A study on price spread and marketing efficiency of sweet orange in Nalgonda district of Telangana

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ABSTRACT

The study was conducted to know about the price spread and marketing efficiency of sweet orange in Nalgonda district of Telangana. Purposive sampling was used to select the 90 sample farmers from the district. Totally four marketing channels were identified and among those channel-1 having farmer – commission agent – wholesaler – retailer – consumer was very prominent among the other channels and marketing efficiency (0.39%) was also higher in this channel as compared to other channels. Producer share in consumer rupee from the channel-1 was 27.19 per cent. Some of the suggestions to improve market efficiency given by the farmers were to increase the cold storage units and to improve the marketing intelligence.

Keywords: Sweet orange; price spread; marketing efficiency; channel

INTRODUCTION

India stood third in production of citrus fruits at global level after China and Nigeria in the year 2016. Sweet orange constitutes the bulk of the global citrus fruit production. Citrus fruits are good source of vitamin C, fibers and folic acid. Sweet orange is an important crop of Far East, Union of South Africa, Australia, throughout Mediterranean area and subtropical areas of South America and the Caribbean. It is produced in many countries around the world especially in warm and tropical weathers. The world production of sweet orange was 49.6 million metric ton in the year 2016-2017. India occupies fourth position in production of sweet orange after Brazil, USA and China (Anon 2017a).

In India citrus occupies 3rd position in production after banana and mango among the fruit crops. Here citrus fruits are primarily grown in Maharashtra, Andhra Pradesh, Telangana, Punjab, Karnataka, Uttaranchal, Orissa, Assam and Gujarat. In India total citrus fruit production in the year 2016-17 was 127.46 lakh metric ton and among these mandarins were 47.540 lakh metric ton, sweet orange 34.970 lakh metric ton, lime/lemon 27.890 lakh metric ton and others 17.06 lakh metric ton (Anon 2017b). In India 2.09 lakh hectare of area was under sweet orange cultivation in the year 2016-17.

Telangana state occupies first position in the production of sweet orange in India with the share of 40.95 per cent of production. Sweet orange production in Telangana state was 4.23 lakh ton and area was 30520 ha in the year 2016-17 (Sateesh and Indumathi 2018).

Present study was conducted to examine the existing marketing channels for sweet orange in Nalgonda district and to evaluate the price spread and marketing efficiency in different marketing channels.

METHODOLOGY

The present study was conducted in Nalgonda district of Telangana state. Nalgonda district was purposively selected as it stood first in area and production of sweet oranges in Telangana. Purposive sampling technique was used to select the district and

convenience sampling technique to select the Mandals, villages, market functionaries, markets and farmers. Three villages in each Mandal were selected through convenience sampling technique and under each village six sweet orange farmer respondents were selected through convenience method. Thus in total the sample size was of 90 farmers. The market intermediaries at various levels of marketing were also studied with their marketing costs and margins. Based on convenience sampling techniques 10 samples were selected for each market intermediaries (commission agents, wholesalers, pre-harvest contractors and retailers).

Primary data were collected from the selected sweet orange growers, commission agents, pre-harvest contractors, wholesalers and retailers through survey method with the help of a pre-tested questionnaire specially designed for the purpose. The secondary data were collected from the Department of Horticulture, Government of Telangana.

The marketing cost included weighing, loading, unloading, commission of the commission agents, market fee etc which were paid by the marketing functionaries on per quintal basis. Total cost of fruit marketing was calculated as under:

$$Tc = Cp + Mci$$

where Tc: Total cost of sweet orange fruit marketing, Cp: Cost incurred by the farmer, Mci: Marketing cost increased by middlemen

The marketing costs were calculated to find out the cost occurred for each market intermediary.

Marketing margin: This refers to the net share of different market intermediaries of a particular quantity produce after deducting marketing costs from gross marketing margins at each stage of handling by respective intermediaries of the commodity.

Following marketing margins were worked out in the study through:

$$Ami = Pmi - (Pp + Mci)$$

where Ami: The absolute margin of the ith middleman, Pmi: Selling price of the ith middleman, Pp: Farmer's price for sweet orange produce, Mci: Marketing cost of the ith middleman

For the present study marketing margins were calculated for each and every intermediary involved in the sweet orange marketing.

Price spread: It is the difference between the price paid by the consumer and the price received by the farmer. The price spread was worked out by using the following method:

$$Price\ spread = Pp - Pf$$

where Pp= Price paid by the consumer, Pf= Price received by the producer

Producer's share in consumer's rupee (Ps): It is the price received by the farmer as a percentage in the consumer's price.

$$Ps = (PF/PC) \times 100$$

where PF= Price received by the farmer, PC= Price paid by the consumer

The price spread was used to find out the sweet orange grower share in sweet orange consumer's rupee.

Marketing efficiency: Marketing efficiency was calculated by using the method given by Acharya and Agarwal (2004). It is given as follows:

$$ME = FP/(MC + MM)$$

where ME: Marketing efficiency, FP: Net price received by the farmer-seller, MC: Total marketing cost, MM: Net marketing margin

For the present study marketing efficiency was calculated to find out the efficiency level of each marketing channel of sweet oranges.

RESULTS and DISCUSSION

Pre-harvest contractor: Pre-harvest contractor is one who does not even own an orchard but purchases the orchards for a season or more from the owner farmer of an orchard and performs all the functions of marketing at his own cost and risk. It was found that such pre-harvest contractors played a vital role in marketing of sweet oranges in Nalgonda district. They got around the orchards at the time of flowering or bearing and had rough estimate of the total possible

quantity of oranges of an orchard. The terms and conditions of the contract varied from one farm to another depending upon the bargaining power of the grower and performance of the orchard yields in previous years. The pre-harvest contractors usually performed all the operations like picking, grading, packing and transportation etc in the process of forwarding the product to consumers.

Wholesalers: The wholesalers operated at the second stage of marketing. They made bulk purchases from the commission agents, pre-harvest contractors and the farmers. Operations like grading, storing and forwarding the consignment to the processing units and retailers for retail sale at the market were done by them. Sometimes sweet oranges were sent in trucks without packing to the distant wholesalers or markets. In this process the oranges reached the retailers of the concerned market and ultimately to the consumer.

Commission agents: The commission agents are an important via-media for collecting the sweet oranges from growers and pre-harvest contractors. They had direct contact with growers, pre-harvest contractors and wholesalers and kept up to date information about the prices at different market levels. The other market functionaries had to depend on these agents in all aspects and price variations were also influenced by these people by and large. It was also observed that the margin of profit enjoyed by this section of traders was high.

Retailers: There were numerous retailers operating with varying scales in the sweet orange markets. The retailers usually made bulk purchase of sweet oranges from the wholesalers and small quantities from the pre-harvest contractors for retail sale in towns, cities, bazaars, weekly haats and other marketing centers. Consumers directly purchased oranges from the retailers. So the function of retailers seems to be most important as they ultimately brought oranges to the consumer and thereby earned a margin for rendering the services.

Marketing channels

In the marketing of sweet oranges four marketing channels were identified in the study area.

Channel 1: Farmer – commission agent – wholesaler – retailer – consumer

Channel 2: Farmer – wholesaler – commission agent – retailer – consumer

Channel 3: Farmer – pre-harvest contractor – wholesaler – commission agent – retailer – consumer

Channel 4: Farmer – pre-harvest contractor – retailer – consumer

Mainly the sample farmers had been using the channels 1 and 2. Least preferred were channels 3 and 4.

From Table 1 it can be inferred that in channel 1 the marketing cost of the farmer was Rs 204.00. In channels 2, 3 and 4 farmer did not incur any expenditure as he sold the produce at farm site itself. Farmers realized a profit margin of Rs 1699.50, 1524.80, 897.70 and 905.10 per quintal in channels 1, 2, 3 and 4 respectively. Among the four channels highest net price was from channel 1 and lowest from channel 4. Commission agents did not incur any expenditure towards marketing in all the channels and realized profit margin of Rs 126.30, 158.70 and 220.00 per quintal in channels 1, 2 and 3 respectively. Among the three channels commission agents received highest margin from channel 3 and lowest from channel 1. In channel 4 there was no involvement of commission agents.

In channel 1, 2 and 3 the wholesaler incurred marketing costs of Rs 210.00, 591.00 and 768.00 respectively and realized a profit margin of Rs 565.00, 1175.70 and 2532.00 per quintal of sweet orange respectively. Among the three channels wholesalers incurred highest marketing costs and profit margin from channel 3 and lowest from channel 1. In channel 4 there was no involvement of wholesalers.

Pre-harvest contractors were involved in channels 3 and 4 only. In channel 3 pre-harvest contractor did not incur any expenditure towards marketing and realized a profit margin of Rs 1000.00 per quintal. In channel 4 pre-harvest contractor incurred a marketing cost of Rs 236.00 per quintal and realized a profit margin of Rs 1914.00 per quintal of sweet orange. Among these two channels pre-harvest contractors received highest profit in channel 4.

In channels 1, 2, 3 and 4 the retailer incurred marketing costs of Rs 712.25, 1213.10, 1470.60 and 1557.00 respectively and realized profit margin of Rs 2637.75, 4986.90, 5029.40 and 5443.00 per quintal respectively. Among the four channels retailers incurred highest marketing costs and profit margin from channel 4 and lowest from channel 1.

Table 1. Price spread in sweet orange marketing under different channels

Component	Price spread (Rs/q)			
	Channel 1	Channel 2	Channel 3	Channel 4
Farmer				
Production cost	1253.50	1706.60	1588.00	1611.60
Marketing cost	204.00	0.00	0.00	0.00
Net price received	1699.50	1524.80	897.70	905.10
Commission agent				
Purchase price	0.00	0.00	0.00	0.00
Marketing cost	0.00	0.00	0.00	0.00
Sale price	0.00	0.00	0.00	0.00
Profit margin	126.30	158.70	220.00	0.00
Wholesaler				
Purchase price	2275.00	2200.00	2200.00	0.00
Marketing cost	210.00	591.00	768.00	0.00
Sale price	3050.00	3966.70	5500.00	0.00
Profit margin	565.00	1175.70	2532.00	0.00
Pre-harvest contractor				
Purchase price	0.00	0.00	2066.70	2100.00
Marketing cost	0.00	0.00	0.00	236.00
Sale price	0.00	0.00	3066.70	4250.00
Profit margin	0.00	0.00	1000.00	1914.00
Retailer				
Purchase price	2900.00	4000.00	3500.00	3500.00
Marketing cost	712.25	1213.10	1470.60	1557.00
Sale price	6250.00	10200.00	10000.00	10500.00
Profit margin	2637.75	4986.90	5029.40	5443.00
Price paid by consumer	6250.00	10200.00	10000.00	10500.00
Price spread (CP-PP)	4550.50	8675.20	9102.30	9594.90
Producer share in consumer rupee (%)	27.19	14.94	8.97	8.62

Table 2. Market efficiency under different channels

Component	Channel-1	Channel-2	Channel-3	Channel-4
Net price received by the farmer (Rs/q)	1699.50	1524.80	897.70	905.10
Total marketing costs + total margins (Rs/q)	4251.30	8125.40	11020.00	9150.00
Market efficiency (%)	0.39	0.18	0.08	0.09

Thus it can be inferred that the sweet orange farmers were realizing higher share of consumer rupee in channel 1 compared to other channels. The price spread was very low in channel 1.

Marketing efficiency of sweet oranges

Marketing efficiency speaks the fact as to what extent the marketing agencies are able to move the goods from farmer to the consumer at the minimum costs with maximum service facilities and at reasonable prices.

The market efficiency was found to be high in channel 1 (Table 2) with 0.39 per cent compared to all other channels as there were three market intermediaries present in this channel and also marketing costs were less. In channels 3 and 4 market efficiency was less because of more number of intermediaries involved and also marketing costs were high. Accordingly the market efficiency was 0.08 and 0.09 per cent respectively. In these two channels the sweet oranges were sold through pre-harvest contractor.

CONCLUSION

In sweet orange trading size and colour are the primary parameters considered at every stage of trading in deciding the price. Among the four marketing channels identified, channel 1 (Farmer – commission agent – wholesaler – retailer – consumer) was very prominent among the other channels in the study area and marketing efficiency was also high in this channel compared to other channels.

On the basis of the study it is suggested that to eliminate middlemen in sweet orange marketing farmers should manage to sell their produce directly to processing industries, exporters, retailers etc. Transportation costs may be brought down by establishing primary markets at suitable places and within reasonable reach of the farmers. Setting up of processing plants in the growing areas would help in reducing the marketing costs particularly transport costs. Awareness must be created among the farmers on systematic harvesting and quality maintenance so that they could export their produce to other countries to fetch better price. Adequate infrastructure pertaining to quality maintenance may be provided to the farmers.

Developing cold storages closer to the major sweet orange markets will help to stabilize sweet orange prices and prevent the farmers from forced sales. Government should take necessary steps to boost market intelligence system related to market information like commission agent charges, prices etc.

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