



POMEGRANATE CROP VALUE CHAIN ANALYSIS OF MARKETING SYSTEM IN DHULE DISTRICT (M. S.)

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Abstract

Agriculture is not only an occupation but also a way of life. However, farmers cultivating traditional crops are incapable to harvest even adequate food and grains. A shift has been seen from traditional crop system to more productive and remunerative crops. The pomegranate crop production is an appropriate choice in low and uncertain rainfall area. As far as pomegranate fruits are concerned, it came to India from middle Asia (Raut V. G. 2006). At that time, very few cultivators in India take pomegranate crop. But later on, production of pomegranate crop in India has been increased day by day. Maharashtra state stood first in the production of pomegranate. The concentration Index of Dhule district indicated a large temporal change from 0.88 in 1991 to 2.91 2001. Within a decade the growth of pomegranate cultivation has been rapid in the study region therefore, the study region is selected purposefully. Geographical and economical factors have boosted the cultivation and production of pomegranate crop. The pomegranate farming in study region became popular due to many favorable factors.

Key words: Trade Channel, Value Chain, Pre-Harvest Contractor, Commission agents, Wholesaler, Aggregator

1. Introduction

Horticulture is a best way for economic empowerment. It is helpful for the homogeneous development of the individual farmer, agrarian society and ultimately for the country. Since last two decades horticulture production has been increased considerably (Singh H. 2009). Pomegranate growers need to get income as per their production cost, but this is not the real situation. Because of many times growers do not get sufficient income & their production cost is considered. They need big capital or investment long duration and risk at any time, and growers get less income. Benefit is circulated in marketing chain instead of growers. It is a loss of growers and consumers. Production cost of pomegranate is higher. Consumers get pomegranate fruit in two times higher rates than, it is sold by growers. Marketing chain is responsible to increase the value of pomegranate. Hence, it is a need of hour to make aware to the growers about this trading chain, an attempt are made to analyze the market chain through the present research paper.

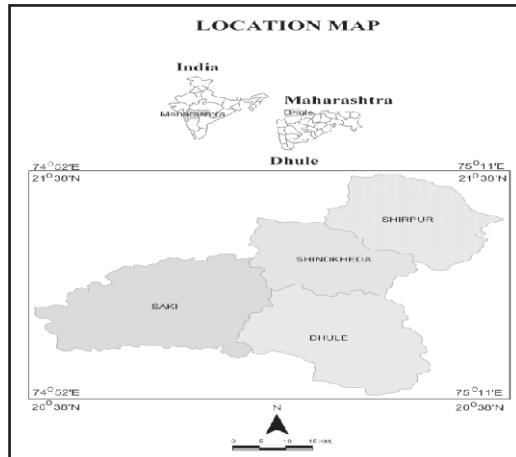
Pomegranate cultivation area and growth rate is higher n the study region, it is due to profitability of pomegranate crop. Profitable production proves that cost benefit ratio is higher. In pomegranate cultivation system, factors like market, producer and consumers determine cost of pomegranate fruits. Growers must get benefits as per the production cost. Unfortunately, a large sum of market value is growth up in market chain. Consequently, growers get less benefit due to market chain. A large portion of market value is divided in market chain. Growers do not get sufficient benefits an attempt is made to analyze market chain of pomegranate fruit in the study region. Out of total production of pomegranate in India, Maharashtra shares 70% production. The pomegranate fruits are produced in the draught prone area of Maharashtra state includes Solapur, Dhule, Ahmednagar, Pune, Sangli and Dhule Districts Dhule district ranked after Nasik and Sangli district the production of pomegranate in Maharashtra state, Sangli district stood second in the production of pomegranate.

2. Study Area:

The district of Dhule formerly known as west Khandesh, district headquarters since 1960. Lies between 20°38' to 21°23' North latitude and 73°47' to 75°11' East of longitude. It covers an area of

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8063 square kilometers. As of 2001[update] Dhule had a population of 341,473. Males constitute 52% of the population and females 48%. Dhule district is mainly located in to the Panzara and Kan river basin area.



1. Objectives:

There are following aims and objects for this research paper.

- 1.1 To study Market value of Pomegranate
- 1.2 To Know (make) trade channel of pomegranate in study region
- 1.3 To Study the price built up along with the value chain of pomegranate

2. Hypothesis:

The pomegranate marketing system is positive relationship between marketing cost and length of marketing channels

3. Data base and Methodology:

The entire agree-economic analysis in present study is based on the empirical data collected from various offices as well as through intensive field work, survey, interviews and discussions made with the pomegranate growers. Primary data from Government officials or NGO does not record the data at farm level on aspects like production cost, yield, marketing of the pomegranate. Hence, the interview of growers was the only source to work out for the purpose of agree-economic analysis. The discussions were held with expert and progressive farmers, crop consultants, traders, agro input dealers, extension staff of the agricultural universities as MPKV Rahuri and officers and staff of Market and Govt. agriculture department. secondary data was collected from various sources as Government department, Institutes and the data were also obtained from reviewing book, research journals, published magazines, Newspaper and Google search website.

Since the study aims the geographical analysis the sample survey method has been used for the present research. Based on analysis of secondary data the spatio temporal variations of pomegranate fruit farming was understood. Subsequently the high, medium and low crop concentration zones were identified in the study region. Therefore, the stratified random sampling method has been adopted for the selection of the villages. The location quotient and composite Z score was use to find out the pomegranate concentration region in the study area. The collected data is analyzed on the basis of Trade channel and value chain of pomegranate marketing system of pomegranate crop. The result of primary and secondary data analysis is summarized in the form of suggestions and conclusions.

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6. Explanation:

Maharashtra state is popularly known as the 'fruit bowl' of India. (Y.N. Kunthe - 2006). Dhule district is a drought-prone district. For such a drought-prone area, pomegranate is a boon. This crop requires less quantity of water. Farmers are acquiring the scientific method of applying minimum-water consumption. Economical profits are there in just minimum labour and less expense. So the growth rate of pomegranate cultivation is increasing in less water, follow land and light soil. Pomegranate cultivation area, income and productivity have been increasing day by day in the study region..

7.1 Growers: Average Cost Benefit Ratio:

The average landholding of pomegranate farmers is around 4 Ha, which is spread into 2-4 land parcels. Around 50% of the land is used for pomegranate cultivation and the rest is used for growing other crops. As mentioned earlier, pomegranates are propagated through grafting. The plants are sown in square system that accommodates 750 plants in a hectare. The cost of establishment of orchard in a hectare is represented in table below:

Table No. 1 : Cost Benefit Ratio of Pomegranate (Hectare/Rs.) Growers in Dhule district				
Sr. No.	Item	Sub Items of Expenditure	Average Cost	Average Cost in %
1	Establishment cost	Plantation	9430.1	4.5
		Gestation period	3596.4	1.7
		Sub total	13026.5	6.2
2	Operating cost	Material cost	80100.1	38.3
		Labour cost	32648.1	15.6
		Machinery	18577.6	8.9
		Other cost	40301.1	19.3
		Sub total	171626.9	82.2
3	Marketing cost	Harvesting	5679.7	2.7
		Packing cost	451.2	0.2
		Transport cost	3526.1	1.7
		Market charge	14572.6	7.0
		Sub total	24229.5	11.6
4	Gross cost	Item 1+2+3	208882.8	100.0
5	Yield	Tons	9.1	
6	Price	Rs./Kg	48.6	
7	Gross return	Item 5*6	443993.3	
8	Net profit	Item 7 - 4	235110.5	
9	Cost Benefit Ratio	Item 7 / 4	2.1	

Source: Computed by researchers, 2015

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Pomegranate cost benefit ratio is an important part for the research. The pomegranate cultivation requires modern technological agro equipment, skills labour and timely material inputs. Therefore, the cost of production is high day by day. The establishment (6.3%), operating cost (82.6%) and marketing cost (11.2%) together constituted the gross annual average cost 2.07 lakh per hectare of pomegranate farming for the study region.

The net profit earned by the farmers is the composite result of production cost, yield of pomegranate and price for pomegranate fruits in the market. In the existing geographical condition of the study area, the pomegranate cultivation a good response to higher inputs applied by farmers. It results in average yield 9.1 tons per hectare. Moreover, good demand for pomegranate fruits in market leads to fetch the average remunerative price 48.6 Rs. per kg. Consequently, attractive net returns 2.35 lacs per hectare per year earned by respondents prove good economic profitability of pomegranate cultivation. The cost of benefit ratio is 1:2:1 amply clears that why farmers most adopt this pomegranate cultivation on a large scale.

7.2 Value Chain Analysis of Pomegranate:

The post harvest sector of pomegranate is characterized by its chain and relationships between producers and consumers. The intermediates playing a significant role of regulating these marketing chains, other words, marketing intermediaries link producers to other intermediaries or to the ultimate users of the product. So as they operate between the producer and the final buyer. The transactional functions of intermediaries involve buying, selling and risk taking. The various intermediaries involved in marketing of pomegranate are the pre-harvest contractors, village level aggregator, commission agents, wholesalers and retailers. Majority of growers sold their produce either through trade agents at village level or commission agents at the market. Efficiency of marketing depends to some extent on performance of intermediaries, which in turn reflects competitiveness of the marketing system. There is positive relationship in between marketing cost or number of intermediaries. When more number of functionaries is involved in marketing system, the amount on account of their services and margins are deducted from the gross payment of the producers. In this regard, Ladaniya M. S. (2003) stated that producer's share in the consumer's rupee is low and the producer has to depend on the intermediaries, who often get more profits. Intermediaries operating from place of production to consumption though help in moving the produce but make their fortunes through earning profits as high as possible. The costs of fruits are determined by the performance and efficiency of different marketing functionaries in various marketing channels. Pomegranate price depend on trading chain and value chain of marketing system.

6.3 Trading Chain of Pomegranate:

Various channels of the pomegranate supply chain are mentioned below

Pre Harvest Contractors:

The last stage of fruit growing, the local contractors and pomegranate growers negotiate for the trade of fruit. The growers oral agreements by the harvesting of fruits, the growers to borrow money from the per harvest contractors whenever required. They had good faith on each other and maintain the good will. Contractor make maximum profit compared to growers. So growers also choose by diversification of fruits to different market. About 12.7 percent growers sold their fruits to pre harvest contractors with mutually convenient terms and conditions. The growers were bound to sell their pomegranate fruit to a particular agent. The harvest contractor always paid to growers 5 to 10 Rs. Per kg. lower rate than the prevailing market rate.

Village Level Aggregator:-

Around 10-15% of the produce from an orchard is sold through village level aggregators. These fruits are very small in size at the time of harvesting of fruits by the contractor and hence they are not plucked by the contractor. These are plucked by the farmer later on and sold through village level

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aggregators in APMC markets of Nashik, Malegaon and Satana. The major players involved in trade of pomegranates are farmer, pre-harvest contractor, village level aggregator, Commission agent, wholesaler, semi-wholesaler and retailer. The role played by major stakeholders and the value added at each stage is briefly captured below:

Private Traders:

Private traders survey the overall area with the help of local people. Pomegranate growers are communicated when pomegranate fruits production is high. The private traders are representative from national market. The national market places like Delhi, Kanpur, Kolkatta, Indor, Bhopal, Zhansi, Surat, Ahemdabad, etc. are stating the study region. Local any growers are employed by these traders as call pomegranate pilots. Pomegranate pilots help – by all means to traders, He is employed on monthly basis or on the basis of quantity. The growers negotiate with offered price and then decide to with trader, the availability of fruit is bulk then current price in local and destination market are important price determining factors. This type of marketing is popular in the study area. About 23.12 percent growers sold their fruit to private traders on the farm. It is marketing system is also known as on farm sale of pomegranate, which saves the expense of grower on marketing of fruits. The fruit harvesting processes like harvesting, shorting, packing, transforming etc. arranges by the traders. The amount of yield is made immediately on the same day of harvesting. But due to some trend by traders with growers now become more cautious.

Commission Agents:

Commission agents are locally known as Dalal or agents. The cultivators sell their fruit through it consist detail of their commission chargers of the rate 4 to 10 percent at various market. The open auction system is widely considered to be superior to another system. It is some growers complained that is false type of competition. There is also unity of among fruit agents who decide the price by mutual understanding to open auction, so they do not offer better price for the fruits. Some commission agents perform the function of wholesalers and therefore obtain more profit in the trade of pomegranate.

Wholesalers:

Two types of the wholesalers, first is local wholesalers and second is national wholesalers. Local wholesalers are the roe of commission agent, who got a key position in fruit marketing. They purchase fruit either from commission agent or directly from the growers in the market. They are supplies fruit to the local retailer and distributer who self fruit to a district or state place. National wholesalers are involved in distribution fruit all over national and international of level. They are also smaller wholesalers, who work under national wholesalers.

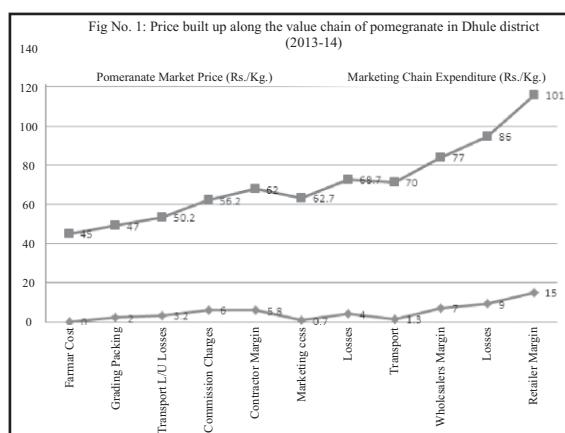
Retailer to directly sold to the consumers:

It is ultimate node in the chain of middleman. The retailer is small trader who either own stall and dealings directly wholesaler. Retailer purchase small quantities fruits and seal out during the day by day. The retailers are spread all over towns, cities and markets. So sometime they are also purchase fruit directly from the growers. Therefore, the retailer takes maximum profit in pomegranate trade.

7.4 Price built up Along the Value Chain of Pomegranate:

Value chain of 1 kg of pomegranate indicating the various activities and cost build-up a every step has been Fig 1. as shown below. The most commonly observed trade channel has been selected for the price build up of pomegranate i.e. Farmer - Pre harvest contractor - Commission agent - Wholesaler-Semi wholesaler - Retailer. The price build up is indicated for medium grade 'Bhagwa' variety of pomegranate in hast bahar. The transportation cost has been taken from Dhule to Mumbai. The cost of retailing, which includes the cost of shop, wages, rent etc, has not been considered.

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As evident from above, farmers incur a cost of Rs 6/kg maintenance of pomegranate orchard. Around 4-6 % (2.4Rs.) of the produce, which may be cracked, rotten or damaged by the pest, is culled during sorting and grading on the farm. The average price realized by the farmer is around Rs 45/kg and thus his net margin is Rs 36.6/kg.

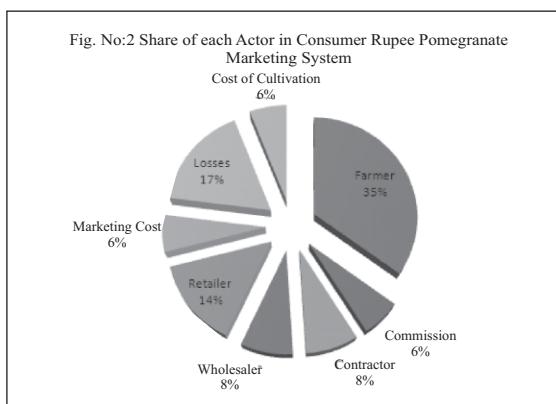
As explained earlier, the cost of grading, packaging, loading, unloading, transportation and commission at APMC market, which is around 25-30% (17Rs), is borne by the contractor. It has been observed that after the replacement of wooden boxes and gunny bags by plastic crates and corrugated boxes as packaging material in recent years, percent of produce wasted during handling and transportation from farm to market has considerably reduced. Some contractors have reported that once the produce is packed at farm in the corrugated boxes, not even 1-3% of the total produce is wasted during handling and transportation to the destination markets. The price realized by the contractor is Rs62/kg at APMC Mumbai and his net margin is Rs 5.2/kg. The produce is traded in APMC market and it is bought by the wholesaler and he pays marketing cess @1%. Since commission agent facilitates trade and also pays to contractor on behalf of the wholesaler, he takes financial risk and thus charges commission at the rate of 8% from the contractor. The net margin realized by the wholesaler and retailer is around Rs 6.7 and Rs 15/kg respectively. At retail level pomegranates are mostly sold on the basis of count instead of weight.

Table No.2: Pomegranate Price Buildup Can be Summarized (Rs. / Kg.) in Dhule District.

Sr. no.	Particulars (Rs . / Kg.)	Farmer	Contractor	Wholesaler	Retailer
1	Cost of purchase price	6	45	62	77
2	Cost of Market, Transport, Wastage	2.4	11.8	8.3	9
3	Selling Price	45	62	77	101
4	Price Spread	36.6	5.2	6.7	15

Source: Computed by researchers, 2015

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7.5 Potential for Intervention:

Based on the need assessment of the pomegranate value chain are action plans were drawn-up and stakeholder consultations undertaken to identify areas of potential interventions. Some of the areas identified for intervention is it is proposed to set up a pack house for pomegranates at Malegaon in Nasik district the pack houses may have facilities for: Pre-cooling, Sorting/grading, Packing, Cold storage. It is estimated that the throughput of pomegranates at Malegaon and Sangamner spoke shall be 2000 MT. This spoke will also handle other crops such as grapes, onion and maize. The details of the facilities have been captured in the subsequent chapter. Pomegranates may be transported in reefer vans to avoid physical and quality loss during Transit Since market of pomegranate has recently started from the region, farmers may be educated about Good Agricultural Practices..

8. Conclusions:

There are around five intermediaries between the farmer and consumer. The intermediaries are contractor, commission agent, wholesaler, semi-wholesaler and retailer. The price build up from farmer to consumer is around 2.5 times. The produce is sold on mark up basis and at retail level, it is sold on count instead of weight in Mumbai. However, in the retail markets of Delhi, pomegranates are mostly sold on weight basis. Since pomegranate is a hardy fruit, wastages are quite low along the value chain i.e 3- 5% at farm level and 1% during handling and transport. Major losses occur at level (both weight and value) i.e. around 5-10%, if the produce is not sold on the same day. The contractor bears the product risk and his price spread is Rs 6/kg and earns 8 paisa of a consumer rupee. The commission paid by the contractor to the commission agent constitutes 6 paisa of a consumer rupee. The wholesalers bears product, marketing as well as financial risk, though to a lesser extent, and his share in a consumer rupee is around 8 paisa. Around 5% of the produce is also wasted at wholesale level. The retailer deals in smaller volumes and his share in a consumer rupee is around 14 paisa.

9. Suggestions:

- There is need to decrease marketing channel.
- It is a requirement of an independent system like farm to market or grower to consumer.
- Government agencies should assist to develop market system.
- There should be more transparent relationship between grower and traders.
- To develop good market system database of modern technology need by growers.

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