

## Structure Overview of the Florida Citrus Industry in 2009<sup>1</sup>

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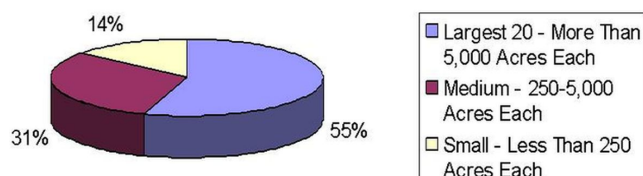
### Introduction

The Florida processed citrus industry can be grouped into six sectors: (1) Growers, (2) Fruit Dealers/Intermediate Handlers, (3) Bulk Processors, (4) Juice Brands, (5) Fresh Fruit Packers, and (6) Gift Fruit Shippers. These six sectors, behaving as separate yet interdependent components, have evolved into an \$8.9 billion citrus industry with enormous production, distribution, and marketing capability (Rahmani and Hodges 2009). This information is based on outputs (revenues) of each of the 20 broad sectors of the economy that the Florida citrus industry impacts. Today, like much of agriculture, Florida's citrus industry is in a state of transition, change being ever more evident in new pest and disease issues, increasingly productive citrus growing, new processing technologies, and an expanding distribution system. The objective of this article is to provide readers a better understanding of the Florida citrus industry and how it functions.

### Citrus Growers

Combined with a southward shift in response to freezes, the greater part of Florida citrus production has gradually been concentrated into fewer but larger commercial firms. Although there are an estimated

8,000 commercial citrus growers in Florida, the largest 20 of these now account for over one-half of Florida's citrus acreage (Figure 1), whereas just a decade ago, the largest 20 commercial citrus growers in Florida accounted for an estimated one-third of Florida's citrus acreage.



**Figure 1.** Structure of Florida grower sector [Note: These percentages are of total Florida citrus, which is currently 576,577 acres. Source: USDA/NASS/FASS (2009)]

Florida's citrus grower sector can be arbitrarily organized into large agribusiness firms, medium-size growers, and small-size growers. Large agribusiness firms each grow more than 5,000 acres of citrus. They represent a large and increasing share of Florida citrus production and may hold interest in other agricultural or business activities. The focus of these increasingly predominate agribusiness firms is on long-term profitability and stable cash flow rather than annual profits correlated directly to changes in year-to-year prices. They view marketing as central to their

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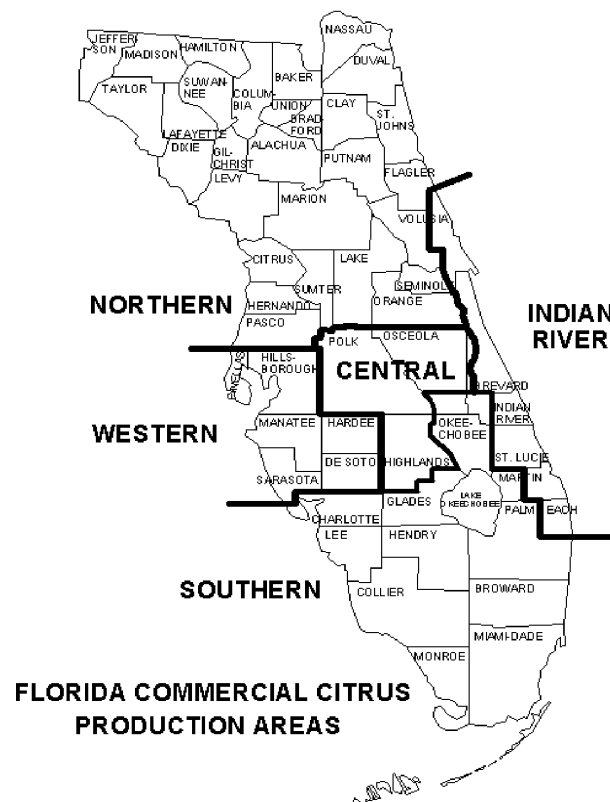
overall success and they are interested in long-term business relationships rather than short-term relationships with flexible commitments. Some large citrus agribusiness firms grow only citrus while others in this size category also produce cattle, winter vegetables, and/or sugarcane. Typically, the larger agribusiness firms are privately owned, and one of them is vertically integrated into citrus growing, processing, and marketing.

Medium-size growers operate citrus groves of anywhere from 250 to 5,000 acres of citrus and account for an estimated 31 percent of Florida's citrus acreage. They primarily produce citrus, or citrus and cattle, and tend to be privately held, family owned firms that do not own bulk citrus processing plants.

Small-size growers grow less than 250 acres of citrus and account for about 14 percent of Florida's citrus acreage. They tend only to grow citrus; are characterized by full-time, part-time, and absentee growers; and typically sell their fruit on the cash market on short-term contracts.

In contrast with the southward shift of citrus acreage, most of Florida's processing plants are located in the central production region (Table 1, Figure 2). Only two citrus processing plants are currently located in the southern region. This is because most of the processing plants were originally built before 1970, when most of the fruit was grown in the central and northern regions. It is much less expensive to haul the fruit than move the plant—the last citrus processing plant built in the southern region was in 1993.

Growers bear most of the risk of price volatility. A freeze or flood can quickly kill the trees in a grove and also significantly affect yield. Such an event can make an investment worth \$9,000–\$12,000 per acre worth \$3,000–\$5,000 per acre overnight. To reward this risk, financial returns to the fresh and processed orange growing sector are often higher than returns to the bulk processing sector, albeit these returns are cyclical. For example, in the 1970s, when supplies were abundant and prices were lower, returns to orange growers were relatively low. When orange supplies were scarce in the 1980s and prices higher, returns to groves not significantly damaged by freezes were high. In the 1990s, supplies became abundant



**Figure 2.** Florida commercial citrus production areas [Source: USDA/NASS/FASS (2009)]

again and financial returns plummeted below break-even costs in some years. Currently, losses of citrus acreage to urbanization, canker, and greening, as well as the impacts of recent hurricanes on spreading canker, are pushing returns higher again, and so the cycle continues. That cycle may be permanently changed to a high-price phase if greening permanently results in scarce or diminishing supplies.

### Fruit Dealers/Intermediate Handlers

In 2009, there were 147 licensed fruit dealers in Florida. These include processors, fresh fruit packers/shippers, brokers, cooperatives, caretakers, growers, gift fruit shippers, etc. Legitimate fruit buyers and sellers must be licensed and bonded, with the bond insuring financial solvency. However, there are not nearly as many firms whose primary business is buying and selling citrus as there are licensed fruit dealers. Those whose primary business is buying and selling citrus are commonly referred to as "bird dogs" because of their ability to locate scarce fruit from smaller growers.

Bird dogs buy fruit from growers and sell it to processors or fresh packinghouses. Collectively they purchase and sell about 25–30 percent of the citrus produced in Florida. The 10 largest bird dogs account for the vast majority of fruit handled by this sector. A large part of the fruit traded by bird dogs is non-speculative in that the bird dog has the fruit committed at a fixed price or on a pricing mechanism before the fruit is purchased from growers. Some fruit is purchased speculatively, and then sold at either a profit or loss. Attempting to buy fruit based on guessing future prices usually leads to large financial losses. The most successful bird dogs view their business as a service, and prefer to make a small fee for handling fruit rather than attempting to profit by speculating on fruit price behavior. Many bird dogs also provide grower services such as grove caretaking, fruit harvesting, and hauling. Providing these services helps bird dogs develop business relationships with growers, and obtain a partially captive supply of fruit.

Bird dogs typically buy from medium- and small-size growers on a cash price basis. These growers are often part-time growers or absentee owners, making it difficult for citrus processing plants to negotiate directly with each of them individually. While the trend toward fewer but larger growers has reduced the number of growers that need to rely on bird dogs as fruit marketers, the southward shift of citrus acreage and resultant greater distance between the fruit supply and the processing plants has increased the industry's need for efficient hauling and logistics services.

Some larger bird dogs are vertically integrated into grove ownership, although usually the grove operates as a separate business. Bird dogs, like other commodity brokers, operate with a low asset base and slim margins. Due to the volatile nature of fruit prices, returns on assets range from negative values to over 25 percent profit. The most successful bird dogs tend to be relatively profitable firms having the unique skills that this business demands.

### **Bulk Citrus Processors**

This sector consists of firms that process oranges into 65°Brix bulk concentrate and/or single strength

not-from-concentrate (NFC), and grapefruit into 58°Brix bulk concentrate and/or single strength NFC. The juice is usually sold in bulk tankers and occasionally in 55-gallon drums. Florida bulk processors comprise five of the eleven citrus processing plants in Florida, and the largest three of these five represent about one-half of Florida's citrus processing capacity. In addition, one of the bulk processors also does most of the citrus processing for a major brand that no longer owns processing plants, and so this processor's operation represents their bulk business and most of that brand's requirements.

The cyclical nature of profitability for orange producers is the converse for the bulk processing sector. For example, when fruit supplies are scarce, processors bid fruit prices high relative to bulk concentrate prices and processing profitability declines. When fruit supplies are abundant, processing margins widen as growers accept lower fruit prices relative to bulk concentrate prices in order to find a market for their fruit. Another factor that affects the bulk concentrate prices that Florida bulk processors compete against is the supplies and prices for bulk concentrate from Brazil.

For a significant portion of their needs, the majority of Florida's bulk processors have captive fruit through toll processing arrangements (where processors process fruit owned or purchased by another entity for a fee), have a dedicated fruit supply from some type of grower relationships, or are able to hedge their fruit price risk using frozen concentrated orange juice (FCOJ) futures and options. Otherwise, the volatile nature of fruit prices during times of scarcity could force them out of business like during the 2006/07 season (Lakeland Ledger 2007).

### **Florida Branded Juice Marketers**

There are seven branded juice marketers in Florida, four national, and three regional or "niche market" brands.

#### ***National Brands***

Advertised on television and distributed nationally, the four national brands are Tropicana (owned by PepsiCo), Minute Maid (owned by the Coca-Cola Company), Florida's Natural Growers (a

grower-owned cooperative), and Ocean Spray (a grower-owned cooperative). Tropicana's processing business is headquartered in Bradenton, Florida, its home office is headquartered in Chicago, Illinois, and its parent company, PepsiCo, is headquartered in Purchase, New York; Minute Maid is headquartered in Atlanta, Georgia at parent company Coca-Cola's headquarters; Florida's Natural is headquartered in Lake Wales, Florida; and Ocean Spray is headquartered in Lakeville-Middleboro, Massachusetts.

These branded juice marketers account for about one-half of Florida's citrus processing capacity, although two of them no longer own processing plants and now toll process their juice. Most of these firms also purchase bulk concentrate and bulk NFC from bulk processors in Florida as well as in Brazil. While Ocean Spray's key thrust is juice beverages (products that are not 100% juice), the branded orange juice marketer's thrust is FCOJ (frozen concentrate orange juice), RECON (reconstituted from concentrate), and NFC (not-from-concentrate), as well as other fruit juices such as grapefruit and apple. Minute Maid also markets Hi-C and 5-Alive, and Tropicana markets Twister, all juice-containing beverages.

Tropicana, Minute Maid, and Florida's Natural together account for 66 percent of the overall orange juice market, and 80 percent of the NFC juice market. The key focus of all three brands is NFC. Minute Maid originally entered the NFC category, in the late 1980s with Premium Choice, but high costs of production and the entrenched position of Tropicana forced them out of the NFC category temporarily in 1996. Minute Maid re-entered the NFC category in 2001 with Simply Orange, which has been a very successful product line.

### ***Regional/Niche-Market Brands***

The three regional or niche market brands are Indian River Select, Natalie's Orchid Island, and Nobel. Indian River Select started in the mid-1990s with high quality orange and grapefruit NFC. Its message was that the Indian River area, where it sourced most of its fruit, produced the highest quality fruit in the world. That combined with careful fruit selection and high-quality processing standards has

resulted in very flavorful juices. Indian River Select is in distribution in the Southeast, and is a leading grapefruit juice brand in the supermarkets where it is in distribution. Indian River Select is privately owned and based in Fort Pierce, Florida. Their processing plant is Fresh-Co, Ltd.

Orchid Island's key focus is 100 percent fresh-squeezed orange, grapefruit, and tangerine juices. It also markets lemon and lime juice, and lemonade and limeade. The company stakes its success on keeping the juice very cold, just above freezing, and pulling juices from the shelves seventeen days from the date of juice extraction. Orchid Island is privately owned and based in Fort Pierce, Florida. Their processing plant is Orchid Island Juice Company.

Nobel's key thrust is NFC tangerine juice. It also markets NFC blood orange, organic orange, and red grapefruit juices. Nobel's line of juice blends and beverages includes tangerine guava, mango, tangerine cranberry, and organic lemonade. Founded in 1995, the brand is privately held and based in Winter Haven, Florida. Their processing plant is Blue Lake Citrus.

### **Fresh Fruit Packinghouses**

This sector packs and markets about 10 percent of Florida's total citrus production. Although less than five percent of Florida's round oranges are sold as fresh fruit, a large portion of Florida's grapefruit, tangerines, and navel oranges are sold fresh rather than for processing. While oranges are the most popular citrus fruit consumed in the United States, Florida's leading fresh citrus variety is grapefruit, accounting for over one-half of Florida's citrus produced for the fresh market.

Currently, there are 40 certified fresh citrus packinghouses in Florida, collectively packing at least 30,000 cartons of fresh citrus annually. Primarily these firms are either cooperatives or large growers. The fresh citrus packing sector in Florida is somewhat fragmented, although not as much as it was 10–15 years ago. In 2009, the 10 largest packinghouses accounted for about 50 percent of the fresh citrus packing in Florida, as opposed to 35 percent in 1995.

Packinghouses receive oranges and grapefruit in large pallet boxes holding about 900 pounds of fruit. Fruit that is split or rotten is discarded; fresh fruit from canker-free groves is separated for grading, packing, and export, as required for the European market. Fruit with canker symptoms that is destined for export to markets not accepting fruit with canker symptoms is diverted to the domestic market. Fruit that is deemed unacceptable for the fresh market due to ripeness, size, shape, appearance of peel, etc., is culled as eliminations and sent to processing plants (about 25–30% of fruit for the domestic market and 40–50% for export markets). Typical preparation steps for fruit for the fresh market are (1) applying fungicides to the fruit, (2) air-drying the fruit, (3) waxing the fruit to prevent it from drying out, (4) separating the fruit into grades and sizes, (5) packing the fruit into either 42-pound or 45-pound cardboard cartons, and (6) shipping the fruit to market.

Most packinghouses have a sales staff/function, and sell fruit directly to supermarket chains or to citrus market operators and brokers. Virtually all fresh sales are free on board (f.o.b.) prices from the packinghouse. Over 40 percent of Florida's fresh citrus is exported to foreign markets. Canada is the largest market for Florida fresh oranges and tangerines while Japan and Western Europe are leading foreign markets for Florida grapefruit.

### **Retail Citrus Gift Fruit Shippers**

There are 76 businesses classified as gift fruit shippers in Florida. Most are vertically integrated into grove ownership and fruit packing. Retail fresh citrus outlets sell fresh oranges, grapefruit, tangelos, and tangerines; fresh squeezed orange and grapefruit juice; citrus candies; citrus jellies and jams; citrus recipe books; and other Florida souvenir-type novelties. They also pack and ship fruit, usually as gifts, to customers nationwide.

Three important elements of success to a gift fruit business are to consistently offer a large variety of high-quality citrus fruit at its peak flavor in the retail outlet; to be located within an easy drive of targeted customers; and to financially be able to spend the required years to build a gift fruit shipping customer base. Targeted customers are those who like to shop

for unique things, love fresh citrus and can afford it, and are quality-conscious.

The most successful retail citrus outlets have many customers and operate from late October through May. In addition to in-store sales, significant revenues also are generated by telephone, computer, and mail orders. The typical gift fruit customer orders several shipments of fruit per year for themselves and their families and friends.

Retail citrus outlets tend to be privately-held family firms, many handed down over several generations. While large corporations generally are not a good fit as operators of this type of business—due to the complexities of sourcing a large varied inventory of perishable commodities and dealing with the quality issues/consumer complaints of a direct mail-shipping program for perishable commodities—they may contract these smaller businesses as affiliates with whom they exchange orders for marketing and delivery services. Most retail citrus gift fruit shippers, however, are growers who have decided to also grade, pack, and sell their fruit in their own retail market outlet. It is the unique nature of this specialty business that attracts growers.

Many consumers tasted their first and/or best Florida citrus from a gift fruit box or bag, or a retail gift fruit outlet. Indeed, the commercialization of Florida citrus began with fruit stands and holiday gift fruit.

### **Conclusions**

The story of Florida's citrus industry can be summarized in one sentence: "Consumers search for product quality and convenience." This phenomenon led to the development of the various types of citrus juices and fresh fruit varieties sold in today's marketplace, and created the dynamic forces that influence the citrus industry. The story is ever unfolding from individual growers planting citrus groves, to global corporations acquiring citrus processing facilities and marketing citrus juices, to the infrastructure of research and development that is integral to its success.

## References

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**Table 1.** Acres of oranges and number of processing plants by production area in 2008

Florida Region	Acres of Oranges	Number of Processing Plants
Northern	23,233	1
Central	139,768	5
Western	133,293	2
Indian River	50,007	1
Southern	150,127	2

Note: See Figure 2 for a map showing the location of these production regions.  
Source: Florida Citrus Processors Association, List of Members, and USDA/NASS/FASS (2009).