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## Estimating Acreage of Fresh Citrus<sup>1</sup>

Fritz M. Roka<sup>2</sup>

### Introduction

How many acres of Florida citrus are managed for fresh production? A seemingly straightforward question, but it is one without an easy or precise answer. While Florida Agricultural Statistics Service (FASS) annually reports total acreage by variety, FASS does not track citrus acreage managed for the fresh market. FASS and the Citrus Administrative Committee (CAC) collect and report other valuable data, including production, fresh utilization, and average prices for both fresh and processed fruit. This publication explains two approaches that can be used to estimate the acreage of fresh citrus. The first approach relies on assumptions concerning planting intentions. The second approach relies on assumptions of pack-out percentages. When considered together, the two approaches provide upper and lower bounds for fresh citrus acreage.

### Uses for Fresh Acreage Estimates

An estimate of fresh citrus acreage would be important for three reasons. First, it would define the potential supply of fresh citrus. Second, it would help the Florida Department of Citrus and other grower organizations to plan their marketing strategies for fresh fruit. Third, a fresh acreage estimate would provide chemical companies and other industry

suppliers with a basis for predicting the extent to which fresh citrus growers would buy their products and services.

### Planting Intentions Estimates

One approach for estimating fresh citrus acreage is to consider "planting intentions." If a grower intends for his fruit to be marketed through a packinghouse, then his grove caretaking operations should reflect fresh marketing goals. In other words, if citrus varieties are planted with the intention of selling to fresh markets, then 100 percent of the caretaking operations should be devoted to achieving fresh market standards. Furthermore, whatever the eventual pack-out rate is does not change the fact that a grower will manage a block of fresh acreage uniformly.

The estimates of planting intentions used in this publication were not based on formal surveys. Rather, they reflect the opinions of industry experts, including several large growers. All the acreage of specialty citrus varieties, mandarins, and Navel oranges are assumed to be planted with the intention of selling fresh fruit. While a substantial portion of grapefruit is processed for juice annually, most growers acknowledge that their first preference is to market fresh grapefruit. In this publication, 95 percent

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2. Fritz M. Roka, assistant professor, Department of Food and Resource Economics, Southwest Florida Research and Education Center, Immokalee, FL, Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida, Gainesville, FL.

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of the grapefruit are assumed to be planted for the fresh market. Most of the early-, mid-, and late-season oranges are destined for processing plants. However, five percent of the crop is marketed annually through fresh channels. Consequently, five percent of the acreage is allocated as being managed as fresh citrus. Table 1 presents an estimate of fresh citrus acreage in Florida by planting intention for the 1997-98 season. Bearing and non-bearing acreage are multiplied by planting intention percentages. Summing across all varieties gives an estimate of fresh acreage based on planting intentions, nearly 224,000 acres of fresh citrus acreage, or approximately 26 percent of the total citrus acreage.

### **Pack-Out Estimates**

A more conservative approach for estimating fresh citrus acreage is to utilize pack-out percentages. Listed in column two of Table 2 are estimates of annual pack-out rates by variety for the 1997-98 season. These percentages were compiled using a phone survey of nine Florida citrus packers. Dividing pack-out rates into the Florida Agricultural Statistics Service's (FASS) fresh utilization statistics provides an estimate of the total boxes delivered to packinghouses. Fresh citrus acreage by variety is determined by multiplying the total bearing and non-bearing acreage by the percentage of fresh production. The pack-out approach indicates that nearly 193,000 acres were being managed for fresh citrus during the 1997-98 season. This represents 23 percent of the total citrus acreage.

### **Conclusion**

There are no formal statistics to document Florida's fresh citrus acreage. Therefore, indirect methods based on planting intentions and pack-out percentages need to be used for estimating fresh citrus acreage. The two methods presented in this publication provide upper and lower bounds for fresh citrus acreage. During the 1997-98 season, estimates based on planting intentions indicated 233,788 of fresh citrus acreage, and estimates based on pack-out percentages indicated 192,713 acres. In other words, between 23 percent and 26 percent of the total Florida citrus acreage were planted for fresh market outlets.

**Table 1.** Estimates of fresh citrus acreage, by planting intentions, 1997-98.

Citrus Variety	Bearing Acres	Non-bearing Acres	% of Acreage Intended for Fresh Market	Estimate of Fresh Acreage
Early/Mid Oranges	293,273	14,455	5%	15,386
Valencia Oranges	291,585	22,725	5%	15,716
Navel Oranges	23,897	1,253	100%	25,150
Temple Oranges	6,151	303	100%	6,454
White Grapefruit	46,609	2,032	95%	46,209
Red Grapefruit	74,739	1,289	95%	72,227
Seedy Grapefruit	3,388	39	0%	0
Tangelos	12,196	472	100%	12,668
Tangerines (all)	24,017	1,961	100%	25,978
Limes	2,469	358	100%	2,827
Lemons	922	251	100%	1,173
Other Citrus	1,930	12,493	0%	0
Total Acreage	784,176	57,628	N/A	223,788

**Table 2.** Estimates of fresh citrus acreage, by pack-out percentage, 1997.

Citrus Variety	Estimate of Fresh Pack-out (%)	Fresh Utilization (1,000 boxes)	Estimate of Fresh Production (%)	Total Acreage (bearing + non-bearing)	Estimate of Fresh Acreage
Early/Mid Oranges	60%	3,481	4%	307,728	13,353
Valencia Oranges	70%	3,596	6%	314,310	15,526
Navel Oranges	60%	4,154	100%	25,150	25,150
Temple Oranges	60%	566	42%	6,454	2,706
White Grapefruit	40%	4,834	66%	51,641	34,103
Red Grapefruit	60%	16,371	89%	76,025	67,789
Seedy Grapefruit	0%	0	0%	3,427	0
Tangelos	70%	913	46%	12,668	5,797
Tangerines (all)	70%	3,428	94%	25,978	24,465
Limes	75%	330	100%	2,827	2,827
Lemons	75%	68	85%	1,173	997
Other Citrus	0%	0	0%	14,423	0
Total Acreage	N/A	N/A	N/A	841,804	192,713