

THE COST OF PICKING, HAULING, PACKING,  
MARKETING AND ADVERTISING  
CALIFORNIA-ARIZONA GRAPEFRUIT  
FOR THE 1983-84 SEASON

LIST OF TABLES

<u>Table</u>	<u>Description</u>	<u>Page</u>
1.	Number, size, and location of California-Arizona grapefruit packinghouses used in the 1983-84 study. . . . .	2
2.	Sample size and distribution of California-Arizona grapefruit packinghouses used in the 1983-84 study. . . . .	3
3.	Estimated costs of picking, hauling, packing, products handling, marketing and advertising California-Arizona grapefruit for the 1983-84 season. . . . .	5
4.	Comparisons of costs of picking, hauling, packing, products handling, marketing and advertising California-Arizona grapefruit, 1974-75 through 1983-84. . . . .	7

For additional copies of this report please write:  
Gary Benoit, Staff Research Associate  
Cooperative Extension, University of California  
Riverside, California 92521

## INTRODUCTION

This report contains the results of a research project being conducted by the University of California and the University of Arizona to develop annual estimates of the costs of growing, picking, hauling, packing, marketing and advertising California and Arizona citrus fruits. The project is sponsored by the California-Arizona citrus industry through grants from the Orange and Lemon Administrative Committees and the California-Arizona Citrus League.

This current study of the project concerns the industry average costs of picking, hauling, packing, marketing and advertising California-Arizona grapefruit during the 1983-84 season and is a continuity of our past reports. Similar reports are also provided for other citrus varieties at the end of the respective growing season.

The research team was composed of staff members of the Cooperative Extension Service, University of California, Riverside, and the Department of Agricultural Economics, University of Arizona, Tucson. In California the project is conducted by Gary Benoit, Staff Research Associate, under the direct supervision of Ms. Etaferahu Takele, Area Farm Management Specialist. In Arizona the project is conducted by Dr. Roger Fox, Economist. Carol Adams, Senior Statistician, Cooperative Extension Service, University of California, Riverside, assists in the development of the statistical methodology. The analysis, coordination, and summarization of data has been delegated to the California group. All information received is handled in strict confidence and only members of the research team have access to it. The research team wishes to thank the many packinghouse managers and office personnel for the fine cooperation extended to them.

## PURPOSE

The purpose of this study was to develop representative industry cost estimates for grapefruit. Realizing certain limitations such as record availability, the research team sought cost figures which would best depict industry averages for the season previously mentioned.

In many cases the cost information supplied by the packinghouses came directly from their auditors' reports. This made it easier to categorize certain costs and keep them consistent from one packinghouse to another. Other sources of information were annual reports, pool statements, personnel records, and personal interviews. Often it was necessary to use a combination of these sources. Thoroughness of records ranged from excellent (where each cost was itemized and categorized in a readily accessible manner) to poor (where cost figures were kept in separate locations or grouped with other costs). In most cases the research team collected the information by personally visiting the packinghouse.

Cost figures collected and analyzed represent costs to the growers, regardless of the organizational structure of the packinghouse. The charge to the grower was the end result the research team was to obtain.





### PICKING COSTS

Picking costs include all operations which involve getting the fruit from the tree to the holding bin. Some houses grouped all of these costs together, while others had them segregated into two categories -- picking expense and field expense. Breakdown by citrus variety was readily obtained in most cases.

The greatest portion of the picking cost is the actual direct labor. Included in this figure are wages, payroll taxes, workmen's compensation insurance, and unemployment insurance for both picking and delivery to roadside. These same cost categories would be true for all supervision required. Housing and transportation costs were also included along with equipment rental, and maintenance and repairs involved in the field operation. Bin and ladder repair was allocated differently from one packinghouse to another, but for this study it is included in picking costs.

### HAULING COSTS

The hauling operation includes the roadsiding and movement of fruit to the packinghouse. Many factors such as distance and mode of travel greatly affect the cost per unit. The cost should include wages, taxes, workmen's compensation insurance, unemployment insurance, equipment usage, maintenance and repairs, fuel, depreciation, and administration. There appeared to be more houses that charged the same rate for all varieties than those that differentiated between varieties.

In some cases it was impossible to obtain separate pick and haul cost data as there are some packinghouses that give this as one combined figure. The research team did not divide and allocate this cost to the proper category; therefore, the cost figure was included only in the total cost. In Table 3, separate pick and haul cost figures were used when they could be obtained. The combined total of pick and haul includes houses that gave the costs separately and those that combined them.

### PACKING COSTS

Packing costs include all operations that move the fruit through the house. This involves the receiving, washing, treating, grading, sizing, packing, storing, and loading of the fruit. Costs are broken down into four categories: materials and supplies; labor; direct operating overhead; and indirect operating overhead. Labor costs include salaries of house, floor, and administrative personnel, as well as payroll taxes and compensation insurance. Direct operating overhead is composed of power, water, repairs and maintenance, and machine leasing. Costs which make up indirect operating overhead are insurance, taxes, licenses, fees, depreciation, rent, interest, retirement benefits, travel, and legal. This study is based on the premise that all of the above-mentioned costs should be allocated to the packed cartons of fresh fruit.

Table 3.  
Estimated costs of picking, hauling, packing, products handling, marketing and advertising  
California-Arizona grapefruit  
for the 1983-84 season

Variety	<u>Picking</u> all fruit <sup>1/</sup>	<u>Hauling</u> all fruit <sup>1/</sup>	<u>Total</u> all fruit <sup>2/</sup>	<u>Packing</u> fresh fruit <sup>3/</sup>	<u>Handling</u> Products Products fruit <sup>3/</sup>	<u>Marketing &amp;</u> Advertising fresh fruit <sup>3/</sup>
Summer Grapefruit	.604	.171	.748	1.990	.182	.384
Winter Grapefruit	.611	.128	.739	1.969	.160	.401

Dollars per carton

<sup>1/</sup> Includes only houses which kept separate pick and haul cost records.

<sup>2/</sup> Cost figure includes all houses.

<sup>3/</sup> Proportion of industry 1983-84 production to fresh and products is as follows:  
Summer Grapefruit, 63% fresh, 37% products; Winter Grapefruit, 65% fresh, 35% products.

### PRODUCTS HANDLING COSTS

The products handling charge is placed on fruit which is utilized in the processing outlet. This tonnage is sent to processing plants in bulk. Because this fruit usually has to be separated in the packinghouse process, it must bear some of the direct operating costs such as unloading, washing, and grading. Because of this, a charge is levied on the products either by tonnage or carton equivalent. In this report there has been a conversion of all cost figures to carton equivalents using 33.5 pounds or 32 pounds.

### MARKETING AND ADVERTISING COSTS

Marketing and advertising costs for the year 1983-84 were received from corporate headquarters when dealing with cooperative houses, and the amounts shown are net costs for that function. In the case of independent houses, the cost of these functions to growers was obtained from the individual house itself.

Included in marketing and advertising costs are trade promotion, advertising, selling, brokerage fees, district exchanges, overhead of sales and administrative personnel, and overhead of office or headquarters.



Table 4.

Comparisons of costs of picking, hauling,  
packing, products handling, marketing and advertising  
California-Arizona grapefruit 1974-75 through 1983-84 seasons

<u>DOLLARS PER CARTON</u>				
<u>Year</u>	<u>Picking &amp; Hauling</u>	<u>Packing</u>	<u>Products Handling</u>	<u>Marketing &amp; Advertising</u>
1974-75				
Summer	.432	.984	.180	.223
Winter	.368	1.204	.151	.218
1975-76				
Summer	.481	1.022	.199	.257
Winter	.371	1.157	.129	.221
1976-77				
Summer	.483	1.129	.236	.248
Winter	.450	1.300	.131	.251
1977-78				
Summer	.480	1.218	.192	.231
Winter	.526	1.346	.126	.218
1978-79				
Summer	.548	1.280	.202	.239
Winter	.563	1.428	.124	.236
1979-80				
Summer	.580	1.407	.178	.288
Winter	.613	1.480	.138	.290
1980-81				
Summer	.655	1.473	.175	.298
Winter	.690	1.556	.160	.280
1981-82				
Summer	.648	1.726	.181	.338
Winter	.679	1.682	.162	.357
1982-83				
Summer	.695	1.899	.175	.360
Winter	.734	1.820	.148	.388
1983-84				
Summer	.748	1.990	.182	.384
Winter	.739	1.969	.160	.401