CHAPTER-6
MARKETING OF POMEGRANATE

6.1 INTRODUCTION:

The discussion made in earlier chapters clears that Nashik district has tremendous potential for pomegranate production. The study area is topmost producer of pomegranate in the state. The fruits of Bhagawa variety produced in this region are famous for their quality. However, it is equally significant that merely increased production would not bring revolution in agricultural economy of the study area unless these productions are associated with the efficient marketing system. According to Thompen (1951) an effective and efficient marketing system is one which facilitates the production of those products, which, when sold to consumers will yield maximum returns after the deduction of marketing charges and farm production cost incurred by farmers. In other words, marketing is the last stage in the crop production where the grower converts all his efforts and investment in cash.

Successful fruit growing not only requires knowledge, skill and accuracy in the production but also in the marketing. Therefore, marketing of fruits assumes a special significance in the pomegranate cultivation, when the economy of small and marginal farmers in drought prone regions like that of Solapur and Nashik district is striving hard to move forward from the subsistence level to commercial agriculture. An efficient market system becomes the backbone of such economy. The economic position of a farmer can’t be improved by producing only more unless he gets, ‘fair price’ for his produce (Phule 2002).

The marketing is one of the post production activities, which consistently influences the extent and nature of cultivation as well as settle on profits to growers. No doubt, pomegranate is a profitable venture but with the rapid increase in acreage and production several issues in marketing have emerged. Existing trade of pomegranate fruits in study area is characterized by high transportation, packing costs and mal practices in market and lack of storage facilities etc. Due to such deficiencies, the growers are getting low net returns even though prices of pomegranates are higher in consumer or retail markets, which needs careful analysis.
Against this background, present chapter deals with analysis of pomegranate fruit marketing in the study area.

- The marketing operations and intermediaries involved in pomegranate marketing are described in detail.
- The pattern of pomegranate fruit distribution is explained in terms of type of market and channels used by the sample growers.
- The efficiency of pomegranate markets was measured by computing the cost benefit ratio for on farm sale, tehsil, district and national markets in general.
- The marketing cost and comparative profits after selling the pomegranate fruits in above markets was assessed in particular.
- The technique of tabular analysis was employed for financial calculations and average figures of financial inputs made by respondents are considered for interpretation of results.
- Lastly, the special focus is placed on international marketing practices and common problems faced by growers in exporting the pomegranate fruits from study area.

6.2 MARKETING FUNCTIONS:

Marketing is a complex process consisting of different services or activities known as ‘functions’. Those functions are performed by growers and various agencies to fill the location gap between producer and consumer (Phule 2002).

6.2.1 Harvesting of Pomegranate:

Pomegranate fruits usually take a period of 135 to 170 days for maturity after blossom (flowering). If the harvesting is not done in proper time or postponed then there is a possibility of yield losses. For instance, fruit makes a metallic sound when tapped, the buds at anterior end of fruit get curved inwards and becomes hardier and dry at maturity, skin can easily scratch with marked depression on the sides, the change in skin color (green purple to deep pink with reddish and yellowish patches), the seeds become soft and sweet (Adsule and Patil 1995).

Pomegranate tree does not produce number of flowers at the same time in blossom and all the fruits do not reach at maturity simultaneously. Hence,
pomegranate fruits are often plucked in installments at an interval of 15 - 20 days. And the total harvesting period is lasts for two months. The fruits only attaining an adequate size, bright color and good appearance and having characteristics of the variety are plucked as the first selection. The growers usually confirm time of harvest by inspecting the above stated fruit maturity standards.

i) **Harvesting Period:**

In study area the fruits of Hasta, Ambe and Mrig Bahar are harvested during the months of March - April, June - Sep and Dec - Feb respectively. The mode of disposal and market distance were taken into account. For local markets, full matured orange or red fruits are plucked. And for distant markets, the fruits just reaching the ripening stage in next 4 -5 days were harvested but after fully irrigating the orchard to maintain and restore moisture in fruits considering the long distance transport.

However, it was noted that earlier harvest before maturity period was carried out by some respondents due to adverse environmental conditions. Nearly 15% respondents harvested fruits when they were green in colour and half matured due to non availability of irrigation water in summer. Similarly high temperature in March, April (Hast Bahar harvesting) may lead to insufficient irrigation water ultimately results in dehydration and the splitting of fruits.

ii) **Harvesting Method:**

Harvesting of Pomegranate is quite easy. Plucking of fruits is usually done either early in the morning or evening hours. Use of clippers or cutting knife is recommended for cutting the fruits. But hand plucking was in common practice. The fruits were directly pulled off or bruised from the base of the stem. Then collected in plastic crates and transported as head loads. If the quantity is large the bullock carts or small power tiller tractors were used. And plastic crates are emptied in temporarily erected or permanent packing shed.

The quality of harvested fruits considerably varies from one lot to another therefore sorting and grading of pomegranate operations are performed by employing the experienced skilled labour from.
6.2.2 Sorting and Grading:

Both operations are carried out simultaneously, before packing of fruits into the box.

i) Sorting:

Sorting of fruits for gradation purpose is the key marketing function which defines the quality of produce. It refers to the standardization of produce based on size, shape and color of fruits. Wide range in fruit size from small to large was observed. The diameter of mature fruits ranges from 5 cm to above 8 cm and from 200 gm to 750 gm in weight. This variation in quality is mainly due to the differences in management practices like insect pest control methods and time of harvesting, favourability of weather etc. In practice, fruits showing greenish color, sun spots, disease spot, rough surfaces, blemishes and cuts or damages during harvest are eliminated. In other words, inferior quality are not mixed into superior quality fruits.

ii) Grading:

After sorting, fruits are commonly graded at the producer level for securing good market prices. Kakad and et. al. (2002) concluded that fruit grade was the contributing factor for increasing the net price received by the producers. The gradation helps the growers to describe the quality that they are offering and the buyers can understand what is being offered.

It was noticed that no specific commercial gradation standards are defined by authorities. So generally ‘eye sight’ grading is practiced in the study region, normally respondents made three to four grades of fruits (table No. 6.1) taking into consideration the color, shape and weight of fruits

Table No. 6.1 Grading System of Pomegranate Fruits

<table>
<thead>
<tr>
<th>Grade</th>
<th>Name of Size</th>
<th>Diameter</th>
<th>Shape</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Super size</td>
<td>Above 10 cm</td>
<td>Very large</td>
<td>Above 600 gm</td>
</tr>
<tr>
<td>II</td>
<td>King size</td>
<td>8 to 10 cm</td>
<td>Large</td>
<td>500 to 600 gm</td>
</tr>
<tr>
<td>III</td>
<td>Queen size</td>
<td>5 to 8 cm</td>
<td>Medium</td>
<td>400 to 500 gm</td>
</tr>
<tr>
<td>IV</td>
<td>Prince size</td>
<td>Below 5 cm</td>
<td>Small</td>
<td>300 to 400 gm</td>
</tr>
</tbody>
</table>

(Source: Sonawane 2007)
6.2.3 Packing of Boxes:

After sorting, the packing of fruits into boxes is the next essential task intended to keep fruits in good condition for more period and easy for handling, loading and unloading in transportation. Good pack of well presented fruits is also necessary to attract the consumer. The white or red coloured corrugated boxes having 3 plies are utilized for fruit packing to upcountry markets. The cut pieces of waste paper are used as cushioning or filler material inside the box and also in between layers of fruits to avoid bruising on the skin of fruit during transportation.

Depending on requirements of particular national market, the weight of the filled box varied from 5 to 7 kg. If counted in number usually 6 fruits of Grade I and 12 fruits (Grade II) while 18 fruits (Grade III) and 24 to 27 fruits (Grade IV) are filled in the single box for upcountry markets.

However, the packing system is not followed for local markets located within the study area. The pomegranate fruits were brought in loose form i.e. arranged in a row of 2 to 3 layers in plastic crates of 20 kg capacity. Such crates were extensively used by respondents. Since crates are durable, light weight and shallow and easy to handle not only in the field but also during transport and at the market place. Some growers also brings the fruits in gunny bags, locally called as ‘dag’ having the capacity to carry 40 to 50 kg of fruits. But fruits filled in a gunny bag cause more mechanical damages as compared to plastic crates.

6.2.4 Transportation:

Transport of fruits from the field to the market is the final activity in the process of marketing.

i) Mode of Transport:

The mode of transport used by growers and traders varied with the type of market or depending on distance to be covered. For local markets located at Satana, Nampur, Malegaon and Nashik headquarter; the tempo, pickup vans, tractors, ape rickshaw (auto rickshaw) and even motorcycles were used as a means of transport to cover distances up to 100 km. It costs nearly Rs. 1 - 2 kg⁻¹ of fruits.
Table No. 6. 2 Vehicles Used By Respondents For Transport of Fruits.

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Type of Vehicle</th>
<th>Category of Respondents</th>
<th>Total Respondents</th>
<th>Percent of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Small</td>
<td>Medium</td>
<td>Large</td>
</tr>
<tr>
<td>i</td>
<td>Motorcycle</td>
<td>25</td>
<td>10</td>
<td>07</td>
</tr>
<tr>
<td>ii</td>
<td>Ape/auto rickshaw</td>
<td>56</td>
<td>30</td>
<td>19</td>
</tr>
<tr>
<td>iii</td>
<td>Pickup vans</td>
<td>81</td>
<td>72</td>
<td>38</td>
</tr>
<tr>
<td>iv</td>
<td>Tractor</td>
<td>00</td>
<td>01</td>
<td>06</td>
</tr>
<tr>
<td>v</td>
<td>Tempo</td>
<td>00</td>
<td>03</td>
<td>01</td>
</tr>
<tr>
<td>iv</td>
<td>Trucks</td>
<td>04</td>
<td>03</td>
<td>07</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>166</td>
<td>119</td>
<td>78</td>
</tr>
</tbody>
</table>

(Source: Compiled by researcher)

Although railway transport is cheaper but there are certain problems in rail transport like non-availability of goods wagon, trains not running on time, loading and unloading problems makes delayed delivery of produce up to destination markets. Therefore, road transport by trucks or lorry is the most convenient mode for upcountry markets than rail transport. The Mumbai - Agra National Highway No. 3 running through the study region facilitates the disposal of pomegranate produce to national markets in north India (Agra, Delhi, Kolkotta, Kanpur and Lucknow).

**ii) Distribution and Assembling Centers:**

The place locally known as ‘Manmad chowfully’ near Malegaon city located on National Highway No. 3 has been developed as major collecting and distributing center of pomegranate boxes for marketing all over India. The transport agents from this place stated that during the peak harvesting season of pomegranate, daily 20 to 25 trucks are loaded for north Indian markets.

The pomegranate boxes are also collected from the central place of a group of villages known as ‘assembling center’ namely ‘Dabhadi’ village for Malegaon tehsil and ‘Lakhmapur’ village (for Deola and Satana tehsil). These villages are located in main production region and on state highway No. -- also act as assembling centers for further movements of pomegranate boxes in the national market.
6.3 INTERMEDIARIES:

As stated earlier, existing marketing system for pomegranate is not conducive for their increased production. This is because of long distances between production and consumption regions that involve a large number of intermediaries who ripe the maximum share of consumer prices. Subsequently, growers get relatively marginal benefits over the cost incur by them for producing pomegranates (Ladaniya and et. al. 2003). Therefore, it is necessary to improve the efficiency of marketing by minimizing the intermediaries between the actual buyer and the seller. In this perspective, the section below presents an overview of activities of intermediates; those are taking part in the trade of pomegranate marketing of the study area.

6.3.1 Pre-harvest Contractors:

During the mid-growing season, the local contractors and farmers negotiate for the trade of pomegranate fruit. As per oral agreements the growers perform intercultural practices up to the harvesting of fruits. The long term trade links helped the producers also to borrow money from the pre-harvest contractors whenever required. They had faith on each other and maintaining the goodwill. However, contractors make more profit compared to orchardists due to better contacts in upcountry markets as well as by diversification of produce to different markets.

About 11.38% respondents sold their produce to pre-harvest contractors with mutually convenient terms and conditions. But it is forced type of sale. The growers were bound to sell their produce to a particular agent. The pre-harvest contractor distribute advance moneys among growers to ensure business for his side and they always paid to grower the lower rates (Rs. 5 -10 kg⁻¹) than the prevailing market rates.

6.3.2 Private Traders:

During peak harvesting periods, the private traders or their representative from national market places like Delhi, Kanpur, Kolkata, Ahmadabad, Surat, Baroda, Bhopal, Zhansi and Indore are staying in villages of the study region. Local youths so called as ‘ pomegranate pilots’ are employed by these traders either on daily wages or monthly basis or sometimes after final dealing (per kilogram of produce). These pilots function as guide and help the traders in dealing with pomegranate producers as well as for moving from one village to another in search of the produce.
Taking into consideration the quality and quantity of fruits, traders offer certain buying price per kilogram of fruits; excluding underweight (< 100gm), cracked and blemished fruits. The growers negotiate with offered prices and then decide whether to deal with trader or not. In such cases availability of fruits in the region, quantity of arrival, current prices in local and destination market are important price determining factors.

This type of marketing is most popular in the study area known as ‘on farm sale of pomegranate’, which saves the expense of grower on marketing of fruits. The yield is procured by trader so he arranges for harvesting, sorting, packing and transporting boxes up to the desired national market places. The payment of bill to grower is made immediately on the same day of harvesting. About 20.94 % respondents sold their produce to private traders on the farm.

6.3.3 Commission Agents:

Locally, they are known as, ‘Dalal’, who arranges for auctioning the produce at the market places. The growers sell their produce through a commission agent in the market place. After weighing the produce, they pay the bill so called ‘Patti’. It consists details of their commission charges at the rate of 6% and another 4% market charge deducted from the total amount of the produce.

Although the open auction system is widely considered to be superior to other systems but growers complained that is a false type of competition. There is unity among fruit agents who decide the prices by mutual understanding prior to commencing to open auction. And they do not offer better prices for the fruits. Many commission agents also perform the function of wholesalers and therefore obtain more profits in the trade of pomegranate.

6.3.4 Wholesalers:

The most common intermediaries in a distribution channel are fruit wholesalers, who got a key position in pomegranate marketing. They purchase produce either from commission agents or directly from the producers in the market. Local wholesalers also play the role of commission agent as well as broker. Some wholesalers have their stalls in retail or terminal markets. They can be classified as below.
• Local wholesalers supplies fruits to the local retailer.

• Provincial wholesalers also referred as the distributor who sell fruits to a retailers at district or state places.

• National wholesalers are involved in distributing goods all over the nation.

• Sub wholesaler are smaller wholesalers, who work under large wholesaler.

6.3.5 Retailer:

The retailer is an ultimate node in the chain of the middleman, who directly sells to the consumers. The retailer is a trader who either owns a stall or hawks but dealings directly with the wholesalers. He purchases very small quantities of fruits early in the morning and sell it out during the remaining day. Sometimes they also purchase fruits directly from the producer. The retailers are spread all over the markets in cities and towns. The retailer takes maximum profit in pomegranate trade and their share in consumer’s rupee is higher.

6.3.6 Co-operative Marketing Society:

In order to improve marketing efficiency and reduce the number of middlemen the co-operative societies of growers have been formed in Solapur District of Maharashtra. These societies act themselves as middleman and charge their commission after marketing of the produce. In other words, It work as a redistributing center for selling the produce in national and international markets. They arrange for assembling of the pomegranate and transport of the same to the distant markets. They have good contacts with wholesalers, commission agent and retailers.

But there is no any such institutional agency or Pomegranate grower’s Co-operative Marketing society in the study area, such type of marketing facility is essential to maximize the returns from pomegranate farming. And the intermediates operating between the producer and the final buyer play a significant role in regulating the linkages between producers and consumers as well as between urban and rural areas. But there is a positive relationship in between marketing cost and length of marketing channel or number of intermediaries. In this perspective, the following discussion highlights the pattern of distribution of pomegranate existing in study area.
6.4 MARKETING CHANNELS:

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 (Phule 2002).

6.4.1 Channels for Domestic Markets:

Depending on the distance between place of demand and production region and time required different channels have been evolved. As far as the marketing of pomegranate fruit is concerned, Fig No. 6.1 shows that 9 subtypes of linkages or channels exist to sell this fruit in domestic markets.

Figures No. 6.1 indicate that as the distance between the producers and consumers increases more the number of functionaries consequently higher the profits of middlemen and lesser is the marketing efficiency. The marketing has been regarded as the post production activities, which consistently influences the extent and nature of cultivation as well as determines the profits to grower.

The single most important factors governing the sale of table pomegranates in the retail market is the ‘appearance’. The appearance is influenced by colour, size and shape of fruit, in other words, physical condition of entire fruit. Hence after harvesting fruits must remain fresh till it reaches to the consumer. In this context, table No. 6.3 show that method of selling pomegranate fruits varies from one grower to another that ultimately affect on returns obtained from the produce.
Figure No. 6.1: Marketing Channels For Domestic Markets

[Source: After Phule 2002]
Table No. 6. 3 Market Channel Wise Distribution of Sample Growers

<table>
<thead>
<tr>
<th>Channel Number</th>
<th>Intermediaries in Channel</th>
<th>No. of respondents</th>
<th>Percent of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Small</td>
<td>Medium</td>
</tr>
<tr>
<td>I</td>
<td>Producer - Private traders - Wholesaler at national market - Retailer - Consumer</td>
<td>38</td>
<td>46</td>
</tr>
<tr>
<td>II</td>
<td>Producer - Wholesaler at tehsil market - Retailer - Consumer</td>
<td>55</td>
<td>24</td>
</tr>
<tr>
<td>III</td>
<td>Producer - Wholesaler at district market - Retailer - Consumer</td>
<td>33</td>
<td>26</td>
</tr>
<tr>
<td>IV</td>
<td>Producer - Pre-harvest contractor - Wholesaler at national market - Retailer - Consumer</td>
<td>31</td>
<td>17</td>
</tr>
<tr>
<td>V</td>
<td>Producer - Local commission agent - Wholesaler national market - Retailer - Consumer</td>
<td>08</td>
<td>04</td>
</tr>
<tr>
<td>VI</td>
<td>Producer - Wholesaler at distant market - Retailer - Consumer</td>
<td>00</td>
<td>01</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>165</td>
<td>118</td>
</tr>
</tbody>
</table>

(Source: Compiled by researcher)
6.4.2 Marketing Channels Used by Respondents:

It is on the behalf of grower’s decision that at which market place the produce would be sold. Usually the current prices of pomegranate and expenses for market place were two major factors taken into consideration for selecting particular channel by the respondents. Table no 6.3 revealed that there were six channels utilized by respondents for the marketing of pomegranate fruits.

a) Channel-I:

The private traders come in direct contact with the grower; the middlemen are eliminated. The benefit of grower is that there is no need to pay any commission charges and incur expenses for marketing operations such as sorting, packing, transporting the fruits. The traders offer better prices to the grower to see that grower is satisfied. The grower possesses’ better bargaining power thereby he can take better prices for fruits from the trader. Therefore, this type of sale is popular among growers, as much as 31.40 % respondents followed this channel.

b) Channel-II and III:

The growers directly sale his produce in the local market at the tehsil and District headquarters. In this, the grower has a little to say about the price in the market and he may go for distress sale. Despite of that 25.34 % and 21.21 % respondents preferred channel II and III respectively. The advantage in following both channels was that firstly, the fruits are sold in loose form which saves expenses on sorting and packing of boxes. Secondly, all grades of fruits can be sold at tehsil markets including the rough skin or blemished and underweight fruits. Actually, after on farm sale it is return produce by contractors or traders. Such produce later on utilized for fruit processing purpose i.e. for making anardana, syrup, jams, jelly etc.

c) Channel-IV:

It involves the long term relationship building that created good faith in between pre harvest contractor and the grower. The contractor is close to the farmer in few cases familiar relationship. The significant proportion about 16.80 % respondents gave up their produce to the pre-harvest contractors.

The advantage for contractor is that he does not spend lots of time in finding and locating the growers. As well as he gets the produce at low prices compared to
prevailing market rates in that particular harvesting season. The advantage for farmers is that his financial wants for cropping season or any other purpose are satisfied by obtaining advance moneys from the contractor. And Grower also not carries packing, grading, transport of the produce and commission to the agents.

d) Channel-V and VI:

In these channels they need a service provider in between the grower and the wholesalers at distant market. In other words, the produce reaches to national or distant market through local commission agents and transport agencies. The advantage for the wholesaler is that he receives well packed boxes of pomegranate fruits at the market.

The disadvantage for the grower is that he is not personally present at the market place. Moreover, he has to handle everything which requires manpower. He arranges harvesting schedules and incurs expenses on packing of fruits and commissions to the agents in distant markets. In spite of that, he remains as price takers. Because of such inconvenience, very few growers prefer to dispose their produce to national or upcountry markets. That is evident from table No. 6.3 that only 3.20 % and 1.53 % respondents preferred channel V and VI respectively.

Finally, it can be concluded that the respondents did not follow the same channel to sale their produce. Because, there are advantages and disadvantages in following any channel. And from the study area over 95% of produce is marketed through local channels by on farm sale to private traders or pre harvest contractors and local markets within district. These are more accepted channels by growers in all types of pomegranate holdings in the study area. In contrast, distant places like state or national markets are generally avoided by growers. Similarly, organized type of marketing by forming groups of growers or co-operative society and linking it to distant market places is almost absent in the study area.

6.5 MARKET EFFICIENCY:

Earlier, there was not much awareness about deduction of commissions from the growers. Now, there is growing demand from pomegranate growers to abolish or at least to reduce the percentages of commissions. The biggest issue in this whole is the lack of transparency. There has been a steep rise in the cost of marketing on account of heavy deductions which result in reduction of the profit margins of the
grower. Currently pomegranate grower has to pay minimum of six different charges at the market place. Commission agents charge heavy commission at the rate 6 – 8 % in total bill of the produce. Besides it, the market authorities also collect funds through weighing, loading and unloading, carting and recording charges. It accounts to 2 – 4 % of the total bill of the produce. Together market deductions are 10 % of gross value of production. It is very high as stated by 78.14% respondents. It means that marketing costs have direct influence in deciding the efficiency in marketing of particular produce.

Therefore, the attempt was made to assess the impact of market type on the profitability of pomegranate orchard with the intention that the grower can choose a suitable market place that would give better returns to him. For the purpose of comparative appraisal, the respondents were grouped according to market type preferred by them for selling their produce. Then cost benefit analysis was carried out especially various items of marketing cost are highlighted in detail.

**Table No. 6.4 Distributions of Respondents According to Market Type**

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Market type</th>
<th>Category of respondents</th>
<th>Total</th>
<th>Percent in total</th>
</tr>
</thead>
<tbody>
<tr>
<td>i</td>
<td>On farm sale</td>
<td>69 Small</td>
<td>63 Medium</td>
<td>43 Large</td>
</tr>
<tr>
<td>ii</td>
<td>Local or tehsil market</td>
<td>55 Small</td>
<td>24 Medium</td>
<td>13 Large</td>
</tr>
<tr>
<td>iii</td>
<td>District Market (Nashik)</td>
<td>33 Small</td>
<td>26 Medium</td>
<td>18 Large</td>
</tr>
<tr>
<td>iv</td>
<td>National markets</td>
<td>08 Small</td>
<td>05 Medium</td>
<td>06 Large</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>165 Small</td>
<td>118 Medium</td>
<td>80 Large</td>
</tr>
</tbody>
</table>

(Source: Compiled by researcher)

6.5.1 **On Farm Sale:**

As stated earlier, the attractiveness of on farm sale lies in the fact that it eliminates the expenses of grower on the labourious marketing operations in the field as well as charges in the market place. However depending on an oral agreement with traders, the grower has to carry only harvesting operations. And its cost was only ₹ 3117.9 only. Because of lower marketing expenses and also receiving satisfactory
prices and cash payments, on farm sale of pomegranate fruits is now becoming a popular trend of marketing in the study area.

The net profit ₹ 27.44 kg$^{-1}$ of fruits was realized by 48.21% respondents, who sold their produce either to private traders or pre-harvest contractors. The average cost benefit ratio for on farm sale of the pomegranate was 1:2.20. But it increased with size of the holding from 1: 2.14, 1: 2.22 to 1: 2.23 for small, medium and large growers respectively (Appendix-VIII (A)). Because of the differences in quality and quantity of fruits as well as the medium and large farmer posses better bargaining power, when dealing with the traders as compared to small farmers.

6.5.2 Tehsil Markets:

The market places are usually located at tehsil headquarters and supervised by the Agricultural Produce Marketing Committee (APMC) formed by growers. As far as pomegranate fruit trade is concerned, there are five local markets in study area namely Malegaon, Satana, Nampur, Pimpalgaon Basawant and Nashik headquarter (district market). All these market places are located within 20 - 80 km from production regions. The pomegranate fruits in unpacked form i.e. loose fruits filled in plastic crates or gunny bags were brought to local markets.

The crates at market place are arranged according to grade of fruits and kept exposed in one place for inspection of purchaser like local commission agents or traders. Then produce is auctioned by commission agents through open negotiations and fixing the price on the basis of quality of fruit. The producer receives the bill locally called ‘Patti’ from traders in which all the details regarding commission charges, weighing charges, loading and unloading and other market charges are mentioned. The payment of bill is immediately made after weighing the produce.

Although the open auction system is widely considered to be superior to other systems but 29.61% growers complained that it is a false type of competition. There is unity among fruit traders, who decide prices by mutual understanding prior to starting to open auction and they don’t offer better prices. Thus lack of healthy competition eventually leads to unfair prices for good quality produce.

Lack of organization and strong farmers’ group reduces the price bargaining power of growers to negotiate with traders in the market ultimately affect their incomes. Farmers remain price takers while well organized traders determine prices
for the produce. Therefore, business skill among the grower community needs to be improved by forming the clusters group or co-operatives or grower organizations.

Nearly one-fifth (20.8%) respondents traded their produce in local markets (tehsil headquarters). An observation of Appendix-VIII (B) clears that the selling of pomegranate produce in local markets does not require heavy cost; the average marketing cost was ₹11,893 for 8.46 tons of fruits. Mainly because of low transport cost for shorter distances that do not exceed ₹1 kg⁻¹, own vehicles were used by the growers. Moreover, the fruits are brought in loose forms filled in gunny bags or plastic crates, so the expenses of material and labour for packing of boxes are saved.

The smaller volumes of produce (5 to 10 quintals) of all grades were frequently traded in tehsil markets. But usually produce brought in the local market is not of much better quality. It commonly consist more proportion of III and IV grade fruits. It also contents the returned or rejected produce by private traders after on farm sale like underweight fruits (<100 gm), blemished by diseases, cracked fruits etc. All such fruits though posses an edible quality but cannot be sold at any other market place, which can be utilized for fruit processing purposes. Therefor local wholesaler often purchase it at very low rates.

The maximum proportion of inferior quality of produce brought down the average prices ₹35.6 kg⁻¹ of pomegranate fruits. Therefore, lowest net profit ₹12.35 kg⁻¹ of fruits and cost benefit ratio 1:1.53 was observed for farmers, who sold the fruits in local markets.

6.5.3 District Markets:

The district headquarter, Nashik market is now attaining the status of ‘state level market’ for pomegranate. It is located within 60 to 100 km distance from the pomegranate producing villages, which provides an easy access to the growers. All marketing activities are completed within a day.

Appendix-VIII (C) show that the marketing cost steadily increased from 6.06% for tehsil to 8.46% of district markets. It is because of more distance of district place from villages that in turn increased transport cost (2.12%). As well as disposal of good quality and quantity of fruits also required careful harvesting and grading of fruits so that increased labour cost (1.74%). Besides, high gross value of produce
caused high charges of commission and market fees, which contributed 4.60% in the gross cost.

However, superior quality produce were commonly launched by the growers due to more competitions at district markets so the fruits obtained fine rates ₹ 52.34 kg$^{-1}$. As a result, the utmost net profit ₹ 31.22 kg$^{-1}$ were realized by 24.22% respondents, who opted for district market. Although produce was of good quality but carried in loose form; this practice is similar to local markets, which put aside the expenses on box packing of fruits. Eventually, highest cost benefit ratio 1:2.48 was calculated for district markets.

Interestingly enough not a single respondent disposed his produce in regional or state level markets namely Nagpur, Mumbai, Pune and Kolhapur. Rather they prefer to send good quality produce at district market place (Nashik headquarter). It is due to higher transport cost and more time required for the above said state markets. Moreover, pomegranate growers do not prefer Mumbai market because of ‘Hatta’ system for fixing the prices of fruits. It is a secret system of fixing the market rates, in which two traders or commission agents hold the hands of each other covered by cloth or handkerchief and by counting fingers they decide the price of fruits. In this bargaining, the interest of growers is not safeguarded since the transactions under ‘hatta system’ are not known to third person (Phule 2002). Some commission agent charge 10 percent commission over and above the Hatta price rates.

6.5.4 National markets:

The markets outside the state of Maharashtra namely Delhi, Agra, Lucknow, Kanpur, Gorakhpur in the north, Ahmadabad, Surat, Baroda in the west and Indore and Zhanshi in central India are known as national markets. In addition Bangalore, Chennai in the south and Mumbai in Maharashtra are now emerging as new national markets for pomegranate fruits. Delhi and Kolkata markets are well known for the maximum arrival of pomegranate and very less fluctuation in prices throughout the year. Both of these market places not only act as pomegranate distribution centers in India but also exporting the fruits to neighboring countries e.g. Nepal, Bangladesh and Myanmar.

The commission agent on receipt of produce arrange for its sale at the market place. The boxes of each lot of produce in a truckload are kept separately for open
auction. The price is fixed by inspecting fruit quality after randomly opening 2 to 3 boxes. The purchasers are fruit wholesalers at national level. The producers do not go personally to the distant market, commission agents sent the ‘patties’ and payment of bill by demand draft through transport agency from where the produce was disposed.

Appendix-VIII (D) indicates that the maximum net profit ₹ 37.93 kg⁻¹ of pomegranate fruit was realized but the second highest cost benefit ratio 1: 2.41 was calculated after selling the produce in national market. It was mainly due to significant marketing cost, which occupied nearly ¼ share in gross cost of pomegranate cultivation.

The respondents to the extent of 57.39 % expressed that packing of pomegranate boxes for national markets is an expensive and labourious item. The growers employed labour for the harvesting, sorting, grading and packing of fruits. Then, he arranged for truck transport through private agencies and paid for local as well as long distance transport charges. It normally accounts ₹ 5 kg⁻¹ of fruit. Besides it, the cost of packing pomegranate box including labour and material expenses was ₹ 35.0 for a box of 7 kg capacity. In addition, 10% of the gross value of the produce is deducted on account of commission and market charges. In this regard, table No. 7.8 provides the details of marketing cost required for national markets.

**Table No. 6.5 Marketing Cost for National Market**

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Items of Cost</th>
<th>Item rates</th>
</tr>
</thead>
<tbody>
<tr>
<td>i</td>
<td>Labour cost for harvesting, sorting and grading</td>
<td>₹ 450 - 500.0 ton⁻¹</td>
</tr>
<tr>
<td>ii</td>
<td>Packing expenditure</td>
<td>(1 ton =143 boxes of 7 kg)</td>
</tr>
<tr>
<td></td>
<td>a) Labour cost</td>
<td>₹ 7.0 per box</td>
</tr>
<tr>
<td></td>
<td>b) Cost of corrugated box</td>
<td>₹ 15.0 per box</td>
</tr>
<tr>
<td></td>
<td>c) Paper cutting, gum tape and nylon wire</td>
<td>₹ 10.0 per box</td>
</tr>
<tr>
<td>iii</td>
<td>Local transport</td>
<td>₹ 7 per box</td>
</tr>
<tr>
<td>iv</td>
<td>Distant Transport charge</td>
<td>₹ 20 - 25.0 per box</td>
</tr>
<tr>
<td>v</td>
<td>Commission at national market</td>
<td>6 % of gross value of produce</td>
</tr>
<tr>
<td>vi</td>
<td>Loading, unloading, weighing charges, market fee</td>
<td>4 % of gross value of produce</td>
</tr>
</tbody>
</table>

(Source: Compiled by researcher)
Table No. 6.5 indicates high marketing cost due to expense on labour and material required for box packing. Skilled labour for sorting, grading and packing of fruits demands higher wages as well as price of packing material consisting corrugated box, tape, paper cuttings etc. are also raising day by day. It gives extra financial burden on grower in addition to long distance transport and market deductions. It is the chief cause of a comparatively less number of respondents opting for this kind of marketing. There were only 19 (5.23%) respondents, who disposed pomegranate boxes to national markets particularly at Delhi, Lucknow, Jaipur, Baroda and Indore. Likewise, there are several other reasons stated below; because of which pomegranate growers usually do not prefer the national markets.

- All other functionaries of market i.e. commission agents, weighman and transport agencies receive their share promptly. But, there are usually delays in payments of growers.

- Respondents complained that sometimes the commission agents communicated lower prices, charged higher commissions and show unauthorized deductions.

- In fact, the pomegranate producing regions of the study area are located far off from the places of national markets. Due to unavailability of railway wagons on time, the road transport by trucks remains as the only mode of transport but it takes more time for distant markets. Moreover, packaging methods are not standardized and inferior quality of material would damage fresh fruits during transit and handling in markets. It is estimated that nearly 10% fruits are wasted because of poor packaging methods that leads to high risk of post harvest losses.

- Therefore, growers were not ready to take any risk and usually preferred to sell their produce at local markets or on the farm to private traders or pre-harvest contractors. So they also receive cash payments on the same day of harvest to meet their immediate needs for production, consumption and social activities.
6.5.5 Market Wise Profits:

The table No. 6.6 and fig No. 6.3 prove that net profit of pomegranate fruits increased when the grower sold his produce either to district market or at national markets by his own efforts. As compared to the profit earned by grower after selling his produce on farm to private trader. In other words, the grower earns profit about ₹ 27.44 kg\(^{-1}\) of fruits in case of on farm sale but it was lowest ₹ 12.35 kg\(^{-1}\) for tehsil market due to inferior quality of fruits. In contrast, it increased with distance from pomegranate production region i.e. ₹ 31.22 kg\(^{-1}\) for the district and as high as ₹ 37.93 kg\(^{-1}\) at the national market places.

**Table No. 6.6 Comparative Net Profits from Pomegranate Fruit Sale**

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Type of market</th>
<th>Profit</th>
<th>Small farmers</th>
<th>Medium farmers</th>
<th>Large farmers</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>i</td>
<td>On Farm Sale</td>
<td>₹ kg(^{-1})</td>
<td>25.83</td>
<td>28.60</td>
<td>27.86</td>
<td>27.44</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CBR</td>
<td>1: 2.14</td>
<td>1: 2.22</td>
<td>1: 2.23</td>
<td>1: 2.20</td>
</tr>
<tr>
<td>ii</td>
<td>Tehsil Market</td>
<td>₹ kg(^{-1})</td>
<td>13.25</td>
<td>11.02</td>
<td>12.43</td>
<td>12.35</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CBR</td>
<td>1.65</td>
<td>1.45</td>
<td>1.49</td>
<td>1.53</td>
</tr>
<tr>
<td>iii</td>
<td>District Market</td>
<td>₹ kg(^{-1})</td>
<td>29.47</td>
<td>32.62</td>
<td>31.53</td>
<td>31.22</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CBR</td>
<td>2.36</td>
<td>2.57</td>
<td>2.51</td>
<td>2.48</td>
</tr>
<tr>
<td>iv</td>
<td>National Market</td>
<td>₹ kg(^{-1})</td>
<td>39.38</td>
<td>40.58</td>
<td>34.38</td>
<td>37.93</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CBR</td>
<td>2.50</td>
<td>2.48</td>
<td>2.28</td>
<td>2.41</td>
</tr>
</tbody>
</table>

(Source: Compiled by researcher)
On the basis of the above analysis, third declarative hypothesis put for the present study that the profitability of pomegranate varies according to type of market is accepted. In other words, profitability of pomegranate increases with local, district and national markets. But farmers, after working in the orchard throughout the year do not want to take any further marketing operations and high cost of marketing and risks of post harvest losses at distant places. Hence, the on farm sale of fruits will continue to have its importance in pomegranate cultivation of the study region.

6.6 INTERNATIONAL MARKETS:

Looking at the global level, total trade of pomegranate is 1 to 1.2 million tons per year. Spain is the biggest exporter contributing 70 to 75 % of World’s trade of pomegranate while Iran is the 2nd largest exporter shares 15 to 20 %. In spite of the largest producer in the World, India lies at 3rd position and exports 5 -10 % only (Nichit 2007). The greatest month of commercial pomegranate production in Spain is from September to December and the demand for Indian pomegranates decreases once the pomegranates from Spain and Iran starts flooding the markets. But in India pomegranate fruits are produced throughout the year, therefore it has a comparative advantage to supply pomegranate fruits even during off-season to European countries.

Netherlands, U.K., Saudi Arabia, Bangladesh, Belgium, Germany, Bahrain, Oman, Shri-Lanka, Nepal, Cyprus, Qatar are some of the major countries where pomegranate fruits from India are exported. Bhagwa is one of the best varieties suitable for export purpose and it is gaining popularity among consumers in foreign markets. This variety also met the fruit standards set by the Western World and demanded especially between December and April. Its peak production is during December to March and continues up to April to June. Thus, India can export pomegranates from February to June months when there will be no competition from Spain as a biggest exporter (Hegde 2007).

6.6.1 Pomegranate Export from Study Area:

It amply clears that the study region also has ample scope to produce the export quality pomegranate. However, this region is also not an exception to the trend of nation in export. Even it ranks first in pomegranate production in Maharashtra but the production of export quality fruits is very negligible (< 1%) of total production.
Nashik district is popular for producing and exporting quality grapes in the state and it had also recently entered into export of pomegranate. Some progressive pomegranate growers in association with private export companies started to adopt modern cultivation techniques for export considering demand of Indian pomegranate in foreign markets. Recently, the Ministry of Agriculture, Maharashtra has taken a lead and successfully exported the pomegranate containers to foreign countries.

Individual effort of growers with the help of government organizations such as Agriculture and Processed Food Products Export Development Authority (APEDA), Maharashtra State Agriculture Marketing Board, (MSAMB) and non-government organization like Pomegranate Growers’ and Research Association, Pune (MS) has opened up avenues for export of pomegranate. MSAMB has established two export facility centers for pomegranate at Baramati and Indapur (Dist: Pune, M.S.). As a result of joint efforts, table No. 6.7 shows that few tons of the pomegranate fruits were exported to international markets from the study region.

Table No. 6.7 Pomegranate Export from Nasik District

<table>
<thead>
<tr>
<th>Sr.No.</th>
<th>Year</th>
<th>Export (MT)</th>
<th>No. of container*</th>
</tr>
</thead>
<tbody>
<tr>
<td>i</td>
<td>2005-06</td>
<td>145.00</td>
<td>10</td>
</tr>
<tr>
<td>ii</td>
<td>2006-07</td>
<td>186.86</td>
<td>13</td>
</tr>
<tr>
<td>iii</td>
<td>2007-08</td>
<td>85.92</td>
<td>06</td>
</tr>
</tbody>
</table>

(*1 Container =15 MT) (Source: Commerce Branch, District Agri. office, Nashik)

No doubt, the higher prices derived from export had encouraged few growers to learn new techniques for export but they are not very successful yet. The growers, who exported their produce were well established especially financially millionaires. They are few in number. In fact, they are grape exporters so have gained quality expertise in agronomical practices like water and nutrient management, pruning, thinning, growth hormones etc. Despite of taking all such efforts and intensive care, it was possible to produce only 40 % of export quality fruits and rest of the produce was sold within the country. Therefore, generally growers in study region are not interested in pomegranate production for export.

The private companies or export traders are playing dominant role in pomegranate export. But due to difficulties in documentation and procedures, and
stringent Phyto-sanitary standards the growers are unable to export the pomegranates by own efforts. So export of this fruit has not been substantially increased yet, because the international standards are difficult to follow for growers. That's why during field survey not a single respondent was found as pomegranate exporter.

6.6.2 Problems in Pomegranate Export:

The discussion made with the respondents, agricultural officials and experts revealed following common constraints regarding deprived conditions of pomegranate export from the study area.

i) Phyto-sanitary Standards:

First of all, it is noteworthy that due to the epidemic spread of devastating infectious diseases all over the state namely bacterial blight and pomegranate wilt, the quality and quantity of pomegranate are also hampered in the study area on a large scale. Hence the use of powerful pesticides becomes necessary in pomegranate farming as a part of preventive and precautionary measure against insect-pest and disease incidences. So for the growers it gets difficult to meet the specified standards for export and to produce the fruits without utilizing agro-chemicals or to manage a number of chemical residues below detectable limits (BDL) in pomegranate fruits.

On the other hand, importing countries are quality conscious especially European and US markets, where the photo-sanitary standards are stricter. They do not tolerate any chemical residues in fruits. Even if the external physical appearance of the fruit is good but chemical residues in the end product (fruits) are the main obstacle for exporting the pomegranate to foreign markets.

ii) Export Documentation:

According to Agriculture and Processed Food Products Export Development Authority (APEDA), India the following documents are essential for export.

- Documents related to produce: invoice, packing list, certificate of origin, phyto-sanitary certificate, Global gap certificate, health certificate.
- Organic certification: Certificate of fruit production based on organic farming.
- Documents related to shipment: Mate receipt, shipping bill, handling bill.
- Documents related to payment: Letter of credit, bill of exchange.
• Bank realization certificate (BRC): This is the advice given by a Foreign or Exchange bank after the realization of money from the importer.

The list of the above documents proves that it is difficult task for an individual pomegranate grower to complete the procedure of export. Even if he knows about the production techniques and the potentials of the pomegranate crop for earning foreign exchanges but due to difficulties in documentation, they are unable to export.

iii) Technical Management:

Many private companies are already engaged in export of grapes from the study area. Nowadays, as a part of expansion in their business, companies are showing keen interest in pomegranate export as returns are high; nearly double the price of foreign markets than domestic markets. In order to ensure the export quality of pomegranates, these companies have initiated a service called the ‘Techno Management system’. Under which different kinds of services were provided like a) management of quality during production b) inspection and maintenance of pesticide schedule and record c) documentation and data control d) code of hygienic practices for post harvest handling e) Internal quality audit f) Packing and labelling etc. Then after fruit production, company procures pomegranate from their associate growers.

iv) Export Trader:

The long experience in grape export, entrepreneurship, knowledge of quality demanded in foreign markets help private companies in exporting the pomegranates. Initially the company appoints the service providers, who visit the pomegranate field and estimate amount of export quality produce. Then they purchase the entire produce at lower rates from the grower. Out of the entire produce whatever is of the best export quality is sorted by concerned buyers and disposed to international markets. Their concerns and contacts in export fields are markedly different from the growers.

iv) Export Functions:

Especially for international market more time is required due to multifarious linkages. Fig. No. 6.3 indicates that there exist 7 different channels for exporting pomegranate. The chain of essential operations or event happening from production up to shipment (fig No. 6.4) for exporting the pomegranate is too long to follow so. whatever the export quality pomegranates produced in study region that was an avenue of large farmers and in association with private companies.
Figure No. 6. 3 Marketing Channels For Pomegranate Fruit Export

(Source: After Phule 2002)
Figure No. 6.4 Chain of Marketing Operations for Pomegranate Export
v) **Constraints of Respondents in Export:**

During the field survey not the single respondent was found, who had previously exported or planning to export the pomegranate fruits. In this context, the interview with pomegranate growers indicated variety of major and minor constraints (table No. 6.8) faced at field level.

**Table No. 6. 8 Constraints of Respondents in Pomegranate Export**

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Particulars of Constraint</th>
<th>Percentages of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>i</td>
<td>Lack of technical knowledge for export production</td>
<td>94.80 %</td>
</tr>
<tr>
<td>ii</td>
<td>Unable to produce export quality fruit due to agro-chemicals</td>
<td>84.31 %</td>
</tr>
<tr>
<td>iii</td>
<td>Low production of export quality fruits in total produce</td>
<td>15.76 %</td>
</tr>
<tr>
<td>iv</td>
<td>Documentation and procedure for export</td>
<td></td>
</tr>
<tr>
<td>a)</td>
<td>Not Known</td>
<td>71.42 %</td>
</tr>
<tr>
<td>b)</td>
<td>Known but not in detail</td>
<td>12.76 %</td>
</tr>
<tr>
<td>v</td>
<td>Market places for export</td>
<td></td>
</tr>
<tr>
<td>a)</td>
<td>Not known</td>
<td>68.53 %</td>
</tr>
<tr>
<td>b)</td>
<td>Known but not in detail</td>
<td>17.39 %</td>
</tr>
<tr>
<td>vi</td>
<td>Export grading and packing standards are difficult to follow</td>
<td>91.37 %</td>
</tr>
<tr>
<td>vii</td>
<td>High marketing cost</td>
<td>86.11 %</td>
</tr>
<tr>
<td>viii</td>
<td>Risk in payments if given to the private exporter on credit</td>
<td>56.84 %</td>
</tr>
<tr>
<td>ix</td>
<td>Uncertainty in foreign market rates</td>
<td>75.49 %</td>
</tr>
<tr>
<td>x</td>
<td>Private exporters demand at lower rates</td>
<td>43.04 %</td>
</tr>
<tr>
<td>xi</td>
<td>No cold storage facilities</td>
<td>94.55 %</td>
</tr>
</tbody>
</table>

(Source: Compiled by researcher)
Above discussion amply clears that in the present condition the growers are unable to produce and export the pomegranates by own efforts. The growers are not interested and willing to take risks in export. As a consequence, today, pomegranate produced in study region is finding its share in export as a fresh fruit. Hence, as stated below much more effort regarding technology transfer is needed to expand the trade thereby meeting all standards of quality for importing countries especially of Europe.

- Proper varietal selection, crop and post harvest management, infrastructure such as cold chain, facilities for marketing at production center will definite help in enhancing the cultivation of export quality pomegranate.

- Time of export, limiting the pesticide use and regulation of fruit quality and size are three main important aspects need to be managed in production of pomegranate fruits for export. The fruits weighing more than 500 grams with superior qualities are immediately accepted in international markets.

- In order to meet Phyto-sanitary standards set by importing countries ‘organic farming’ of pomegranate is the only way for disposing pomegranates to export markets for earning the foreign exchanges.

Finally, it can be stated that pomegranate has good export potentials. Apart from consumption of fresh fruits, it has scope for alternative uses e.g. processed products (juice, jam, jelly) and medicinal uses of pomegranate leads to gaining popularity in the World markets. This clearly calls for making the product more export oriented. For that purpose, step-by-step the growers would be managed to cultivate the pomegranate farms in an organic way to obtain the fruits for export. Especially in light of the fact that per unit price realization in international markets is far higher than the domestic markets.