Marketing Efficiency and Disposal Pattern of Pomegranate in Maharashtra

ABSTRACT:

Aims: Pomegranate has a paramount importance among the producers of Maharashtra, a leading producing state in the country, needs efficient marketing and disposal to the ultimate consumer for more value against its perishability.

Study Design: Vashi market near to Navi Mumbai was selected for the study purpose due to maximum hoarding of pomegranates in the states and from the other states as well. A total 60 Producers and 40 functionaries were asked to respond against a structured schedule which was prepared for the purpose.

Place and Duration of Study: The study was undertaken as the mandatory project work programme of MBA (Agribusiness)which was undertaken jointly by International Agribusiness Management Institute and ABC Company, Maharashtra in the month of January-April 2024.

Methodology: Different stakeholders, connected to the Vashi market were selected purposively to address the problem statement and the corresponding objectives which were analysed further through descriptive statistics and Acharya Measurement of Marketing Efficiency.

Result: Producers were getting more than 60 percent of the share in consumer rupee irrespective of the four major channels. The state share in pomegranate production wasalso quite significant at the national sphere. Despite that, storage issues, transportation issues and some cases issues of packaging materials generate cost escalation for the stakeholders. It was observed, where farmers were doing primary processing before selling the pomegranate to the next stakeholders were getting good amount of net income from it.

Conclusion: It is advised to encourage the development of the farmers' market where producers can sell directly to consumers and reaping more benefit from their surpluses.

Keyword: Pomegranate, Vashi Market, Storage, Efficiency, Marketing Channel

1.INTRODUCTION

India stands second in overall fruits and vegetables productionproducing 300.6 million MT out of which 103.03 million MT fruits in the basket [1]. The country has the greatest advantage of diverse climatic conditionsthat allows for year-round availability of fruits [2]; unfortunately, climatic variability and harsh weather condition stands as a deterrent in the production process. Eventually, the gravity of the situations is more severe in absence of proper infrastructure; especially cold storage, logistic system, and suitable packages. As a result, producers try to sale instantly in their respective accessible market for reaping their desired amount ofprofit. This condition ofmarketing practices many times lead to distress sale which is quite a common phenomenon in fruits and vegetables.

Pomegranate (*Punica Granatum L.*)is one of the important fruits grown in tropical to temperate agro-climatic conditions of India is gaining importance due to its nutritional and therapeutic values due to the presence of several bioactive compounds in its different parts [3].Iran, India, China, Turkey and the USA are major pomegranate producing countries with 76 percent of the total global production [4]. India is the largest producer of pomegranate with around 50 percent share, globally [5]. Most of India's pomegranate production occurs in tropical regions and the states like Maharashtra, Karnataka, and Andhra Pradesh are contributing more than 50 percent to the total output in the region. This is followed by subtropical regions, where states such as Gujarat and Rajasthan also play a significant role. In contrast, temperate regions in India account for a minimal share, contributing only about 1 to 2 percent of the country's pomegranate production [6]. Despite good volume of production, the producers of many states, especially in Gujarat farmers are quitting pomegranate cultivation because of uncertain weather conditions and an increase in pests and disease infestation [7]. Contrary to that Maharashtra state supports its pomegranate producers with proper infrastructure as a result, post-harvest losses in pomegranate are substantially less than other states[1]. Despite that decrease in area of pomegranate

[1]At the state level, Andhra Pradesh experienced the highest pomegranate losses (8.69%), whereas Maharashtra had the lowest (6.02%). Lack of infrastructure for cold storage and pack houses in Andhra Pradesh and Karnataka led to higher losses.

production across all the states of India is a matter of concern that not only impact on production but also on the processing industry and their capacity utilisation[8].

In Maharashtra, pomegranate is cultivated around 1.62 lakh ha with a production of 17.48 lakh MT [9]. However, the lack of storage facilities, malpractices in market, lack of knowledge about export, fluctuation in market price, unavailability credit at low interest rate, irregular supply of electricity, unavailable technical labour and trained worker [10] creates an ecosystem of many middlemen from pre-harvest contractors, commission agent cum wholesalers, distant market wholesalers, retailers, to exporters[11] in between producers at one end to consumers at another. Besides that,absence of processing industries, high labor costs, lack of storage facilities, expensive transportation, and inadequate market information [12] make the producers to search the market and dispose the marketed surplus in the hand of the middlemen. As study stays, higher the middlemen, lesser will be the efficiency in the agro-based marketing system and producers also get less in the consumers surplus.

With this backdrop, the present paper is going to reveal the facts regarding marketing pattern, marketing chain, price spread and other impediments for the stakeholders in the pomegranate marketing in Maharashtra after the harvest from the farmers' field. These days, ICAR-NRCP developed a value chain approach for the comprehensive utilization of pomegranates. This initiative aims to diversify the utilization pattern of pomegranates, which is currently dominated by table consumption, into various value-added products. The goal is to avoid distress sales, ensure higher profit realization for pomegranate growers, and generate employment through the development of related enterprises [13].

2.MATERIALS AND METHODS

To understand the disposal pattern of pomegranate in Maharashtra state, Vashi Market of Navi Mumbai was selected for the study purpose in which it was tried to target 60 pomegranate farmers, 40 functionaries including 15 wholesalers cum commission agents, 10 retailers, 5 preharvest contractors, 5 local traders/aggregators and 5 unorganised private companies for the stipulated response against the

problemstatements.Vashi market was selected due to its high arrival rate of pomegranates, one of the highest in Maharashtra[2].

Fig 1 Vashi Agriculture Produce Market Committee

Farmers visiting Vashi (Navi Mumbai) APMC, or the farmers selling their produce to intermediaries who ultimately sell it in Vashi (Navi Mumbai) APMC were selected through purposive sampling in the study.According to data from [14], Vashi APMC received a notable influx of 14,379 metric tons of pomegranates during the 2022-23 period, securing its position as the second-highest receiver of pomegranates in Maharashtra. This influx underscores the market's significance in the regional agricultural landscape and its pivotal role in facilitating trade and distribution across Maharashtra and beyond. Even, Despite the limited cultivation of fruits in the immediate vicinity, Vashi Market ranks among the top three largest Agricultural Produce Market Committees (APMCs) in India, particularly notable for its substantial volume of fruits received. Maharashtra's prominence in pomegranate cultivation contributes significantly to Vashi Market'sstature, with pomegranates sourced from key cultivation regions such as Solapur, Sangola, Nashik, Manchar, and Sangli finding their way to the market.Wholesaler cum commission agents selling more than 10 MT

[2]The arrival rate indicates the strategic importance of a market for a given commodity, making it a major criterion for market selection [15]

of Pomegranates in a week during peak season andretailers purchasing fruits from Vashi (Navi Mumbai) APMC were selected for the purpose. In the data collection practices, question was asked to each stakeholder regarding cost, price and activity wise connection with other players in the same supply chain to verify their reliability against each response. Complete data were collected in the month of January to April, 2024 looking into the harvesting period of pomegranate in to account. After collection of data, it was analysed through Acharya measurement of marketing efficiency for understanding marketing efficiency. Other than this, marketing cost, marketing margin, price spread was also calculated to support the standpoint in the direction of efficient disposal pattern of pomegranate in the study area.

2.1 Measurement of Marketingefficiency

Theevaluationofmarketingefficiencyinvariouschannelsinthestudyareawillb econductedusing [16].

$$\text{Marketing Efficiency} = \frac{Pf}{Mc + Mm}$$

were, P_f = Net price received by the farmer

Mc = Total marketing cost

Mm = Total marketing margin

3.RESULTS AND DISCUSSION

As reported in the table 1, there were four major channels for pomegranate found in the study area which were marketed in Vasi market. Channel 1 was dominated of 40 percent of farmers depended on it where as only 8.33 percent farmers channelized their produce through the channel IV. Channel IV was majorly controlled through the private companies where pomegranate was disposed through the collection center.

Table 1 Identified Pomegranate Marketing Channel in Maharashtra

Channel No	Number of	Percentage distribution	Marketing channel

	Farmers		
Channel I	24	40.00	Farmer – Wholesaler cum Commission Agent – Retailer – Consumer
Channel II	20	33.33	Farmer – Pre-harvest Contractor – Wholesaler cum commission agent – Retailer – Consumer
Channel III	11	18.33	Farmer –Local trader / Aggregator - Wholesaler cum Commission Agent – Retailer – Consumer
Channel IV	5	8.33	Farmer – Collection Centre – Distribution Centre – Consumer

Channel II was also very much significant for the producers because of the involvement of the preharvest contractor who owned all the post-harvest operations (harvesting, packing, sorting, grading) on the behalf of the farmers and took away all the pomegranate in the farmers' field itself. So, their importance in the context of nonprice support mechanism is quite important one.Even, price support to the farmers in the form of instant cash by the preharvest contractors allowed 33.33 percent of producers to dispose their pomegranate in the channel II. Many times, 18.33 percent of handled over their pomegranate to local trader to market the same in the Vashi market on their behalf to reduce any transaction cost economics in the form of place, time and distance market.

As first three channels were passed through Vashi APMC, their comparative figures were depicted in the table 1. It was observed when farmers were doing some of the primary processing activities before selling to the next middlemen in the supply chain, they received comparatively better net price for their produce (channel I was better over Channel III and Channel II). Producers share in consumer rupees was also found better in the Channel I in comparison to the other channels (Ch II and Ch III); that could be the reason more farmers disposed their pomegranate in the Channel I only (table1). In channel I, major cost incurred was found at the retailors level (50%) of the total cost incurred in the pomegranate marketing chain. Even, retailors cost accounted significantly higher in all the channels; around more than 40 percent in the channels. Transportation cost was higher for the producers (14.97%), storage cost for wholesaler (10.98%) and retailors (25.26%) in the channel I, need efficient infrastructural development. Similarly, preharvest contractor was also facing issues of transportation cost (12.80%) and in the same manner, wholesaler and retailors

incurred significant storage cost of 14.25 and 22.06 percent respectively. In the channel III, aggregators incurred more on transportation cost (14.99%) where as farmers incurred 4.16 percent as storage expenditure followed by wholesaler (14.24%) and retailors (22.05%) in the same categories in pomegranate disposal pattern to the Vashi APMC. In all the three channels, marketing margin were comparatively higher over marketing cost; may be due to unorganised pattern of pomegranate marketing in the area.

Table 2 Channel wise disposal pattern of pomegranate and Marketing Efficiency (price in qtl)

Sr.	Particulars	Channel I	Channel II	Channel III
1	**Net price received by the farmer**	10338.50	9600.00	9810.00
2	**Cost incurred by the farmer**			
I	Loading/ Unloading Cost	85.00 (4.24)		
II	Grading Sorting and Packaging Cost	70.00 (3.49)		70.00 (2.91)
III	Packaging material	40.00 (2.00)		15.00 (0.62)
IV	Transportation cost	300.00 (14.97)		
V	Weighing Charge	25.00 (1.25)		
VI	Storage Cost	110.00 (5.49)		100.00 (4.16)
VII	Miscellaneous cost	31.50 (1.57)		5.00 (0.21)
	Total cost (I to VII)	661.50 (33.00)		190.00 (7.91)
3	Farmer's selling price	11000.00	9600.00	10000.00
4	**Cost incurred by Pre-harvest contractor**			
I	Harvesting Cost		133.00 (5.67)	
II	Grading Sorting and Packaging Cost		70.00 (2.99)	
III	Packaging material		15.00 (0.64)	
IV	Loading/ Unloading Cost		85.00 (3.63)	
V	Weighing Charge		25.00 (1.07)	
VI	Transportation cost		300.00 (12.80)	
VII	Storage Cost		192.00 (8.19)	
VIII	Miscellaneous cost		41.00	

			(1.75)	
	Total cost (I to VIII)		861.00 (36.73)	
5	Preharvest contractor margin		672.00 (17.02)	
6	Preharvest contractor's selling price to Wholesaler cum commission agent		11133.00	
7	**Cost incurred by Local trader/Aggregator**			
I	Loading/ Unloading Cost			85.00 (3.54)
II	Weighing Charge			25.00 (1.04)
III	Transportation cost			360.00 (14.99)
IV	Storage Cost			200.00 (8.33)
V	Miscellaneous cost			33.50 (1.39)
	Total cost(I to V)			703.50 (29.28)
8	Local trader/Aggregator margin			700.00 (17.26)
9	Local trader's/Aggregator's selling price to Wholesaler cum commission agent			11403.50
10	**Cost incurred by wholesaler cum commission agent**			
I	Labour cost	85.00 (4.24)	85.00 (3.63)	85.00 (3.54)
II	Storage Cost	220.00 (10.98)	333.99 (14.25)	342.11 (14.24)
III	Miscellaneous cost	30.50 (1.58)	41.90 (1.79)	42.71 (1.78)
	Total cost (I to III)	335.50 (16.64)	460.89 (19.66)	469.82 (19.56)
11	Wholesaler cum commission agent margin	1320.00 (41.02)	1335.96 (33.84)	1368.42 (33.75)
12	Wholesaler cum commission agent's selling price to retailer	12655.50	12929.85	13241.74
13	**Cost incurred by retailer**			
I	Loading/ Unloading Cost	60.00 (2.99)	60.00 (2.56)	60.00 (2.50)
II	Transportation cost	240.00 (11.97)	240.00 (14.24)	240.00 (9.99)
III	Market Fee	126.56 (6.31)	129.30 (5.52)	132.42 (5.51)
IV	Storage Cost	506.22 (25.26)	517.19 (22.06)	529.67 (22.05)
V	Miscellaneous cost	74.62 (3.72)	75.72 (3.23)	76.97 (3.20)
	Total cost (I to V)	1007.42 (50.26)	1022.21 (43.61)	1039.05 (43.25)

14	Retailer's margin	1898.33 (58.98)	1939.48 (49.13)	1986.26 (48.99)
15	Retailer's selling price to consumer	15561.22	15891.54	16267.05
16	Total marketing cost (MC)	2004.40 (100.00)	2344.10 (100.00)	2402.37 (100.00)
17	Total marketing margin (MM)	3218.33 (100.00)	3947.44 (100.00)	4054.68 (100.00)
18	Price spread (MC + MM)	5222.73	6291.54	6457.05
19	Marketing efficiency (Acharya's method)	**1.98**	**1.53**	**1.52**
20	Producer's share in consumer's rupee	**66.44**	**60.41**	**60.31**

Parenthesis in bracket is showing the percentage of the respective cost and margin

Though very few farmers depended on channel IV, still price received by the farmers was quite higher than the channel I, II, and III. Again, it was mainly due to initial primary processing activities that were done by the farmers at their level only. Transportation and Packaging material costs were two of the major one that were incurred by the companies at their collection centres that was around 36 percent in total. Delivery partner charge (19.79%) was the major cost at the Delivery centre of the company and in this way, company incurred a total cost of ₹ 2602 per qtl of pomegranate marketing from producers to their organisations. Here, also companies were taking higher margin over their cost incurred in different categories; could be due to more unorganised and informal in nature.

Table 3 Disposal pattern of Pomegranate through private companies (price in qtl)

Sr No.	Particulars	Price
1	Net price received by the farmer	13166.75
2	**Cost incurred by the farmer**	
I	Grading Sorting and Packaging Cost	55.00(2.11)
II	Loading/ Unloading Cost	40.00(1.54)
III	Transportation cost	110.00(4.23)
IV	Storage Cost	115.00(4.42)
V	Miscellaneous Cost	13.25(0.51)
	Total cost (I to V)	333.25(12.81)
3	Farmer's selling price to CC	13500.00
4	**Cost incurred by CC of Private Company**	
I	Labour Cost	147.20(5.66)
II	Packaging Material	545.00(20.94)
III	Transportation cost	400.00(15.37)
IV	Storage Cost	202.50(7.78)
V	Miscellaneous Cost	103.58(3.98)
	Total cost (I to V)	1398.28 (53.73)
5	CC selling price to DC	14898.28
6	**Cost incurred by DC of Private Company**	

I	Labour Cost	50.00(1.92)
II	Transportation cost	190.00(7.30)
III	Storage Cost	74.49(2.86)
IV	Delivery Partner charge	515.00(19.79)
V	Miscellaneous Cost	41.47(1.59)
	Total cost (I to V)	870.97(33.47)
7	Private company's margin	2979.66(100.00)
8	Private company selling price to consumer	18748.90
9	Total marketing cost (MC)	2602.49(100.00)
10	Total marketing margin (MM)	2979.66(100.00)
11	Price spread (MC + MM)	5582.15
12	Marketing efficiency (Acharya's method)	**2.36**
13	Producer's share in consumer's rupee	**70.23**

Parenthesis in bracket is showing the percentage of the respective cost and margin

4. CONCLUSION

Pomegranate marketing in Maharashtra is the lucrative one in that context where producers are getting more than 60 percent of share in consumer rupee irrespective of the channel and it is quite better if it is disposed through private companies for juice making (one of the value-added products). Even, the state share in pomegranate production is quite significant and considered as the leading state in the national sphere. In spite of that storage issues, transportation issues and some cases issues of packaging materials generate cost escalation for the stakeholders, need focus attention of infrastructural development. It is observed, where farmers are doing primary processing before selling the pomegranate to the next stakeholders are getting good amount of net income from it. Vashi market of Navi Mumbai is the hub of pomegranate disposal where all the stakeholders in the business are connected., generate a scope of future business ecosystem in pomegranate marketing. The role played by the preharvest contractors are very much significant in this disposal pattern of pomegranate marketing due to their non price and price support mechanism in the disposal pattern.

5. RECOMMENDATION

So, it is advised to encourage the development of the farmer's market where producers can sell directly to consumers and reaping more benefit from their surpluses.

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