



Florida Citrus Outlook 2021-22 Season: March Update

Prepared by:

Marisa L. Zansler, Ph.D.
Economic and Market Research Department
Florida Department of Citrus
Gainesville, Florida

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**ECONOMIC AND MARKET RESEARCH DEPARTMENT
FLORIDA DEPARTMENT OF CITRUS**

Web Site: www.FloridaCitrus.org/grower/

Bartow Office: 605 East Main Street
P.O. Box 9010
Bartow, Florida 33831-9010 USA

Gainesville Office: 2125 McCarty Hall
P.O. Box 110249
University of Florida
Gainesville, Florida 32611-0249 USA

Telephone: 352-294-7691
E-Mail: mzansler@ufl.edu

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Florida Citrus Outlook

2021-22 Season: March Update

Introduction

This report provides an update to the supply and demand projections of Florida citrus for the 2020-21 season based on the USDA's National Agricultural Statistics Service (USDA/NASS) March citrus production forecast, released on March 9, 2022. The initial USDA/NASS citrus production forecast released on October 12, 2021 for the 2021-22 Florida citrus crop, by variety, provided the initial baseline for these projections.¹ This report provides an update of the utilization of oranges, grapefruit, and specialty citrus, in accordance with industry trends. Projections include Florida orange juice (OJ) and grapefruit juice (GJ) pack, movement, and ending inventory, along with estimates of U.S. consumption, retail sales of OJ and GJ, and preliminary on-tree price estimates based on the most recent readily available data. World OJ availability is presented, given its strong bearing on Florida's OJ situation. Fresh fruit movement projections are also included. Sensitivity analyses are provided to assess alternative scenarios for availability and movement, where appropriate.

The March citrus forecast for the 2021-22 Florida citrus season is 45.9 million boxes, an estimated 20.6% decline in total Florida citrus production of oranges, grapefruit, and tangerines. The forecast for total U.S. citrus production for the 2021-22 season indicates production will decrease overall by 16.7% with a total of 120 million boxes of oranges, grapefruit, and specialty citrus from California, Florida, and Texas. Specifically, the March forecast projects 89.2 million boxes of oranges, 9 million boxes of grapefruit, and 21.8 million boxes of specialty tangerines and

¹ USDA National Agricultural Statistics Service, Florida Field Office. "Citrus March Forecast" https://www.nass.usda.gov/Statistics_by_State/Florida/Publications/Citrus/Citrus_Forecast/

tangelos. The USDA forecast also anticipates California and Arizona will produce 24.4 million boxes of lemons in the 2021-22 season.

The projections contained in this report rely on assumptions based on recent industry trends in production components, as well as trends in supply and demand for citrus products. Even a modest variation in these trends could substantially change forecasted projections.²

Review of the 2020-21 Florida Citrus Season

This section provides an overview of trends from the 2020-21 season that may impact the outlook for the 2021-22 season. At the onset of the 2020-21 season, the Florida citrus industry continued to be in a state of recovery following a decade of significant decline in production and availability, most notably after the 2017-18 hurricane season when Hurricane Irma crossed through the majority of Florida's citrus producing regions on September 11, 2017. The preliminary production projection for the 2020-21 Florida citrus season was 57.79 million boxes of Florida oranges, grapefruit, and tangerines, an estimated 21% decline in total citrus production compared to production in the 2019-20 season. Fruit drop following the October 2020 citrus forecast, originally projected at 62.6 million boxes of oranges, grapefruit, and tangerines, was the leading reason for the overall decline in availability for the season.

The USDA/NASS preliminary estimate for the Florida round orange crop in the 2020-21 season, released in September 2021, was 52.8 million boxes, a decline of 14.6 million boxes, or 21.7% less than the previous season's crop of 67.4 million boxes. The fruit drop rate for early-midseason oranges was 43%, compared to a 28% drop rate during the 2019-20 season. The drop rate for navel oranges was at 37%, compared to 26% the previous season. The drop rate for Valencia oranges was 41%, compared to 30% the previous season. Despite the decrease in the

² USDA National Agricultural Statistics Service, Florida Field Office. "Citrus Production October Forecast" https://www.nass.usda.gov/Statistics_by_State/Florida/Publications/Citrus/

orange crop, certified fresh orange shipments in 2020-21 were up to 3.05 million boxes, an increase of 2.3% from the previous season. The increase in fresh production despite the overall decline in the orange crop reflects, in part, reflects a modest increase in replanting efforts during preceding years.

A smaller share of the Florida orange crop was utilized by the processed sector in 2020-21, compared to historical data, with approximately 93.7% of total orange production made into either frozen concentrated orange juice (FCOJ) or single-strength orange juice (SSOJ), which is also referred to as not-from-concentrate (NFC) orange juice. In recent years, processed utilization has represented between 95-96% of total orange production. The share of round orange boxes directly utilized for SSOJ was estimated at 43.62 million boxes in 2020-21. This share is 88.2% of total processed utilization, the highest NFC share in Florida processor history. However, this still represented a decrease of 6.22 million boxes from last season. The quantity of orange boxes utilized in 2020-21 to produce FCOJ is estimated at 5.84 million boxes, a decrease of 8.31 million boxes over last season's utilization of 14.15 million boxes, representing a further decline in the share of boxes of oranges utilized to produce FCOJ.

World availability of orange juice was down compared to the previous season as the leading OJ producing suppliers (Brazil, Mexico, and the United States) faced weather-related production challenges. The decline in availability before the 2018-19 season created uncertainty around the supply needed for processors to meet the market demand, leading to a surplus of imported orange juice. However, the decline in availability of NFC during the 2020-21 season, when demand was high, ensured a market for Florida production.

While preliminary estimates of total orange juice movement in 2020-21 indicate a decline of 73 million SSE gallons (or 10.4%) to 632 million SSE gallons from last season, movement of

Florida's processed oranges in the 2020-21 exceeded the volumes of the 2017-18 season. This is largely due to an increase in demand at retail for premium not-from-concentrate (NFC) orange juice, where 88% of Florida's processed oranges were utilized that season. By the end of the 2020-21 season, Florida's OJ ending inventory is estimated to decline to 383.0 million SSE gallons (or 31.5 weeks of supply) associated with a projected 10% decline in total OJ movement with the loss of market access to foodservice.

The USDA/NASS preliminary estimate for the 2020-21 Florida grapefruit crop production was 4.1 million boxes, representing a decrease of 15.5% from the previous season's crop of 4.85 million boxes. Florida grapefruit production has declined by more than 90% since the 2003-04 season due to the harmful impacts of hurricanes and HLB. The preliminary estimated production for the white grapefruit crop was 620,000 boxes, down 170,000 boxes from last season, and the red grapefruit crop was 3.48 million boxes, down 580,000 boxes from last season. Certified fresh grapefruit shipments were estimated to be 1.89 million boxes in 2020-21, down 7.6% from last season. Processed utilization is estimated at 2.11 million boxes, down 0.60 million boxes from last season. Utilization for frozen concentrated grapefruit juice (FCGJ) is estimated at 0.31 million boxes in 2020-21, down 0.16 million boxes from last season. Single-strength grapefruit juice, or NFC GJ, is projected to account for 1.79 million boxes, down 0.45 million boxes from last season.

Total movement of grapefruit juice from Florida-based processors in 2020-21 was estimated to reach 16.58 million SSE gallons, a 6% increase over the previous season due to the increase in demand at retail for NFC GJ. The increased movement served to alleviate some of the surplus NFC GJ inventories. By the end of the 2020-21 season, Florida's ending GJ inventory was estimated at 15.97 million SSE gallons (or 50 weeks of supply) with any surplus juice associated with the inventories of FCGJ.

Certified fresh grapefruit utilization was estimated to account for approximately 46% of total grapefruit production during the 2020-21 season. Certified fresh grapefruit shipments in 2020-21 were 1.89 million boxes, representing a decline of 158,344 boxes compared to last season. Domestic fresh grapefruit shipments are projected at 2.45 million cartons, up by 211,634 cartons. The domestic share has increased in recent year from around 42% annually to a 65% share of all Florida fresh grapefruit shipments. Florida is projected to have exported 1.32 million cartons of fresh grapefruit during the 2020-21 season, representing a decline of 528,322 cartons over last season. Florida fresh grapefruit was shipped to various export markets in Asia, Europe, and Canada.

The preliminary estimate for the 2020-21 Florida specialty citrus crop production is 890,000 boxes, a decrease of 130,000 boxes from last season. Despite higher freight on board (FOB) prices in recent years, specialty production has declined more than 90% since the 2009-10 season. Specialty citrus includes tangelos, Royal tangerines (formerly known as Temple oranges), early tangerine varieties, honey tangerines, Autumn Honey, Juicy Crunch, Orri, Roe, Tango, and other minor tangerine varieties. Florida certified shipments are estimated to be about 62% of the crop with 547,857 boxes (equivalent to 1.1 million cartons) moving during the 2020-21 season, primarily to the domestic market.

Overall, certified on-tree revenues for oranges, grapefruit, and specialty citrus are projected to decline by 17% from an estimated \$688 million in the 2019-20 season to an estimated \$573 million in 2020-21 season. However, the USDA/NASS preliminary estimate for processed on-tree prices may significantly underestimate the total on-tree returns for the season before adjustments are made for intermediate priced fruit.

The Florida citrus industry continues to be in a state of recovery following several years of decline, including efforts to mitigate the impacts on returns from higher production costs, reduced overall tree replant rates, and annual declines in fruit availability that have had irremediable impacts on industry infrastructure. As consumers continue to indicate a renewed awareness of the health and wellness benefits of citrus in recent months, the recovery of the industry is crucial to meet both short-term and long-term demand.

Florida Orange Crop, Utilization and Movement

This section provides an overview of world orange production and utilization trends based on the most recent information that may have an impact the Florida citrus industry outlook during the 2021-22 season. Table 2 provides estimates of the orange utilization and outlook of the world's leading suppliers of orange juice on the world market, namely Brazil, Mexico, and the United States. Total combined orange production in the United States, Brazil, and Mexico are expected to decline by 3.3% with the United States, Brazil, and Mexico expected to produce approximately a combined 549.3 million 90-lb equivalent boxes in the 2021-22 season.³

Specifically, the United States is expected to produce 83.9 million 90-lb equivalent boxes, Brazil is expected to produce 360.6 million 90-lb equivalent boxes, and Mexico is expected to produce an estimated 104.8 million 90-lb equivalent boxes in the 2021-22 season. The data suggests that approximately 57.2% of production in these countries would be utilized for processing, a projected 14.5% decline over last season. The remainder of this section looks specifically at utilization within each country.

³ Includes domestic fresh use in each country.

Florida

The USDA/NASS March forecast for the 2021-22 Florida round orange crop is 41.2 million boxes, which would represent a decline of 22%, or equivalent to 11.6 million boxes compared to last season's crop of 52.8 million boxes. Including the 2017-18 season, where Hurricane Irma contributed to significant fruit loss to the crop, this forecast would result in the lowest production level of round oranges in nearly six decades. Much of the significant drop since the release of the USDA/NASS October forecast for the 2021-22 Florida round orange crop has been associated with freezes in February 2022. Table 1 reports Florida orange box utilization. The 2021-22 early and mid-season orange crop forecast, including Navel oranges, is 18.2 million boxes, down 4.5 million boxes (or a decline of 19.8%) from last season. The navel orange crop is forecasted at 490,000 boxes, representing 2.7% of the total early and mid-season orange crop estimate. The Valencia crop is forecasted at 23.0 million boxes, a projected 23.6% decrease over last season's Valencia production of 30.1 million boxes.⁴

This Outlook assumes approximately 94% of orange production will be utilized on the processed market. The share of round orange boxes directly utilized for single-strength orange juice (SSOJ), which is used to make not-from-concentrate (NFC) orange juice, is estimated at 33.93 million boxes (or 88.0% of total processed utilization) in the 2021-22 season, a decrease of 9.73 million boxes from last season. The quantity of orange boxes utilized in 2021-22 to produce FCOJ is estimated at 4.63 million boxes, a decrease of 1.19 million boxes over last season's utilization of 5.81 million boxes. Certified fresh orange shipments in 2021-22 are estimated at 2.44 million boxes, down 19.9% from the 3.05 million boxes shipped last season. Florida's processed

⁴ One Florida orange box weighs 90-lb.

orange utilization is estimated at 38.56 million boxes, a decrease of 22.1% over last season's utilization of 49.47 million boxes.

The total juice yield for Florida processed production is roughly estimated to be 4.670 SSE gallons per box for the 2020-21 season based on an evaluation of currently available production and movement data. An overview of historical juice yields is reported in Table 4.

São Paulo

Brazil is the leading exporter of orange juice in the world with the vast majority of production reaching markets in Europe, North America, and Asia. Orange processed production in the State of São Paulo, where most of Brazil's oranges used for processing are grown, increased by roughly 1% over the previous season from 222.5 million 90-lb equivalent boxes to 224.0 million 90-lb equivalent boxes, an increase of 1.5 million boxes. The current estimates for the São Paulo orange crop, as reported by Fundecitrus, are found in Table 3. The juice yield for São Paulo production is roughly estimated to be 5.260 SSE gallons per box for the 2020-21 season based on an evaluation of currently available production and movement data. An overview of historical juice yields is reported in Table 4.

Mexico

Mexico is the second leading exporter of orange juice, with the processed share and exports increasing incrementally in recent seasons in response to the decline in world orange juice supplies. Although a net exporter of orange juice, orange production in Mexico is primarily intended for consumption in the fresh, domestic market. However, favorable prices and supply shortages in the United States over the last decade continue to displace fresh production in favor of the processed export market. Between 80 to 83 percent of Mexican exports are destined for the U.S. market. The packout rate for fresh oranges declined marginally each season, with supplies diverted to processed utilization. With processing occurring from October through April, the orange fruit processing

period in Mexico overlaps Florida's. While most of the processed utilization goes into FCOJ, with Mexico producing mainly Valencia varieties for processing, NFC production has increased incrementally each season.

Over the last four seasons, production has been inconsistent due to inclement weather and other unknown factors. Mexico experienced a favorable crop during the 2018-19 season due to good weather and yields. Total supply for oranges during the 2018-19 season was 4.53 million metric tons (equivalent to approximately 111 million 90-lb boxes) (USDA/FAS, Feb 2019). Total supply for oranges in 2019-20, however, declined by more than half due to excessive heat and reduced yields. Mexico experienced extreme weather conditions in 2021 which may have impacted the available crop. Orange processed production in Mexico increased by roughly 26% over the previous season from 33.1 million 90-lb equivalent boxes to 41.6 million 90-lb equivalent boxes, an increase of 8.6 million boxes. The estimates for the Mexico orange crop are based on the most current data reported by USDA/FAS and are found in Table 3. The juice yield for Mexico production is roughly estimated to be 5.685 SSE gallons per box for the 2020-21 season and is based on an evaluation of currently available production and movement data provided by USDA/FAS. An overview of historical juice yields is reported in Table 4.

Other U.S. Orange Production

Other U.S. oranges come primarily from California and Texas with utilization primarily intended for fresh consumption. Typically, about 80-85% of California and Texas oranges are intended for the fresh market. However, in recent years, processed share has increased. During the 2018-19 season, California fresh utilization was estimated at 74% and Texas utilization was estimated at 43%, with the remainder going into processed. During the 2019-20 season, California fresh utilization rebounded to an 80% share with Texas fresh utilization hovering around a 74%

share, with the remainder going into processed. During the 2020-21 season, California fresh utilization was estimated at 79% share with the share of Texas fresh orange utilization at 62%.

According to the USDA/NASS citrus production forecast for the 2021-22 season, California is expected to produce 39.0 million 80-lb boxes of non-Valencia type oranges and 8.6 million 80-lb boxes of Valencia oranges for a total of 47.6 million boxes of oranges, a decrease of 12.7% over the previous season. As many as 10.8 million boxes are estimated to be processed into juice based on previous utilization rates. The USDA/NASS citrus production forecast for Texas orange production in the 2021-22 season is estimated to decrease by 61.9% to 400,000 million 85-lb boxes. The Texas crop share into processed utilization could represent as many as 178,187 million 85-lb boxes. This analysis estimates that as many as 9.8 million 90-lb Florida equivalent boxes of California and Texas combined production may be used in processing of orange juice. The share of single-strength and concentrate is not reported by either state. This analysis projects that orange juice production may decrease by approximately 9.8% from an estimated 48.5 million SSE gallons of orange juice in the 2020-21 season to 43.8 million SSE gallons in the 2021-22 season.

Orange Juice Production and Availability

This section describes orange juice (OJ) availability on the domestic market by evaluating world production, inventories, and movement. Orange juice production and availability are key measures in sustaining the demand for Florida citrus products over the long run. Table 5 provides estimates for comparative juice production from Florida, Brazil, and Mexico based on their respective production seasons. For the 2021-22 Florida season, estimated total supply of orange juice on the world market is projected to decrease by 0.2 over the previous period from 1.91 billion SSE gallons to 1.62 billion SSE gallons due to reduced availability in production from leading

suppliers, such as Brazil, Mexico, and the United States (Table 5). Florida production is estimated to contribute 11.5% of orange juice to this total supply this season.

At the same time, global trade was down in accordance with the decline in supply. In addition, the USDA Foreign Agricultural Service (FAS) reports global consumption will continue to decline due to the projected drop in world availability of orange juice. While a majority of orange juice is produced in Brazil, Mexico is the leading supplier of FCOJ to the U.S. market. In recent seasons, both countries have emerged as competitive suppliers of NFC orange juice to the United States.

Comparisons of orange juice beginning inventories and production levels for Florida, Brazil, and Mexico are provided in Table 6. Aggregate OJ production from the three leading suppliers in 2021-22 is projected at 2.08 billion SSE gallons, a decrease of 447.2 million SSE gallons (or down 17.7% from last season's 2.53 billion SSE gallons) largely due to decline in juice yields and reduced orange production. World orange juice production must also consider world demand for orange juice stocks as the United States is only one market for the leading suppliers. While the vast majority of U.S. orange juice production is consumed domestically, Brazil and Mexico orange juice production is primarily intended for the world market. The share among Brazil and Mexico export markets for orange juice are reported in Tables 7 and 8, respectively.

Based on Brazilian Department of Foreign Trade (SECEX) data, an estimated 1.49 billion SSE gallons of OJ were exported from Brazil in 2020-21, down 3.4% from the 1.54 billion SSE gallons exported in 2019-20. Most of Brazil's orange juice exports are bound for Europe, with shipments to Europe during the 2020-21 season at an estimated 968.3 million SSE gallons (and representing approximately 65% of all exports), an estimated 9.9% decline over the previous season. The majority of Brazil's exports to Europe are frozen concentrate, representing 74% of the

total in 2020-21, although NFC exports are on the rise each season. A portion of Brazil's OJ sent to Europe may be re-exported to other markets. Brazil's OJ exports to East Asia were down by 4.4% with 144.1 million SSE gallons. Brazil's exports to North American (USMCA) countries were up by 18.4% with 291.5 million SSE gallons, intended primarily for the U.S. market. Approximately 53% of these exports in the 2020-21 season were frozen concentrate used to make reconstituted, shelf stable, and frozen orange juice. Brazil's exports during the 2021-22 season, as of January 2022, are down by 5.6% as a reflection of the decline in production. Most notably, however, is the increase in juice exports to East Asia which are currently up by 36% and a slight reversal to the previous season's decline. Europe remains the leading destination for Brazil's orange juice, representing 63% of all exports. Brazil's exports to North American (USMCA) countries are currently below last season by 7% with the majority of shipments intended primarily for the U.S. market.⁵

Based on U.S. Customs import data, an estimated 51.4 million SSE gallons of OJ were exported from Mexico in 2020-21, up 4.2% from the 49.3 million SSE gallons exported in 2019-20. A majority of Mexico's orange juice exports are bound for the United States, with reported shipments to USMCA countries during the 2020-21 season at about 44.3 million SSE gallons, an estimated 17.3% increase over the previous season. While most of the Mexico's exports to the United States are frozen concentrate, an increasing share of NFC has been used to offset the decline Florida production. Mexico's orange juice exports to select regions are reported in Table 8 of this report.

⁵ FDOC-EMRD February 2022 Economic Indicators Report

U.S. Orange Juice Supply, Disappearance and Retail Sales

Disappearance is used in this analysis to discuss orange juice availability to meet demand. Presumed consumption is a rough measure of market performance reflecting orange juice movement in which the disappearance of orange juice from measurable data is calculated as the sum of beginning U.S. inventory, Florida and other U.S. production, and U.S. imports minus U.S. exports and ending U.S. inventory. The current estimate of total U.S. OJ disappearance is projected at 638.3 million SSE gallons for the 2021-22 season, a projected decline of 7.4% from an estimated 689.1 million SSE gallons consumed in the previous season (Table 12). The projected reduction in consumption largely reflects a contraction in supply on the domestic market. Total U.S. OJ production is estimated at 228.8 million SSE gallons based on the March USDA estimate for the orange crop in Florida, California, and Texas (NASS/USDA, 2022a). Total U.S. OJ imports are projected at 243 million SSE gallons, a projected decrease of 33.5% over the previous season. U.S. exports are also expected to decline by 48.6% over last season and are projected at 20.5 million SSE gallons.

By comparison, Florida processor orange juice receipts, movement, and net change in inventory are reported in Table 13. Net from Florida fruit refers to the orange juice production from Florida-sourced oranges in each season which is compared to receipts of 100% orange juice from imported sources, domestic sources, and non-reporting Florida facilities. Movement is reported as domestic packaged and bulk movement as well as exports. During the 2020-21 Florida citrus season, Florida orange production is projected to account for 58% of SSOJ and 14% of FCOJ receipts by processors, respectively. Specifically, Florida processors are expected to receive 162.4 million gallons of SSOJ from Florida production and 116.6 million gallons from other sources. Florida processors are expected to receive 23.9 million gallons of FCOJ from Florida's orange

crop with a remaining 148.4 million gallons from other sources. The majority of SSOJ movement from Florida processors is packaged, whereas the majority of FCOJ movement occurs as bulk movement for package out of state. It is estimated that between 63-68% of orange juice from Florida movement is consumed through retail channels with the remainder consumed as foodservice and institutional demand.

The Nielsen Topline Report provides more exact measures but with an abridged market coverage across all retailers. The Florida Department of Citrus (FDOC) purchases Nielsen retail outlet data for OJ sales in grocery stores with annual sales of at least \$2 million, drug stores with annual sales of at least \$1 million, mass merchandisers, Wal-Mart, club (Sam's and BJ's), dollar stores (Dollar General, Family Dollar, and Fred's), and military/DECA. The following analysis is based on the Nielsen retail universe Expanded All Outlets Combined data described above.

In addition to OJ prices, retail OJ sales during the 2021-22 season will be largely dependent upon availability, market growth/contraction, and substitutes. Retail sales were estimated assuming consumer behavior during 2020 and 2021 will carry forward into the 2021-22 season amid consumer concerns over COVID-19; however, the model assumes the impact will lessen over time. Estimates with a sensitivity analysis are provided for three price scenarios in Table 14.⁶

Scenario 1 (middle or base price): Overall retail OJ price is projected to increase from \$7.37 per gallon in 2021-22, to \$7.79 per gallon in 2020-21, a 6% increase in retail price, but prices could increase at a higher rate, due to overall inflation in the economy, reduced promotional activity and persistent shortages associated with supply chain disruptions. In addition to its own price, the demand for OJ depends on levels of OJ advertising and promotion, consumer income,

⁶ Retail market forecasts prepared by Yan Heng, Ph.D., Assistant Research Scientist, Food and Resource Economics Department, University of Florida

attitudes and perceptions, and competition from other beverages through prices and advertising/promotion levels of these beverages, as well as other factors.

Retail sales of orange juice, in terms of equivalent gallon sales, are projected to decline based on higher prices with a decline in overall availability and low retail promotional activity. OJ sales in Nielsen retail outlets are estimated at about 379.8 million single-strength gallons in 2021-22f based on the average price of \$7.79, down 4.2% from last season's sales of 396.4 million SSE gallons (Table 14). Estimates of sales by segment (FCOJ, NFC, and RECON) are also shown in the table. The preceding estimates represent a 60.6% NFC market share of OJ category market sales volume, RECON market share estimated at 32.4% of total OJ category market sales volume, FCOJ market share estimated at 3.6% of total OJ category market sales volume, and remaining shares of total volume allocated to shelf stable.

Orange juice sold on promotion at retail is at a historic low, contributing to an increase in the average reported price. The share of orange juice sold on promotion with corresponding price per equivalent gallon is reported in Table 15. Nielsen collects promotional information from retailers, known as trade promotions, which are compiled into four categories in the FDOC Nielsen custom database. The key promotional items are feature items, display items, a combination of both feature and display, and temporary price reductions (also known as price decrease). The FDOC Nielsen custom database provides periodic updates on the share of retail sales sold with and without promotions. Feature items are retailer specific promotions, such as print ads and coupons from retailers. Displays must be set in a secondary selling location and showcase a product in high traffic areas that consumers can pick up and purchase. A display must be temporary for Nielsen to recognize as a display. A promotion that combines elements of features and displays are tracked separately. Finally, a common trade promotion is a temporary price reduction. Price

decreases must be at least five percent lower than regular price. If the lower price persists over seven consecutive weeks, Nielsen will consider the reduced price as the new regular price and will no longer record the item as sold on promotion (source: NielsenIQ).

The reporting of promotional activity declined considerably during the pandemic, which may have been due to multiple factors. The most critical was the inability of Nielsen in-store data dispatchers to coordinate with retailers. Another reason behind the reduction in activity had to do with supply-chain coordination. An analysis of trade promotions pre- and post-pandemic (January 2018 through December 2019 versus period of April 2020 through August 2021) revealed that gallons sold on promotion declined by 7% for total orange juice sales, 9% for NFC orange juice sales, and 4% for Recon orange juice sales.

Florida Fresh Orange Shipments, by Market

Florida fresh certified orange shipments are reported in Table 16. Certified fresh orange utilization is projected to account for approximately 5.9% of total orange production during the 2021-22 season. As such, certified fresh orange shipments in 2021-22 are estimated at 2.44 million boxes (equivalent to 4.88 million cartons), which would be a decrease of 19.9% from the 3.05 million boxes (equivalent to 6.09 million cartons) shipped last season. Domestic fresh orange shipments are projected at 4.86 million cartons, down by 1.23 million cartons. The domestic share is projected to be about 95% of all Florida fresh orange shipments in 2021-22. Florida packers are projected to export slightly more than 230,000 cartons of fresh oranges during the 2021-22 season, representing an increase of 6% compared to last season. Accounting for 88% of all exports, Canada was the leading destination of Florida fresh oranges.

Florida Orange Juice Inventory and Movement

Both demand-side and supply-side factors affecting orange juice availability are analyzed in this section. While the previous two Florida citrus seasons have experienced further declines in orange production, rapid shifts in consumer demand for orange juice began in mid-March 2020 as a result of concerns associated with Covid-19. Subsequent changes in consumer shopping behaviors continued into 2021, sustaining increased sales volumes at retail when compared to the pre-pandemic period in 2019. The significant rise in sales volumes have continued to reduce the SSOJ inventories. At the same time, the decline in foodservice did little to reduce overwhelmed FCOJ inventories. In addition, the Florida OJ situation continues to be affected by the reduced production levels largely associated with the spread of Huanglongbing (HLB, also known as citrus greening).

Current estimates for the Florida OJ situation (October-September season) are shown in Table 9. Florida's OJ imports are based on aggregate Florida-Brazil-Mexico OJ availability, and adjusted for Florida processor trends. Three scenarios for 2021-22 are provided, varying with respect to Florida processor imports.

The 2020-21 Florida citrus season concluded with a year-over-year reduction in SSOJ and FCOJ inventories from the previous season. Combined Florida OJ ending inventory for the 2020-21 season is 347.3 million SSE gallons or 28.5 weeks of supply, compared to 30.8 weeks in the previous 2019-20 season. Adding the 2020-21 ending inventory to the 2021-22 estimate of Florida OJ production of 185.3 million SSE gallons, plus an estimated imports and other adjustments totaling 265.0 million SSE gallons, Florida's OJ availability in 2021-22 (October 2021 through September 2022) is estimated at 797.6 million SSE gallons, down 201.5 million SSE gallons (or 20.2%) from last season's level. Total movement in 2020-21 is estimated to decline by 7.9 million

SSE gallons (or 1.2%) to 643.9 million SSE gallons from last season. By the end of the 2021-22 season, Florida's OJ ending inventory is estimated to decline to 153.8 million SSE gallons (or 12.4 weeks of supply) associated with a projected total OJ movement and reduced crop size.

While import quantities are most likely be influenced by actual production, movement, and availability from non-Florida sources observed during the 2020-21 season, imports are hampered by reduced shipments from a major Brazilian exporter this season. Holding all trends constant and considering alternate import scenarios where OJ imports are 10% higher and 10% lower than discussed in the previous paragraph, ending inventories would range from 129.5 million SSE gallons (10.5 weeks supply) to 178.1 million SSE gallons (14.4 weeks supply). Estimates of Florida's inventory, production and movement levels for FCOJ and NFC, underlying the total OJ estimates in Table 9, are shown in Table 10 and Table 11. Final projections for the 2020-21 season will be reflected in the 2021-22 Florida Citrus outlook report released in October 2021.

This analysis assumes approximately 12.0% of Florida processed orange utilization was processed as FCOJ during the 2021-22 season. Beginning Florida processor inventories of FCOJ for the 2021-22 season totaled 226.2 million SSE gallons. Florida processor FCOJ production is estimated at approximately 22.9 million SSE gallons based on an estimated utilization of 4.63 million boxes of round oranges and an average FCOJ juice yield of 4.95 gallons per box in 2021-22 season. Imports of FCOJ, which is used to make Recon, shelf stable and frozen orange juice, are projected to decrease by 31.0% to 146.1 million SSE gallons. Total overall FCOJ availability is projected to decline by 20.9% when compared to the 2021-22 season. Total movement is projected to increase by about 5% as a result of the re-emergence of foodservice and USDA surplus juice purchases in 2021-22. Based on the estimated utilization, receipts, and movement trends,

FCOJ ending inventories are projected to decrease by the end of the season to approximately 107.4 million SSE gallons (or 19.3 weeks of supply).

This analysis assumes that approximately 88% of Florida processed orange utilization during the 2021-22 season will be processed as SSOJ, which is used for NFC orange juice. At the onset of the 2021-22 season, beginning Florida processor inventories of SSOJ were 121.1 million SSE gallons (17.6 weeks supply), a decrease of 16.7% when compared to the previous season. Florida processor SSOJ production is estimated at approximately 162.4 million SSE gallons based on an estimated utilization of 33.93 million boxes of round oranges and an average juice yield of 4.79 SSE gallons per box, which would be a decrease of 30.7% compared to the pack last season. Imports and domestic receipts of SSOJ are projected to increase by 9.0% to 96.9 million SSE gallons. Total overall SSOJ availability is projected to decline by 16.7% when compared to the 2020-21 season. Total movement, including EVAP into Recon, is projected to decline by at least 1.4% with a majority of SSOJ consumed through retail channels. Based on the estimated utilization, receipts, and movement trends, SSOJ ending inventories are projected to decrease by the end of the season to approximately 42.7 million SSE gallons (or 7.0 weeks of supply).

Florida Grapefruit Crop, Utilization and Movement

The USDA/NASS March estimate of the Florida grapefruit crop in 2021-22 is 3.90 million boxes, a decrease of 4.9% from last season's crop of 4.10 million boxes (Table 17). Florida grapefruit production has suffered losses of more than 90% since the 2003-04 season due to the harmful impacts of hurricanes and HLB. Certified fresh grapefruit shipments are estimated to be 1.99 million boxes in 2021-22, up by 5% compared to certified fresh utilization last season. Non-certified utilization is forecasted at 80,000 boxes in 2021-22. Processed utilization is projected to account for approximately 47% of the total crop and is estimated at 1.83 million boxes, a decline

of about 12.8% compared to the 2020-21 season. This outlook assumes that utilization of the processed grapefruit crop into single-strength grapefruit juice (SSGJ), which is used to make NFC grapefruit juice, is expected to account for as much as 88% of processed utilization with an estimated 1.61 million boxes used this season, which represent a decrease of about 10% compared to last season. Utilization of the processed grapefruit crop into frozen concentrated grapefruit juice (FCGJ) is estimated at 219,720 boxes in 2021-22, down 88,925 boxes from last season.

Florida Grapefruit Juice Inventory and Movement

Florida began the 2021-22 season with 16.78 million SSE gallons of GJ in inventory (54.5 weeks supply), down from the previous season's level of 19.46 million SSE gallons (62.2 weeks supply based on average movement at that time) (Table 18). Combined GJ production plus processor imports, domestic and foreign, in 2021-22 is estimated at 13.86 million SSE gallons, up 0.43 million SSE gallons from last season. Combining production with beginning inventories, GJ availability in 2021-22 is estimated at 30.6 million SSE gallons, down by 6.9% and representing a decrease of 2.26 million gallons from last year. GJ movement in 2021-22 is estimated at 18.58 million SSE gallons, up 14.5% from last year. The 2021-22 ending inventory for Florida GJ is estimated at 12.07 million SSE gallons (or 33.8 weeks supply). Table 17 also describes the availability, movement, and inventory estimates for FCGJ and single-strength grapefruit juice (SSGJ) projected for the 2021-22 season.

Florida processors are projected to utilize 88% of processed grapefruit for SSGJ (or GJ NFC). Beginning inventory of SSGJ for the 2021-22 season is down by 7.1% over the previous season at 10.20 million SSE gallons (44.06 weeks supply). Production from Florida fruit is estimated at 8.66 million SSE gallons based on an estimated 1.61 million boxes of grapefruit and juice yield 5.373 SSE gallons per box, representing a 4.7% decrease in pack from fruit over the

previous season. Florida processors are projected to utilize 12% of processed grapefruit for FCGJ. Beginning inventory of FCGJ for the 2021-22 season is down by 22.5% over the previous season at 6.58 million SSE gallons (77.06 weeks supply). Production from Florida fruit is estimated at 1.11 million SSE gallons based on an estimated 219,720 boxes of grapefruit and juice yield 5.050 SSE gallons per box, representing a 25.2% decrease in pack from fruit over the previous season. Exports of in 2021-22 are estimated at 1.18 million SSE gallons based on analysis of Florida processor statistics and industry sources. In some seasons, the level of GJ exports reported by the Florida citrus processors has exceeded the level reported by the U.S. Department of Commerce. The U.S. Department of Commerce data are tracked to provide an indication of market shares across export destinations.

U.S. Grapefruit Juice Supply, Disappearance, and Retail Sales

U.S. GJ disappearance is estimated at 28.67 million SSE gallons in 2021-22, compared to 36.54 million SSE gallons in the previous season (Table 19).⁷ Disappearance is expected to decline by 21.5% between 2020-21 season and the 2021-22 seasons due largely to Texas production losses following the February 2021 freeze, but may be overstated as previous season estimates would have included cold storage supplies not tracked within the FDOC Florida processor database or by USDA cold storage estimates. Total U.S. GJ production is estimated at 19.01 million SSE gallons based on Florida processors data and the USDA forecast of the grapefruit crop in California and Texas. The projected decline in disappearance for the 2021-22 season is consistent with the decline in availability coupled with declining market growth. Total U.S. GJ imports are estimated at 3.12 million SSE gallons, an increase of 17.8% over the previous season. U.S. exports are projected at

⁷ Disappearance in prior seasons included non-Florida domestic cold storage supplies that are not tracked by USDA. This outlook incorporates estimates of cold-storage. Some duplication with Florida storage may occur but are negligible as reported here.

1.80 million SSE gallons based on analysis of Florida processor statistics.

Other U.S. grapefruit come primarily from California and Texas with the utilization intended for both fresh and processed consumption. According to the USDA/NASS March 2022 citrus production forecast for the 2021-22 season, California is expected to produce 3.5 million 80-lb boxes of grapefruit, which would be a decrease of 20.5% compared to the previous season. As many as 1.0 million boxes are estimated to be processed into juice this season based on previous utilization rates. The USDA/NASS citrus production forecast for Texas grapefruit production in the 2021-22 season is estimated to decrease by 33% to 1.6 million 80-lb boxes. The Texas crop share into processed utilization could represent about 800,000 80-lb boxes. This analysis estimates that as many as 1.7 million 85-lb Florida equivalent boxes of California and Texas combined production may be used in processing of grapefruit juice. The share of single-strength and concentrate is not reported by either state. This analysis projects that grapefruit juice production may decrease by approximately 12.3% from an estimated 10.5 million SSE gallons of orange juice in the 2020-21 season to 9.3 million SSE gallons in the 2021-22 season.

In addition to GJ prices, retail sales of GJ during the 2021-22 season have been constrained by declines in distribution, substitutes, and decline in promotion for more than a decade. Retail sales were estimated assuming consumer behavior during 2020 and 2021 will carry forward into the 2021-22 season amid consumer concerns over COVID-19; however, the model assumes the impact has lessened over time. Estimates are provided for three price scenarios. Nielsen retail sales of GJ are projected to decrease from 11.16 million SSE gallons to 10.88 million SSE gallons, assuming a 4.2% increase in price for the overall price of GJ from \$9.02 to \$9.40 per SSE gallon from last year (middle scenario) (Table 20). Estimates of sales by segment (FCGJ, NFC, and RECON) are also shown in Table 20. The estimates project market share of NFC GJ will be 69%

of retail sales volume, Shelf Stable market share estimated at 25% of retail sales volume, FCGJ market share estimated at 4% of retail sales volume, and remaining shares allocated to Recon GJ. Even prior to the pandemic, grapefruit juice sold on promotion has been on the decline. The share of grapefruit juice sold on promotion with corresponding price per equivalent gallon is reported in Table 21.

The share of grapefruit juice sold on promotion with corresponding price per equivalent gallon is reported in Table 21. The reporting of promotional activity declined considerably during the pandemic, which may have been due to multiple factors. The most critical was the inability of Nielsen in-store data dispatchers to coordinate with retailers. Another reason behind the reduction in activity had to do with supply-chain coordination. An analysis of trade promotions pre- and post-pandemic revealed that the share of gallons sold on promotion has been on the decline from 39.9% during the 2017-18 season to 31.4% during the 2020-21f season in total refrigerated grapefruit juice sales. Sales of shelf stable grapefruit juice sold on promotion has been on the decline from 17.3% during the 2017-18 season to 5.7% during the 2020-21f season in the total refrigerated grapefruit juice sales.

Fresh Grapefruit Shipments, by Market

Florida fresh certified grapefruit shipments are reported in Table 22. Certified fresh grapefruit utilization is projected to account for approximately 51% of total grapefruit production during the 2021-22 season. Certified fresh grapefruit shipments in 2021-22 are currently estimated at 1.99 million boxes (equivalent to 3.98 million cartons, which would represent an increase of 5.3% compared to last season. Domestic fresh grapefruit shipments are projected at 2.19 million cartons, which would represent a decline of 10.5% compared to last season. The domestic share

has increased in recent years from around 42% annually to a 64% share of all Florida fresh grapefruit shipments.

Export shipments are projected at 1.23 million cartons of fresh grapefruit during the 2021-22 season, representing a decline of 7% compared to last season. Certified Florida fresh exports represent 37% of fresh shipments. Florida fresh grapefruit will ship to various export markets in Asia, Europe, and Canada. Accounting for an estimated 548,000 cartons, the top markets for Florida certified fresh grapefruit are Japan and Korea (ROK). Europe is projected to receive approximately 439,000 cartons of fresh Florida grapefruit, and Florida fresh packers are expected to ship approximately 231,760 cartons to Canada, accounting for 7% of total exports and 6% increase compared to the previous season.

Florida Specialty Crop and Utilization

The USDA/NASS March estimate of the Florida specialty crop in 2021-22 is 800,000 boxes, a decrease of 90,000 boxes from last season (Table 23). Despite higher FOB prices in recent years, specialty production has declined more than 85% since the 2011-12 season. The USDA/NASS March estimate of specialty citrus includes tangelos, Royal tangerines (formerly known as Temple oranges), early tangerine varieties, honey tangerines, Autumn Honey, Juicy Crunch, Orri, Roe, Tango, and other minor tangerine varieties. Temples were classified and reported as early-midseason oranges between the 2005-06 and 2015-16 seasons. Florida certified shipments are estimated to be about 62% of the crop with an estimated 496,000 boxes (equivalent to 992,000 cartons) moving during the 2021-22 season to primarily the domestic market (Table 24). Domestic fresh specialty shipments are projected at 992,000 million cartons, down by 103,713 cartons. The domestic share typically represents close to 97% of annual shipments. Florida packers are projected to export approximately 32,535 cartons of fresh specialty fruit during

the 2021-22 season, representing a decline of 1,917 cartons over last season. Accounting for 72% of exports, Canada would be the leading destination of Florida fresh specialty.

Preliminary On-Tree Price Expectations

Prices are critical variables for the various projections in this report. For example, they are the primary explanatory variables in projecting volume sales, which in turn, determine inventory levels. Various data on citrus prices are reported. From this, price trends can be identified and used in the analysis. In this section, some price trends at the grower level are discussed. Nothing herein is meant to imply minimum pricing, nor FDOC staff opinion on optimal pricing.

State average certified on-tree revenue for 2021-22 are estimated using the same methodology used by the USDA/NASS Florida Field Office to calculate the final on-tree returns reported in the preliminary 2020-21 Citrus Summary released in September.⁸ The on-tree price estimates are based on assumed state average prices and costs and may not reflect the returns for any particular grower to the extent that prices and costs faced by a grower deviate from the averages. On-tree prices also reflect pick-and-haul costs and packing charges similar to the 2020-21 season with minor adjustments added to overall packing charges to reflect current market conditions (Singerman, 2021a and 2021b). The variance in average processor delivered-in prices per pounds solids for processed oranges and grapefruit are shown in Table 25. The estimated delivered-in prices in 2021-22 are weighted averages of priced fruit as of the week of delivery (spot and contract). Industry sources are consulted to assess the proximity of assumptions on contract prices with actual market values. On-tree price projections are calculated using pick and haul costs as reported by UF-CREC (Singerman, 2021b). Based on assumed average delivered-in

⁸ Note that the 2020-21 USDA/NASS preliminary estimate for processed on-tree returns may significantly underestimate total on-tree returns for the prior season before adjustments are made for intermediate priced fruit. This analysis attempts to account for intermediate priced fruit in the 2021-22 season. The 2020-21 USDA/NASS estimates have not been released at the time of this writing.

prices for early/mid-season and Valencia oranges of \$2.14/ps⁹ and \$2.57/ps, respectively, average processed on-tree prices in 2021-22 for early/mid-season and Valencia oranges are estimated at \$7.42/box and \$10.90/box, respectively (Table 25). Based on assumed average delivered-in prices for white and red grapefruit of \$2.27/ps and \$1.92/ps, respectively, average processed on-tree prices in 2021-22 for white grapefruit and red grapefruit are estimated at \$6.62/box and \$5.58/box, respectively (Table 25).

Certified on-tree revenues for Florida oranges, grapefruit, and specialty citrus varieties are reported in Table 18. Total certified orange on-tree revenue is projected at \$393.6 million for the 2021-22 season compared to the preliminary estimated \$500.9 million for the 2020-21 season, representing a 5% increase in orange revenues for the season. Total processed orange on-tree revenue is projected at \$353.5 million in 2021-22 compared to the preliminary estimate of \$452.8 million for the 2020-21 season, representing a 21.9% decrease in processed revenues for the season. Fresh orange on-tree revenue is estimated to decrease to \$40.2 million in 2021-22 compared to \$48.1 million in 2020-21, representing a 16.5% decrease.

Total certified grapefruit on-tree revenue is projected at \$55.3 million for the 2021-22 season compared to the preliminary estimated \$57.9 million for the 2020-21 season, representing 5% decrease in grapefruit revenues for the season. Total processed grapefruit on-tree revenue is projected at \$11.8 million in 2021-22 compared to the preliminary estimate of \$14.3 million for the 2020-21 season, representing a 17.5% decrease in processed revenues for the season. Fresh grapefruit on-tree revenue is estimated to decrease to \$43.4 million in 2021-22 compared to \$43.6 million in 2020-21, representing a 0.3% decrease.

⁹ ps = refers to pounds solids or the amount of soluble solids in each box of fruit.

Total specialty on-tree revenue is projected at \$29.5 million for the 2021-22 season compared to the preliminary estimated \$12.9 million for the 2020-21 season, representing a 18% increase in specialty revenues for the season.

Overall, on-tree revenues for oranges, grapefruit, and specialty citrus are projected to decline by 16.3% from an estimated \$571.7 million in the 2020-21 season to an estimated \$478.4 million in 2021-22 season.

Summary: Implications for the Florida Grower

The USDA/NASS March citrus forecast for the 2021-22 suggests production of Florida citrus will drop by 20.6% to 45.9 million boxes of oranges, grapefruit, and tangerines. The forecast for total U.S. citrus production for the 2021-22 season indicates production will decrease overall by 16.7% with a total of 120 million boxes of oranges, grapefruit, and specialty citrus from California, Florida, and Texas. Specifically, the March forecast projects 89.2 million boxes of oranges, 9 million boxes of grapefruit, and 21.8 million boxes of specialty tangerines and tangelos. The USDA forecast also anticipates California and Arizona will produce 24.4 million boxes of lemons in the 2021-22 season.

At the same time, the demand for Florida citrus products, which remained strong during 2021 as many consumer-shopper trends which had emerged during 2020 carried through the 2020-21 season, has remained strong given the supply shortages. With an overall decline in world availability of citrus, grower prices were projected to improve compared to the 2021-22 season, but overall returns to growers are projected to decline with the reduced crop and higher production costs.

The USDA/NASS October forecast for the 2021-22 reports that Florida production of round oranges will be 41.2 million boxes, production of grapefruit crop will be 3.9 million boxes, and production of specialty tangerines will be 800,000 boxes.

Florida processed utilization of oranges and grapefruit will decline with the decrease in production, but a higher share will be used to make NFC juices. While overall movement of juice is expected to decline, movement is expected to be consistent with Florida availability and supplies.

Overall, on-tree revenues for oranges, grapefruit, and specialty citrus are projected to decline by 16.3% from an estimated \$571.7 million in the 2020-21 season to an estimated \$478.4 million in 2021-22 season.

Mid-season projections for the 2020-21 Florida citrus season reveal a steady demand for fresh and processed citrus products amid an expected decrease in overall availability. The increase in demand of both fresh and processed citrus over the last 18 months suggests it is imperative for the Florida citrus industry to stay the course in terms of efforts to mitigate the impacts on returns from higher production costs, increase overall tree replant rates, and protect and revitalize industry infrastructure.

References

Florida Department of Citrus. 2021a. FDOC Processors statistics database. Economic and Market Research Department, Gainesville, FL.

Florida Department of Citrus. 2021b. Nielsen Retail Sales Monthly Topline Report: Report 13 of the 2019-20 Season. Economic and Market Research Department, Gainesville, FL.

Foreign Agricultural Service. December 2020. Mexico Citrus Update. GAIN report no. MX2020-0075, U.S. Dept. Agr., Washington D.C.

Foreign Agricultural Service. June 2021. Brazil Citrus Semi-annual 2021. GAIN report no. BR2021-0022. U.S. Dept. Agr., Washington D.C.

Foreign Agricultural Service Office of Global Analysis. July 2021. Citrus: World Markets and Trade, U.S. Dept. Agr. , Washington D.C.

National Agricultural Statistics Service Florida Field Office. 2020a. Citrus October forecast. U.S. Dept. Agr., Maitland, FL.

National Agricultural Statistics Service Florida Field Office. 2020b. Florida citrus statistics 2019-20. U.S. Dept. Agr., Maitland, FL.

National Agricultural Statistics Service Florida Field Office. 2021a. Citrus fruits 2021 Summary (September 2021). U.S. Dept. Agr..

Singerman, A. April 2021a. 2020/21 Average Packing Charges for Florida Fresh Citrus. University of Florida-IFAS, Citrus Research and Educ. Ctr., Lake Alfred, FL.

Singerman, A. 2021b. 2020/21 Harvesting Charges for Florida Citrus: Picking, Roadsiding and Hauling. University of Florida-IFAS, Citrus Research and Educ. Ctr., Lake Alfred, FL.

TABLES

Table 1. Utilization of Florida round oranges.

Season	Certified ^a Fresh	FCOJ ^b	SSOJ ^b	Certified ^a Processed	Non- Certified ^c Fresh	Other	Total
millions 90-lb boxes							
2001-02	6.93	132.15	85.87	220.62	2.45	2.60	230.00
2002-03	6.28	98.72	92.51	193.29	3.44	2.06	203.00
2003-04	6.16	137.50	93.39	232.34	3.74	1.22	242.00
2004-05	4.90	52.18	88.51	142.36	2.49	1.71	149.80
2005-06	4.53	49.11	90.17	140.46	2.78	1.11	147.70
2006-07	4.97	45.96	75.21	121.96	1.43	1.43	129.00
2007-08	4.42	80.80	85.11	163.83	1.43	1.27	170.20
2008-09	5.54	72.58	82.81	155.13	1.38	1.56	162.50
2009-10	4.49	52.74	75.14	127.48	1.37	1.68	133.70
2010-11	4.48	51.75	82.69	134.09	1.48	0.13	140.50
2011-12	4.63	65.35	75.52	140.28	1.46	-0.26	146.70
2012-13	4.59	47.95	79.23	127.18	1.38	0.41	133.60
2013-14	4.15	22.72	76.03	98.88	1.35	0.44	104.70
2014-15	3.99	19.22	71.89	91.72	0.98	0.87	96.95
2015-16	3.07	15.84	61.85	77.60	0.92	0.10	81.70
2016-17	2.19	12.65	53.27	66.09	0.62	0.14	68.85
2017-18	2.33	7.66	34.36	42.26	0.43	0.27	45.05
2018-19	2.32	15.20	53.76	69.11	0.43	0.16	71.85
2019-20	2.98	14.15	49.85	64.18	0.25	0.18	67.30
2020-21	3.05	5.81	43.66	49.54	0.17	0.10	52.80
2021-22f	2.55	3.98	40.27	44.34	0.20	<0.0	47.00
2021-22u	2.44	4.63	33.93	38.64	0.20	<0.0	41.20

u = update to forecast (based on the USDA production forecast for 2021-22 season released on March 9, 2022;

f = Forecast (based on the USDA production forecast for 2021-22 season released on October 12, 2021).

^a Certified deliveries to Florida processors based on Florida Department of Agriculture and Consumer Services data.

^b FCOJ and SSOJ utilization includes specialty boxes processed into orange juice; Florida reporting facilities (F.A.C. 20-3) only.

^c USDA final fresh utilization less FDACS certified fresh.

Table 2. Utilization of world oranges – Selected Countries.

Season	<u>United States</u>			<u>Brazil</u>			<u>Mexico</u>		
	Prod ^a	Util Fresh	Util Proc	Prod ^a	Util Fresh	Util Proc	Prod ^a	Util Fresh	Util Proc
- million 90-lb equivalent boxes -									
2002-03	259.6	55.6	204.0	361.0	134.0	227.0	91.5	89.5	2.0
2003-04	288.4	50.9	237.6	450.0	135.0	315.0	95.6	90.7	4.9
2004-05	208.8	53.1	155.7	377.0	120.0	257.0	98.0	79.9	18.1
2005-06	203.4	48.6	154.9	467.0	117.0	350.0	101.8	88.1	13.7
2006-07	171.8	33.0	138.8	406.0	110.5	295.5	104.1	86.9	17.1
2007-08	227.0	49.9	177.1	441.0	110.0	331.0	105.3	80.8	24.5
2008-09	205.2	43.3	162.0	453.0	113.0	340.0	102.7	78.2	24.5
2009-10	186.4	50.3	136.0	413.0	124.0	289.0	99.2	77.7	21.6
2010-11	197.9	51.1	146.7	417.0	130.0	287.0	99.9	77.2	22.8
2011-12	199.6	50.7	148.9	388.0	119.0	269.0	89.8	69.5	20.3
2012-13	183.7	49.8	134.0	554.0	135.0	419.0	107.8	70.8	37.0
2013-14	150.4	42.1	108.3	504.0	177.0	327.0	111.0	81.6	29.4
2014-15	141.2	40.1	101.1	401.0	133.0	268.0	110.6	72.6	38.0
2015-16	135.3	45.1	90.2	438.0	148.0	290.0	112.8	72.3	40.4
2016-17	113.1	39.6	73.5	409.7	127.7	282.0	113.4	62.0	51.4
2017-18	86.1	37.0	49.1	353.3	121.3	232.0	111.0	64.4	46.5
2018-19	120.6	38.2	82.5	512.0	117.0	395.0	113.6	59.7	53.9
2019-20	115.9	41.5	74.4	391.0	122.0	269.0	62.0	39.9	22.0
2020-21	102.2	41.9	60.3	473.0	121.0	352.0	68.8	34.5	34.3
2021-22 ^f	86.2	32.9	53.3	314.5	87.0	227.0	65.4	32.7	32.7
2021-22 ^u	83.9	35.5	48.3	360.6	136.6	224.0	104.8	63.2	41.6

u = update to forecast (based on the USDA production forecast for 2021-22 season released on March 9, 2022;

f = Forecast (based on the USDA production forecast for 2021-22 season released on October 12, 2021).

^a U.S. production estimates as reported by USDA/NASS Citrus Fruits Summary (*various issues*) and converted into 90-lb equiv. boxes; Brazil based on various Foreign Agricultural Service GAIN reports and Fundecitrus. Mexico based on Foreign Agricultural Service, Official USDA Estimates as of July 2021.

^b Fresh utilization includes NFC for domestic consumption for all seasons and NFC for export prior to 2003-04; thereafter, NFC-for-export, along with FCOJ utilization, is included in processed boxes.

^c Weighted by utilized round oranges and specialty citrus used in OJ.

Table 3. Comparative utilization of round oranges, Florida, São Paulo, and Mexico.

Season	Florida			São Paulo ^a			Mexico ^b		
	Prod	Utilization		Prod	Utilization		Prod	Utilization	
		Fresh	Processed		Fresh	Processed		Fresh	Processed
- million 90-lb equivalent boxes -									
2002-03	203.0	9.7	193.4	280.0	60.0	220.0	91.5	90.3	2.0
2003-04	242.0	9.9	232.1	365.0	60.0	305.0	95.6	90.8	4.9
2004-05	149.8	7.4	142.4	290.0	46.0	244.0	98.0	80.1	18.1
2005-06	147.7	7.3	140.4	380.0	44.0	336.0	101.8	88.4	13.7
2006-07	129.0	6.4	122.6	320.0	36.5	283.5	104.1	86.6	17.1
2007-08	170.2	5.9	164.3	350.0	34.0	316.0	105.3	80.8	24.5
2008-09	162.5	6.9	155.6	360.0	35.0	325.0	102.7	78.1	24.5
2009-10	133.7	5.9	127.8	315.0	39.0	276.0	99.2	77.6	21.6
2010-11	140.5	6.0	134.5	320.0	46.0	274.0	99.9	77.3	22.8
2011-12	146.7	6.1	140.6	285.0	28.0	257.0	89.8	69.9	20.3
2012-13	133.6	6.0	127.6	444.0	49.0	395.0	107.8	70.7	37.0
2013-14	104.7	5.5	99.2	390.0	80.0	310.0	111.0	81.1	29.4
2014-15	97.0	5.1	91.8	290.0	45.0	245.0	110.6	72.2	38.0
2015-16	81.7	4.0	77.7	325.0	55.0	270.0	112.8	71.7	40.4
2016-17	68.9	2.8	66.0	300.7	38.7	262.0	113.4	60.6	51.4
2017-18	45.1	2.9	42.2	245.3	36.3	209.0	111.0	68.2	46.5
2018-19	71.9	3.0	68.8	407.0	36.0	371.0	113.6	60.9	53.9
2019-20	67.3	2.9	64.4	286.0	41.0	245.0	62.0	39.1	22.0
2020-21	52.8	3.2	49.6	268.6	46.1	222.5	101.3	67.3	33.1
2021-22f	47.0	2.8	44.2	267.9	40.9	227.0	65.4	36.5	32.7
2021-22u	41.2	2.6	38.6	264.1	40.1	224.0	104.8	62.2	41.6

u = update to forecast (based on the USDA production forecast for 2021-22 season released on March 9, 2022;

f = Forecast (based on the USDA production forecast for 2021-22 season released on October 12, 2021).

^a Based on USDA, FAS, "Brazil Citrus Semi-annual," GAIN report various issues and Fundecitrus updates.

^b FAS Production, Supply and Demand database; 2020-21 and 2021-22 estimated using various industry sources. Data current through July 2021 and may not reflect the freezes from February 2021.

^c Weighted by utilized round oranges and specialty citrus used in OJ.

Table 4. Comparative orange juice yields, Florida, Brazil, and Mexico.

Season	Florida	São Paulo SSE gal/box	Mexico
2002-03	6.14230	6.03255	5.68517
2003-04	6.16219	5.97683	5.71360
2004-05	6.30517	6.23894	5.69285
2005-06	6.44845	5.79055	5.73593
2006-07	6.54986	6.24501	5.68517
2007-08	6.61971	6.07673	5.79887
2008-09	6.59442	6.18843	5.96943
2009-10	6.23481	5.59156	5.68517
2010-11	6.35204	5.38623	5.58736
2011-12	6.52862	5.87744	5.68517
2012-13	6.38718	5.32859	5.68517
2013-14	6.22370	5.36539	5.96554
2014-15	5.93257	5.01416	5.83188
2015-16	5.67329	5.87939	5.70240
2016-17	5.82744	4.67900	5.68517
2017-18	5.57996	4.93765	5.83478
2018-19	5.71727	5.01665	5.42675
2019-20	5.69192	5.23140	5.68517
2020-21	5.33159	5.23140	5.68517
2021-22f	5.13720	5.32177	5.68517
2021-22u	4.67048	5.25952	5.68517

u = update to forecast (based on the USDA production forecast for 2021-22 season released on March 9, 2022;

f = Forecast (based on the USDA production forecast for 2021-22 season released on October 12, 2021).

^a Source: FDOC Processors Statistics database.

^b Source: CitrusBr

^c Mexico estimates are calculated using USDA/FAS Production, Supply and Distribution (PSD) Datasets. Data current through December 2021 and may not reflect updates from harvested period.

Table 5. Comparative orange juice production, Florida, São Paulo, and Mexico.

Season	Florida (October - September)	São Paulo ^a (July - June)	Mexico (October - September)	Total
- million SSE gallons -				
2002-03	1,195.2	1,362.0	11.1	2,568.3
2003-04	1,440.7	1,885.6	28.0	3,354.3
2004-05	900.6	1,602.9	103.2	2,606.7
2005-06	916.7	2,063.9	78.7	3,059.3
2006-07	807.1	1,789.5	97.5	2,694.1
2007-08	1,098.3	2,005.4	142.0	3,245.7
2008-09	1,024.7	2,061.1	146.2	3,232.0
2009-10	797.3	1,831.3	122.6	2,751.1
2010-11	854.0	1,772.8	127.3	2,754.0
2011-12	919.7	1,594.5	115.6	2,629.8
2012-13	812.3	2,228.2	210.3	3,250.8
2013-14	614.6	1,758.9	175.4	2,548.9
2014-15	540.5	1,364.8	221.4	2,126.7
2015-16	440.8	1,712.9	230.5	2,384.1
2016-17	384.1	1,401.0	292.4	2,077.5
2017-18	234.5	1,196.3	271.6	1,702.3
2018-19	394.3	2,015.1	292.4	2,701.8
2019-20	364.3	1,398.2	125.3	1,887.8
2020-21 ^p	263.8	1,306.3	195.0	1,765.0
2021-22 ^f	233.9	1,121.6	136.5	1,492.0
2021-22 ^u	185.3	1,193.9	236.7	1,616.0

u = update to forecast (based on the USDA production forecast for 2021-22 season released on March 9, 2022;

f = Forecast (based on the USDA production forecast for 2021-22 season released on October 12, 2021).

^a Source: Brazilian Association of Citrus Exporters (CitrusBR)

Table 6. Total Florida, Brazil, and Mexico OJ availability

Season	<u>Florida</u> ^a		<u>Brazil</u> ^b		<u>Mexico</u> ^c		<u>Total</u>			
	Beg. Inv.	Prod.	Beg. Inv.	Prod.	Beg. Inv.	Prod.	Beg. Inv.	Prod.	Avail	Avail Change
- million SSE gallons -										
2002-03	661.70	1,195.16	366.26	1,361.98	1.39	11.14	1,029.35	2,568.28	3,597.63	0.0%
2003-04	680.53	1,448.16	210.28	1,885.60	1.39	27.99	892.21	3,361.75	4,253.96	18.2%
2004-05	794.78	911.12	334.23	1,602.90	1.39	103.19	1,130.40	2,617.21	3,747.60	-11.9%
2005-06	602.80	924.46	77.99	2,063.85	2.51	78.68	683.29	3,066.99	3,750.28	0.1%
2006-07	446.29	815.73	140.65	1,789.51	1.39	97.48	588.33	2,702.73	3,291.06	-12.2%
2007-08	363.06	1,107.55	25.07	2,005.36	1.39	142.05	389.52	3,254.96	3,644.48	10.7%
2008-09	624.16	1,034.74	20.89	2,061.07	2.79	146.22	647.84	3,242.04	3,889.88	6.7%
2009-10	672.93	806.07	231.17	1,831.29	2.79	122.55	906.89	2,759.91	3,666.80	-5.7%
2010-11	548.46	863.71	239.53	1,772.80	2.79	127.28	790.78	2,763.79	3,554.57	-3.1%
2011-12	391.23	928.39	178.25	1,594.54	2.79	115.59	572.27	2,638.52	3,210.79	-9.7%
2012-13	433.56	820.90	90.52	2,228.18	-	210.28	524.08	3,259.37	3,783.44	17.8%
2013-14	523.57	622.41	612.75	1,758.87	2.29	175.36	1,138.61	2,556.64	3,695.25	-2.3%
2014-15	473.95	547.24	708.84	1,364.76	1.27	221.43	1,184.06	2,133.43	3,317.49	-10.2%
2015-16	503.16	443.59	465.13	1,712.92	2.39	230.48	970.68	2,386.98	3,357.66	1.2%
2016-17	409.89	387.41	458.17	1,400.97	2.37	292.45	870.43	2,080.83	2,951.26	-12.1%
2017-18	368.28	236.73	204.71	1,196.26	1.67	271.56	574.67	1,704.54	2,279.21	-22.8%
2018-19	357.31	396.47	8.36	2,015.11	2.79	292.45	368.45	2,704.03	3,072.48	34.8%
2019-20	517.69	366.60	222.82	1,398.18	-	125.34	740.51	1,890.12	2,630.63	-14.4%
2020-21	397.78	264.95	434.50	1,306.27	-	194.97	832.28	1,766.19	2,598.47	-1.2%
2021-22f	347.32	233.90	215.86	1,121.58	-	136.48	563.18	1,491.96	2,055.14	-20.9%
2021-22u	347.32	185.31	115.59	1,193.91	2.79	236.74	465.69	1,615.97	2,081.66	-17.68%

u = update to forecast (based on the USDA production forecast for 2021-22 season released on March 9, 2022;

f = Forecast (based on the USDA production forecast for 2021-22 season released on October 12, 2021).

^a Source: Florida Department of Citrus Processor Database.

^b Source: Brazilian Association of Citrus Exporters (CitrusBR).

^c Source: USDA/FAS Production, Supply and Distribution (PSD) Datasets for Mexico.

Table 7. Brazil orange juice exports to select regions.

Season	USMCA			Europe			East Asia	All Else	Total
	Concentrate	NFC	Total	Concentrate	NFC	Total	Total	Total	
Jul - Jun	- million SSE gallons -								
2001-02	200.56	-	200.56	1,199.38	5.95	1,205.34	172.05	70.06	1,648.01
2002-03	328.09	10.90	338.98	1,203.72	40.49	1,244.20	174.97	73.02	1,831.18
2003-04	226.52	20.52	247.03	1,362.70	58.61	1,421.32	205.34	72.97	1,946.66
2004-05	281.08	21.00	302.07	1,330.54	74.21	1,404.75	205.98	88.64	2,001.45
2005-06	223.00	24.60	247.59	1,206.68	102.90	1,309.58	231.93	115.46	1,904.56
2006-07	336.80	34.91	371.71	1,219.97	135.76	1,355.73	183.07	90.66	2,001.18
2007-08	274.35	72.80	347.15	1,051.31	157.51	1,208.83	164.23	92.22	1,812.43
2008-09	147.29	59.26	206.55	1,150.97	173.89	1,324.86	161.44	91.39	1,784.24
2009-10	200.57	60.39	260.96	1,085.01	167.50	1,252.51	189.07	89.16	1,791.70
2010-11	86.28	73.06	159.34	978.55	197.67	1,176.22	227.75	80.34	1,643.65
2011-12	149.29	67.38	216.68	970.30	173.15	1,143.45	174.90	84.96	1,619.99
2012-13	222.31	69.51	291.82	929.34	214.98	1,144.32	146.16	77.72	1,660.02
2013-14	252.62	48.96	301.58	804.02	213.92	1,017.94	135.34	84.86	1,539.71
2014-15	261.06	83.43	344.50	884.95	210.27	1,095.22	144.98	91.79	1,676.49
2015-16	191.39	88.13	279.52	898.24	228.44	1,126.68	124.76	81.90	1,612.86
2016-17	144.04	101.30	245.34	652.13	234.23	886.36	113.50	96.19	1,341.39
2017-18	290.29	154.93	445.23	806.54	228.19	1,034.74	151.06	86.68	1,717.70
2018-19	126.29	150.72	277.00	684.16	230.21	914.37	120.66	73.21	1,385.25
2019-20	134.80	111.39	246.19	840.00	234.84	1,074.85	150.74	67.86	1,539.64
2020-21p	155.75	135.73	291.48	712.62	255.72	968.34	144.10	83.66	1,487.58
2021-22f	116.81	158.81	275.62	698.37	232.70	931.07	180.12	81.98	1,468.80

Table 8. Mexico orange juice exports to select regions.

Table 6: Mexico orange juice exports to select regions.

Season	USMCA			Europe			East Asia	All Else	Total
	Concentrate	NFC	Total	Concentrate	NFC	Total	Total	Total	
- million SSE gallons -									
2001-02	35.14	0.04	35.17	19.95	0.00	19.95	3.15	5.16	63.43
2002-03	4.23	0.00	4.23	0.75	0.01	0.76	0.57	0.43	5.99
2003-04	2.72	0.01	2.73	0.65	0.00	0.65	0.32	0.29	3.99
2004-05	11.27	0.79	12.07	1.75	0.01	1.76	0.31	0.40	14.54
2005-06	8.99	0.10	9.09	4.42	0.00	4.42	0.69	1.07	15.27
2006-07	13.67	1.49	15.16	1.71	0.00	1.72	0.33	0.76	17.97
2007-08	14.67	0.98	15.65	3.54	0.06	3.60	0.51	1.09	20.85
2008-09	13.64	0.21	13.86	3.91	0.85	4.76	1.09	1.35	21.05
2009-10	14.96	2.24	17.20	2.65	0.79	3.44	1.05	1.05	22.75
2010-11	15.24	2.82	18.06	13.22	0.82	14.04	0.75	1.31	34.16
2011-12	11.53	5.68	17.20	5.07	0.08	5.15	1.03	1.76	25.14
2012-13	18.31	4.69	23.00	7.81	0.26	8.07	1.76	2.07	34.90
2013-14	27.59	5.93	33.52	5.84	1.23	7.07	2.38	1.99	44.95
2014-15	28.82	6.08	34.89	4.92	0.60	5.51	1.73	2.01	44.15
2015-16	31.06	7.52	38.58	5.12	0.40	5.52	1.69	1.43	47.22
2016-17	32.37	12.89	45.26	9.88	0.02	9.90	1.57	1.04	57.77
2017-18	34.80	20.93	55.72	7.16	0.86	8.02	1.72	1.33	66.79
2018-19	40.54	22.12	62.66	5.01	2.18	7.19	2.15	1.53	73.54
2019-20	22.41	15.38	37.79	4.92	3.32	8.24	2.02	1.24	49.28
2020-21p	24.18	20.14	44.31	2.96	1.73	4.69	1.51	0.86	51.37

Table 9. Forecasted total Florida OJ availability, movement, and carryover for 2021-22, and actual for 2019-20 and 2020-21.

Item ^a	2019-20	2020-21p	2021-22u		
			Low	Mid	High
- million PS -					
Beginning Inventory	517.7	397.8	347.3	347.3	347.3
Production ^d	366.6	265.0	185.3	185.3	185.3
Imports ^e	181.9	300.6	218.7	243.0	267.3
Other adjustments ^e	36.6	35.8	22.0	22.0	22.0
Availability	1,102.7	999.1	773.3	797.6	821.9
Total Movement	705.0	651.8	643.9	643.9	643.9
Domestic	667.3	609.5	623.4	623.4	623.4
Export	17.8	23.9	20.5	20.5	20.5
Ending Inventory	397.8	347.3	129.46	153.8	178.06
- weeks supply -					
Carryover	30.8	28.5	22.1	25.2	27.2

u = update to forecast (based on the USDA production forecast for 2021-22 season released on March 9, 2022;

f = Forecast (based on the USDA production forecast for 2021-22 season released on October 12, 2021).

^a Based on data reported by Florida Citrus processors' statistics; October-September season.

^b Projected Florida imports 10% less than middle scenario.

^c Projected Florida imports 10% more than middle scenario.

^d Includes production by Florida Citrus processors' statistics members and an estimate of other Florida production by non-members.

^e Foreign and domestic; reprocessed tangerine juice; net loss/gain during reprocessing; and adjustments.

Table 10. Forecasted total Florida FCOJ availability, movement, and carryover for 2021-22, and actual for 2018-19 through 2020-21 seasons.

Item	2019-20	2020-21p	2021-22f	2021-22u
<u>FCOJ</u>	- million SSE gallons -			
Beginning Inventory	314.61	252.33	226.17	226.17
Pack	79.70	29.37	19.82	22.92
Other Sources	160.14	214.49	231.53	148.36
Imports	146.22	211.76	223.14	146.12
FCTJ	2.65	4.00	3.31	3.31
Evap	17.88	6.40	6.04	1.55
Net loss/gain	(1.97)	(1.45)	(0.95)	(2.62)
Total FCOJ Availability	559.09	502.42	477.53	397.46
Total FCOJ Movement	306.88	276.24	281.38	290.07
By Form				
Retail	9.68	8.05	8.55	8.55
Institutional	44.49	46.61	43.17	43.17
Bulk	252.71	221.58	229.66	238.35
By Market				
Domestic	291.72	254.26	262.50	271.19
Export	15.16	21.99	18.88	18.88
Ending Inventory	252.33	226.17	196.15	107.39
Carryover	43.58	42.57	36.25	19.25

u = update to forecast (based on the USDA production forecast for 2021-22 season released on March 9, 2022; Forecast (based on the USDA production forecast for 2020-21 season released on October 10, 2020).

^a Includes pack from specialty fruit.

^b Domestic receipts by members of non-Florida products; Florida product received by members from non-members; foreign imports; reprocessed frozen concentrated tangerine juice; chilled OJ used in FCOJ, net loss or gain during reprocessing; and adjustments.

^c Forecasted imports, FCTJ, Evap and Net loss/gain adjustments combined in October 2020 Florida Citrus Outlook. Data source: FDOC Florida Citrus processors' statistics database.

Table 11 Forecasted total Florida SSOJ availability, movement, and carryover for 2021-22, and actual for 2018-19 through 2020-21 seasons.

Item ^a	2019-20	2020-21p	2021-22f	2021-22u
SSOJ	----- million SSE gallons -----			
Beginning Inventory	203.09	145.45	121.15	121.15
Pack From Fruit	284.57	234.40	214.08	162.39
Other Sources	36.01	98.48	99.13	115.06
Imports	35.63	88.86	83.20	96.86
Recon	22.22	23.10	23.92	26.56
Net loss/gain	(21.83)	(13.48)	(7.98)	(8.36)
Total SSOJ Availability	523.67	478.33	434.36	398.60
Total SSOJ Movement	378.22	357.18	335.30	352.23
By Form				
Packaged	352.21	343.89	315.18	332.56
Bulk	26.01	13.29	26.16	21.23
NFC By Market				
Domestic	375.62	355.28	339.75	352.20
Export	2.60	1.90	1.58	1.58
Ending Inventory	145.45	121.15	108.15	47.72
Bulk Ending Inventory ^d	139.52	116.15	103.15	42.72
	----- weeks supply -----			
	20.4	17.6	16.8	7.0
Bulk Carryover ^d	19.6	16.9	16.0	6.3

u = update to forecast (based on the USDA production forecast for 2021-22 season released on March 9, 2022;
f = Forecast (based on the USDA production forecast for 2021-22 season released on October 12, 2021).

Source: Florida Citrus processors' statistics.

^a Availability, movement and inventory adjusted by Florida Citrus processors' statistics to 11.8° Brix gallons.

^b Includes supplies from non-member sources and adjustments.

^c Assumes RECON movement equals pack from FCOJ.

^d Forecasted adjustment incorporated into pack from fruit in October 2020 Florida Citrus Outlook.

^e Assumes bulk inventories are NFC.

Table 12. U.S. orange juice supply and disappearance.

Season	Beginning Inventory ^a	Total U.S. Production ^b	United States		Ending Inventory	Disappearance	
			Imports ^c	Exports ^{c,d}		TOTAL	Per Capita
- millions SSE gallons -							gallons
2002-03	784.4	1,248.4	290.9	104.8	804.1	1,414.8	5.0
2003-04	804.1	1,475.7	222.3	123.0	890.0	1,489.2	5.2
2004-05 ^a	890.0	977.7	357.5	119.1	674.9	1,431.2	5.0
2005-06	674.9	996.2	298.8	137.7	808.4	1,023.9	3.5
2006-07	808.4	896.1	399.2	122.6	651.4	1,329.7	4.5
2007-08	651.4	1,171.6	405.5	138.7	1,161.8	927.9	3.1
2008-09	1,161.8	1,066.8	317.4	124.7	1,188.3	1,233.0	4.1
2009-10	1,188.3	846.8	327.6	146.7	1,005.7	1,210.3	4.0
2010-11	1,005.7	920.2	265.2	214.2	657.7	1,319.1	4.4
2011-12	657.7	966.9	223.3	151.7	730.3	966.0	3.2
2012-13	730.3	850.7	420.5	169.4	856.2	975.8	3.2
2013-14	856.2	664.4	417.6	160.0	782.5	995.8	3.2
2014-15 ^e	782.5	590.3	458.4	113.1	525.0	1,193.0	3.8
2015-16	525.0	504.0	390.1	91.6	436.8	890.7	2.8
2016-17	436.8	420.5	416.8	72.1	378.2	823.8	2.6
2017-18	378.2	268.6	581.3	44.8	364.8	818.5	2.6
2018-19	364.8	456.0	481.8	41.9	528.2	732.5	2.3
2019-20 ^e	528.2	408.7	292.2	47.8	415.9	765.4	2.4
2020-21	410.5	312.1	365.6	39.8	359.2	689.1	2.07
2021-22 ^f	359.2	273.5	371.1	20.5	319.82	663.6	1.99
2021-22 ^u	359.24	228.84	242.98	20.46	172.33	638.27	1.91

u = update to forecast (based on the USDA production forecast for 2021-22 season released on March 9, 2022;

f = Forecast (based on the USDA production forecast for 2021-22 season released on October 12, 2021).

^a Based on FCOJ inventories for the United States (National Agricultural Statistics Service, Cold Storage Reports) plus Florida SSOJ inventories (FCPS); in 2003-04 and prior years based on Florida FCOJ and SSOJ inventories (adjusted to 11.8° Brix gallons).

^b OJ production from TX and CA estimated using USDA estimates, Florida production includes estimate from non-reporting processor members.

^c U.S. Department of Commerce. Actual prior to 2019-20. Projected for September 2020-21 season.

^d FDOC processor statistics reporting exports which exceeded the volume reported by the U.S. Department of Commerce.

^e Ending inventories for a 53-week season.

Table 13. Florida processor OJ receipts, movement, and inventory, by type.

Season	Net from Florida Fruit ^a	Imports and Other Receipts ^{b,c}	Domestic Packaged Movement	Domestic Bulk Movement	All exports	Net change in inventory
----- million SSE gallons -----						
<u>FCOJ</u>						
2012-13	316.06	193.97	94.97	273.20	69.80	72.07
2013-14	151.78	204.82	84.68	258.52	49.69	(36.30)
2014-15	123.33	252.37	83.93	234.31	36.18	21.28
2015-16	92.78	197.77	78.72	235.29	41.96	(65.42)
2016-17	75.67	254.37	68.75	224.05	60.00	(22.75)
2017-18	42.16	304.46	64.35	214.88	15.69	51.70
2018-19	87.03	295.82	63.56	225.57	18.98	74.75
2019-20	82.04	164.78	54.17	237.55	15.16	(60.06)
2020-21	30.55	220.71	54.67	199.59	21.99	(24.98)
2021-22f	19.82	231.53	51.72	229.66	18.88	(48.90)
2021-22u	23.90	148.36	51.72	238.35	18.88	(136.69)
<u>SSOJ</u>						
2012-13	504.84	38.75	449.95	44.27	22.86	26.52
2013-14	470.63	17.55	434.44	34.72	24.57	(5.55)
2014-15	423.91	34.07	407.12	28.40	8.04	14.42
2015-16	350.81	39.69	384.92	23.77	6.82	(25.01)
2016-17	311.74	59.37	356.01	25.65	5.01	(15.55)
2017-18	194.56	100.04	328.96	24.13	1.97	(60.46)
2018-19	309.44	110.30	318.16	17.30	2.21	82.06
2019-20	284.57	36.01	352.16	23.46	2.60	(57.64)
2020-21	234.40	98.48	343.89	11.39	1.90	(24.30)
2021-22f	214.08	105.17	315.18	26.16	1.58	(23.67)
2021-22u	162.39	116.62	332.56	21.23	1.58	(76.36)

u = update to forecast (based on the USDA production forecast for 2021-22 season released on March 9, 2022;

f = Forecast (based on the USDA production forecast for 2021-22 season released on October 12, 2021).

^a FCOJ includes an estimate of non-reporting processor pound solids.

^b FCOJ other receipts includes net loss/gain in production, evaporated SSOJ, and concentrated tangerine juice used in FCOJ.

^c SSOJ other receipts includes net loss/gain in production, reconned FCOJ used in SSOJ, and is less evaporated SSOJ

Florida Department of Citrus; processor database

Table 14. Retail orange juice sales.

Season	NFC	RECON	FCOJ	Other	TOTAL
Volume^b					
----- million SSE gallons -----					
2012-13	320.9	213.0	27.5	0.8	562.1
2013-14	310.6	191.5	23.4	0.5	526.1
2014-15	292.1	175.9	21.2	0.6	489.8
2015-16	282.8	164.9	20.0	0.4	468.1
2016-17	265.4	148.7	18.1	0.3	432.4
2017-18 ^c	249.1	133.3	16.4	12.3	411.4
2018-19	231.0	136.0	14.7	12.6	394.2
2019-20	263.7	151.1	17.9	13.1	445.9
2020-21p^a	260.5	137.7	15.1	14.8	428.1
2021-22f	227.8	120.6	13.2	12.9	374.5
2021-22u					
High Price	234.6	125.7	13.6	13.2	387.1
Mid-Price	230.0	123.0	13.6	13.2	379.8
Low Price	229.5	122.8	13.6	13.1	379.0
Price^b					
----- \$ per SSE gallon -----					
2012-13	7.25	4.79	4.77	8.46	6.20
2013-14	7.27	4.87	4.89	8.89	6.29
2014-15	7.63	4.95	4.96	9.11	6.55
2015-16	7.56	4.92	4.91	8.95	6.51
2016-17	7.67	5.15	4.93	8.67	6.69
2017-18	7.92	4.97	5.07	7.45	6.83
2018-19	8.40	4.88	5.06	7.42	7.03
2019-20	8.62	4.86	5.13	7.31	7.17
2020-21p^a	8.81	4.86	5.13	7.62	7.37
2021-22f	9.00	4.84	5.19	7.72	7.48
2021-22u					
High Price	9.48	5.09	5.28	8.09	7.86
Mid-Price	9.40	5.04	5.24	8.02	7.79
Low Price	9.31	5.00	5.19	7.95	7.72

u = update to forecast (based on the USDA production forecast for 2021-22 season released on March 9, 2022.

f = Forecast (based on the USDA production forecast for 2021-22 season released on October 12, 2021).

^a Based on an analysis of trends to estimate remaining two periods for the season. Nothing herein is meant to imply minimum pricing, nor FDOC staff opinion on optimal pricing.

^b Data source: Nielsen Answers on Demand, Expanded All Outlets Combined; FDOC Custom database. Grocery stores \$2 million+, mass merchandisers, Walmart discount stores and supercenters, club stores, dollar stores, drug stores \$1 million+, and military/DECA.

^c Routine maintenance of the FDOC Custom database revealed several items (UPCs) were categorized as Recon OJ instead of shelf stable OJ. The database was refreshed in January 2019 altering the totals for the 2017-18 season forward.

Table 15. Share of 100% orange juice sold on promotion with reported price, by type

Season	2017-18	2018-19	2019-20	2020-21
Share - Any Promo^a	----- % of total sales -----			
NFC	37.9%	35.1%	30.4%	28.9%
RECON	26.2%	25.2%	21.4%	22.0%
TOTAL	32.2%	30.2%	26.0%	25.3%
Share - No Promo	----- % of total sales -----			
NFC	62.1%	64.9%	69.6%	71.1%
RECON	73.8%	74.8%	78.6%	78.0%
TOTAL	67.8%	69.8%	74.0%	74.7%
Any Promo Price	----- \$ per SSE gallon -----			
NFC	\$7.18	\$7.66	\$7.93	\$8.09
RECON	\$4.42	\$4.36	\$4.27	\$4.33
TOTAL	\$6.41	\$6.65	\$6.83	\$6.98
No Promo Price	----- \$ per SSE gallon -----			
NFC	\$8.37	\$8.81	\$8.93	\$9.04
RECON	\$5.16	\$5.05	\$5.03	\$4.98
TOTAL	\$7.03	\$7.20	\$7.29	\$7.45

^aShare sold on promotion include feature items, display items, a combination of both feature and display, and temporary price reductions (also known as price decrease). Information is reported for informational purposes. Outlook projections of retail sales are not disaggregated by promotional activity.

Data source: Nielsen Answers on Demand, Expanded All Outlets Combined; FDOC Custom database.

Table 16. Destination markets for Florida certified fresh orange shipments.

Season	Exports		Domestic				TOTAL ^b	
(Aug-July)	Overseas ^a	Canada	South	Northeast	Central	West		
----- million 45-pound cartons -----								90-lb boxes
2003-04	0.55	0.86	4.69	4.20	1.70	0.31	12.31	6.16
2004-05	0.42	0.57	3.99	3.37	1.21	0.24	9.81	4.90
2005-06	0.15	0.54	4.03	3.14	1.04	0.16	9.06	4.53
2006-07	0.12	0.56	4.51	3.11	1.26	0.04	9.59	4.80
2007-08	0.28	0.49	3.91	2.91	0.97	0.01	8.58	4.29
2008-09	0.25	0.59	4.69	3.97	1.30	0.02	10.83	5.41
2009-10	0.19	0.55	3.83	3.17	0.95	0.03	8.73	4.36
2010-11	0.14	0.55	3.70	3.22	1.03	0.04	8.69	4.35
2011-12	0.09	0.51	3.93	3.27	1.22	0.06	9.08	4.54
2012-13	0.12	0.57	3.92	3.16	1.21	0.04	9.02	4.51
2013-14	0.12	0.53	3.35	2.81	1.28	0.03	8.13	4.06
2014-15	0.06	0.65	3.09	2.68	1.33	0.03	7.83	3.92
2015-16	0.13	0.50	2.29	1.97	1.10	0.02	6.02	3.01
2016-17	0.03	0.39	1.51	1.61	0.82	0.02	4.38	2.19
2017-18	0.02	0.34	1.64	1.57	1.05	0.05	4.67	2.33
2018-19	0.04	0.27	1.54	1.66	1.08	0.04	4.63	2.32
2019-20	0.02	0.24	2.38	2.00	1.27	0.04	5.96	2.98
2020-21	0.03	0.19	2.66	1.74	1.27	0.21	6.09	3.05
2021-22f	0.03	0.21	2.01	1.65	1.11	0.09	5.11	2.55
2021-22u	0.03	0.20	1.93	1.58	1.06	.08	4.88	2.44

u = update to forecast (based on the USDA production forecast for 2021-22 season released on March 9, 2022).

f = Forecast (based on the USDA production forecast for 2021-22 season released on October 12, 2021).

Source: Division of Fruit and Vegetable Inspection Service, Florida Department of Agriculture.

a Includes some offshore exports not destined for Europe.

b May not add up due to rounding.

Table 17. Utilization of Florida grapefruit.

Season	Volume					
	Fresh	FCGJ	SSGJ	Non-Certified	Other ^a	TOTAL
----- millions 85-lb boxes -----						
2002-03	14.14	15.96	6.22	1.45	0.93	38.70
2003-04	15.18	17.19	6.59	1.48	0.47	40.90
2004-05	6.70	2.47	2.76	0.71	0.15	12.80
2005-06	6.24	8.00	4.12	0.68	0.26	19.30
2006-07	10.31	11.56	4.43	0.65	0.25	27.20
2007-08	9.91	10.45	5.20	0.71	0.33	26.60
2008-09	8.68	8.42	3.70	0.66	0.23	21.70
2009-10	8.71	6.04	4.59	0.65	0.32	20.30
2010-11	7.73	7.01	4.18	0.66	0.18	19.75
2011-12	7.25	6.87	3.83	0.68	0.22	18.85
2012-13	7.14	6.10	4.23	0.70	0.18	18.35
2013-14	6.05	4.73	4.05	0.50	0.32	15.65
2014-15	5.27	3.83	3.16	0.44	0.19	12.90
2015-16	4.54	2.77	3.04	0.41	0.04	10.80
2016-17	3.25	1.81	2.36	0.25	0.09	7.76
2017-18	1.62	0.54	1.54	0.12	0.06	3.88
2018-19	1.79	0.60	1.97	0.14	0.01	4.51
2019-20	2.04	0.47	2.24	0.09	<0.001	4.85
2020-21 _p	1.89	0.31	1.79	0.10	0.01	4.10
2021-22 _f	1.71	0.20	1.81	0.08	<0.001	3.80
2021-22 _u	1.99	0.22	1.61	0.08	<0.001	3.90

u = update to forecast (based on the USDA production forecast for 2021-22 season released on March 9, 2022;

f = Forecast (based on the USDA production forecast for 2021-22 season released on October 12, 2021).

Table 18. Forecasted Florida GJ availability, movement, and carryover, by type, for 2021-22, and actual for 2018-19 through 2020-21.

Item	2019-20	2020-21p	2021-22f	2021-22u
<u>FCGJ</u>		--- millions SSE gallons ---		
Beginning Inventory	7.99	8.48	6.58	6.58
Pack From Fruit	2.56	1.48	0.96	1.11
Imports and other adjustments ^a	<u>1.64</u>	<u>1.05</u>	<u>1.39</u>	<u>0.28</u>
Total FCGJ Availability	<u>12.19</u>	<u>11.01</u>	<u>8.93</u>	<u>7.98</u>
Movement	<u>3.71</u>	<u>4.44</u>	<u>3.63</u>	<u>5.95</u>
Ending Inventory	8.48	6.58	5.30	5.83
Carryover (weeks supply)	121.3	77.06	76.0	51.0
<u>SSGJ^c</u>		--- Million SSE gallons ---		
Beginning Inventory	9.85	10.98	10.20	10.20
Pack from Fruit ^a	11.94	9.08	9.23	8.66
Imports/Dom Receipts ^b	<u>2.62</u>	<u>2.18</u>	<u>2.57</u>	<u>4.12</u>
Total SSGJ Availability	<u>24.42</u>	<u>22.24</u>	<u>21.17</u>	<u>22.14</u>
Movement – NFC	13.13	11.78	11.84	12.63
Movement– RECON/EVAP ^{d,e}	0.62	0.42	0.22	0.22
Total SSGJ Movement	<u>13.44</u>	<u>12.04</u>	<u>11.84</u>	<u>12.63</u>
Bulk Ending Inventory	10.67	10.04	9.11	9.51
		--- Weeks supply ---		
Bulk Carryover ^f	48.2	44.1	41.0	39.2
<u>TOTAL GJ</u>				
Beginning Inventory	17.84	19.46	16.78	16.78
Production and Imports ^a	<u>19.02</u>	<u>13.43</u>	<u>12.67</u>	<u>13.86</u>
Total GJ Availability	<u>36.61</u>	<u>33.26</u>	<u>30.10</u>	<u>30.64</u>
Movement- Domestic	14.74	14.32	13.67	17.40
Movement- Export	2.09	1.90	1.80	1.18
Total GJ Movement	<u>16.83</u>	<u>16.22</u>	<u>15.47</u>	<u>18.58</u>
Bulk Ending Inventory	19.77	17.03	14.64	12.07
		--- Weeks supply ---		
Carryover	62.3	54.6	49.2	33.8

u = update to forecast (based on the USDA production forecast for 2021-22 season released on March 9, 2022;

Source: FDOC Florida Citrus processors' statistics database.

^a Includes adjustments and pack from reprocessed FCGJ.

^b Includes domestic receipts of non-Florida product, receipts of Florida product from non-member processors, and receipts from foreign sources

^c Availability, movement and inventory adjusted by FCPS to 10.0° Brix gallons.

^d Rounds to zero on FPS Weekly Report.

^e Assumes RECON movement equals pack from FCGJ.

^f Includes packaged

Table 19. U.S. grapefruit juice production, supply, and disappearance.

Season	United States ^a					Disappearance	
	Beg Inv	Prod ^b	Imports	Exports ^c _d	End Inv	TOTAL	Per Capita
Millions SSE gallons							
2002-03	98.10	141.21	0.42	45.60	82.70	111.43	0.87
2003-04 ^e	82.70	147.27	0.49	64.12	72.08	94.26	0.82
2004-05 ^f	72.08	64.54	11.38	27.59	35.92	84.49	0.43
2005-06	35.97	86.88	5.62	21.57	44.77	62.13	0.46
2006-07	44.78	125.64	0.91	42.93	62.61	65.79	0.63
2007-08	62.61	114.21	0.32	40.51	64.87	71.76	0.61
2008-09 ^e	64.87	88.80	0.49	37.13	50.40	66.63	0.50
2009-10	50.40	82.56	0.61	24.67	45.78	63.12	0.47
2010-11	45.78	87.69	0.36	32.80	35.58	65.45	0.49
2011-12	35.58	82.18	0.51	23.75	39.55	54.97	0.43
2012-13	39.55	79.26	0.77	22.74	36.81	60.03	0.43
2013-14	36.81	67.38	0.30	18.22	35.87	50.4	0.37
2014-15 ^e	35.87	51.97	0.35	15.97	29.67	42.55	0.29
2015-16	29.67	46.65	0.81	11.05	27.68	38.4	0.26
2016-17	27.68	40.64	2.77	8.63	20.96	41.5	0.23
2017-18	20.96	30.38	6.66	6.78	13.95	37.27	0.17
2018-19	13.95	51.18	12.26	5.89	17.78	53.72	0.24
2019-20 ^e	17.84	35.32	4.98	5.02	19.46	33.66	0.18
2020-21 ^p	19.46	24.07	2.65	4.97	23.45	36.54	0.11
2021-22 ^f	20.78	23.39	4.89	4.11	19.10	25.85	0.08
2021-22 ^u	23.45	19.01	3.12	1.80	15.12	28.67	0.09

u = update to forecast (based on the USDA production forecast for 2021-22 season released on March 9, 2022;

f = Forecast (based on the USDA production forecast for 2021-22 season released on October 12, 2021).

^a Estimated as U.S. production plus imports minus exports plus beginning inventory minus ending inventory. Prior to 2019-20 season, presumed consumption estimates may have included cold storage outside of Florida. As of 2021-22, estimates of non-Florida processor cold storage incorporated into beginning and ending inventory.

^b GJ production from TX and CA estimated using USDA estimates, Florida production includes estimate from non-reporting processor members.

^c U.S. Department of Commerce, except for exports in 2002-03, 2003-04, and 2006-07 through 2010-11.

^d FDOC processor statistics reporting exports which exceeded the volume reported by the U.S. Department of Commerce.

^e Ending inventories for a 53-week season.

^f 2004-05 and thereafter Florida bulk NFC inventory and production adjusted by FCPS to 10.0° Brix gallons.

Table 20. Retail grapefruit juice sales.

Season	Refrig. NFC	Refrig. RECON	FCGJ	Shelf Stable	TOTAL
Volume					
-----million SSE gallons -----					
2012-13	10.66	0.97	0.39	5.05	17.07
2013-14	10.05	0.94	0.32	4.22	15.53
2014-15	9.29	1.02	0.10	3.87	14.27
2015-16	9.40	0.99	0.18	3.82	14.39
2016-17 ^b	9.51	0.53	0.12	3.77	13.93
2017-18 ^b	8.77	0.48	0.09	3.77	13.11
2018-19 ^{b,c}	8.11	0.12	0.38	3.02	11.63
2019-20 ^{b,c}	8.91	0.15	0.47	2.99	12.52
2020-21 ^p	8.47	0.18	0.42	2.97	12.04
2021-22 ^f	8.25	0.17	0.41	2.89	11.71
2021-22 ^u					
High Price	7.53	0.194	2.80	0.44	10.96
Mid Price	7.52	0.190	2.74	0.43	10.88
Low Price	7.50	0.187	2.66	0.42	10.77
Price					
----- \$ per SSE gallon -----					
2012-13	7.53	6.09	4.46	6.04	6.94
2013-14	7.57	6.26	4.61	6.39	7.11
2014-15	7.85	6.17	5.24	6.43	7.32
2015-16	7.83	6.48	4.36	6.41	7.32
2016-17	7.96	5.88	4.42	6.28	7.40
2017-18	8.30	6.71	4.84	6.19	7.61
2018-19 ^c	8.86	13.78	4.74	6.64	8.19
2019-20 ^c	9.27	18.16	3.83	7.41	8.73
2020-21 ^p	9.49	19.18	4.60	7.74	9.03
2021-22 ^f	9.88	20.13	4.64	7.82	9.34
2021-22 ^u					
High Price	9.72	19.31	8.28	7.04	9.42
Mid Price	9.70	19.27	8.26	7.03	9.40
Low Price	9.68	19.23	8.25	7.02	9.39

u = update to forecast (based on the USDA production forecast for 2021-22 season released on March 9, 2022;

f = Forecast (based on the USDA production forecast for 2021-22 season released on October 12, 2021).

^a Based on an analysis of trends. Nothing herein is meant to imply minimum pricing, nor FDOC staff opinion on optimal pricing.

^b Data source: Nielsen Answers on Demand, Expanded All Outlets Combined; FDOC Custom database. Grocery stores \$2 million+, mass merchandisers, Walmart discount stores and supercenters, club stores, dollar stores, drug stores \$1 million+, and military/DECA.

^c One or more refrigerated recon products, as indicated by UPCs in the FDOC custom database, were confirmed as discontinued leading to a significant drop in volume for the category. The volume remaining recon products reflects equivalent gallons of small container sizes which would indicate a significant increase in price.

Table 21. Share of 100% grapefruit juice sold on promotion with reported price, by type.

Season	2017-18	2018-19	2019-20	2020-21
Share - Any promo^a	----- % of total sales -----			
NFC	39.9%	38.3%	34.1%	31.4%
RECON	17.3%	10.9%	8.0%	5.7%
TOTAL	32.8%	30.7%	27.1%	24.1%
Share - No Promo	----- % of total sales -----			
NFC	60.1%	61.7%	65.9%	68.6%
RECON	82.7%	89.1%	92.0%	94.6%
TOTAL	67.2%	69.3%	72.9%	75.9%
Any Promo Price	----- \$ per SSE gallon -----			
NFC	\$7.22	\$7.72	\$8.00	\$8.25
RECON	\$5.39	\$6.41	\$7.51	\$9.29
TOTAL	\$6.93	\$7.59	\$7.92	\$8.32
No Promo Price	----- \$ per SSE gallon -----			
NFC	\$9.10	\$9.71	\$9.93	\$10.03
RECON	\$6.39	\$6.83	\$7.40	\$7.61
TOTAL	\$8.04	\$8.66	\$9.03	\$9.22

^a Share sold on promotion include feature items, display items, a combination of both feature and display, and temporary price reductions (also known as price decrease). Information is reported for informational purposes. Outlook projections of retail sales are not disaggregated by promotional activity.

Data source: Nielsen Answers on Demand, Expanded All Outlets Combined; FDOC Custom database.

Table 22. Destination markets for Florida certified fresh grapefruit.

Season (Aug-July)	Domestic	Exports				TOTAL ^b	
		Canada	Europe ^a	Far East	Total Exports ^b		
	----- million 42½-pound cartons -----						million 85-lb box equivalent
2002-03	9.90	1.60	6.20	10.50	18.30	28.20	14.10
2003-04	9.00	1.80	6.90	12.70	21.40	30.40	15.20
2004-05	4.90	0.80	2.80	5.00	8.60	13.50	6.75
2005-06	4.80	0.80	2.10	4.80	7.70	12.50	6.25
2006-07	6.75	1.28	4.40	8.20	13.87	20.62	10.31
2007-08	6.20	1.20	5.00	7.50	13.70	19.90	9.95
2008-09	6.05	1.09	3.92	6.30	11.31	17.35	8.68
2009-10	6.11	1.15	3.46	6.71	11.31	17.42	8.71
2010-11	5.40	1.10	3.12	5.84	10.06	15.46	7.73
2011-12	5.53	0.99	2.80	5.17	8.96	14.49	7.25
2012-13	5.99	1.09	2.92	4.28	8.28	14.27	7.14
2013-14	5.13	0.99	2.61	3.39	6.98	12.11	6.05
2014-15	4.44	0.81	2.24	3.06	6.11	10.55	5.27
2015-16	3.79	0.65	1.93	2.70	5.28	9.07	4.54
2016-17	2.66	0.42	1.42	1.99	3.83	6.49	3.25
2017-18	1.51	0.22	0.61	0.90	1.73	3.24	1.62
2018-19	1.87	0.30	0.52	0.88	1.70	3.57	1.78
2019-20	2.24	0.31	0.71	0.83	1.85	4.09	2.04
2020-21	2.45	0.22	0.52	0.57	1.33	3.78	1.89
2021-22f	2.19	0.23	0.44	0.55	1.23	3.42	1.71
2021-22u	2.51	0.29	0.61	0.57	1.47	3.98	1.99

u = update to forecast (based on the USDA production forecast for 2021-22 season released on March 9, 2022.

f = Forecast (based on the USDA production forecast for 2021-22 season released on October 12, 2021).

Source: Division of Fruit and Vegetable Inspection Service, Florida Department of Agriculture.

^a Includes some offshore exports not destined for Europe.

^b May not add up due to rounding.

Table 23. Utilization of Florida fresh specialty.

Season	Fresh	Non-Certified	Processed	Total
----- millions 90-pound boxes -----				
2002-03	4.52	0.24	3.33	7.85
2003-04	4.99	0.26	2.52	7.50
2004-05	3.81	0.29	2.19	6.00
2005-06	4.16	0.34	2.75	6.90
2006-07	3.50	0.37	2.35	5.85
2007-08	3.71	0.31	3.29	7.00
2008-09	3.34	0.35	1.66	5.00
2009-10	3.43	0.38	1.92	5.35
2010-11	3.45	0.40	2.35	5.80
2011-12	3.27	0.39	2.17	5.44
2012-13	2.69	0.31	1.60	4.28
2013-14	2.34	0.33	1.44	3.78
2014-15	1.92	0.18	1.56	3.48
2015-16	1.13	-	0.70	1.82
2016-17 ^b	0.85	-	0.77	1.62
2017-18	0.49	-	0.26	0.75
2018-19	0.54	-	0.45	0.99
2019-20	0.64	-	0.38	1.02
2020-21 ^p	0.60	0.05	0.29	0.89
2021-22 ^f	0.54	0.05	0.31	0.90
2021-22 ^u	0.50	0.05	0.25	0.80

u = update to forecast (based on the USDA production forecast for 2021-22 season released on March 9, 2022.

f = Forecast (based on the USDA production forecast for 2021-22 season released on October 12, 2021).

a Processed boxes are utilized for orange juice, except some tangerines utilized to 100% produce tangerine juice.

b Starting in the 2016-17 season, Royal tangerines (formerly Temple) reported with specialty.

Table 24. Destination markets for Florida certified fresh specialty shipments.

Table 24. Destination markets for Florida certified fresh specialty shipments.								
Season	Exports		Domestic				TOTAL ^b	
(Aug-July)	Overseas	Canada	South	Northeast	Central	West		
----- million 45-pound cartons -----								--- millions 90- pound boxes-- --
2003-04	0.16	0.50	3.10	2.82	1.58	1.29	9.45	4.73
2004-05	0.09	0.34	2.43	2.19	1.12	0.87	7.05	3.52
2005-06	0.09	0.39	2.75	2.35	1.17	0.88	7.63	3.81
2006-07	0.01	0.43	2.55	2.14	1.29	0.20	6.61	3.30
2007-08	0.01	0.41	2.82	2.47	1.20	0.16	7.07	3.53
2008-09	0.00	0.33	2.40	2.22	1.16	0.14	6.25	3.12
2009-10	0.05	0.33	2.45	1.97	0.95	0.60	6.35	3.17
2010-11	0.10	0.30	2.47	1.96	0.99	0.55	6.36	3.18
2011-12	0.04	0.24	2.42	1.82	0.89	0.55	5.95	2.98
2012-13	0.05	0.21	2.04	1.48	0.72	0.42	4.93	2.46
2013-14	0.03	0.16	1.70	1.33	0.62	0.37	4.20	2.10
2014-15	0.03	0.13	1.53	1.19	0.48	0.26	3.61	1.80
2015-16	0.01	0.06	0.99	0.81	0.32	0.17	2.37	1.19
2016-17	0.02	0.04	0.72	0.61	0.20	0.13	1.72	0.86
2017-18	0.00	0.01	0.41	0.30	0.09	0.05	0.87	0.43
2018-19	0.01	0.03	0.48	0.31	0.09	0.06	0.98	0.49
2019-20	0.01	0.03	0.58	0.31	0.11	0.11	1.14	0.57
2020-21p	0.01	0.02	0.63	0.23	0.08	0.12	1.10	0.55
2021-22f	0.01	0.03	0.57	0.29	0.09	0.10	1.08	0.54
2021-22u	0.01	0.02	0.52	0.26	0.08	0.09	0.99	0.50

u = update to forecast (based on the USDA production forecast for 2021-22 season released on March 9, 2022.

f = Forecast (based on the USDA production forecast for 2021-22 season released on October 12, 2021).

Source: Division of Fruit and Vegetable Inspection Service, Florida Department of Agriculture.

a Includes some offshore exports not destined for Europe.

b May not add up due to rounding.

Table 25. Projected average 2021-22 Florida fresh and processed on-tree prices.

Item	FOB Price ^a	Packing Costs ^{b,c}	Delivered-In Price ^a		Pick & Haul Costs ^d	On-Tree Price
----- \$ per carton -----				----- \$ per box -----		
<u>FRESH (100% Pack Out)^e</u>						
Oranges						
Navel	25.70	6.26	31.96	15.98	3.44	19.42
Early & Mid	18.56	7.26	25.82	12.91	3.44	16.35
Valencia	15.28	8.26	23.54	11.77	4.07	15.84
Grapefruit^e						
White	28.63	5.92	34.54	17.27	3.39	20.66
Red	30.93	5.92	36.84	18.42	2.93	21.35
Specialty						
All Tangerine	35.60	7.12	42.72	21.36	4.93	26.29
<u>PROCESSED</u>				- \$/ps ^f -		
Oranges^g						
Early & Mid (4.89 ps/box)	Low:	1.97	9.62	3.04	6.58	
	Mid:	2.14	10.46	3.04	7.42	
	High:	2.31	11.30	3.04	8.26	
Valencia (5.45 ps/box)	Low:	2.36	11.56	3.11	8.45	
	Mid:	2.57	14.01	3.11	10.90	
	High:	2.78	13.57	3.11	10.46	
Grapefruit^h						
White (4.42 ps/box)	Low:	2.09	9.21	3.39	5.82	
	Mid:	2.27	10.01	3.39	6.62	
	High:	2.46	10.81	3.39	7.42	
Red (4.41 ps/box)	Low:	1.77	7.83	2.93	4.90	
	Mid:	1.92	8.51	2.93	5.58	
	High:	2.08	9.19	2.93	6.26	

^f = Forecast (based on the USDA production forecast for 2021-22 season released on October 12, 2021).

^b Includes Industry Assessments (See Singerman (2021a)).

^c Packing charges for Florida citrus are reported by Singerman (2021a).

^d Pick and haul costs are reported by Singerman (2021b).

^e 2020-21 preliminary prices are based on cash sales only as reported by the USDA, National Agricultural Statistics Service in "2020-21 Citrus Summary," 09/08/2021.

^f Net of FDOC assessment, inspection fees and import duty ps = refers to pounds solids or the amount of soluble solids in each box of fruit.

^g Spot and contract final prices known week of delivery for Florida certified shipments. Round orange prices include hybrids & tangerines processed with round oranges. Data source: Florida Processor Statistics database.

Table 26. On-tree returns for certified Florida citrus.

Variety	2020-21 ^p			2021-22 ^f		
	Fresh	Processing	TOTAL ^b	Fresh	Processing	TOTAL ^b
<u>Oranges</u>						
Early, Mids, & Navels	22.3	164.2	186.4	21.5	132.8	153.24
Valencias	25.8	288.9	314.7	19.7	220.7	240.4
Total Orange	48.1	453.0	501.1	40.2	353.5	393.6
<u>Grapefruit</u>						
White Seedless	3.3	2.7	6.0	3.0	3.9	6.9
Colored Seedless	40.2	10.8	51.0	39.9	13.2	53.0
Total Grapefruit	43.6	13.5	57.1	43.5	118.8	55.3
<u>Specialty</u>						
Total Tangerines	13.0	-0.1	12.9	26.3	3.3	29.5
TOTAL CITRUS^a	104.7	467.0	571.7	109.9	368.5	478.4

p = preliminary

f = Forecast (based on the USDA production forecast for 2021-22 season released on October 12, 2021).

^a Based on an analysis of trends. Nothing herein is meant to imply minimum pricing, nor FDOC staff opinion on optimal pricing. Processing data based on delivered-in prices known week of delivery. Fresh fruit data based on industry trends and data supplied by Citrus Administrative Committee.

^b May not add up due to rounding.

