

## PRICE SPREAD AND MARKET MARGIN OF POMEGRANATE IN BANASKANTHA DISTRICT OF NORTH GUJARAT

R.M.Patel<sup>1</sup>, R.R.Patel<sup>2</sup> and A.S.Patel<sup>3</sup>

1 Assistant Professor, College of Agribusiness Management, SDAU Sardarkrushinagar-385506

2 Assistant Research Scientist, AICRP-OFR, SDAU, Jagudan-382710

3 Assistant Research Scientist, Wheat research station, SDAU, Sardarkrushinagar-385506

Email: arprmp@gmail.com

### ABSTRACT

*Pomegranate is an important fruit crop of north Gujarat. The average production and productivity of Pomegranate in the state has increased considerably. Therefore, this study was undertaken with a view to estimate different aspects in marketing of Pomegranate like, marketing channels, disposal of Pomegranate, marketing cost, market margin, price spread and producer's share in consumer's rupee in selected market for Banaskantha district of north Gujarat. Deesa market is the only regulated market in Banaskantha district, hence, it was purposively selected for the study. Data on monthly wholesale prices and arrivals of pomegranate for the year 2015 were collected from records of Deesa market committee (APMC). Two talukas having highest area in the district were selected covering six villages from each taluka were selected randomly. Thus, totally 12 villages were selected for the study. In next step, 10 growers from each of these villages were selected randomly. In this way, totally 120 growers were selected for this study purpose. Thirty six market functionaries were selected randomly from Deesa market. By and large Pomegranate growers received Rs.5097 per quintal by selling in regulated market in Deesa. It can be observed that in the month of July to January nearly 75.00 per cent of the produce was disposed off. The overall prices received by the farmers showed an increasing trend as sale proceeds from September to April in the market under the study. The price of pomegranate was remaining lowest in the month of September (i.e., Rs.2913 per quintal) and was maximum (i.e., Rs.6919 per quintal) during the month of April. Only two channels were identified for pomegranate sold within and outside of the state. Channel-I consisted of sale to consumer through wholesaler cum commission agent (within the state) and retailer while in channel-II produce moved through wholesaler cum commission agent (out of the state) and retailer working as middlemen between producer and consumer. Per quintal total marketing cost was estimated to Rs. 1090 for pomegranate. The cost components for the produce were packing charges which accounted 2.57 percent of the total marketing cost. The transportation and spoilage (storage) contributed 5.78 per cent and 1.74 per cent of the total marketing cost, respectively. On an average the producer's share in consumer's rupee for pomegranate was found 63.71 per cent, when they sold their produce through wholesalers-cum-commission agents and retailers. The marketing efficiency of Deesa market for pomegranate was 1.76. Price fluctuations(100%), far away regulated markets(60.83%), lack of market information of pomegranate(67.50%), lack of skill labour for packing(60.83%), insufficient storage facility (36.67%) and high cost of transportation(28.33%) were the major marketing constraints faced by the pomegranate growers.*

**Keywords:** market margin, price spread, pomegranate

### INTRODUCTION

It is native of Iran and Afghanistan. A handsome deciduous and somewhat thorny large shrub or small tree (*Punica granatum*) belonging to the family Punicaceae, native to semi tropical Asia and naturalized in the Mediterranean region in very early times. Plant grows to the height of 5-8 meters tall. It has long been cultivated as an ornamental and for its edible fruit. The fruit about the size of an apple bears many seeds, each with a fleshy crimson seed coating, enclosed in a tough yellowish to deep red rind.

- Pomegranates are not only used for eating but they are also used as medicines.
- Sugar content of Pomegranate Juice is about 12 to 16 %. This sugar is light for digestion.
- Pomegranate peel is used for medicines for diseases, colouring of cloths and toothpastes/toothpowders.
- Juice of pomegranate is used to make Sodium Citrate, Citric Acid. These are used to prepare medicines.

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- Dry peels of pomegranate are used with tulsi leaves and Ginger to prepare medicine for Cough.
- Pomegranate Juice has Iron, Phosphorus, Calcium, Magnesium etc which helps in growth of blood in the body.
- Many processed food products such as Juice, Cold drinks, Carbonated Drinks, Anardana, Wine, Syrup etc are prepared from Pomegranate fruits.

In the production of pomegranate, marketing plays a vital role. When the cultivators grow this crop primarily for market, they will be interested to know whether the crop will be profitable or otherwise at the price at which the produce would be sold. It is an important stage where the producer converts his hard labour and other inputs used into cash and it is at this stage that he will be in a position to find out whether his investment on the enterprises is rewarding or not.

The farmers, as producers have neither the time nor the skill to undertake several activities involved in the process of marketing of pomegranate. The cultivation of pomegranate is taken up by a large number of farmers on a relatively small area. Individually, therefore they can't afford to take up marketing, which is complex and risky. Secondly, the pre harvester contractors who play dominant role in marketing of pomegranate many times don't pay full amount of the contract which is fixed at the time of mutual dealings. Naturally, therefore the exploration of market opportunities and the development of a suitable market structure for the supply of pomegranate from the point of production to the consuming centers are of great importance in this regard. The area under pomegranate is gradually increasing in the district surplus in food grain for the time being. Nearly after four decades the miracle of Green Revolution felt becoming gray. Indian agriculture is at cross road again (Chhonkar and Dwivedi, 2004).

The scientists have realized that the green revolution with high input use has reached a plateau and is now sustained with diminishing return and falling dividend. The intensive use of inputs has not only polluted the soil, water and the environment causing their slow degradation but also affected the human beings. Thus a natural balance needs to be maintained for survival and well being of the human beings, plant and animal kingdom. The obvious choice for that would be adoption of organic farming without compromising agricultural production.

### OBJECTIVE

To know the practice-wise adoption of organic farming by the organic farmers of north Gujarat

### METHODOLOGY

The North Gujarat covers six districts and with the help of the various institutions and NGOs viz. JATAN trust (Baroda), and National Horticulture Mission the information regarding organic farming was collected. Based on the information collected, a district wise list of organic farmers was prepared. District in which more member farmers engaged in organic farming was selected for the study and such three districts viz., sabarkantha, mehsana and banaskantha were selected purposively.

**Table 10: Name of variety and recommended areas of pomegranate in India**

Name of variety	Recommended areas
Ganesh	Maharashtra, Andhra Pradesh, Gujarat, Tamil Nadu, Uttar Pradesh, Himachal Pradesh
Bhagwa	Maharashtra, Karnataka, Andhra Pradesh, Gujarat, Uttarakhand, Uttar Pradesh, Himachal Pradesh, Rajasthan, Madhya Pradesh
Dholka	Gujarat
G-137	Maharashtra, Karnataka, Andhra Pradesh
Mridula	Maharashtra, Tamil Nadu, Rajasthan
Jyoti	Karnataka, Tamil Nadu, Madhya Pradesh
Jalore Seedless	Rajasthan
Co-1(Hybrid)	Tamil Nadu
Ruby	Karnataka, Maharashtra

(Source: Report of National Horticulture Board, 2013)

### Pomegranates in world

At the global level, India is the world's largest producer of pomegranates, followed by Iran. Other countries like Turkey, Spain, Tunisia, Morocco, Afghanistan, China, Greece, Japan, France, Armenia, Cyprus, Egypt, Italy and Palestine also cultivate this product. At present, good quality pomegranates come from Turkey, Iran, Afghanistan, Syria, Morocco and Spain.

### Pomegranates in India

In India, Maharashtra is the leading producer of pomegranates followed by Karnataka, Andhra Pradesh, Gujarat and Tamil Nadu. To a smaller extent, it is also grown in Rajasthan and Himachal Pradesh. It is cultivated commercially in Sholapur, Sangli, Nashik, Ahmednagar, Pune, Dhule, Aurangabad, Satara, Osmanabad and Latur districts of Maharashtra, while in Karnataka it is cultivated in

Bijapur, Belgaum and Bagalkot districts. Sholapur is famous for juicy pomegranate fruit which is locally known as Anar.

The total area under cultivation of this crop in India during 2012-13 was 113200 ha (hectares) with production of 745

thousand MT (Metric Tonne). From Table 1.3 it is clear that Maharashtra has highest share in total production. Ganesh, Mridula, Ruby, Arakta and Bhagwa are some of the important varieties of pomegranate grown in India

**Table 2 : State-wise area, production and productivity of Pomegranate in India (Area in '000 HA, Production in '000 MT and Productivity=MT/HA)**

State	2010-11			2011-12			2012-13		
	Area	Production	PDY	Area	Production	PDY	Area	Production	PDY
Maharashtra	82.0	492.0	06.0	82.0	478.0	05.8	78.00	408.00	05.2
Karnataka	13.6	142.6	10.5	15.1	151.7	10.0	15.10	150.30	10.0
Gujarat	5.8	60.3	10.4	6.2	66.2	10.7	7.40	79.02	10.7
Andhra Pradesh	2.8	27.8	10.0	2.9	29.0	10.0	6.20	62.01	10.0
Madhya Pradesh	0	0	0	2.6	27.5	10.6	2.16	23.00	10.6
Rajasthan	0.8	5.5	06.6	0.8	4.7	05.9	1.01	05.50	05.4
Tamil Nadu	0.5	12.7	27.6	0.5	13.2	26.4	0.38	11.90	31.3
Others	1.8	2.2	01.2	2.1	2.1	01.0	3.00	05.23	01.7
<b>Total</b>	<b>107.3</b>	<b>743.1</b>	<b>06.9</b>	<b>112.2</b>	<b>772.4</b>	<b>06.9</b>	<b>113.2</b>	<b>745</b>	<b>06.6</b>

(Source: Report of National Horticulture Board, 2013)

Pomegranates are available almost throughout the year because of the adoption of a number of 'bahar' treatments. The major district markets in Maharashtra are Sholapur, Nashik, Sangli, Ahmednagar, Pune and Satara; in Karnataka they are Bijapur, Belgaum, Bagalkot and Bellary; in Andhra Pradesh, Anantpur; and in Gujarat, Bhavnagar, Ahmedabad and Banaskantha districts. For market consumption, pomegranate is graded into three varieties Extra Class, Class I and Class II.

As far as the distribution of pomegranate from primary to terminal markets is concerned, pomegranates produced in Maharashtra, Karnataka, Andhra Pradesh and Tamil Nadu find markets in Mumbai, Nagpur and Kolkata. From Mumbai and Kolkata ports, these fruits are exported to the destination markets.

**Pomegranates in Gujarat**

In Gujarat, The total area under cultivation of pomegranate crop during 2012-13 was 7374 ha with production of 79023 MT. From Table 3 it is clear that Katch has highest share in total production and Banaskantha has second highest share in total production followed by Katch. Ganesh, Dholka and Bhagwa are some of the important varieties of pomegranate grown in Gujarat.

**Table 3 : District-wise area and production of Pomegranate in Gujarat state for the year 2012-2013 (Area in HA and Production in MT)**

Sr. No.	Name of District	Area (ha)	Production (MT)
1	Ahmedabad	75	900
2	Amreli	12	720
3	Banaskantha	1619	12920
4	Bharuch	143	904
5	Narmada	59	0
6	Bhavnagar	475	1900
7	Dang	0	0
8	Gandhinagar	131	1310
9	Jamnagar	162	1938
10	Junagadh	92	945
11	Porbandar	0	0
12	Kutch	1955	23310
13	Kheda	117	1153
14	Anand	57	586
15	Mehshana	484	4730
16	Patan	330	3930
17	Panchmahal	100	1125
18	Dahod	10	137
19	Rajkot	45	480
20	Sabarkantha	622	12752
21	Surat	18	181
22	Surendranagar	191	1919

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23	Vadodara	650	7110
24	Valsad	0	0
25	Navsari	2	21
26	Tapi	25	352
Total		7374	79023

(Source: Report of Gujarat Horticulture Board, 2013)

**Table 4: Trends in the Export of Pomegranates during 2010 to 2013**

Year	Volume (MT)	Value (₹ lakh)
2010-11	18211.66	7095.24
2011-12	30162.27	14727.84
2012-13	36027.43	23449.62

(Source: Report of National Horticulture Board, 2013)

From Table 1.4 it is evident that export of pomegranates has surged 98 per cent from 18212 MT in 2010-11 to 36027 MT in 2012-13. As far as country-wise export of pomegranates for 2012-13 is concerned, UAE is the major buyer followed by Netherland, Russia, Saudi Arabia and Bangladesh. Even though there appears to be an increase in the volume of exports from India over these years. This is in spite of the fact that India is the largest producer of pomegranates in the world.

**Table 5 : Taluka-wise Area and Production of Pomegranate in Banaskantha district During 20012-2013**

Talukas	Area (ha)	Production (MT)
Amirgadhd	70	513
Vadgam	212	1554
Palanpur	223	1635
Dantiwada	30	220
Deesa	384	2815
Deodar	118	865
Dhanera	113	828
Kankrej	50	367
Danta	30	220
Tharad,	251	1840
Bhabhar,	76	557
Vav	12	88

(Source : Dept. of Horticulture, Govt. of Gujarat.)

### OBJECTIVES

- (1) To study the existing marketing channels and practices followed in the disposal of Pomegranate
- (2) To estimate marketing costs, margins and price spread in marketing channel of Pomegranate.

(3) To estimate the producer's share in consumer's rupee in marketing of Pomegranate.

(4) To identify constraints in production and marketing of pomegranate and to suggest appropriate policy measures.

(5) To study grade wise domestic & export market price

### METHODOLOGY

#### Sampling design

The Banaskantha was purposively selected for research. The total production of Pomegranate in Gujarat was 79.02 Thousand MT from 7.40 Thousand hectares during 2012-13. The production of Banaskantha was 11867 MT from 1619 hectares. It contribute the second highest production in Gujarat after Kutch. So, Banaskantha was selected purposively for the research. (Report of Gujarat Horticulture Board, 2013) The area and production of Pomegranate in Deesa and Tharad are more as compare to the other tehsil. So, Deesa and Tharad were purposively selected from Banaskantha district for the study. Savpura purposively selected villages and no of farmers were shown in Table 6. Multistage stratified random sampling method was used to carry out the research.

**Table 6 : Selected tehsil, villages, no. of farmers in Banaskantha district**

Tehsil	Selected village	No. of farmers	Total
Deesa	Lakhani	20	60
	Sarkari Goliya	20	
	Gela	20	
Tharad	Savpura	20	60
	Meghpura	20	
	Bhimpura	20	
<b>Total</b>	<b>6</b>	<b>120</b>	<b>120</b>

An interview schedule was developed for collection of the primary data. The data were collected through personal survey method for the year 2014 and tabulated analyzed and interpreted in terms of the objectives

The marketing efficiency and producer's share in consumer's rupee were measured by using the following formula:

[1] Shepherd's formula for marketing efficiency :

$$ME = \frac{V}{I} - 1$$

Where,

$$ME = \text{Index of marketing efficiency}$$

V = Value of the product sold  
 I = Total marketing costs and margins

[2] Producers share in the consumer's rupee (P.S.)

$$P.S. = \frac{\text{Price received by producer}}{\text{Retail price}} \times 100$$

## RESULTS AND DISCUSSION

### Market Structure

It was found that market fee rupees 0.50 per 100 rupees

of value. Whereas market commission found rupees 7 per 100 rupees. The whole marketing process of pomegranate in the study area involved packing, transportation and selling functions. Better packing always helped in maintaining the quality and reducing the losses during the transit on account of spoilage. Packing of pomegranate is generally done in papers. They are generally transported by trucks where the bottom is filled with fodder to prevent spoilage. Most of the pomegranate is sold at the farm level to the commission agent cum wholesalers. Sometimes the pomegranate is also sent to distant markets like Jaipur, Delhi and Mumbai by trucks. The commission agent in these markets charged the commission of 7 per cent.

**Table 7 : Monthly disposal of sale and price received in different markets during the year 2014**

Month	Ahmedabad		Deesa	
	Price ₹/qtl	total sale (quintals)	Total sale (quintals)	Price ₹/qtl
January-14	8485	540	34	6590
February-14	11432	410	26	6765
March-14	11490	360	23	6840
April-14	12554	320	21	6919
May-14	11584	190	18	5941
June-14	9689	205	22	5793
July-14	5581	460	32	4550
August-14	4785	760	40	3819
September-14	4423	900	44	2913
October-14	4973	750	39	2958
November-14	5235	580	37	3761
December-14	6233	560	34	4310

Monthly distribution of sales and prices of pomegranate is given in Table 1. Very less quantity *i.e.*, 25.13 per cent & 24.61. per cent of the total disposal was sold by the growers during February to June at Deesa & Ahmedabad market resp. It can be observed that in the month of July to January nearly 75 per cent of the produce was disposed off.

Looking to the overall prices received by the farmers, it showed an increasing trend as from September to April in the market under the study. The price of pomegranate was remaining lowest in the month of September (*i.e.*, ₹ 2913 per quintal) and was maximum (*i.e.*, ₹ 6919 per quintal) during the month of April at Deesa market.

As presented in Table 8, only two channels were identified for pomegranate sold within and outside of the state. Channel-I consisted of sale to consumer through wholesaler cum commission agent (within the state) and retailer while in channel-II produce moved through wholesaler cum commission agent (out of the state) and retailer working as middlemen between producer and consumer.. Among these

two channels, channel-I was found to be more popular dealing major share of the total quantity sold. The pomegranate was sold through channel-II, it was further sent to the vegetable markets *i.e.* Jaipur, Benglore, Mumbai, Pune, Delhi and Nasik *etc.*

**Table 8 : Channels of marketing of pomegranate in Banaskantha district of north Gujarat**

Sr. No	Marketing channels
I	Producer-Wholesalers cum-commission agents – Retailer-Consumer
II	Producer—Wholesalers cum-commission agents (out of the state) -Wholesalers cum-commission agents – Retailer-Consumer

Per quintal cost of marketing of pomegranate incurred by various agencies are depicted in Table 9. The overall per quintal cost of marketing of pomegranate was estimated to be ₹ 1090 to the growers, wholesaler and retailer.



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The cost components for the produce were packing charges which accounted 2.57 per cent of the total marketing cost. The transportation and spoilage (storage) contributed 5.78 per cent and 1.74 per cent of the total marketing cost, respectively. Market fee collected at 0.50 percent and Commission at 7.00 percent of goods value sold in the regulated market. These charges are borne by the wholesaler and retailers respectively from the regulated markets.

### Distribution of produce from primary to terminal market

- ◆ Pomegranates grown in different parts of country are transported to the big cities for marketing. i. e. 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.

### Exports and export potential

#### (A) Domestic Strengths for exporting pomegranate domestic strengths for exporting pomegranate are given in the following points :

- ◆ India is the largest producer of pomegranates in the world.
- ◆ India produces finest varieties of pomegranate having soft seeds, very less acids and very attractive colour of the fruits and grains.
- ◆ With adoption of different "bahars", India can supply pomegranates almost throughout the year.
- ◆ Maximum cultivation of pomegranate is in states of Maharashtra and North Western Karnataka which are very close to the western port of Mumbai for exporting to Gulf and European countries.
- ◆ Quality of pomegranate is much superior to Spain and Iran in edible quality and attractiveness.

- ◆ Agri Export Zone for enhancing exports of pomegranate has been established in Maharashtra state.
- ◆ There is strong research support for scientific cultivation of pomegranate like National Research Center for Pomegranate, Solapur, MPKV, Rahuri in Maharashtra and IIHR, Bangalore in Karnataka state.
- ◆ Pomegranate co-operative societies from Maharashtra state have formed an apex cooperative namely MAHA ANAR.
- ◆ Bhagwa variety has high acceptance in European market.
- ◆ Pomegranate export facility center is being set up/has been set up in Baramati area with mechanical handling system.
- ◆ Farmers have been trained for export quality production and have registered with GLOBALGAP certification.
- ◆ MSAMB has recently obtained brand name i.e. "MAHAPOM".

### B Exports

Export of pomegranate has decreased in quantity from 35175.17 tons in 2007-08 to 30158.59 tons in 2011-12. whereas in value term it show an increase trend during the same period. There is tremendous potential for exports of pomegranate from India and it is fact that India is largest producer of pomegranates in the world. Moreover, India produces finest edible quality of pomegranates which are available almost throughout the year. The major Markets of India's pomegranate during the year 2011-12 were UAE, Bangladesh, Netherlands, UK, Saudi Arabia and Russia.

#### Export of Pomegranate from India in the last five years

Years	Quantity (tons)	Value (in ₹ Lakhs)
2007-08	35175.17	9119.49
2008-09	34811.21	11461.62
2009-10	33415.07	11942.84
2010-11	18211.67	7095.20
2011-12	30158.59	4726.88

Source: APEDA Database, 2011-12

**Table 9 : Marketing cost of pomegranate in Banaskantha district of north Gujarat. (₹/qtl)**

Sr. No.	Items	Farmer	Wholesaler	Retailer	Total cost	Percen
1	Grading and packing charges	28	0	0	28	2.57
2	Loading, unloading and weighing charges	05	05	05	15	1.38
3	Transportation charges	40	9	14	63	5.78
4	Storage and spoilage charges	0	0	19	19	1.74
5	Market fee	0	402	0	402	36.88
6	Commission	0	0	563	563	51.65
	<b>Total</b>	<b>73</b>	<b>416</b>	<b>601</b>	<b>1090</b>	<b>100</b>

The costs, margin and producers share in consumer's rupees are analyzed for channel-I only and results are given in table 10. Because in channel-I produce moved from producers to consumer through wholesalers-cum-commission agents and retailers dealing only at Deesa regulated market in Banaskantha. Where as in channel-II producers disposed of produce on their farm without any marketing cost. Therefore, this channel only has been considered for estimating cost and margins. It can be observed from the table 4 that the producers share in consumer's rupee after deduction of all the expenses of the marketing incurred by the producer was 63.71 per cent. The total price spread was observed 36.29 per cent of consumer's price when produce were sold through wholesalers and retailers.

**Table 10 : Estimation of producer's share, marketing costs and margins for pomegranate**

Sr. No.	Items	₹ Per quintal	Percent to consumer's price
1	Net price received by producer	5096.58	63.71
2	Cost incurred by producer	73	0.91
3	Producer's sale price	5169.58	64.62
4	Cost incurred by wholesaler	416	5.20
5	Net margin of wholesaler	50	0.62
6	Prise paid by retailer	5635.58	70.44
7	Cost incurred by retailer	601	7.51
8	Net margin of retailer	1763.42	22.05
9	Consumer's price	8000	100
10	Total cost of marketing	1090	13.62
11	Total marketing margin	1813.42	22.67
12	Total marketing cost & margin	2903.42	36.29
13	Price spread		36.29
14	Producer's share in consumer's rupee		63.71

One of the criteria for measuring the marketing efficiency is to know that up to what extent the marketing agencies are able to move the goods from producers to consumers with the minimum costs. The value of marketing efficiency estimated using Shepherd's formula is given in table 11. The average value of the produce sold were ₹ 8000 per quintal in Deesa market.

The marketing efficiency estimated for pomegranate was 1.76 for Deesa market. The consumers paid higher prices for pomegranate but more (36.29 per cent) advantage of

higher price had gone in to the pocket of intermediaries while rest of the 63.71 per cent advantages went to the producers

**Table 11 : Marketing efficiency for pomegranates in Deesa market**

Sr. No.	Particulars	Deesa
1	Value of the produce sold ₹/qtl.(V)	8000.00
2	Total cost of marketing and margin ₹/qtl.(I)	2903.42
3	Marketing efficiency (ME)	1.76

**Problems of pomegranate marketing**

**Table 12 : Problems for pomegranates marketing**

Sr. No.	Particulars	No.of farmers (per cent)
1	Markets far away from farm	73 (60.83)
2	Storage problem	44 (36.67)
3	Price fluctuations	120 (100.00)
4	High cost of transportation	34 (28.33)
5	Lack of availability of market information	81 (67.50)
6	Lack of skilled labour for packing	73 (60.83)

From the Table 12 it could be seen that 60.83 per cent respondents opined that markets far away from the farm, over 28.33 per cent of the respondents opined that higher transportation charges were problem in marketing of pomegranate. The other problems were lack of availability of market information (67.50%), storage problem (36.67%), price fluctuations (100.00%) and lack of skilled labour for packing (60.83%).

**CONCLUSION**

- (1) By and large pomegranate growers received ₹ 5096.58 per quintal by selling in regulated market in Deesa.
- (2) It can be observed that in the month of July to January nearly 75.00 percent of the produce was disposed of.
- (3) The overall prices received by the farmers it showed an increasing trend as sale proceeds from September to April in the market under the study. The price of pomegranate was remaining lowest in the month of September (i.e., ₹ 2913 per quintal) and was maximum (i.e., ₹ 6919 per quintal) during the month of April.
- (4) Out of two channels, channel-II was found more popular amongst farmers because there is no any marketing cost

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any getting higher prices. Produce moved from producers to consumers through Wholesalers cum-commission agents (out of the state) - wholesaler-cum-commission agents and retailers.

- (5) Per quintal total marketing cost was estimated to ₹ 1090 for pomegranate crop. The cost components for the produce were packing charges which accounted 2.57 percent of the total marketing cost. The transportation and spoilage (storage) contributed 5.78 per cent and 1.74 per cent of the total marketing cost, respectively.
- (6) On an average the producer's share in consumer's rupee for pomegranate was found 63.71 per cent, when they sold their produce through wholesalers-cum-commission agents and retailers.
- (7) The marketing efficiency of Deesa market for pomegranate was 1.76.
- (8) Price fluctuations, far away regulated markets, lac of market information of pomegranate, lack of skill labour for packing, insufficient storage facility and high cost of transportation were the major marketing constraints faced by the pomegranate growers.

### **SUGGESTIONS**

Thus, It can be suggested from the present investigation that

- (1) Price fluctuations, lack of market information and Non-availability of scientific storage facility was one of the major factor contributing to lower returns from pomegranate. Therefore, suitable storage facilities are essential to stabilize the returns of pomegranate growers by increasing the storage life of the fruit.
- (2) 36.29 per cent of consumer price had gone into the pocket of intermediaries. Hence, Efforts should be made to reduce middlemen. Therefore it was suggested

that Policy reform should be done to facilitate direct marketing

- (3) Because of its perishable nature with no better storage infrastructure and market operation on the part of the farmers: a reason of fear that gives advantage to the Intermediaries and another reason are lack of/non coordination among the concern farmers. Establishing co-operative societies and collective decision among farmers relating to price and arrival will help reduce the gross market margin of pomegranate.

### **REFERENCES**

- Acharya, S. S. and Agarwal, N. L. (2007) "Agriculture Marketing in India" Oxford & IBH Publishing Co. Pvt. Ltd.; New Delhi.
- Anonymous (2011). Indian Horticulture Database-2011. National Horticulture Board, Ministry of Agriculture, Government of India, Gurgaon
- Bhat Anil and et al.,(2014), "A study on behaviour of arrivals and prices of fruits in Narwal market of Jammu" *Journal of Hill Agriculture* 5(1): 24-29
- Saithal D.G., (1993) ; "Economics of Production and Marketing of Papaya in Bijapur district of Karnataka" *An unpublished M.Sc. (Agri.) Thesis*, University of Agricultural Sciences, Dharawad.
- Sharma B.B. and Pandey H.K. (1972) : " Economics of Guava Production and Marketing"-A case study. *Indian Horticulture* 17(1): 5-6
- Snehal Mishra, and et al.( 2014) Economic analysis of marketing of major vegetables in varanasi district of Uttar Pradesh, India. *Economic Affairs* 2014: 59(4): 649-652
- Veerakumaran G. and Satheesh C.K. (Sept.-Dec. 2002), 'Marketing of Fruits and Vegetables Through Cooperatives- An Analysis of Consumer Behaviour', *Indian Journal of Agricultural Marketing* Volume 16 (2) P.No.53