

A Study on Postharvest Losses and Marketing of Sweet Lime in Anantapur District of Andhrapradesh

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ABSTRACT

Sweet Lime is high source of vitamin C. Sweet lime is not high in sugar but has natural sugar content. It has low glycaemic index which means it release sugars slowly into the blood stream. Sweet lime in india is very important fruit crop for the agriculturalists, cultivated extensively in Andhra Pradesh, Tamil Nadu, Orissa, West Bengal, Assam, Rajasthan, Mizoram, Nagaland and Arunachal Pradesh. India is the fifth largest producer of sweet lime in the world. The study was conducted in Anantapur district of Andhra Pradesh having highest area under sweet lime in the state. The study has examined the post-harvest losses and marketing of sweet lime in Anantapur District, A.P 6 villages were selected on the basis of highest area under sweet lime. A sample of 115 farmers has been taken. The respondents were divided into small, medium, large size of farm group with the help of cumulative tool method. The sample include 25 small 41 medium and 49 large respondents for sweet lime. The study of socio-economic profile of sweet lime growers revealed that the average size of the family decreases, through very marginally, as the size of farm increases. The literacy percentage was considerable high in large size groups followed by small and marginal size farms group and illiteracy percent was highest in medium size farm group followed by small and large farms size groups. Occupation pattern of the growers depicts that the proportion of family members engaged purely in farm work. Post-harvest losses in sweet lime at producer level, the total sample average was 21.33 kg/qt. The study on market analysis of marketing cost, marketing margin, price spread and marketing efficiency of sweet lime revealed that channel I was more remunerative because of the producer's share in the consumer rupee was the highest followed by in channel II 88.3, and in channel III 76.35, respectively.

INTRODUCTION

The sweet lime, Citrus liberticides Tan Sweet lime have a prominent place among popular and exclusively grown tropical and sub-tropical fruits. Their wholesome nature, multifold nutritional and medicinal values have made them so important. Sweet lime possess greater adaptability to different climatic conditions, so are grown with equal success in tropical, subtropical and even in some favourable parts of the temperate regions of the world. Since antiquity, citrus fruits have been under cultivation in Indo-China and sub-Himalayan parts of India. At present U.S.A is having largest area, about 40 per cent of the total acreage, under various citrus fruits in the world. Although the introduction of citrus to this part of the world is fairly recent, yet it is gratifying to note that U.S.A have developed the citrus industry on sound footing within four centuries. By far oranges are the most common among the citrus fruits occupying nearly two-third of the world total area. The leading orange producers are the U, S.A, Brazil, Central and South America, South Africa, Japan, China, India and Mediterranean countries. Mexico and India are the main producers of acid lime, while Japan grown mainly mandarins. In India, the common citrus fruits are mandarins, sweet oranges and limes having 50, 20 and 15 per cent of total area under them respectively. However, they have only 10 per cent of the total area under all fruit crops in India, with third rank after sweet lime and banana.

They are grown in every state of India, but the leading producers are Andhra Pradesh, Telangana, Maharashtra, Assam and Karnataka. Composite Andhra Pradesh is one of the important citrus producing states in the country of about 2,53,400 hectares and an annual production of 38 lakh tonnes. It is the biggest producer of acid lime (citrus aurantifolia) accounting for nearly 75% of the total lime production in the country. Sweet orange (citrus sinensis) is the most prevalent citrus fruit in the state and grown on an extensive scale.

Mandarin oranges (*Citrus reticulata*), lemons (*Citrus limon*) and sour oranges are grown only on a limited area. Sweet orange and acid lime plantation are found in Anantapur, Nellore, Cuddapah, East and West Godavari, Karimnagar, Prakasam Guntur and Krishna districts. Mandarin Oranges are grown only in agency tracts of of E. Godavari, Visakhapatnam and Srikakulam districts. They are available throughout the year. They are not only delicious and refreshing to eat, but also provide vitamins, minerals and many other essential elements which are required for human health. It is the main source of vitamin "C". Citrus fruits are mostly consumed as fresh, particularly mandarins, sweet oranges, pummelo and grapefruit. Lemon and limes being acidic are not generally consumed as fresh but are mostly used for flavouring vegetable dishes, fish, meat and salads. They also used in preparing delicious and refreshing drinks. Mandarins and sweet lime are also used in preparation of squashes, cordials. Limes are mainly used in the preparation of pickles.

In the orient pummelos are used primarily for culinary and medicinal purpose. The essence oil and perfumes produced from citrus flowers, leaves and fruits are in great demand in the international market. A few industries in Telangana and A.P are involved in the manufacturing of citrus by-products like peel oil, pectin and citric acid.

OBJECTIVES OF STUDY

1. To work out disposal pattern and different stages of post-harvest losses of sweet lime in study.
2. To identify major constraints involved in the marketing of sweet lime and suggest measures to policy amplifications

MATERIAL AND METHODS

South India and is internationally acclaimed for its sweet lime production. Among different varieties of sweet lime grown here, Sathgudi is the most popular variety Besides Sathgudi, other varieties of sweet lime such as Mosambi, Malta, Jaffa, etc are also grown here Kanaganapalli Tehsil Head Quarters is Kanaganapalli village. It belongs to Anantapur Division. It is located 25.8 KM towards west from Anantapur District head quarters Anantapur Kanaganapalli Tehsil is bounded by Mamillapalle . Tehsil towards East. kalyandurgam Tehsil towards North, Dharmavaram Tehsil towards west, Hindupur Tehsil towards South . Bengaluru City, Tirupati City, Bellary city are the nearby cities of Kanaganapalli. It is in the 130 m elevation (altitude) This Place is in the border of the Anantapur District.



RESULTS AND DISCUSSION

- To work out disposal pattern and different stages of post-harvest losses of sweet lime in Study area.

SLNO	PARTICULARS	SIZE OF THE FARM GROUPS			SAMPLE AVERAGE
		SMALL	MEDIUM	LARGE	
1	Marketable surplus from own farm	189.32	328.68	548.7	355.57
2	Quantity Purchased from other farms	-	-	-	-
3	Actual marketable surplus	189.32 (100)	328.68 (100)	548.7 (100)	355.57 (100)
4	Disposal of actual marketed surplus of sweet lime in Different marketing channels				
i	Producer → Consumer	61.94 (32.72)	305.8 (30.46)	656.4 (31.11)	361.4 (31.43)
ii	Producer → Commission Agents/ Wholesaler → Consumer	58.02 (30.65)	359.2 (35.78)	750.2 (35.56)	417.89 (33.99)
iii	Producer → Commission Agents/ Wholesaler → Retailer Consumer	54.10 (28.58)	338.82 (33.75)	703.3 (33.33)	328.9 (31.89)

SLNO	PARTICULARS	SIZE OF FARM GROUPS			SAMPLE AVERAGE
		SMALL	MEDIUM	LARGE	
1	Area under sweetlime cultivation per hectar	1.18	1.87	3.06	2.03
2	Total production of sweetlime in Quintals per farmlevel	190	330	550	356.66
3	RETAINED FOR SWEET LIME				
I	Home Consumption	0.14	0.2	0.2	0.18
ii	Kind payments as wages	0.3	0.35	0.5	0.38
iii	Relatives and religious persons	0.24	0.77	0.6	0.58
4	Total (i-ii)	0.68	1.32	1.3	1.09
5	Marketable surplus	189.32	328.68	548.7	355.57

This table indicates that the sample average of total sweet lime production in different size of farms group was (356.66 quintals). The per cent of Sweet lime that was retained by the sample respondents for home consumption, kind payment as wages and to relatives and religious person was highest in medium farms size group (1.32) as compared to small (0.68) and large farms size group (1.3) respectively. The sample average of the marketable surplus is 355.57

Disposal Pattern of Marketable Surplus in Different Channels of Marketing in Different Size of Farms Grou

Indicates that the marketable surplus from own from in small, medium, large size groups was 372.87quintals, 1003.82 quintals and 2109.9 quintals respectively. The sample average of the actual marketed surplus was 1195.56 quintals from different farms size groups. The quantity of Oyster Mushroom that was disposed through channel-I in different farms size group was highest in small farms size group (32.72%) as compared to large and medium size farms group (31.11% and 30.46%) respectively. The quantity of Oyster Mushroom that was disposed through channel-II was highest in medium size group (35.78%) as compared to large and small size farms group (35.56% and 30.65%) respectively. The quantity of Oyster Mushroom that was disposed through channel-III was highest in medium size group (33.75) as compared to large and small size farms group (33.33% and 28.58%) respectively.

Post harvest losses of Sweet lime at different marketing stages i.e. transportation, storage and packaging etc.
The post-harvest losses were estimated were first at producer level, and then at trader level. The losses at producer level have been estimated at different stages, viz. harvesting, grading, packaging, storage, transportation and marketing. Whereas the losses at trader level have been estimated at different stages viz. grading, packaging, storage, transportation and marketing.

The post-harvest losses at producer have been tabulated in tables 4.4 Post-harvest losses at producer levels are high in India due to illiteracy and improper harvesting and handling techniques.

Post harvest losses in sweet lime at producer level

SLNO	Stages	Farm size group			Sample average
		Small	Medium	Large	
1	Harvesting	5 (25.31)	4.50 (22.22)	6.50 (27.08)	5.33 (24.87)
2	Grading	3 (15.18)	3.50 (17.28)	4.75 (19.79)	3.75 (17.41)
3	Packaging	2 (10.12)	3.25 (16.04)	3.25 (13.54)	2.83 (13.23)
4	Storage	3 (15.18)	2.50 (12.34)	2.75 (11.45)	2.75 (12.99)
5	Transportation	4 (20.25)	3.50 (17.25)	4.25 (17.70)	3.91 (18.41)
6	Marketing	2.75 (13.92)	3 (14.81)	2.50 (10.41)	2.75 (13.04)
	Total Losses	19.75	20.25	24	21.33

3 shows that post harvest losses in sweet lime at producer in different farm group.

In small farm group, the post harvest losses were highest in harvesting i.e. 5 kg/qt. (25.31%), followed by transportation i.e. 4 kg/qt. (20.25%), grading i.e. 3 kg/qt. (15.18%), packaging i.e. 2 kg/qt. (10.12%), storage i.e. 3 kg/qt. (15.18%) and marketing i.e. 2.75 kg/qt. (13.92%). The total losses calculated at small farm group were 19.75 kg/qt.

In medium farm group, the post harvest losses were highest in harvesting i.e. 4.50 kg/qt. (22.22%) followed by grading i.e. 3.50 kg/qt. (17.28%), transportation i.e. 3.50 kg/qt. (17.28%), storage i.e. 2.50 kg/qt. (12.34%), packaging i.e. 3.25 kg/qt. (16.04%) and marketing i.e. 3 kg/qt. (14.81%). The total losses calculated at medium farm group were 20.25 kg/qt.

In large farm group, the post harvest losses were highest in harvesting i.e. 6.50 kg/qt (27.08%) followed by grading i.e. 4.75 kg/qt. (19.79), transportation i.e. 4.25 kg/qt. (17.70%), packaging 3.25 kg/qt. (13.54%), storage i.e. 2.75 kg/qt. (11.45%) and marketing i.e. 2.50 kg/qt. (10.41%). The total losses calculated at large farm group were 24 kg/qt.

The sample average of post harvest losses in all three farm groups at different stages, the sample average of losses was highest during harvesting i.e. 5.33 kg/qt (24.87) followed by transportation 3.91 kg/qt. (18.41%), grading 3.75 kg/qt. (17.41), packaging 2.83 kg/qt. (13.23%), storage 2.75 kg/qt. (12.99%), and marketing 2.75 kg/qt. (13.04%). The total sample average was calculated as 21.33 kg/qt.

Table : 4.3.1 Post-harvest losses in Sweet lime at trader level

SL NO	Stages	Quantity (kg/qt)	Percentage
1	Grading	2.25	20
2	Packaging	1.50	13.3

3	Storage	2.50	22.2
4	Transporation	3	26.7
5	Marketing	2	17.8
	Total losses	11.25	100

The table 3.1 shows that post harvest losses in sweet lime at trader level, the losses bearded were trader during grading 2.25kg. (20%), packaging 1.50 kg.(13.3%), storage 2.50 kg (22.2%), transportation 3kg(26.7%), and marketing 2 kg(17.8%).The total post harvest losses at producer level was 11.25kg.

SUGGESTIONS

Based on the findings of this study, the following suggestions are made for policy actions to reduce the post harvest losses thereby increasing the standard of living of the Sweet lime producers in kanaganapalli block of Anantapur district.

1. Provision of good storage facilities to store the Sweet lime that are harvested before they are being taken to the market. This will help to reduce the losses that occur at the farm level.
2. Training initiatives on post harvest handling of perishable products like Sweet lime should be encouraged and follow ups, feedback and adoption measurement should be conducted periodically for sustainability.
3. Roads linking farms to market should be improved to reduce transit losses.
4. Establishment of farmers market and co-operative marketing should be courage to reduce losses related to marketing functions. Furthermore,
5. Establishment of Sweet lime processing industry. So that Sweet lime can be preserved and utilized for long period