	4.1 (0.28)
4	Storage	6 (0.35)	8 (0.58)	7 (0.46)
5	Commission	112.78 (7.09)	161.00 (11.7)	136.89 (9.39)
	Total	152.21 (9.6)	217.28 (15.78)	184.74 (12.69)
D	**Retailer**			
1	Miscellaneous	3.38 (0.21)	4.8 (0.35)	4.09 (0.28)
2	Commission	90.22 (5.7)	128.80 (9.4)	109.51 (8.86)
	Total	93.60 (5.9)	133.60 (9.70)	113.60 (7.8)
	Total Marketing Cost	1590.8 (100)	1377.21 (100)	1484 (100)

(Figures in parentheses are percentage to total marketing cost)

3. Price spread in pomegranate marketing

The price spread refers to the difference between the price received by the growers and the price paid by the consumers.

Channel I: Producer – Wholesaler – Retailer – Consumer

Channel II: Producer- Wholesaler cum commission agent-Fruit trader-Retailer- Consumer Table 5 reveals that the net price received by producer was ` 5094.14 and ` 5174.44 in channel I and channel II, respectively.

Table 5: Price spread in pomegranate marketing (`/q)

S. No.	Particulars	Channel I	Channel II	Overall
1	**Producer**			
i)	Price received by producer	5094.14	5174.44	5134.29
ii)	cost incurred	120.21	110.12	115.16
iii)	Net price	5094.14 (90.88)	5174.44 (86.92)	5134.29 (88.85)
	Selling price of producer	5094.14	5174.44	5134.29
2	**Wholesaler cum commission agent**			
i)	Purchase price	5094.14	5174.44	5134.29
ii)	Cost incurred	170.44 (3.04)	149.44 (2.51)	159.94 (2.77)
iii)	Commission	207.56 (3.7)	193.00 (3.24)	200.28 (3.47)
	Selling price of producer	5472.91	5516.89	5494.89
3.	**Fruit trader**			
i)	Purchase price	--	5516.89	5516.88
ii)	Cost incurred	--	144.23 (2.42)	144.23 (2.42)
iii)	Commission	--	155.78 (2.62)	155.78 (2.62)
	Selling price of fruit trader	--	5816.89	5816.89
4	**Retailer**			
	Purchase price	5472.91	5816.89	5644.9
	Cost incurred	12.57 (0.22)	12.88 (0.22)	12.72 (0.21)
	Commission	119.78 (2.14)	123.00 (2.07)	121.39 (2.10)
	Selling price of retailer	5605.49	5952.77	5779.38
5	**Purchasing Price/Retailer selling price**	5605.49	5952.77	5779.38
	Total cost incurred byall intermediaries	444.12	417.01	430.56
	Total margin of all Intermediaries	327.34	474.44	400.89
	Price spread	511.22	778.33	644.72
	Producers share in consumers rupee	(90.88)	(86.92)	(88.90)

(Figures in parentheses are percentage to total)

Price paid by consumer was worked to ` 5605.49 and ` 5952.77 in channel I and channel II, respectively. In channel I wholesaler and retailer purchase price was ` 5094.14 and ` 5472.91 while cost incurred by wholesaler was ` 170.44 and cost incurred by retailer was ` 12.17 respectively. The market expenses for wholesaler and retailer including commission was ` 207.56 and `119.78, respectively. In second channel the expenses incurred by producer was ` 110.12 in which the market expenses were not involved.

The purchasing price of fruit trader in channel II was ` 5516.89. The price spread was ` 511.22 and ` 778.33 in channel I and channel II respectively. Total margin of all intermediaries was ` 327.34 and ` 474.44 in channel I and channel II, respectively. At overall level margin was ` 400.89 while overall price spread was ` 624.72 which accounted to 88.90 per cent. Thus from above discussion we can conclude that as there are less intermediary in marketing, the producers share in consumers rupee is more. From the study we can conclude that in channel II producers share in consumers rupee was more and consumer obtain the product at cheaper rate than other channel.

4. Constraints faced by pomegranate growers

The pomegranate growers were faced some constraints in marketing of pomegranate was presented in Table 6.

Table 6: Constraints faced by pomegranate growers in marketing of pomegranate

S. No.	Constraints in Marketing	Group I (N=47)	Group II (N=36)	Group III (N=7)	Total
1.	Lack of appropriate grader	12 (25.53)	24 (66.66)	6 (85.71)	30 (33.33)
2.	Lack of knowledge on market information	-	25 (69.44)	7 (100)	44 (48.88)
3.	Lack of processing unit	-	21 (58.33)	3 (42.85)	24 (26.66)
4.	Lack of storage facilities	-	35 (97.22)	7 (100)	42 (46.66)
5.	High market commission	-	36 (100)	7 (100)	43 (47.77)
6.	Exploitation by middleman	-	32 (88.88)	6 (85.71)	38 (42.22)
7.	High transportation cost	-	27 (75)	6 (85.71)	33 (36.66)

(Figures in parentheses are percentage to total)

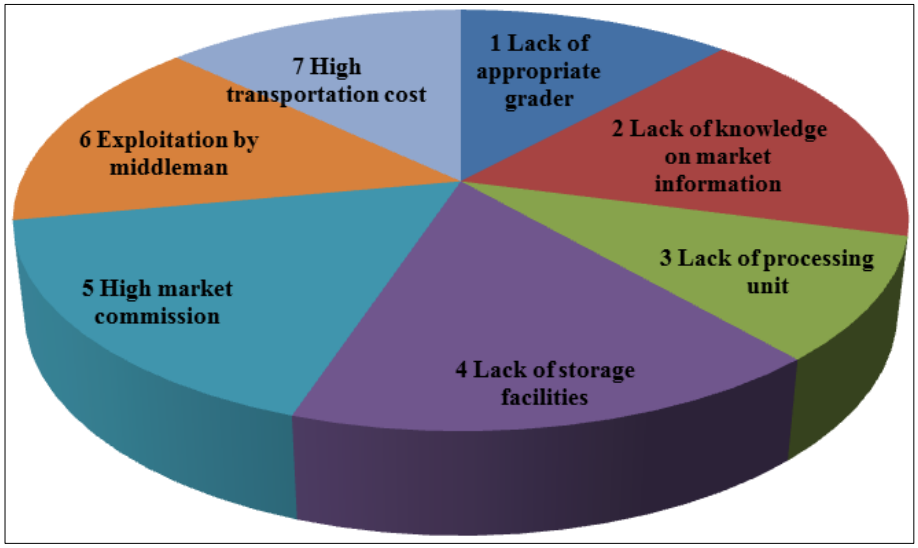

Fig 3: Constraints faced by pomegranate growers in marketing of pomegranate

Constraints in Marketing

For grading of produce a skilled grader is required. In Group I, II and III it was 25.53 per cent, 66.66 per cent and 85.71 per cent respectively. For getting better price in market, knowledge about market information is important. At overall level 48.88 per cent grower not having knowledge on market information. The constrains of lack processing unit for pomegranate was faced by 58.33 per cent and 42.55 per cent farmers in Group II and Group III, respectively. At overall level constraint about processing unit was faced by 26.66 per cent farmers. While in the marketing of pomegranate, constraints of high marketing commission was faced by 100 per cent growers both in Group II and Group III, respectively. Constraints of high transportation cost was faced by 75 per cent and 85.71 per cent growers in Group II and Group III, respectively. In marketing, it was observed that the lack of knowledge about market information followed by high market commission, lack of cold storage and processing facilities were major constraints.

From the above results it can be concluded that in marketing of pomegranate mostly followed marketing channel was - Producer-Wholesaler cum commission agent-Fruit trader-Retailer-Consumer. The producer share in consumers' rupee was 90.88 per cent in channel I which was more than channel II. Lack of cold storage facilities and high rate of commission were the major constraint's in marketing of pomegranate.

Conclusions

1. Maximum quantity sold through channel II i.e. 60.69 per cent of Grade I and in channel I 53.63. Per cent of quantity sold of Grade I. The channel second was commonly followed channel in study area. Channel II: Producer-Wholesaler cum commission agent-Fruit trader-Retailer-Consumer.
2. Producer had not taken part in marketing process and they sold their produce at farm itself to pre-harvest contractor and some farmer sell their produce at taluka market with the help of own transport means which includes transportation cost and packing cost. It can be conclude that as there are less intermediary in marketing, the producers share in consumer's rupee is more.
3. Major constraints in marketing were lack of knowledge about market information followed by high market commission, lack of cold storage and processing facilities etc.

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