

Analysis Of Existing Logistic Setup In Marketing Of Mangoes In Khammam District Of Telangna

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Abstract: Present study was under taken to identify the different channels of marketing of mangoes were identified; the profit margins in the respective channels were analyzed. This study provides useful and meaningful insights to the orchardists, intermediaries in marketing under different channels with regard to economic level of mango production and marketing. The marketing costs, margins, and the role of middlemen will be of great relevance to the policy makers to overcome problems in marketing of mangoes. Research studies conducted by an individual are always confronted with various bottlenecks and hence the present study is not an exception to such limitations. This study was confined to a particular agro-climatic region and hence conclusions drawn are applicable to that area and or other areas where similar conditions exist. Further, the necessary data and information collected through survey method by conducting personal interviews with sample farmers and inferences drawn are subject to recall bias, since the farmers did not maintain any records on cultivation and marketing aspects. But almost care had been taken in collection of relevant data. The study was carried out in a limited period of time and for limited size of sample and hence generalization of results may not be possible.

I. INTRODUCTION

With regard to area and production in Telangana, Ranga Reddy district secured first rank with an area of 0.46 lakh hectares followed by Nalgonda district with 0.34 lakh hectares, Khammam with 0.28 lakh hectares, Warangal with 0.18 lakh hectares, and Mahabubnagar with 0.12 lakh hectares. In production, Nalgonda occupies first rank with 2.73 lakh tonnes and next to it are the districts of Ranga Reddy with 5.28 lakh tonnes, Khammam with 3.95 lakh tonnes, Mahabubnagar with 3.52 lakh tonnes, Warangal with 2.45 lakh tonnes. With regard to area and production in Telangana, Khammam district secured third rank in 2012-13. The demand for mangoes in the country and abroad is increasing over time (Telangana Department of Horticulture, 2013). Mango being a rich source of nutrients, vitamins, minerals is highly preferred fruit by the consumers and cultivation of mangoes brings higher income to the farmers. It is an important fruit crop among the various fruits grown in India. It is possible to have vast opportunities of employment and income generation for different types of people in the marketing of mangoes. In view of its economic importance the logistics of mangoes through different channels has to be investigated, their costs and margins have to be estimated to help the active players in different channels and improve the efficiency levels. It is also important to examine the marketing aspects to increase the income of mango growers and intermediaries involved in marketing. To investigate the above issues a micro level field study was conducted in fruit markets of Sathupalli, Kothagudem, Manuguru and Aswaraopet mandals of Khammam district in Telangana. Very few research studies have been attempted so far to study the analysis of logistics involved in marketing of mangoes in different channels in Telangana. With regard to area, production in Telangana, Khammam district secured Third rank in 2012-13. Therefore an enquiry is made to analyze supply chain of mangoes under different channels with the following objectives.

The specific objectives of the study:

- To study the existing logistics setup in marketing of Mangoes in Khammam district.
- To identify different market channels in Mango marketing and estimate market costs under different channels.

II. DATA AND METHODOLOGY

Primary data were collected from the selected mango growers, commission agents, pre harvest contractors, distant wholesalers, wholesalers, retailers and consumers of the study area through survey method with the help of pre-tested schedules designed for the purpose. Secondary data pertaining to the agro economic features of the study area were collected from chief planning officer, Khammam district. The data regarding the arrival and prices of the regulated market along with other related information were collected from the market committee records. The data regarding exports were collected from APEDA. The data regarding the area, production, productivity of mango, processing units, cold storages, and AEZ'S were collected from Department

of Horticulture, Government of Telangana. Secondary data relevant to the study is also collected from some additional sources like, Assistant Director of Horticulture, CMIE, India stat.

2.1 Tools of analysis:

Analytical techniques/tools used to analyze the data pertaining to the study are presented here, Simple averages are used for estimating the average quantity sold, marketing costs, profit margin and intermediaries under different marketing channels. Appropriate percentages were worked out for the purpose of comparison.

III. EXISTING LOGISTIC SETUP IN MANGOES MARKETING:

The economic well being of farmers depends not only on minimization of costs, but also on maximization of returns. Unless the farmers sell their produce in a market where they are sure of getting a fair price all the efforts exercised by the producer to realize higher yields would become futile. Where producer sells and at what price it is sold is of prime importance to judge whether farmers are able to maximize their due share of consumer's price. Thus it is of paramount importance to study the structure of market and various marketing activities involved in marketing the produce. Agricultural marketing plays an important role not only in stimulating production and consumption, but also in accelerating the pace of economic development. Its dynamic functions are of prime importance in promoting economic development. An efficient marketing system ensures higher levels of income for the farmers by reducing the commission on marketing services of farm products. An efficient logistics and marketing system guarantees the farmers better prices for farm products and induces them to invest the surplus in modern inputs, so that productivity and production increase.

In the present study, an attempt was made to identify different marketing channels through which selected orchardists' marketed mangoes. Though the marketing practices of mangoes in the study area are more or less similar, there was distinction observed in the study. Most of the growers were found to dispose the standing crop to the preharvest contractors. There are four predominant mango supply chains identified in the study area.

Channel-I: Producer- Commission agent- Wholesaler - Retailer- Consumer.

Channel-II: Producer- Local retailer- Consumer.

Channel-III: Producer-Consumer.

Channel-IV: Producer- Preharvest contractor-Commission agent- Wholesaler- Retailer-Consumer.

The percentage of farmers selling the mangoes through different channels along with quantity of produce marketed are presented in Table 1

The particulars of the Table 1 indicated that the most prevalent marketing channel in mango trade was channel-IV (Producer- Preharvest contractor-Commission agent- Wholesaler- Retailer- Consumer.) through which 59.17 per cent of farmers disposed the mangoes. The percentage of produce sold through this channel was 58.52. Channel-I was the next important one through which 20.83 per cent of the sample farmers routed their produce and the corresponding percentage of the total produce sold was 23.84. Channel-IV is followed by channel-II with regards to percentage of farmers choosing the channel and percentage of the quantity of the produce disposing through the Channel along with the percentage share of the total output sold by the sample farmers. Channel-III i.e. sale to consumers in the farm or near by road is the last one and least preferred one by the farmers, i.e. only 6.67 per cent of the sample farmers dispose 8.99 per cent of produce through this channel. Similar results were reported by Raju and Thorat et al. (1990) and Chunnilal (1991). Total number of sample farmers involved in marketing of mangoes was 120 and they marketed 34874 quintals of mangoes.. The channel-III is an important one regarding the average quantity sold by each farmer which is 392 quintals. Channel-I, Channel-IV and Channel-II were the next important regarding the average quantity sold by each farmers which is 332.60, 287.44 and 188.44 quintals respectively.

When the pattern of opting different channels was examined, it was understood that the preharvest contractors were preferred by the farmers as they were more accessible. Besides high transportation cost involved in taking the produce to the market, wide price fluctuations at the time of harvesting and risk and uncertainty involved in mango production and marketing are the important factors causing the farmers to sell the mangoes to preharvest contractors.

Table 1: Particulars of farmers along with the quantity sold in different channels

S.No	Market Channel	No of respondents	Quantity of the produce(q)	Average per farmer(q)
1	Channel-I	25 20.83	8315 23.84	332.6
2	Channel-II	16 13.33	3015 8.65	188.44
3	Channel-III	8	3136	392

		6.67	8.99	
4	Channel-IV	71	20408	287.44
		59.17	58.52	
	Total	120	34874	290.61
		100	100	

Note: Figures in the parentheses indicate percentages to the total number of growers and the total quantity produced.

The farmers in channel-I send their produce of mangoes to local fruit market (or) Gaddiannaram fruit market. Here commission agent acts as converging point for mangoes throughout the state. They make note of each farmer and sell the produce to the wholesalers in the presence of farmers only. The wholesalers market the fruits in distant markets like Nagpur, Delhi, Gujarat, Haryana etc, through commission agents. They market the fruits depending on the prices existing in the distant markets. They would get the information of the prices by phone from the commission agents who are at the distant markets. The distant retailers purchase the produce from the distant wholesalers and then sell it to consumers. Some times, the commission agent himself acts as a local wholesaler and undertakes marketing of mangoes. The local retailers purchase the produce from the commission agent or wholesaler and then sell it to consumers.

The farmers in channel-II sell the produce directly to the local retailers. This is very rare situation. As the study area is near by the city some well known retailers comes to the farmers' orchards and buy the produce. Here the transportation costs are to be incurred by the retailer only. The farmers in channel-III sell the produce directly to the consumers in the farm itself or near by road. Here the produce sold is very small (392quintals only), but the profit in this channel is very high when compared to the other mentioned channels. Channel-IV is very similar to the channel-I except for the presence of an additional intermediary- the preharvest contractor. The payments for the orchards is based on the performance of the orchard yields over the previous years, size and quality of the fruits produced, age of the orchards and the prices in the market. In this channel it is the preharvest contractor who bears the harvesting charges and marketing costs to market the produce in Local fruit market (or) Gaddiannaram fruit market. All the other middlemen perform the same function as discussed in the channel-I. The farmers did not incur any expenditure towards marketing particularly in this channel

IV. MARKETING COSTS IN DIFFERENT CHANNELS:

The costs incurred by different intermediaries in performing marketing tasks in different channels are presented in Table 2

In channel-I, producer, wholesaler, distant wholesaler, and retailer were involved. Here producer directly markets the mangoes to the wholesaler through commission agent. The wholesaler buys the produce and disposed them to the retailer who in turn sold the produce to consumers. The total marketing costs incurred by the intermediaries in channel-I are Rs 354.07 per quintal. . Of all the intermediaries more marketing costs were incurred by wholesaler, followed by producer, in the marketing costs of the wholesaler transportation costs formed the major portion with Rs 165.55 where as other costs were Rs 19.34 which includes labour charges, packing and weighing, ripening costs, spoilage losses, taxes, etc., Next to wholesaler, producer incurred the next higher costs which amounted to Rs 150.86 (42.61 per cent). Here transportation costs, commission agent charges and labour charges formed major portion which are Rs 28.26, Rs 17.52 and Rs 99.26 respectively.

Table 2 Marketing costs for one quintal of mangoes in different channels (Amount in Rupees)

1	Producer				
		99.26	36.11	43.19	0
	Labour charges	28.22	16.62	42.43	0
		28.26	0	26.4	0
	Transportation	8.04	0	25.93	0
		1.13	1.07	0	0
	Packing & weighing	0.32	0.49	0	0
		0	0	6.96	0
	Ripening costs	0	0	6.84	0
		2.3	3.37	20.88	0
	Spoilage losses	0.65	1.55	20.51	0
		2.39	1.32	4.37	0
	Taxes etc	0.68	0.61	4.29	0
		17.52	0	0	0
	Commission agent charges	4.98	0	0	0
	Total	150.86	41.87	101.8	0

		42.61	27.01	100	0
2	Pre harvest contractor				
	Labour charges	0	0	0	33.32
		0	0	0	9.07
	Transportation	0	0	0	48.42
		0	0	0	13.18
	Packing & weighing	0	0	0	4.54
		0	0	0	1.24
	Ripening costs	0	0	0	0
		0	0	0	0
	Spoilage losses	0	0	0	0.97
		0	0	0	0.26
	Taxes etc	0	0	0	1.85
		0	0	0	0.5
	Commission agent charges	0	0	0	46.43
		0	0	0	12.64
	Total	0	0	0	135.53
		0	0	0	36.89
3	Wholesaler				
	Labour charges	2.13	0	0	2.96
		0.61	0	0	0.81
	Transportation	165.56	0	0	156.93
		47.08	0	0	42.72
	Packing & weighing	2.3	0	0	2.97
		0.65	0	0	0.81
	Ripening costs	4.1	0	0	5.94
		1.17	0	0	1.62
	Spoilage losses	6.45	0	0	10.13
		1.83	0	0	2.76
	Taxes etc	4.36	0	0	6.41
		1.24	0	0	1.74
	Total	184.9	0	0	185.34
		52.22	0	0	50.45
5	Retailer				
	Labour charges	0.39	8.57	0	2.18
		0.11	3.94	0	0.59
	Transportation	0	103.27	0	0
		0	47.53	0	0
	Packing & weighing	0	2.83	0	0
		0	1.3	0	0
	Ripening costs	0.99	32.02	0	18.26
		0.28	14.74	0	4.97
	Spoilage losses	15.34	24.75	0	24.31
		4.36	11.39	0	6.62
	Taxes etc	1.59	3.98	0	1.72
		0.45	1.83	0	0.47

Table 2 (Cont.).

		18.31	113.13	0	46.47
	Total	5.17	72.99	0	12.65
	Total marketing costs	354.07	155	101.8	367.34
		100	100	100	100

Note: Figures in the parentheses indicate percentages to the total marketing costs in each channel.

Other costs packing and weighing, spoilage losses, and taxes etc., which accounted to Rs 5.82. Costs incurred by retailer are Rs 18.31 (5.17 per cent). Major costs incurred by the retailer were taxes (Rs 1.59) and spoilage losses (Rs 15.34). The most important feature of this channel was that the transportation costs were high at wholesaler's level because of the longer distance the mangoes had to travel. Spoilage costs were high at retailer's level, retailer being the last functionary in this channel.

The farmers in channel-II sell the produce directly to the retailers, so only one functionary was involved who sold the produce to ultimate consumer. Here the retailer comes to the farmers' orchard and buys the produce, for which he has to bear the transportation costs. The total marketing costs incurred in this channel were Rs 155.00. The marketing costs incurred by the producer and retailer were Rs 41.87 (27.01 per cent) and Rs 113.13 (72.99 per cent) respectively. Transportation costs formed the major item of costs incurred by the retailer which was Rs 103.27 (47.53 per cent). Ripening costs (Rs 32.02) and spoilage losses (Rs 24.75) were the next important to costs incurred by the retailer. In the case of producers marketing costs, labour charges constituted major part i.e. Rs 36.11 (16.62 per cent of the total marketing costs).

In Channel-III, the producer himself takes the sale of ripened fruits to the ultimate consumers in the village markets (or) near by roads. In this channel there are no functionaries involved except the producer. The marketing cost incurred by the producer was Rs 101.80. Labour charges and transportation costs formed major portion, which accounted to Rs 43.19 and Rs 26.40 respectively. Next to it were spoilage losses which accounted to Rs 20.88 and ripening costs accounted to Rs 6.96

Regarding channel-IV preharvest contractor takes the produce from the producer and sells it to the wholesaler in the local fruit market (or) Gaddiannaram fruit market through the commission agent. The producer therefore did not incur any marketing costs. This channel is very much similar to the channel-I except for the preharvest contractor present in this channel. The total marketing costs in channel-I and channel-IV were almost same. It is the preharvest contractor who takes the responsibility of the producer to market the produce. Here also marketing costs were higher at wholesalers' level. Next to wholesaler, preharvest contractor incurred more costs in marketing mangoes. As mentioned the marketing costs incurred by the wholesaler was Rs 185.34 (50.45 per cent). Transportation costs of Rs 156.93 (42.72 per cent) formed the major portion of marketing costs incurred by the wholesaler. Labour charges, ripening costs, spoilage losses, packing and weighing, taxes etc. accounted to Rs 28.41. The marketing cost incurred by preharvest contractor was Rs.135.53 (36.89 per cent to the total marketing costs). For preharvest contractor transportation costs of Rs 48.42 (13.18 per cent) formed major portion after which commission agent charges of Rs. 46.43 and labour charges of Rs 33.32 were high. Costs incurred by retailer were Rs 43.23 (8.50 per cent) and Rs 46.44 (9.14 per cent) respectively.

V. CONCLUSIONS

The most prevalent marketing channel in mango trade was channel-IV through which 59.17 per cent of farmers disposed the mangoes and the produce sold through this channel was about 71 respondents of the total farmers marketed their produce through this channel. Channel-III is least preferred one by the farmers, i.e. only 6.67 per cent of the sample farmers dispose about 8.99 per cent of total produce. The total marketing costs incurred in channel-I and IV were almost same in which the produce is exported to distant markets. The total marketing costs incurred in channel-III (direct sale to consumers) was very low when compared to other channels. Government should take necessary steps to improve market intelligence system regarding market information like commission agent charges, hamali charges, prices etc.

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