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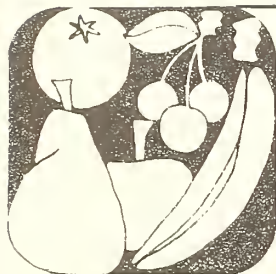
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***FRESH THOMPSON  
SEEDLESS GRAPES-  
PRICES, COSTS, AND MARGINS***

REPRINTED FROM THE FRUIT SITUATION • SEPTEMBER 1974





## FRESH THOMPSON SEEDLESS GRAPES—PRICES, COSTS, AND MARGINS

by

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**ABSTRACT:** The retail value of Thompson Seedless grapes sold in Chicago and New York City increased an average of 73 cents per lug per year between 1964 and 1973. The wholesale and retail margin increased 40 cents per lug per year; rail transportation costs went up 3 cents; harvesting and packing costs rose 9 cents; and grower returns rose 21 cents. Transportation's share of the retail value decreased slightly. Other market shares, including the grower's share, changed little.

**KEY WORDS:** Grapes, retail price, costs, margins, grower returns.

Grapes, one of the principal fruits in the United States, ranked first among noncitrus fruits in farm value. Utilized grape production in 1973 had a farm value of \$671 million, 36 percent of the value of all noncitrus fruits.

Commercial grape production is reported for 13 States. California produces the most—around 90 percent of the U.S. crop each season (table 1). In 1973, of the 4.2 million tons of grapes produced, California accounted for 93 percent. California produced three

types of grapes—table, wine, and raisin. Some of each type are used in the fresh market.

Per capita consumption of fresh grapes has trended downward in recent years. The average person in the United States consumed an estimated 2.4 pounds of fresh grapes in 1973, compared with 3.5 pounds 10 years earlier.

Raisin-type grapes, of which Thompson Seedless are the most important, accounted for 60-68 percent of the California grape crop in each of the last 10

**Table 1.—Grapes: Production and fresh use, California and United States, 1964-73**

Season	Production					Fresh use		
	California		Other States		Total	U.S. crop	California crop	
	Amount	Percentage of total	Amount	Percentage of total			All varieties	Raisin varieties
	1,000 tons	Percent	1,000 tons	Percent	1,000 tons	Percent	Percent	Percent
1964	3,145	90	333	10	3,478	16	17	11
1965	3,975	92	351	8	4,326	14	14	10
1966	3,400	91	333	9	3,733	16	17	12
1967	2,700	88	362	12	3,062	15	16	13
1968	3,255	92	294	8	3,549	16	16	12
1969	3,595	92	303	8	3,898	14	15	11
1970	2,763	89	356	11	3,119	13	14	9
1971	3,534	88	463	12	3,997	10	11	8
1972	2,266	88	304	12	2,570	14	14	12
1973	3,912	93	306	7	4,218	10	10	5

seasons. Most raisin-type grapes each season are either dried for raisins or crushed for wine. From 1964 to 1969, only 10-13 percent of the raisin grape crop each season was used fresh. Since then, increased demand for wine and raisins has sharply reduced the quantity of such grapes used fresh—to only 5 percent of the 1973 crop. Practically all raisin-type grapes sold fresh are Thompson Seedless.

This article discusses prices, marketing costs, margins, grower returns, and production costs for fresh Thompson Seedless grapes. Data used are from a continuing costs and margins project on fruit and vegetables.

### Procedures Explained

Thompson Seedless grapes were priced at two marketing levels—California shipping points and retail in Chicago and New York City. Retail prices were collected monthly by the Bureau of Labor Statistics in a sample of retail stores on Tuesday, Wednesday, and Thursday during the first week of the month containing a Tuesday. The shipping point price used is an average of daily prices for the week preceding the retail pricing week. Shipping point prices are reported by the Federal-State Market News Service. Monthly retail and shipping point prices are weighted by monthly carlot unloads of California grapes in Chicago and New York City to obtain the average price for the season (July-October).

The retail value of a lug of Thompson Seedless grapes is the return to the retailer for salable grapes (retail price minus 9 percent allowance for spoilage loss during the marketing process). Transportation costs are based on rail rates from Fresno, Calif., to Chicago and New York City. Harvesting and packing costs are reported by the California Agricultural Extension Service. Grower returns are derived from the shipping point price by deducting harvesting and packing costs. The wholesale and retail margin is derived by deducting the shipping point price plus transportation costs from the retail value. This margin represents payment for wholesaling (assembly and warehousing), intra-city transportation, and retailing. These functions may be performed by one of more firms. Production costs are based on sample costs reported by the California Agricultural Extension Service.

### Marketing Costs Up—Market Shares Unchanged

The retail price of Thompson Seedless grapes increased sharply between 1964 and 1973. The U.S. average retail price was 57.3 cents per pound in 1973, three-fourths more than 9 seasons earlier. Retail prices went up each season except in 1965, averaging slightly over 2 cents per pound more per year. Retail price increases usually occurred in response to declining supplies of raisin grapes used fresh.

However, in 1966, 1968, and 1971, increased supplies did not result in lower retail prices. Figure 1 shows the relationship of U.S. average retail price to the supply of raisin grapes used fresh.

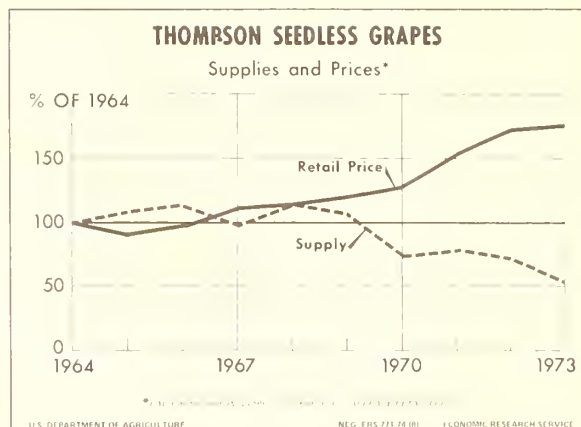


Figure 1

The retail value of a 23-pound equivalent lug of Thompson Seedless grapes sold in Chicago and New York City averaged \$12.80 in 1973, 82 percent higher than in 1964 (Figure 2). The wholesale and retail margin averaged \$6.66 in 1973, more than double the amount in 1964. Rail transportation costs from California to Chicago and New York City, although unchanged from 1964 to 1967, went up 34 percent between 1967 and 1973. Harvesting and packing costs in California rose from \$0.94 to \$1.75 from 1964 to 1973, an 86 percent increase. Returns to California growers for grapes shipped to Chicago and New York City increased 41 percent, from \$2.53 to \$3.57 per lug. Grower returns fluctuated from \$1.72 in 1965 and 1969 to \$4.20 in 1972.

A simple trend line fitted to the data in Figure 2 indicates that the retail value of Thompson Seedless grapes sold in Chicago and New York City increased an average of 73 cents per lug per year since 1964. During the same period, the wholesale and retail margin increased 40 cents per lug per year; rail transportation costs rose 3 cents; harvesting and packing costs went up 9 cents; and grower returns went up 21 cents.

The market share of the retail value going for transportation costs decreased on the average about one-third of a percentage point per year during 1964-73. The percentage of the retail value going to other market factors and to growers did not show any significant trend over the period. For the 10 seasons, the wholesale and retail margin averaged 49 percent of the retail value, transportation costs 8 percent, harvesting and packing costs 14 percent, and grower returns 29 percent.

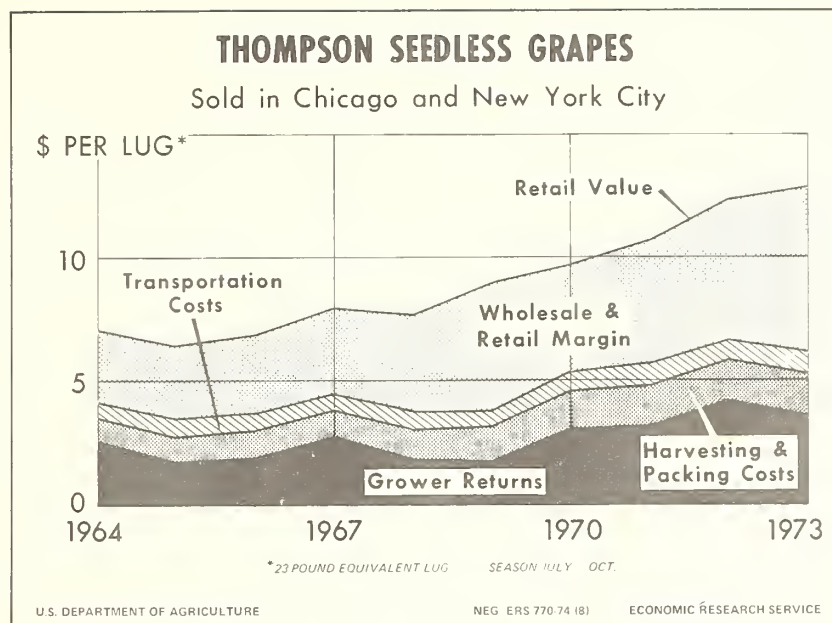


Figure 2

#### Retail Price Higher in New York City

Consumers in New York City paid a much higher average price for Thompson Seedless grapes each year than did Chicago consumers (tables 2 and 3). Price differences between the two cities ranged from 1.5 cents to 9.6 cents per pound. Rail transportation charges to the two cities were essentially the same. Higher retail prices were associated with a larger wholesale and retail margin in New York City each season. The margin was 25-35 percent larger in New York City than in Chicago in 7 of the 10 seasons.

A simple trend line fitted to the data in tables 2 and

3 indicates that both the retail value and the wholesale and retail margin increased faster on the average in New York City than in Chicago. The wholesaler's and retailer's share of the retail value was larger in New York City—by 2 to 12 percentage points. Growers received a smaller share of the retail value of grapes sold in New York City—1 to 8 percentage points less. For the 10 seasons, wholesalers' and retailer's share of the retail value averaged 44 percent in Chicago and 50 percent in New York City. The grower's share averaged 32 and 28 percent, respectively.

Table 2.—Grapes, Thompson Seedless: Seasonal average prices, margins, costs, and returns, Chicago, 1964-73<sup>1</sup>

Season	Retail price per pound	Retail value per lug <sup>2</sup>	Wholesale and retail margin		Transportation costs <sup>3</sup>		Harvesting and packing costs <sup>4</sup>		Grower returns <sup>5</sup>	
			Per lug	Percentage of retail value	Per lug	Percentage of retail value	Per lug	Percentage of retail value	Per lug	Percentage of retail value
	Cents	Dollars	Dollars	Percent	Dollars	Percent	Dollars	Percent	Dollars	Percent
1964	31.5	6.59	2.42	37	.60	9	.94	14	2.63	40
1965	29.2	6.10	2.78	45	.60	10	.98 <sup>6</sup>	16	1.74	29
1966	30.3	6.33	2.80	44	.60	10	1.03	16	1.90	30
1967	36.7	7.68	3.29	43	.60	8	1.14 <sup>6</sup>	15	2.65	34
1968	32.7	6.84	3.06	45	.63	9	1.24	18	1.91	28
1969	39.0	8.16	4.47	55	.64	8	1.34 <sup>6</sup>	16	1.71	21
1970	42.3	8.86	3.58	40	.71	8	1.46	17	3.11	35
1971	46.6	9.75	4.05	41	.77	8	1.55 <sup>6</sup>	16	3.38	35
1972	53.4	11.18	4.56	41	.79	7	1.64	15	4.19	37
1973	54.1	11.33	5.37	47	.81	7	1.75 <sup>6</sup>	16	3.40	30

<sup>1</sup> 4-month weighted average (July-October), 23 pounds equivalent net weight per lug. <sup>2</sup> Returns to retailer for salable grapes (9-percent allowance for loss incurred during marketing process.) <sup>3</sup> Rail charges from Fresno, California. <sup>4</sup> Sample harvesting, hauling and packing costs for California Thompson

Seedless grapes, reported by the California Agricultural Extension Service. <sup>5</sup> Returns to California growers (F.o.b. shipping point price minus harvesting, hauling, and packing costs), does not include returns from cull grapes sold. <sup>6</sup> Estimated.



**Table 3.—Grapes, Thompson Seedless: Seasonal average prices, margins, costs, and returns, New York City, 1964-73<sup>1</sup>**

Season	Retail price per pound	Retail value per lug <sup>2</sup>	Wholesale and retail margin		Transportation costs <sup>3</sup>		Harvesting and packing costs <sup>4</sup>		Grower returns <sup>5</sup>	
			Per lug	Percentage of retail value	Per lug	Percentage of retail value	Per lug	Percentage of retail value	Per lug	Percentage of retail value
	<i>Cents</i>	<i>Dollars</i>	<i>Dollars</i>	<i>Percent</i>	<i>Dollars</i>	<i>Percent</i>	<i>Dollars</i>	<i>Percent</i>	<i>Dollars</i>	<i>Percent</i>
1964 . . . . .	34.4	7.19	3.15	44	.61	8	.94	13	2.49	35
1965 . . . . .	31.0	6.48	3.17	49	.61	9	.98 <sup>6</sup>	15	1.72	27
1966 . . . . .	33.7	7.05	3.50	50	.61	9	1.03	14	1.91	27
1967 . . . . .	38.2	8.01	3.64	45	.61	8	1.14 <sup>6</sup>	14	2.62	33
1968 . . . . .	38.9	8.14	4.63	57	.63	8	1.24	15	1.64	20
1969 . . . . .	45.0	9.42	5.70	61	.66	7	1.34 <sup>6</sup>	14	1.72	18
1970 . . . . .	47.0	9.83	4.54	46	.73	7	1.46	15	3.10	32
1971 . . . . .	52.5	10.98	5.49	50	.79	7	1.55 <sup>6</sup>	14	3.15	29
1972 . . . . .	61.1	12.79	6.14	48	.81	6	1.64	13	4.20	33
1973 . . . . .	63.7	13.33	7.12	54	.82	6	1.75 <sup>6</sup>	13	3.64	27

<sup>1</sup> 4-month weighted average (July-October), 23 pounds equivalent net weight per lug. <sup>2</sup> Returns to retailer for salable grapes (9-percent allowance for loss incurred during marketing process). <sup>3</sup> Rail charges from Fresno, California. <sup>4</sup> Sample harvesting, hauling and packing costs for California Thompson

Seedless grapes, reported by the California Agricultural Extension Service. <sup>5</sup> Returns to California growers (F.o.b. shipping point price minus harvesting, hauling, and packing costs), does not include returns from cull grapes sold. <sup>6</sup> Estimated.

### California Production Costs Up

The cost of producing a 23-pound equivalent lug of Thompson Seedless grapes in California for table use averaged \$1.36 in 1972, 40 percent more than in 1964 (table 4). Labor, the largest single cost component, averaged 50 cents per lug, or more than one-third of total costs in 1972. The next largest component in 1972 was plant costs—primarily depreciation and interest on investment for vines, stakes, and trellis, amounting to 22 cents per lug. Costs of material other than plants were 20 cents per lug; herbicides and insecticides accounted for over 90 percent of this amount. Total equipment costs were about 26 cents per lug. Rent and overhead costs averaged 18 cents.

Relative labor costs declined slightly between 1964 and 1972, from 38 percent to 37 percent of total costs. Relative equipment costs declined also, from 21 percent to 19 percent. Total material costs, however, increased sharply during the period. Herbicides and insecticides, used to reduce labor and equipment costs and increase yields and quality, doubled in costs between 1964 and 1972, increasing their share of total costs from 10 percent to 14 percent. Fertilizer costs made up 1 percent of total costs in both 1964 and 1972.

### Prices and Costs to Continue Increasing

Costs of producing and marketing Thompson Seedless grapes are expected to continue rising for the next few years. Shortages of many inputs have resulted in rapidly increasing prices for them. Many materials used in production and marketing are derived from fossil fuels or made with energy produced from these fuels. Because of recent price increases in fossil fuels, prices are increasing for

**Table 4.—California Thompson Seedless grapes for table use: Perharvest cost of production, 1964, 1972<sup>1</sup>**

Cost item	1972		1964	
	<i>Dollars per 23-lb. lug</i>	<i>Percent</i>	<i>Dollars per 23-lb. lug</i>	<i>Percent</i>
Labor <sup>2</sup> . . . . .	.501	36.9	.371	38.2
Equipment;				
Fuel and repairs . . . . .	.038	2.8	.031	3.2
Depreciation . . . . .	.066	4.9	.051	5.3
Interest on investment . . . . .	.038	2.8	.026	2.7
Taxes . . . . .	.059	4.4	.043	4.4
Water pumping . . . . .	.054	3.9	.048	5.0
Total Equipment . . . . .	.255	18.8	.199	20.6
Materials;				
Plants <sup>3</sup> . . . . .	.221	16.3	.149	15.4
Fertilizer . . . . .	.013	1.0	.010	1.0
Herbicides and insecticides . . . . .	.184	13.5	.092	9.5
Total Materials . . . . .	.418	30.8	.251	25.9
Rent . . . . .	.120	8.8	.103	10.6
Overhead <sup>4</sup> . . . . .	.065	4.8	.046	4.7
Total Costs . . . . .	1.359	100.0	.970	100.0

<sup>1</sup> Based on sample cost of producing California Thompson seedless grapes for table use reported by the California Agricultural Extension Service. <sup>2</sup> Includes social security and other benefit costs. <sup>3</sup> Depreciation and interest on investment for vines, stakes, and trellis. <sup>4</sup> 59 percent of total costs to cover supervision, interest on operating expenses, and other general expenses.

many materials used to produce and market Thompson Seedless grapes. For example, between the second quarter of 1973 and the second quarter of 1974, the index of prices for fuel, power, and light used

in marketing went from 135 to 200 (1967=100) and the index of prices of containers and packaging material increased from 123 to 145. Prices of these inputs and others—such as labor, rent, and taxes—are expected to continue rising.

Production and marketing cost increases will result in higher prices for Thompson Seedless grapes. If future price changes are similar to those of the last 10 years, the retail price of the grapes in Chicago and

New York City would reach 76 cents per pound, or nearly \$16 per lug, by 1978. This assumes conditions similar to those of the last 10 years. Higher retail prices will probably be passed back through the marketing system with higher prices at each level. Grower returns, although highly variable, would average \$4.60 per lug by 1978. The market shares of the retail value would be expected to show little change.





