FLORIDA'S FRESH ORANGE INDUSTRY

Selected Marketing Practices, Costs, and Margins

U.S. DEPARTMENT OF AGRICULTURE / ECONOMIC RESEARCH SERVICE / ERS 531

ABSTRACT

Florida produced 76 percent of a record 8.5-million-ton U.S. orange crop in 1971/72. Over 90 percent of Florida's crop was processed, mainly into frozen concentrated orange juice. Florida supplied 89 percent of all U.S. oranges processed, but only 32 percent of all U.S. oranges sold fresh. Production in Florida increased substantially during 1958/59-1971/72. Although the retail value of Florida oranges sold fresh in Chicago and New York City trended upward during that time, the marketing margin increased faster. Derived grower returns for these oranges trended downward during the period. Consumers in the two cities paid more for an equivalent quantity of juice from fresh oranges than from frozen concentrate. Both the marketing margin and grower returns were generally higher for fresh oranges than for frozen concentrate.

Keywords: Oranges, Fresh fruit, Processed fruit, Prices, Marketing margins, Grower returns.

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HIGHLIGHTS

Florida produced 76 percent of a record 8.5-million-ton U.S. orange crop in 1971/72. Over 90 percent of the Florida crop was processed, mainly into frozen concentrated orange juice.

The 1971/72 U.S. crop was up 54 percent from 1958/59. In all seasons except one during this period, Florida produced three-fourths or more of the crop. Increased orange production in Florida is attributed to heavy new tree plantings in the early and mid-1960's.

As a result of a shift in the consumption pattern of oranges, processing has replaced fresh sales as the primary market for oranges. Fresh orange sales accounted for only 22 percent of the U.S. crop in 1971/72, compared with 36 percent in 1958/59. Florida's fresh orange sales declined from 20 percent in 1958/59 to only about 9 percent in 1971/72 as processing expanded sharply.

Picking, hauling, packing, and selling costs have increased steadily, mainly because of higher labor costs. Labor cost in 1971/72 represented 75 percent of picking and hauling costs.

Retail prices of Florida oranges in Chicago and New York City averaged 15.9 cents per pound in 1971/72--the highest retail price since 1963/64. In that season, a Florida freeze reduced the supply of oranges.

The retail value of a box of Florida oranges sold in Chicago and New York City trended upward during 1958/59-1971/72. However, the marketing margin increased faster. Consequently, derived grower returns for Florida oranges sold in Chicago and New York City trended downward. The Florida grower's share of the retail value was less than 20 percent in six of the last seven seasons.

Chicago and New York City consumers paid more for an equivalent quantity of juice from fresh oranges than for frozen concentrate during 1965/66-1971/72. Total marketing margins were much higher for fresh oranges. Also, Florida growers received higher returns from fresh oranges sold in Chicago and New York City in all but one season.

Truck receipts accounted for three-fourths of Florida's orange unloads in 41 major U.S. cities in 1971. Significant rail unloads were mainly at large northern cities.

Oranges are produced commercially in 32 counties in Florida. About one-half of an average year's crop is produced in Polk, Orange, and Lake counties. These three counties accounted for 68 percent of fresh shipments from Florida in 1971/72.

FLORIDA'S FRESH ORANGE INDUSTRY: SELECTED MARKETING PRACTICES, COSTS, AND MARGINS

by

Alfred J. Burns and Warren K. Trotter 1/

INTRODUCTION

Oranges are one of the principal fruits in the United States. They are important in our diet and are available in many forms--fresh, canned segments, chilled segments, frozen concentrated juice, canned juice, chilled juice, and in blends with other fruit juices or fruit segments. The total farm value of orange production for 1971/72 was over $563 million. Oranges are produced commercially in four States, with Florida accounting for 71 percent of the total value of production in 1971/72.

This report discusses practices and trends in marketing Florida oranges, with emphasis on the fresh market. Data for Temple oranges are included with data for round oranges in the report.

PRODUCTION REACHES RECORD HIGH

U.S. production of oranges reached a record high of 8.5 million tons in 1971/72, 54 percent more than in 1958/59 (fig. 1). This trend toward larger orange crops was interrupted for two seasons because of a severe freeze in Florida during 1962/63. A smaller crop again in 1967/68 was mainly due to reduced set (development of blossoms into fruit) in both Florida and California and adverse weather conditions during the growing season. An 8-million-ton crop was first reached in 1966/67. Over 8 million tons have been produced in five of the last six seasons.

Orange production increased sharply during the 1960's, particularly in the last half. Florida's growers produced 6.4 million tons of oranges in 1971/72--66 percent more than 13 years earlier. Florida accounted for three-fourths or more of the U.S. crop in each season during the past decade except in 1963/64. In 1971/72, Florida produced 76 percent of the U.S. crop. Orange production in Arizona and Texas also increased, but they still produce an insignificant proportion of the U.S. crop. California orange production, on the other hand, remained relatively stable at slightly over 1 million tons in most seasons. In 1971/72, California produced 19 percent of the U.S. orange crop.

1/ Agricultural economists, respectively, in the Commodity Economics Division and National Economics Analysis Division, Economic Research Service.

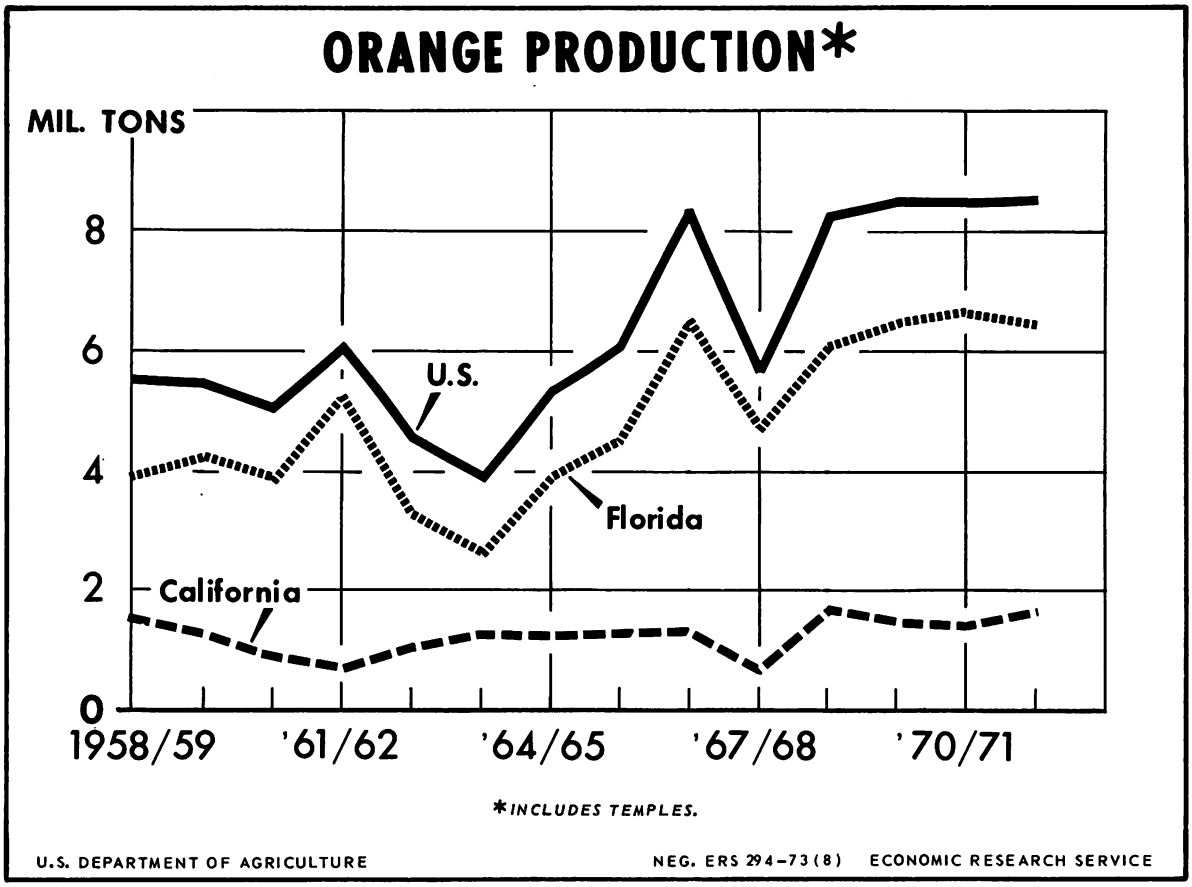

Figure 1

Increased Florida orange production in the 1960's resulted from a substantial increase in bearing trees in the State. Florida had 51.7 million bearing orange trees in 1971, about double the number in 1961 (app. table 1). The number of bearing trees increased sharply in the last half of the 1960's but did not increase much after 1969. This increase is attributed to heavy tree plantings in the early and mid-1960's. Plantings reached a peak of nearly 6 million in 1965 and dropped sharply after that year. Only .5 million trees were planted in 1971. Consequently, the number of nonbearing trees in the State increased in the early 1960's and reached a peak in 1965 of 17.9 million. By 1971, nonbearing tree numbers had decreased to 4.1 million.

Oranges are produced commercially in 32 counties in Florida. The counties are usually grouped into three areas--East Coast, West Coast, and Interior (fig. 2). The Interior area--comprised of slightly more than one-half of the counties--produced 72 percent of the 1971/72 Florida crop (app. table 2). The remainder of the crop was almost equally divided between East Coast and West Coast areas.

Three adjacent Interior counties--Polk, Orange, and Lake--are the leading producing counties and accounted for 44 percent of the 1971/72 Florida crop. The three counties produced about one-half of each year's crop during the preceding 13 seasons. Polk County alone produced from 20 to 25 percent of each year's crop.

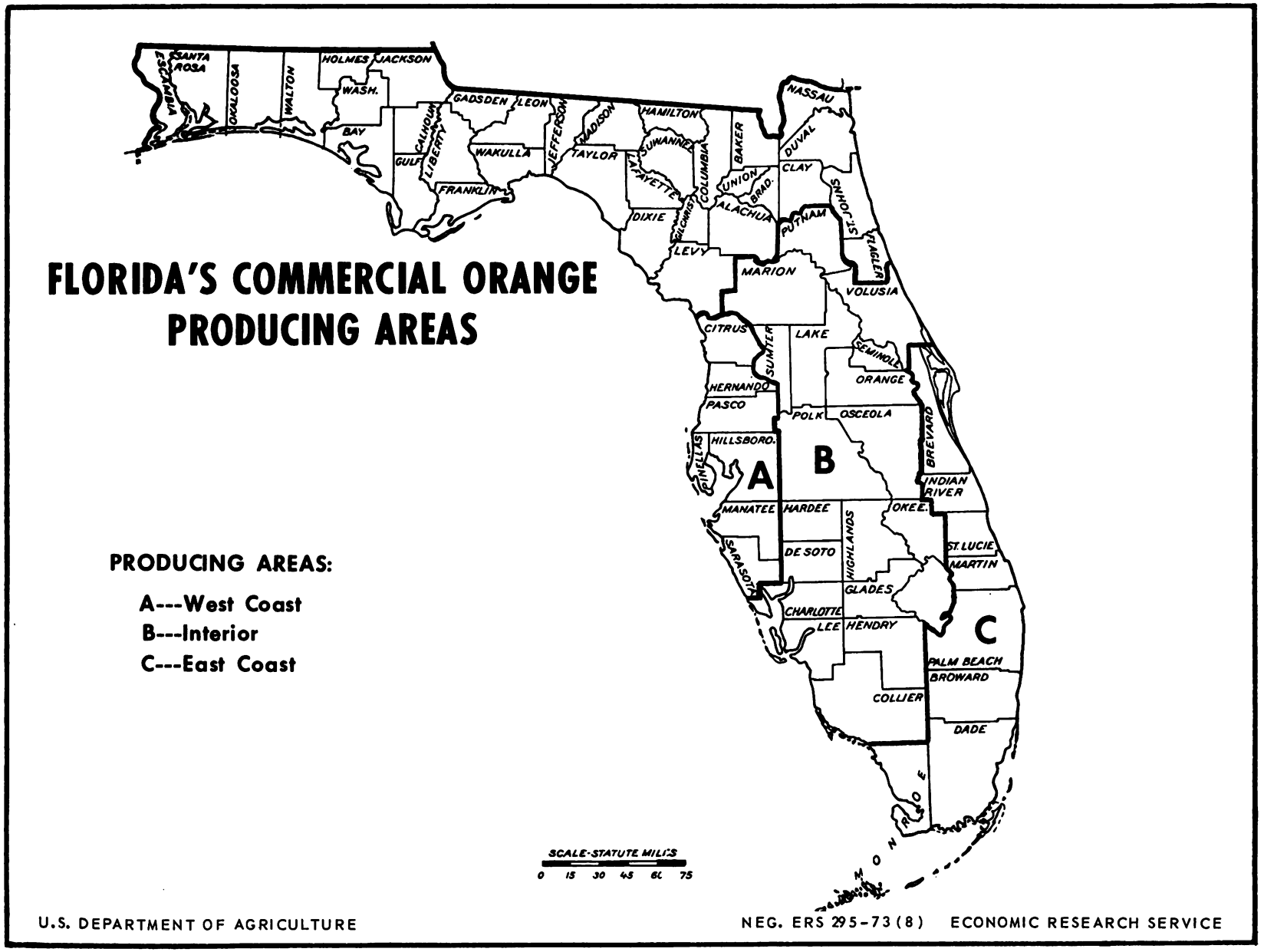

Figure 2

PROCESSED JUICE CONSUMPTION RISES

Consumption of frozen concentrated orange juice increased rapidly after the product's introduction in 1946 and dramatically changed the consumption pattern for oranges. By 1971, annual consumption of frozen concentrated orange juice was over 20 pounds per person on a single-strength basis (app. table 3). Few new products have met with such a high degree of consumer acceptance. Prior to 1946, per capita consumption of fresh oranges had trended upward. Consumption of canned orange juice, the only major processed orange product at that time, was at a low level. Consumption of fresh oranges was at a record high of 48 pounds per person in 1944. With the introduction and rapid growth of frozen concentrated orange juice, fresh orange consumption dropped rapidly and reached a low of 12 pounds per person in 1963. Fresh orange consumption increased slightly after 1963 and appears to have leveled off at about 16 pounds per person. However, consumption of processed orange juices, particularly frozen concentrated orange juice and to a smaller extent chilled orange juice, continued to increase after 1963.

PROCESSING OVERTAKES FRESH MARKET

As a result of the shift in the consumption pattern of oranges, processing replaced the fresh market as the primary market for oranges by the early 1950's. Processing provided an outlet for the increased orange production in the 1960's, and a smaller proportion of each year's crop was sold fresh (fig. 3 and app. table 4). Fresh orange sales were 1.8 million tons in 1971/72, slightly less than in 1958/59. Sales for processing almost doubled in this period. Fresh orange sales accounted for only 22 percent of the U.S. crop in 1971/72, compared with 36 percent in 1958/59.

Orange processing developed more in Florida than in other producing States, and a larger share of Florida's crop is processed. Only about 9 percent of Florida's crop was sold fresh in 1971/72--down from 20 percent in 1958/59. In contrast, 65 percent of California's 1971/72 crop was sold fresh, compared with 73 percent in 1958/59. Florida's share of U.S. processed sales during this period was 85 to 95 percent (fig. 4). Its share of fresh sales fluctuated considerably more, ranging from 32 to 59 percent. In 1961/62 and 1967/68, its share of fresh sales was particularly high because of short crops in other producing States.

A LOOK AT MARKET PRACTICES

Shipment Seasons Vary

The approximate commercial shipping seasons for major varieties of Florida oranges are shown in figure 5. The orange season usually begins in mid-October with shipments of early varieties--Hamlin and Parson Brown. Shipments of these varieties continue until about the middle of February. Shipments of midseason varieties--Pineapple and Temple--begin in December and continue until mid-March. The Valencia season begins in mid-February and continues until mid-June. During the summer months, shipments are mainly of minor varieties.

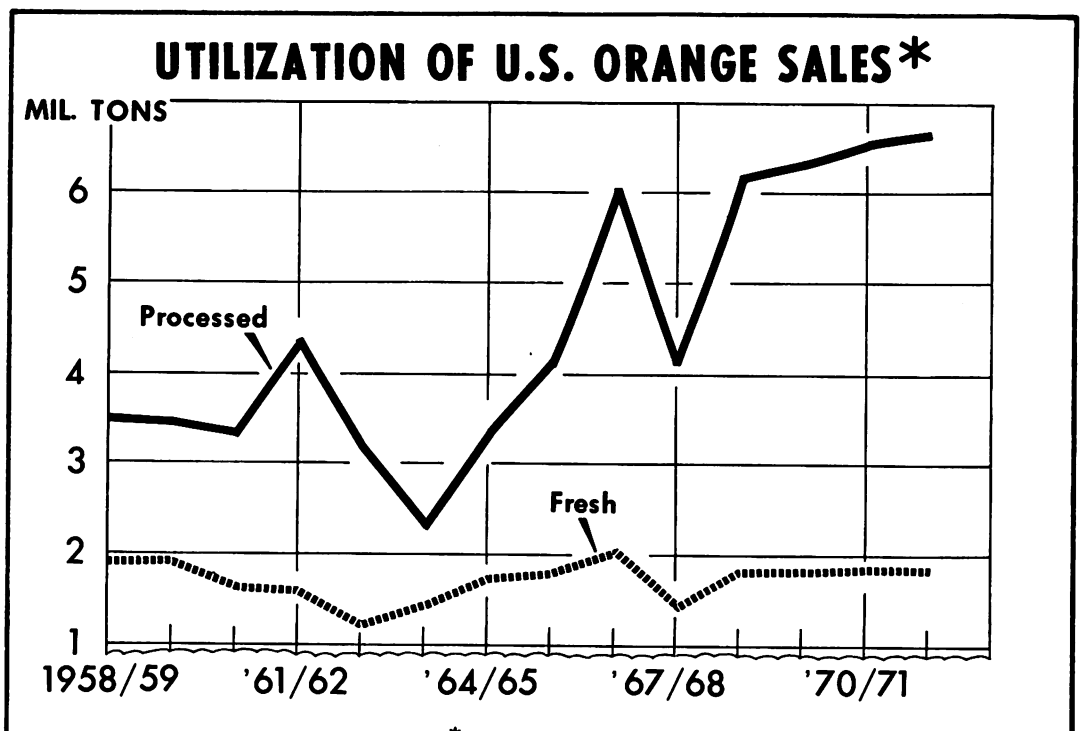

Figure 3

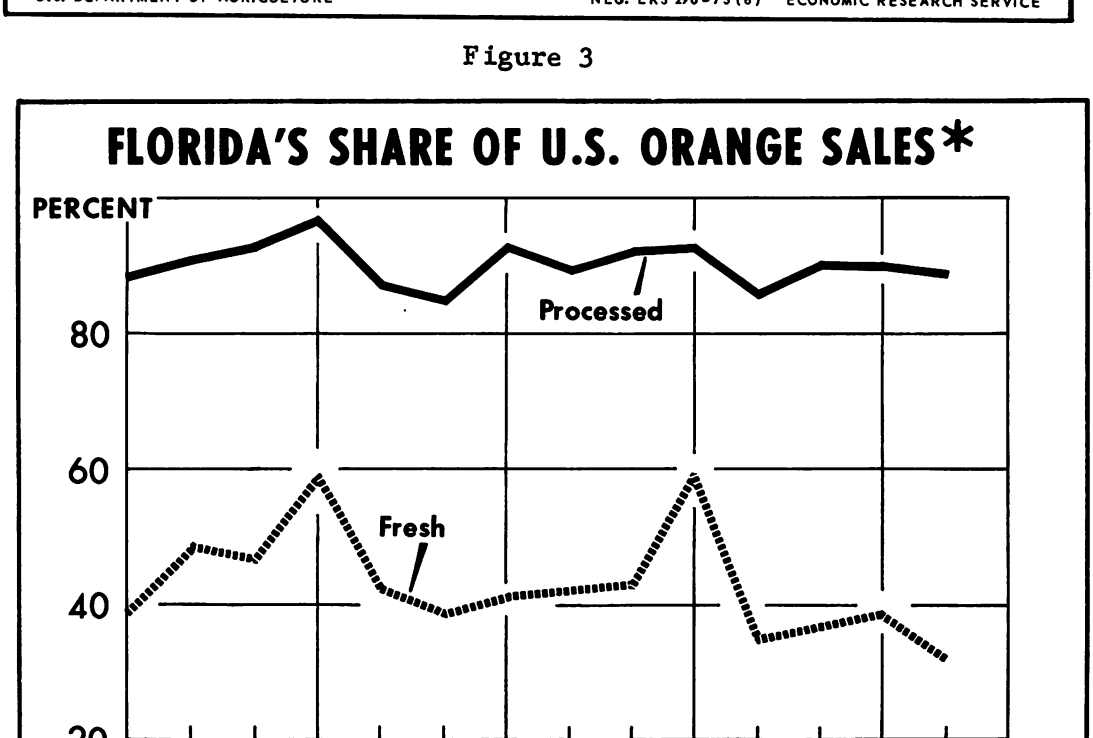

Figure 4

While the commercial shipping season usually begins in August and ends the following July, most fresh oranges are shipped in a 5-month period beginning with November. Seventy-two percent of all fresh shipments were made in these 5 months during 1971/72 (fig. 6). Fresh shipments reached a peak during December when the shipping seasons for early and midseason varieties overlap. Shipments then gradually tapered off for the remainder of the season. About 2 percent were shipped during August, September, and July.

In 1971/72, fresh oranges were shipped from 24 of the 32 producing counties in Florida. The interior area accounted for 83 percent of fresh shipments (app. table 5). Sixty-eight percent of the shipments were from Polk, Orange, and Lake counties, with 38 percent from Polk county alone.

Seven of the eight counties selling only to processors are located in the Southern portion of the State. These counties accounted for only 4 percent of the 1971/72 Florida crop.

Harvesting and Handling--Multistep Operations

Harvesting and handling of Florida oranges from the tree to the consumer involve many operations which are continually changing. Manual handling is gradually being replaced by mechanization and bulk handling of the crop from tree to packinghouse or processing plant. The description of harvesting, hauling, and packinghouse operations which follows was largely adapted from Florida Agricultural Experiment Station Bulletin 681--Better Handling of Florida's Fresh Citrus Fruit.

Harvesting and Hauling

Oranges are harvested either by pulling or by clipping from the tree. Pulling is the preferred harvesting method as it is faster and requires less labor. The pulled or clipped fruit are placed in a canvas picking bag which the picker carries over his shoulder. The bottom of the bag opens so that the fruit can be emptied into field boxes, pallet boxes, or other containers for hauling to the packinghouse or processing plant. The standard field box used is made of wood and when full weighs 100 to 120 pounds, depending upon fruit size, variety, and quality. Field boxes were designed to hold enough fruit to pack out a full 1 3/5-bushel box. Pallet boxes are usually made of wood, but some are reinforced with sheet metal or angle iron. They hold 10 to 12 field boxes of oranges, or approximately 1,000 pounds. For hauling from the field, pallet boxes are loaded on flatbed trucks with a forklift. Oranges are also placed in 20-box carts, 10-box metal baskets, or bulk trucks and transferred with high lift trucks or vertical lift elevators to semitrailers for hauling.

Picking and Hauling Costs--The cost of picking and hauling Florida oranges for fresh packing and processing, as reported by the Florida Agricultural Experiment Station, averaged 84.5 cents per box in 1971/72--90 percent more than in 1958/59 (app. table 6). Most of the increase occurred during the last five seasons. Labor cost increased more than other costs involved in picking and hauling, particularly during the mid-1960's. Labor accounted for slightly over two-thirds of picking and hauling costs in 1958/59 and about three-fourths for the last seven seasons. Picking, with its large use of hand labor, accounted

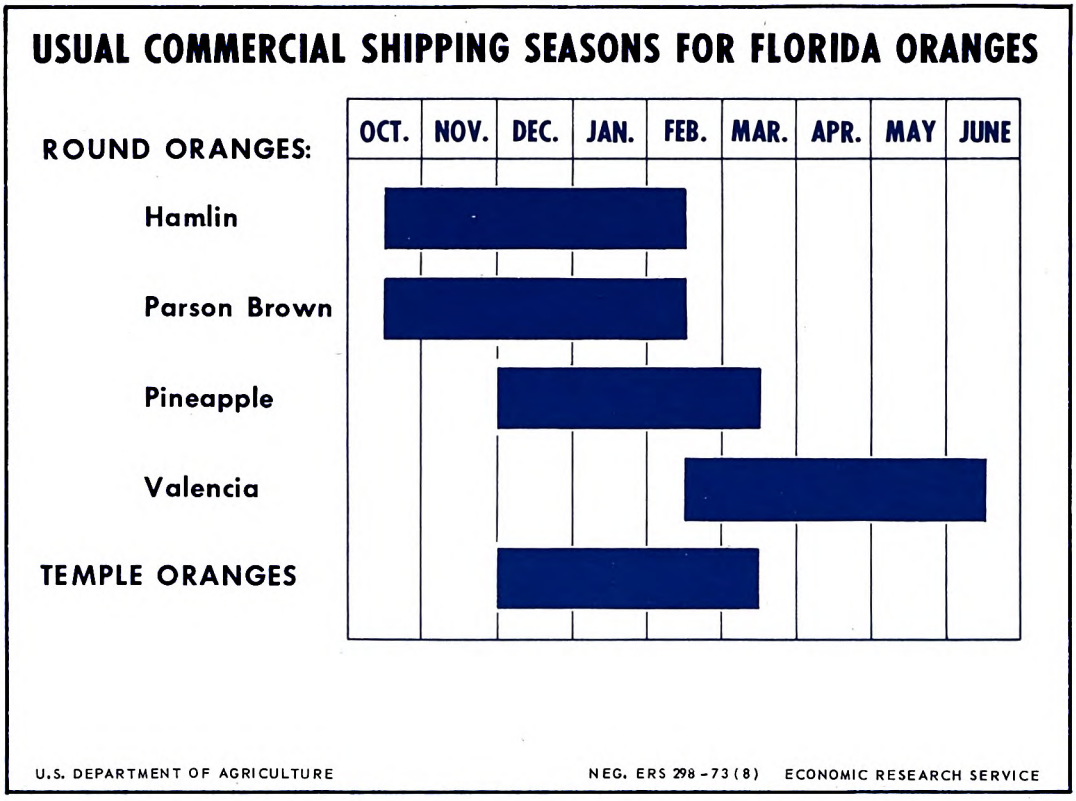

Figure 5

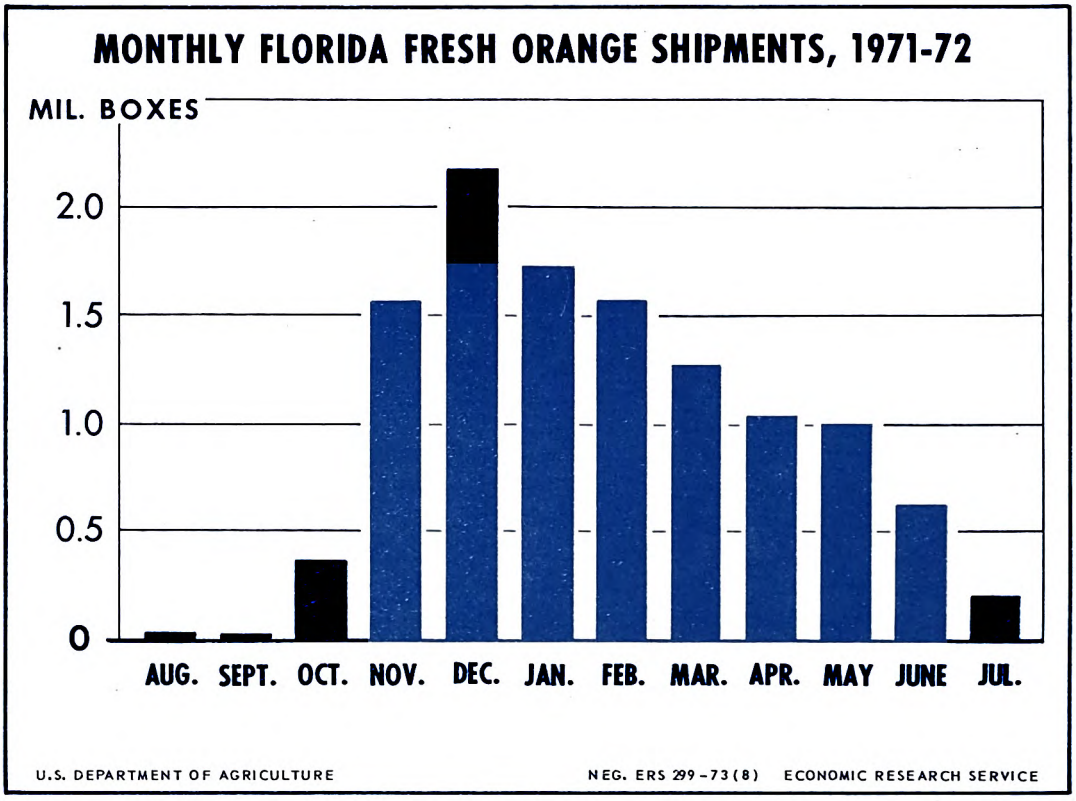

Figure 6

for 76 percent of picking and hauling costs in 1958/59 and 84 percent in 1971/72. Picking costs increased 37 cents per box during this period, while hauling costs increased only 3 cents per box.

Packinghouse Operations

Degreening--The change in color of oranges from green to yellow is associated with night temperatures below 50°F. Early season varieties, such as Hamlin and Parson Brown, when harvested in late fall and early winter may be green although fully mature and of good eating quality. Also, in late season varieties, such as Valencia and Pope Summer, "regreening" may occur as chlorophyll is produced in the rind when vegetative growth resumes in the spring. Thus, during the early and late parts of the season, poorly colored fruit is treated in the packinghouse with ethylene gas in rooms referred to as degreening or coloring rooms.

The time required to degreen a fruit depends upon the degree of natural color and maturity. The lighter the green color and the more mature the fruit, the less time is required to reach the desired color. Early in the season, oranges may be degreened for as long as 72 hours. The shortest practical degreening time for more fully colored fruit is 12 hours.

Packing Line--The packing line begins when fruit is removed from the field boxes or bulk containers by careful dumping to prevent damage to the fruit. Prior to washing, the fruit may move to a soak tank, where it is immersed in water or a cleaning solution. In most cases, soak tanks are not necessary for good cleaning and are no longer recommended, although many older packinghouses still have them.

The fruit moves next to the washer. The washer is generally equipped with transverse brushes which revolve up to 200 rpm. Soap or antiseptic may be dribbled or foamed on the first series of brushes if not applied at the soak tank. After washing, the fruit is sprayed with fresh water.

The fruit is dried mechanically by passing under fans. When dried, it is polished and waxed, and then passed over roller conveyor grading tables. After grading, the fruit is conveyed to sizing equipment which separates the oranges into the standard sizes being packed and drops them at stations for hand packing or conveys them to automatic boxfilling machines.

Color Adding--Early and late oranges that fail to develop a good color are degreened with ethylene to remove the green color. However, degreening leaves the fruit with a yellow or very pale orange color. Since most consumers believe that oranges should be bright orange, a color-adding process was developed to improve the eye appeal and marketability of fresh oranges. This process is subject to regulation under the Florida Citrus Code of 1949 (as amended) and the Food and Drug Administration to insure that consumers receive wholesome, mature fruit with good keeping qualities. The color-adding equipment is located after the washer in the packinghouse line.

The process of adding color to oranges for fresh shipment has declined in importance through the years. About one-half of Florida's fresh orange shipments had color added in 1957/58. Only 36 percent had color added in 1971/72. 2/

Precooling--Precooling is the rapid removal of the fruit's internal heat prior to storage or shipment. This cooling may be accomplished by use of refrigerated air in especially designed precooling rooms after the fruit is packed. Air precooling may also be accomplished in the refrigerator car after it has been loaded. It is desirable to maintain the humidity of the air used in precooling at 95 percent or above. The temperature of the fruit during precooling is reduced to 37-38°F.

Hydrocooling has come into general use in a number of Florida packinghouses within the past 25 years. Prior to packing, the fruit is cooled by passage through a flood-type hydrocooler on a screen conveyor or in pallet boxes. Oranges are usually cooled for 20 minutes with 32°F water, and the temperature of the fruit is reduced 20 to 25 degrees during this time. After cooling, the fruit is packed in perforated polyethylene bags or fiberboard cartons and loaded directly into precooled rail cars or truck trailers. Refrigerated storage rooms are provided for temporary holdings of surplus fruit.

Because the fruit is moist after packing, an antiseptic, usually 0.1 percent sodium-O-phenylphenate, is added to the hydrocooling water to prevent mold. Hydrocooled citrus should be refrigerated until consumed.

Packing and Sellings Costs--The cost of packing and selling fresh Florida oranges averaged $1.81 per box in 1971/72--48 percent more than in 1958/59 (app. table 7). All major cost components increased, but not at the same rate. Costs of packing material increased only 12 percent during the period, representing one-third of packing and selling costs in 1958/59 and only one-fourth in 1971/72. Labor costs for packing increased at about the same rate as total costs and represented slightly under one-third of total costs in all seasons. Costs of selling oranges and packing costs other than for labor and material were two-thirds higher in 1971/72 than in 1958/59.

Fiberboard Containers Replace Wire

For many years, wirebound boxes were the most important containers for shipping Florida oranges. In 1959/60, they accounted for 61 percent of fresh shipments (app. table 8). However, the use of wirebound boxes declined sharply during the following 12 seasons and accounted for only 12 percent of shipments in 1971/72. These containers were replaced mainly by the 4/5-bushel corrugated fiberboard carton. The use of this carton increased from 16 percent of shipments in 1959/60 to 61 percent in 1971/72. Mesh bags accounted for 11 percent of shipments in 1959/60 but were completely replaced by film bags by 1971/72. Twenty-three percent of shipments were in film bags in 1971/72.

2/ Fla. Dept. Agr., Div. of Fruit & Vegetable Inspection, 1971/72 Annual Report.

Trucks Transport Oranges

Oranges move from the producing area to market mainly in refrigerated truck trailers and rail cars. Most truck trailers and an increasing number of rail cars are mechanically refrigerated. Many of the ice-refrigerated rail cars have provisions for thermostatically controlled forced air circulation to maintain temperature at a constant and uniform level throughout the load.

Florida growers rely primarily on trucks for moving oranges to market. Eighty-two percent of Florida's orange shipments in 1970/71 moved by truck, compared with an average of 67 percent for 1959/60-1961/62 (app. table 9). Truck receipts accounted for 75 percent of total Florida orange unloads in 41 U.S. cities in 1971 (app. table 10). Each of 28 cities received 90 percent or more of their Florida oranges by truck. Twenty-two of these cities received 100 percent by truck. Cities with significant rail unloads were mainly large northern markets. New York City received 57 percent of its Florida oranges by rail; Philadelphia, 47 percent. These two cities accounted for 74 percent of all rail unloads in the 41 cities.

NEW YORK CITY AND CHICAGO PRICES AND MARGINS ANALYZED

Retail Prices Up, Grower Returns Down

The Bureau of Labor Statistics estimated the average retail price of Florida oranges in Chicago and New York City to be 15.9 cents per pound in 1971/72--the highest retail price in the last eight seasons (app. table 11). An equally high price existed only in 1963/64, when a Florida freeze caused a sharp reduction in the supply of oranges. Retail prices were substantially lower for several seasons both before and after the freeze.

The retail value of a box of Florida oranges sold in Chicago and New York City trended upward between 1958/59 and 1971/72 (fig. 7). The wholesale-retail margin, the shipping point-wholesale margin, and costs of picking, hauling, packing, and selling increased more than retail price during the period. Consequently, derived grower returns for Florida oranges sold in Chicago and New York City trended downward during the period. 3/ Grower returns averaged $2.24 per box in 1971/72--20 percent less than in 1958/59. Growers received less than $2.00 per box in four of the last seven seasons. In 1966/67, they received only 88 cents per box. This grower return of 88 cents represented only 10 percent of the retail value in Chicago and New York City. The Florida grower's share of the retail value was highly variable during 1958/59-1971/72 but trended downward after 1962/63 (fig. 8). The grower's share was less than 20 percent of the retail value in six of the last seven seasons.

Prices and margins for Florida oranges sold in New York City were usually higher than in Chicago during 1958/59-1971/72. The retail value of a box of Florida oranges was usually $1.50 to $2.50 higher in New York City (app. tables 12 and 13). Both the shipping point-wholesale margin and the wholesale-retail

3/ Derived grower returns is a residual obtained by deducting picking, hauling, packing, and selling costs from grower and packer returns.

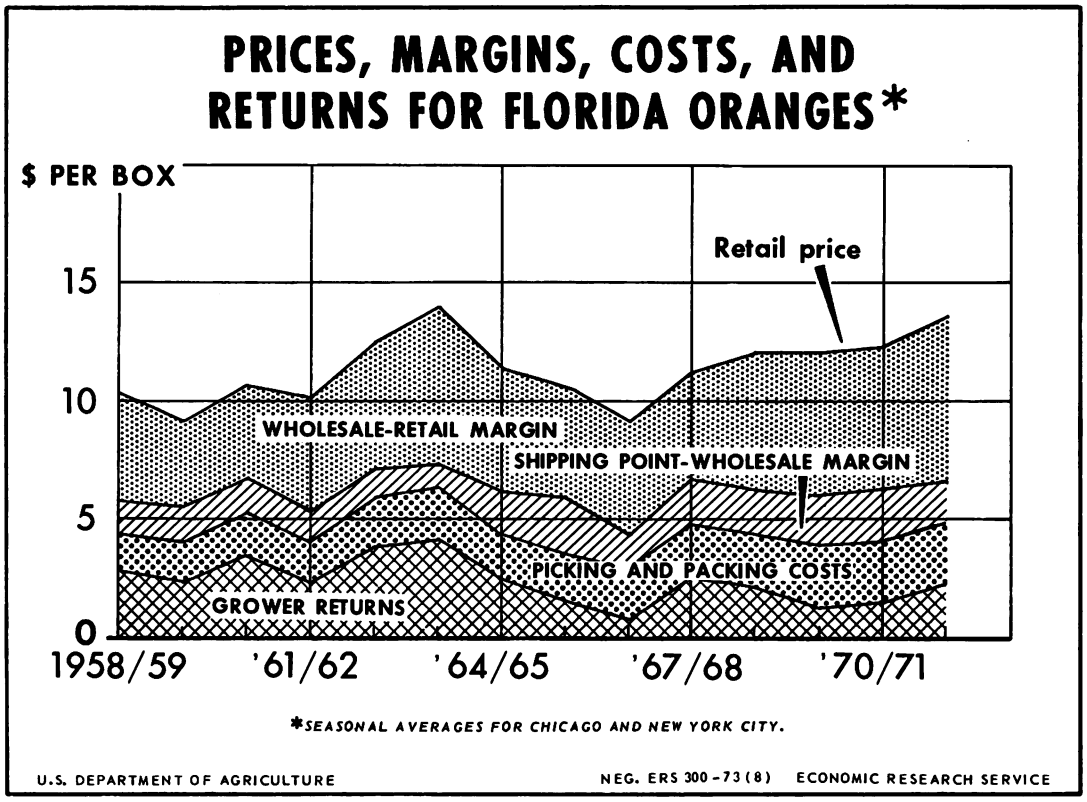

Figure 7

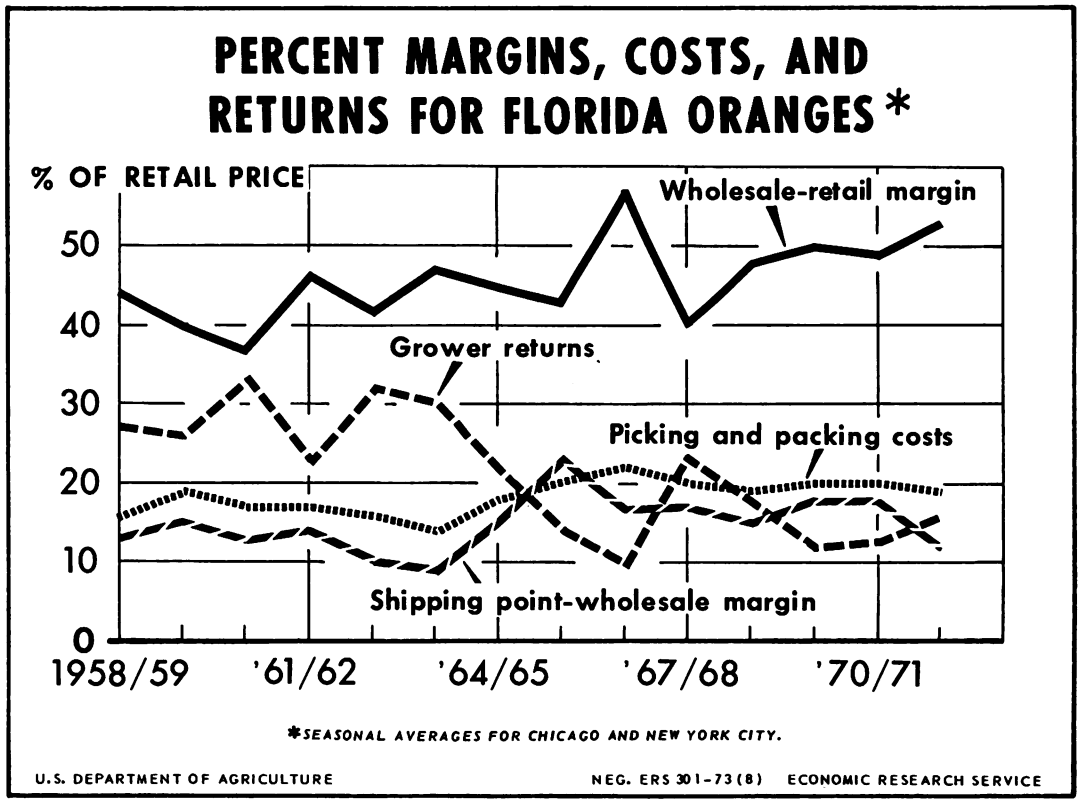

Figure 8

margin were also usually larger in New York City. Florida growers received the same monthly average shipping-point price for oranges regardless of whether sold in New York City or Chicago. However, seasonal average shipping-point prices were usually different for the two cities due to weighting of monthly prices by monthly carlot unloads in each city.

Consumers Pay More for Fresh Oranges Than Processed

The increased consumption of frozen concentrated orange juice intensifies the need for comparing prices, marketing margins, and grower returns for frozen concentrate with fresh oranges. Comparative data for an equivalent quantity of fresh oranges and frozen concentrate sold in Chicago and New York City during 1965/66-1971/72 are presented in appendix table 14. These data are for 24-ounce orange juice equivalents--that is, a 6-ounce can of frozen concentrate and an equivalent quantity of fresh oranges required to yield 24 ounces of juice to the consumer.

Chicago and New York City consumers paid more for an equivalent quantity of juice from fresh oranges than for frozen concentrate during 1965/66-1971/72, and Florida growers received higher returns for fresh oranges in most seasons. Total marketing margins were also much higher for fresh oranges than for frozen concentrate.

Retail prices in both Chicago and New York City were higher for fresh oranges in each of the seven seasons. Fresh orange prices in Chicago ranged from one-third higher to more than double frozen concentrate prices. In New York City, they were more than double frozen concentrate prices in most seasons. Retail prices increased during the period for both fresh oranges and frozen concentrate, but they increased faster for fresh oranges.

The total marketing margin for fresh oranges in New York City was more than double that of frozen concentrate in each of the seven seasons and in Chicago was nearly double in six of the seven seasons. The marketing margin for fresh oranges increased sharply during 1965/66-1971/72, but for frozen concentrate, the marketing margin increased only slightly.

Grower returns were higher for fresh oranges in six of the seven seasons. However, grower returns for fresh oranges were only 10 to 14 percent higher than for frozen concentrate in three of the seasons.

In dividing up the Chicago and New York City consumer's orange juice dollar, the grower's share was larger for frozen concentrate in each of the seven seasons. Also, the grower's share was highly variable for both frozen concentrate and fresh oranges. It ranged from 14 to 35 percent of the consumer's dollar for frozen concentrate and from 9 to 25 percent for fresh oranges.

The share of the consumer's dollar going for the marketing margin was larger for fresh oranges in each of the seven seasons. It ranged from 75 to 91 percent for fresh oranges. The wholesale-retail margin was the largest component of the total marketing margin for fresh oranges. For fresh oranges, this margin represents payment for secondary wholesaling, intracity transportation, and retailing. It averaged about 40 percent of the consumer's fresh

orange dollar in Chicago and 50 percent in New York City. The wholesale-retail margin was also the largest component for frozen concentrate, taking slightly under 40 percent of the consumer's dollar in New York City and more than 40 percent in Chicago. The wholesale-retail margin for frozen concentrate represents payment for transportation from the processing plant, wholesaling, and retailing.

APPENDIX TABLES

Table 1--Estimated number and proportion of bearing and nonbearing orange trees, Florida, 1957-71 1/

Year	Bearing trees		Nonbearing trees		Total trees
	Number	Percent of total trees	Number	Percent of total trees	
	1,000	Percent	1,000	Percent	1,000
1957	24,373	74.0	8,573	26.0	32,946
1958	24,860	69.2	11,058	30.8	35,918
1959	25,051		NA		NA
1960	26,467		NA		NA
1961	25,829	64.9	13,983	35.1	39,812
1962	27,942	66.1	14,321	33.9	42,263
1963	22,860	58.8	16,050	41.2	38,910
1964	27,600	62.0	16,900	38.0	44,500
1965	35,912	66.7	17,931	33.3	53,843
1966	39,658	70.4	16,685	29.6	56,343
1967	43,269	73.7	15,461	26.3	58,730
1968	47,287	78.8	12,710	21.2	59,997
1969	51,234	85.5	8,676	14.5	59,910
1970	51,500	89.5	6,549	10.5	57,549
1971	51,687	92.7	4,051	7.3	55,738

NA = not available.
1/ Includes Temples.

Source: Fla. Dept. Agr., Florida Agricultural Statistics, Commercial Citrus Inventory. Sept. 1972. (Similar publications for earlier years.)

Table 2--Estimated production of Florida oranges, by major counties and areas, 3-season averages, 1958/59-1969/70; seasonal, 1970/71 and 1971/72 1/

Major counties by areas	Average 1958/59-1960/61		Average 1961/62-1963/64		Average 1964/65-1966/67		Average 1967/68-1969/70		1970/71		1971/72	
	1,000 boxes	Pct.	1,000 boxes	Pct.	1,000 boxes	Pct.	1,000 boxes	Pct.	1,000 boxes	Pct.	1,000 boxes	Pct.
East Coast:												
Brevard	2,434	2.8	3,087	3.8	3,140	2.8	2,995	2.4	3,739	2.5	4,349	3.1
Indian River	1,452	1.7	2,002	2.4	2,327	2.1	2,831	2.2	3,861	2.6	4,463	3.1
St. Lucie	3,569	4.1	4,555	5.6	5,184	4.7	5,925	4.7	7,359	5.0	8,750	6.2
Other counties	2/	2/	2/	2/	1,993	1.9	2.977	2.3	5,512	3.8	7,041	4.9
Total	2/	2/	2/	2/	12,644	11.5	14,728	11.6	20,463	13.9	24,603	17.3
Interior:												
Lake	17,458	19.8	13,323	16.2	16,685	15.1	19,316	15.2	21,847	14.8	21,811	15.3
Orange	12,723	14.4	9,165	11.2	12,317	11.2	12,326	9.7	13,698	9.3	13,847	9.7
Hardee	3,648	4.1	4,886	6.0	6,234	5.6	8,268	6.5	9,725	6.6	8,680	6.1
Polk	18,359	20.9	19,019	23.2	27,347	24.8	29,950	23.5	31,150	21.2	31,395	22.1
Other counties	2/	2/	2/	2/	21,523	19.5	24,266	19.0	29,231	19.8	27,495	19.3
Total	2/	2/	2/	2/	84,106	76.2	94,126	73.9	105,651	71.7	103,228	72.5
West Coast:												
Hillsborough	5,750	6.5	3,538	4.3	5,867	5.3	8,097	6.4	9,332	6.4	5,690	4.0
Pasco	3,596	4.1	2,698	3.3	4,239	3.8	5,905	4.6	6,667	4.5	5,115	3.6
Other counties	2/	2/	2/	2/	3,511	3.2	4,510	3.5	5,187	3.5	3,664	2.6
Total	2/	2/	2/	2/	13,617	12.3	18,512	14.5	21,186	14.4	14,469	10.2
State total	88,067	3/	82,067	3/	110,367	100.0	127,366	100.0	147,300	100.0	142,300	100.0

1/ Includes Temples.
2/ Not listed by county or area but included in State total.
3/ Does not add to 100 percent because of omitted counties.

Source: Fla. Dept. Agr., Florida Agricultural Statistics--Citrus Summary, 1971. (Also similar summaries for earlier years.)

Table 3--Per capita consumption of oranges and orange juices, United States, 1958-71

Year	Fresh oranges (farm weight)	Processed orange juices (single-strength basis)			
		Canned	Chilled	Frozen concentrated	Total
			Pounds		
1958	17.6	2.66	1.60	11.67	15.93
1959	19.8	1.91	1.87	14.49	18.27
1960	19.3	2.12	2.10	15.62	19.84
1961	16.1	1.70	1.65	15.30	18.65
1962	15.6	1.92	2.19	17.98	22.09
1963	11.9	1.69	1.14	11.84	14.67
1964	14.3	1.17	1.29	10.58	13.04
1965	16.4	1.24	1.90	14.10	17.24
1966	16.4	1.53	3.04	13.47	18.04
1967	18.0	1.57	4.15	19.49	25.21
1968	14.1	1.19	3.96	17.03	22.18
1969	16.3	1.30	3.87	17.20	22.37
1970	16.3	1.75	4.35	20.62	26.72
1971 1/	16.2	1.60	4.35	20.37	26.32

1/ Preliminary.

Source: U.S. Dept. Agr., Econ. Res. Serv., Fruit Situation, TFS-184, Sept. 1972.

Table 4--Production of oranges and percentage sold fresh, by States, 1958/59-1971/72

Season	Florida 1/		California		Arizona		Texas		Total	
	Production	Sold fresh	Production	Sold fresh	Production	Sold fresh	Production	Sold fresh	Production	Sold fresh
	1,000 tons	Pct.	1,000 tons	Pct.	1,000 tons	Pct.	1,000 tons	Pct.	1,000 tons	Pct.
1958/59	3,869	20	1,493	73	23	91	103	79	5,488	36
1959/60	4,118	23	1,142	74	56	80	122	78	5,438	35
1960/61	3,901	19	926	77	44	86	158	73	5,029	32
1961/62	5,103	18	758	75	54	78	103	53	6,018	27
1962/63	3,353	16	1,061	64	58	64	2	50	4,474	28
1963/64	2,623	22	1,168	71	83	75	11	82	3,885	38
1964/65	3,879	19	1,151	80	91	70	40	90	5,161	34
1965/66	4,518	17	1,346	70	91	68	58	86	6,013	30
1966/67	6,502	14	1,380	72	147	59	122	66	8,151	25
1967/68	4,725	18	718	61	117	82	81	80	5,641	26
1968/69	6,039	11	1,661	59	202	63	202	47	8,104	23
1969/70	6,430	11	1,462	67	175	51	190	56	8,257	23
1970/71	6,628	11	1,406	69	134	37	279	51	8,447	22
1971/72	6,404	9	1,624	65	184	41	261	45	8,473	22

1/ Includes Temples.

Source: U.S. Dept. Agr., Statis. Rptg. Serv., Citrus Fruits: Production, Use, Value, By States, 1909/10-1964/65, Statis. Bul. 380, Jan. 1967; and U.S. Dept. Agr., Statis. Rptg. Serv., Citrus Fruits: Production, Use, Value, By States, Fr Nt 3-1, 1966/67-1971/72 annual reports.

Table 5--Shipments of fresh Florida oranges, by areas and major counties and by months, 1971/72 season

Area and county	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Season total 1/	Percentage of State total
	1,000 boxes													Percent
East Coast:														
Brevard	5.8	0	1.3	21.2	55.1	75.1	38.2	32.3	11.2	7.8	10.5	10.9	269.2	2.3
Indian River	5.4	3.7	5.7	36.4	73.0	27.4	18.4	15.9	12.5	18.9	24.9	15.7	257.8	2.2
St. Lucie	2.8	1.4	5.8	50.1	112.0	117.2	123.1	78.9	66.6	22.1	11.7	13.7	605.4	5.3
Other counties	.7	.4	.8	6.1	21.7	21.9	25.2	6.1	2.0	2.0	3.1	1.6	91.8	.8
Total	14.7	5.5	13.6	113.8	261.8	241.6	204.9	133.2	92.3	50.8	50.2	41.9	1,224.2	10.6
Interior:														
Lake	0	2.7	102.8	269.1	337.5	266.8	202.8	148.0	111.6	135.2	61.6	8.7	1,646.8	14.2
Orange	.1	1.6	66.3	276.2	346.9	280.8	277.2	204.2	126.0	130.6	79.1	9.0	1,798.0	15.5
Seminole	0	0	20.3	80.7	66.1	64.4	58.9	37.0	29.2	17.9	27.1	10.0	411.7	3.5
Highlands	0	0	6.8	90.7	102.9	84.9	105.5	139.1	106.3	70.7	45.8	20.2	772.8	6.7
Polk	.8	.8	79.5	534.4	764.3	569.2	550.5	517.5	500.8	511.2	319.8	59.0	4,408.1	38.1
Other counties	0	.5	15.4	96.3	145.7	98.5	81.4	24.6	27.4	23.6	20.1	8.4	542.2	4.7
Total	.9	5.6	291.1	1,347.4	1,763.4	1,364.6	1,276.3	1,070.4	901.3	889.2	553.5	115.3	9,579.6	82.8
West Coast:														
Hillsborough	0	.2	47.2	81.7	91.0	82.1	59.5	39.7	39.4	39.6	15.2	0	495.5	4.3
Pinellas	0	0	1.0	14.6	36.8	20.2	14.7	12.5	4.3	14.4	12.9	39.3	170.7	1.5
Other counties	0	0	0	8.4	20.4	13.8	16.2	7.0	7.5	9.1	6.9	8.5	97.7	.8
Total	0	.2	48.2	104.7	148.2	116.1	90.4	59.2	51.2	63.1	35.0	47.8	763.9	6.6
State total	15.6	11.3	352.9	1,565.9	2,173.4	1,722.3	1,571.6	1,262.8	1,044.8	1,003.1	638.7	205.0	11,567.7	100.0

1/ Monthly area and county shipments may not add to season totals shown due to rounding.

Source: Fla. Dept. Agr., Div. of Fruit and Vegetable Inspection, 1971/72 annual report.

Table 6--Average costs per box of Florida oranges for picking and hauling, 1958/59-1971/72

Season	Picking cost		Hauling cost		Picking and hauling cost				Total picking and hauling cost
					Labor		Other		
	Cost	Percentage of total	Cost	Percentage of total	Cost	Percentage of total	Cost	Percentage of total	
	Cents	Percent	Cents	Percent	Cents	Percent	Cents	Percent	Cents
1958/59 ...	33.83	76.0	10.69	24.0	31.00	69.6	13.52	30.4	44.52
1959/60 ...	34.34	76.5	10.56	23.5	31.10	69.3	13.80	30.7	44.90
1960/61 ...	34.96	75.8	11.17	24.2	31.42	68.1	14.71	31.9	46.13
1961/62 ...	33.79	76.4	10.41	23.6	31.81	72.0	12.39	28.0	44.20
1962/63 ...	39.57	75.4	12.94	24.6	35.79	68.2	16.72	31.8	52.51
1963/64 ...	43.04	75.8	13.73	24.2	38.41	67.7	18.36	32.3	56.77
1964/65 ...	43.43	78.8	11.66	21.2	39.73	72.1	15.36	27.9	55.09
1965/66 ...	46.12	79.4	11.96	20.6	42.97	74.0	15.11	26.0	58.08
1966/67 ...	46.25	81.2	10.74	18.8	43.32	76.0	13.67	24.0	56.99
1967/68 ...	54.09	80.2	13.32	19.8	50.38	74.7	17.03	25.3	67.41
1968/69 ...	57.77	82.8	11.98	17.2	53.20	76.3	16.55	23.7	69.75
1969/70 ...	61.12	82.3	13.18	17.7	55.54	74.8	18.76	25.2	74.30
1970/71 ...	64.86	83.3	13.04	16.7	56.69	72.8	21.21	27.2	77.90
1971/72 ...	70.86	83.9	13.61	16.1	63.26	74.9	21.21	25.1	84.47

Source: Spurlock, A. H., Costs of Picking and Hauling Florida Citrus Fruits, 1970/71 Season, Ag. Econ. Rpt. 42, Fla. Agr. Expt. Sta., Feb. 1973. (Also similar reports for earlier seasons.)

Table 7--Average costs of packing and selling Florida oranges per 1 1/3-bushel equivalent, packed in 4/5-bushel fiberboard box, 1958/59-1971/72

Season	Selling cost		Packing costs						Total selling and packing costs
			Labor		Material		Other		
	Cost	Percentage of toal	Cost	Percentage of total	Cost	Percentage of total	Cost	Percentage of total	
	Cents	Percent	Cents	Percent	Cents	Percent	Cents	Percent	Dollars
1958/59	8.7	7	36.8	30	40.0	33	37.0	30	1.22
1959/60	6.5	5	37.0	29	46.5	37	36.5	29	1.26
1960/61	6.5	5	40.0	30	48.2	36	38.6	29	1.33
1961/62	5.8	5	40.1	30	48.6	37	37.4	28	1.32
1962/63	8.2	6	45.1	30	46.4	31	50.0	33	1.50
1963/64	10.4	7	42.8	30	43.7	31	45.1	32	1.42
1964/65	9.0	6	45.3	31	44.3	32	45.3	31	1.44
1965/66	6.6	4	48.0	32	46.3	31	48.5	33	1.49
1966/67	6.8	5	47.6	32	46.0	31	48.1	32	1.48
1967/68	7.5	5	51.8	33	46.4	29	51.4	33	1.57
1968/69	7.5	5	54.2	33	46.4	28	55.5	34	1.64
1969/70	12.0	7	54.2	31	47.4	27	62.0	35	1.76
1970/71	14.5	8	54.5	31	47.1	26	61.6	35	1.78
1971/72	14.6	8	60.3	33	44.6	25	61.9	34	1.81

Source: Spurlock, A. H., Costs of Packing and Selling Florida Fresh Citrus Fruits, 1970/71 Season, Ag. Econ. Rpt. 43, Fla. Agr. Expt. Sta., Feb. 1973. (Also similar reports for earlier seasons.)

Table 8--Type and size containers used for Florida oranges, 1959/60, 1965/66, and 1971/72

Container type and size	1959/60		1965/66		1971/72	
	Volume	Percent of total	Volume	Percent of total	Volume	Percent of total
	1,000 boxes	Percent	1,000 boxes	Percent	1,000 boxes	Percent
Nailed boxes:						
1 3/5 bushel (1 box)	0.1	2/	0.2	2/	0	0
4/5 bushel (½ box)	.4	2/	1.5	2/	0	0
Subtotal	.5	2/	1.7	2/	0	0
Wirebound boxes:						
1 3/5 bushel (1 box)	3,686.1	23.7	1,825.2	13.7	0	0
4/5 bushel (½ box)	5,742.3	36.9	3,619.2	27.1	1,351.1	11.7
Subtotal	9,428.4	60.6	5,444.4	40.8	1,351.1	11.7
Corrugated boxes:						
1 3/5 bushel (1 box)	.1	2/	5.3	2/	0	0
1 bushel (5/8 box)	1/	2/	.6	2/	0	0
4/5 bushel (½ box)	2,411.5	15.5	4,856.5	36.4	7,021.6	60.7
2/5 bushel (¼ box)	1/	2/	.5	2/	8.1	.1
Subtotal	2,411.6	15.5	4,862.9	36.5	7,029.7	60.8
Baskets:						
1 bushel (5/8 box)	1/	2/	0	0	0	0
Subtotal	1/	2/	0	0	0	0
Mesh bags:						
4/5 bushel (½ box)	4.4	2/	1/	2/	0	0
20 pounds (¼ box)	101.2	.7	116.8	.9	0	0
8 pounds (1/10 box)	821.3	5.3	324.1	2.4	0	0
5 pounds (1/16 box)	814.5	5.2	657.6	4.9	0	0
4 pounds (1/20 box)	0	0	1.2	2/	0	0
Subtotal	1,741.4	11.2	1,099.7	8.3	0	0
Film bags:						
8 pounds (1/10 box)	90.0	.6	167.5	1.2	171.1	1.5
5 pounds (1/16 box)	753.3	4.8	973.9	7.3	2,459.2	21.2
4 pounds (1/20 box)	0	0	49.6	.4	0	0
Subtotal	843.3	5.4	1,191.0	8.9	2,630.3	22.7
Consumer container	0	0	1/	2/	0	0
Total in containers	14,425.4	92.7	12,599.8	94.5	11,011.1	95.2
Bulk	1,140.2	7.3	729.8	5.5	556.5	4.8
Total	15,565.6	100.0	13,329.6	100.0	11,567.6	100.0

1/ Less than 50 boxes; quantity added in total.
2/ Less than 0.05 percent.
Source: Fla. Dept. Agr., Div. of Fruit and Vegetable Inspection, 1971/72 annual report. (Also similar reports for earlier seasons.)

Table 9--Rail, boat, and truck shipments of Florida oranges, 3-season average, 1959/60-1961/62; seasonal, 1968/69-1970/71 1/

Season	Method of shipment				
	Rail and boat		Truck		Total
	Carlots	Percent	Carlots	Percent	Carlots
Average 1959/60-1961/62	10,212	33.1	20,636	66.9	30,848
1968/69	5,320	22.8	18,033	77.2	23,353
1969/70	4,885	19.1	20,753	80.9	25,638
1970/71	4,848	18.7	22,423	82.2	27,271

1/ Includes estimated proportion of "mixed" car and truck shipments--intrastate and interstate movement. Does not include any Florida consolidated l.c.l. (less than carlot) express shipments. Truck shipments converted to carlot equivalents on basis of 500 boxes per car.

Source: Federal-State Market News Service, Marketing Florida Citrus, Summary of 1970/71 Season, Oct. 1971. (Also similar summaries for earlier years.)

Table 10--Truck and rail unloads of Florida oranges in 41 cities, 1971 1/

Cities	Unloads				
	Truck		Rail		Total
	Carlots	Percent	Carlots	Percent	Carlots
Albany, N.Y.	90	100	0	0	90
Atlanta, Ga.	864	100	1	2/	865
Birmingham, Ala.	401	100	0	0	401
Columbia, S.C.	555	100	0	0	555
Denver, Colo.	8	100	0	0	8
Fort Worth, Tex.	1	100	0	0	1
Houston, Tex.	19	100	0	0	19
Indianapolis, Ind.	152	100	0	0	152
Kansas City, Mo.	78	100	0	0	78
Miami, Fla.	653	100	0	0	653
Milwaukee, Wis.	82	100	0	0	82
Minneapolis, Minn. 3/	65	100	0	0	65
Nashville, Tenn.	16	100	0	0	16
New Orleans, La.	375	100	0	0	375
Oklahoma City, Okla.	3	100	0	0	3
Providence, R.I.	64	100	0	0	64
San Antonio, Tex.	3	100	0	0	3
San Francisco, Calif. 4/	9	100	0	0	9
Seattle, Wash. 5/	1	100	0	0	1
Subtotal	3,439	100	1	2/	3,440
Cleveland, Ohio	390	97	14	3	404
Los Angeles, Calif.	18	95	1	5	19
Louisville, Ky.	267	93	20	7	287
Memphis, Tenn.	192	99	2	1	194
St. Louis, Mo.	125	95	6	5	131
Washington, D.C.	392	90	45	10	437
Subtotal	1,384	94	88	6	1,472
Baltimore, Md.	375	74	135	26	510
Boston, Mass.	396	69	182	31	578
Buffalo, N.Y.	175	84	33	16	208
Chicago, Ill.	476	71	198	29	674
Cincinnati, Ohio	435	84	83	16	518
Detroit, Mich.	611	78	173	22	784
New York, N.Y. 6/	1,591	43	2,088	57	3,679
Philadelphia, Pa.	716	53	625	47	1,341
Pittsburgh, Pa.	323	85	58	15	381
Subtotal	5,098	59	3,575	61	8,673
Total	9,921	73	3,664	27	13,585

1/ No Florida orange unloads in Dallas, Tex., Portland, Ore., and Salt Lake City, Utah.
2/ Less than 0.5 percent.
3/ Includes St. Paul, Minn.
4/ Includes Oakland, Calif.
5/ Includes Tacoma, Wash.
6/ Includes Newark, N.J.

Source: Fresh Fruit and Vegetable Unloads for 41 Cities, Calendar Year 1971, U.S. Dept. Agr., (FVUS 1971), Apr. 1972.

Table 11--Seasonal average retail price per pound for Florida oranges, Chicago and New York, 1958/59-1971/72

Season	Retail price 1/		
	Chicago 2/	New York 2/	2-city average 3/
	Cents		
1958/59	10.4	12.4	11.9
1959/60	9.1	11.0	10.6
1960/61	10.7	12.6	12.1
1961/62	9.9	12.3	11.6
1962/63	12.2	14.6	14.2
1963/64	13.4	16.4	15.9
1964/65	11.7	13.5	13.1
1965/66	11.0	12.4	12.1
1966/67	8.8	11.1	10.5
1967/68	11.7	13.3	12.9
1968/69	12.0	14.2	13.8
1969/70	11.8	14.2	13.8
1970/71	12.5	14.5	14.2
1971/72	16.4	15.8	15.9

1/ 7-month weighted average (Nov.-May).
2/ Bur. of Labor Statis. average city monthly prices weighted by respective city monthly unloads.
3/ Average city seasonal prices weighted by respective city unloads.

Table 12--Seasonal average prices, value, derived grower return, marketing margins, and picking, hauling, packing, and selling costs per box of Florida oranges and as a percentage of retail value, Chicago, 1958/59-1971/72 1/

Season	Retail value per box 2/	Wholesale-retail margin 3/		Auction price per box	Shipping point-wholesale margin 4/		Shipping-point price (returns to grower and packer)		Picking, hauling, packing, and selling costs 5/		Derived grower return 6/	
		Per box	Percentage of retail value		Per box	Percentage of retail value	Per box	Percentage of retail value	Per box	Percentage of retail value	Per box	Percentage of retail value
	----Dollars----		Percent	----Dollars----		Percent	Dollars	Percent	Dollars	Percent	Dollars	Percent
1958/59 ..	9.08	3.63	40	5.45	1.32	15	4.13	45	1.67	18	2.46	27
1959/60 ..	7.91	3.12	39	4.79	1.33	17	3.46	44	1.71	22	1.75	22
1960/61 ..	9.33	3.44	37	5.89	1.34	14	4.55	49	1.79	19	2.76	30
1961/62 ..	8.68	3.84	44	4.84	1.33	16	3.51	40	1.76	20	1.75	20
1962/63 ..	10.11	3.53	35	6.58	1.41	14	5.17	51	2.03	20	3.14	31
1963/64 ..	11.75	3.92	33	7.83	1.60	14	6.23	53	1.99	17	4.24	36
1964/65 ..	10.22	4.33	42	5.89	1.44	14	4.45	44	1.99	20	2.46	24
1965/66 ..	9.55	4.20	44	5.35	1.78	19	3.57	37	2.07	21	1.50	16
1966/67 ..	7.79	3.82	49	3.97	1.00	13	2.97	38	2.05	26	.92	12
1967/68 ..	10.19	4.23	42	5.96	1.17	11	4.79	47	2.24	22	2.55	25
1968/69 ..	10.46	4.08	39	6.38	1.90	18	4.48	43	2.34	22	2.14	21
1969/70 ..	10.26	4.07	40	6.19	2.23	22	3.96	38	2.50	24	1.46	14
1970/71 ..	10.91	4.43	40	6.48	2.39	22	4.09	38	2.56	24	1.53	14
1971/72 ..	14.32	7.10	50	7.22	2.29	16	4.93	34	2.66	18	2.27	16

1/ 7-month weighted average (Nov.-May) for all sizes and varieties of oranges, not including Temples. 90 pounds net weight per box.
2/ Returns to retailer for salable oranges (3-percent allowance for loss incurred during marketing process).
3/ Retail value minus auction price. The amount received for retailing, intracity transportation, and secondary wholesaling.
4/ Auction price minus shipping-point price. The amount received for transportation and auction charges.
5/ Spurlock, A. H., Costs of Picking and Hauling Florida Citrus Fruits, 1971/72 Season, Agr. Econ. Rpt. 42; and Spurlock, A.H., Costs of Packing and Selling Florida Fresh Citrus Fruits, 1971/72 Season, Agr. Econ. Rpt. 43, Fla. Agr. Expt. Sta. (Also similar reports for earlier years.)
6/ Derived by deducting picking, hauling, packing, and selling costs from returns to grower and packer.

Table 13--Seasonal average prices, value, derived grower return, marketing margins, and picking, hauling, packing, and selling costs per box of Florida oranges and as a percentage of retail value, New York City, 1958/59-1971/72 1/

Season	Retail value per box 2/	Wholesale-retail margin 3/		Auction price per box	Shipping point-wholesale margin 4/		Shipping-point price (returns to grower and packer)		Picking, hauling, packing, and selling costs 5/		Derived grower return 6/	
		Per box	Percentage of retail value		Per box	Percentage of retail value	Per box	Percentage of retail value	Per box	Percentage of retail value	Per box	Percentage of retail value
	----Dollars----		Percent	----Dollars----		Percent	Dollars	Percent	Dollars	Percent	Dollars	Percent
1958/59 ..	10.83	4.88	45	5.95	1.35	12	4.60	43	1.67	16	2.93	27
1959/60 ..	9.58	3.83	30	5.75	1.40	15	4.35	45	1.71	17	2.64	28
1960/61 ..	11.05	4.07	37	6.98	1.46	13	5.52	50	1.79	16	3.73	34
1961/62 ..	10.76	5.04	47	5.72	1.44	13	4.28	40	1.76	16	2.52	24
1962/63 ..	12.94	5.65	44	7.29	1.21	9	6.08	47	2.03	16	4.05	31
1963/64 ..	14.36	7.08	49	7.28	1.09	8	6.19	43	1.99	14	4.20	29
1964/65 ..	11.77	5.45	46	6.32	1.85	16	4.47	38	1.99	17	2.48	21
1965/66 ..	10.82	4.61	43	6.21	2.59	24	3.62	33	2.07	19	1.55	14
1966/67 ..	9.66	5.00	52	4.66	1.74	18	2.92	30	2.05	21	.87	9
1967/68 ..	11.64	4.68	40	6.96	2.17	19	4.79	41	2.24	19	2.55	22
1968/69 ..	12.43	6.12	49	6.31	1.86	15	4.45	36	2.34	19	2.11	17
1969/70 ..	12.40	6.35	51	6.05	2.14	17	3.91	32	2.50	20	1.41	12
1970/71 ..	12.66	6.34	50	6.32	2.17	17	4.15	33	2.56	20	1.59	13
1971/72 ..	13.79	7.29	53	6.50	1.60	12	4.90	35	2.66	19	2.24	16

1/ 7-month weighted average (Nov.-May) for all sizes and varieties of oranges, not including Temples. 90 pounds net weight per box.
2/ Returns to retailer for salable oranges (3-percent allowance for loss incurred during marketing process).
3/ Retail value minus auction price. The amount received for retailing, intracity transportation, and secondary wholesaling.
4/ Auction price minus shipping-point price. The amount received for transportation and auction charges.
5/ Spurlock, A. H., Costs of Picking and Hauling Florida Citrus Fruits, 1971/72 Season, Agr. Econ. Rpt. 42; and Spurlock, A. H., Costs of Packing and Selling Florida Fresh Citrus Fruits, 1971/72 Season, Agr. Econ. Rpt. 43, Fla. Agr. Expt. Sta. (Also similar reports for earlier years.)
6/ Derived by deducting picking, hauling, packing, and selling costs from returns to grower and packer.

Table 14--Retail prices, marketing margins, and grower returns for 24 ounces of single-strength juice equivalents, fresh oranges, and frozen concentrate sold in Chicago and New York City, 1965/66-1971/72 1/

Season	Retail price	Marketing margins					Grower returns 6/
		Wholesale-retail margin 2/	Shipping point-wholesale margin 3/	Packing costs or processor margin 4/	Picking and hauling costs 5/	Total margin	
				Cents			
				Fresh oranges			
Chicago:							
1965/66	37.1	16.3	6.9	5.8	2.3	31.3	5.8
1966/67	27.7	13.6	3.5	5.3	2.0	24.4	3.3
1967/68	36.2	15.0	4.2	5.6	2.4	27.2	9.0
1968/69	44.2	17.2	8.0	6.9	2.9	35.4	9.2
1969/70	39.9	15.8	8.7	6.8	2.9	34.2	5.7
1970/71	43.6	17.7	9.6	7.1	3.1	37.5	6.1
1971/72	54.1	26.8	8.7	6.8	3.2	45.5	8.6
				Frozen concentrate			
1965/66	23.7	10.2	7/	4.7	2.2	17.1	6.6
1966/67	20.4	8.8	7/	6.7	2.0	17.5	2.9
1967/68	22.2	8.5	7/	4.8	2.3	15.6	6.6
1968/69	26.2	11.1	7/	4.1	2.9	18.1	8.1
1969/70	23.5	10.6	7/	5.1	2.8	18.5	5.0
1970/71	24.0	10.3	7/	5.8	3.0	19.1	4.9
1971/72	25.1	9.4	7/	5.4	3.1	17.9	7.2
				Fresh oranges			
N.Y. City:							
1965/66	42.1	17.9	10.1	5.8	2.3	36.1	6.0
1966/67	34.4	17.8	6.2	5.3	2.0	31.3	3.1
1967/68	41.4	16.6	7.7	5.6	2.4	32.3	9.1
1968/69	52.5	25.8	7.9	6.9	2.9	43.5	9.0
1969/70	48.2	24.7	8.3	6.8	2.9	42.7	5.5
1970/71	50.6	25.4	8.7	7.1	3.1	44.3	6.3
1971/72	52.1	27.5	6.0	6.8	3.2	43.5	8.6
				Frozen concentrate			
1965/66	21.7	8.2	7/	4.7	2.2	15.1	6.6
1966/67	17.7	6.2	7/	6.6	2.0	14.8	2.9
1967/68	20.3	6.6	7/	4.8	2.3	13.7	6.6
1968/69	23.4	8.3	7/	4.1	2.9	15.3	8.1
1969/70	22.0	9.1	7/	5.1	2.8	17.0	5.0
1970/71	22.6	8.9	7/	5.8	3.0	17.7	4.7
1971/72	24.7	9.0	7/	5.4	3.1	17.5	7.2

1/ Marketing season: fresh, Nov.-May; frozen concentrate, Dec.-Nov. 2/ Fresh: retail price minus wholesale or auction price. Includes secondary wholesaling, intracity transportation, and retailing. Processed: retail price minus processor f.o.b. price. Includes all transportation, wholesaling, and retailing. 3/ Fresh: wholesale or auction price minus shipping-point price. Includes transportation and auction charges or primary wholesaling. 4/ Fresh: Spurlock, A.H., Costs of Packing and Selling Florida Fresh Citrus Fruits, 1971/72 Season, Ag. Econ. Rpt. 43, Fla. Agr. Expt. Sta., Feb. 1973. Processed: processor f.o.b. price minus raw product price paid by processor. 5/ Spurlock, A.H., Costs of Picking and Hauling Florida Citrus Fruits, 1971/72 Season, Ag. Econ Rpt. 42, Fla. Agr. Expt. Sta., Feb. 1973. 6/ Returns for seasonal average quantity of oranges required to yield 24-ounces of single-strength juice to consumer. 7/ Included in wholesale-retail margin.