



CITRUS APRIL FORECAST MATURITY TEST RESULTS AND FRUIT SIZE

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Florida All Orange Production Down 5 Percent from March Forecast
Florida Non-Valencia Orange Production Unchanged
Florida Valencia Orange Production Down 8 Percent
Florida All Grapefruit Production Down 9 Percent
Florida All Tangerine and Tangelo Production Unchanged

FORECAST DATES - 2023-2024 SEASON	
May 10, 2024	June 12, 2024
July 12, 2024	

Citrus Production by Type – States and United States

Crop and State	Production ¹		2023-2024 Forecasted Production ¹	
	2021-2022 (1,000 boxes)	2022-2023 (1,000 boxes)	March (1,000 boxes)	April (1,000 boxes)
Non-Valencia Oranges ²				
Florida	18,250	6,150	6,800	6,800
California	31,500	36,100	38,000	38,000
Texas	170	570	600	700
United States	49,920	42,820	45,400	45,500
Valencia Oranges				
Florida	22,950	9,670	13,000	12,000
California	7,600	8,600	8,000	8,000
Texas	30	560	350	400
United States	30,580	18,830	21,350	20,400
All Oranges				
Florida	41,200	15,820	19,800	18,800
California	39,100	44,700	46,000	46,000
Texas	200	1,130	950	1,100
United States	80,500	61,650	66,750	65,900
Grapefruit				
Florida-All	3,330	1,810	2,200	2,000
Red	2,830	1,560	1,900	1,750
White	500	250	300	250
California	4,100	4,300	3,800	4,100
Texas	1,700	2,250	2,350	2,600
United States	9,130	8,360	8,350	8,700
Lemons				
Arizona	1,250	1,400	900	1,050
California	25,200	26,000	20,000	22,000
United States	26,450	27,400	20,900	23,050
Tangerines and Mandarins				
Florida	750	480	500	500
California ³	17,500	23,550	22,000	22,000
United States	18,250	24,030	22,500	22,500

¹ Net pounds per box: oranges in California-80, Florida-90, Texas-85; grapefruit in California and Texas-80, Florida-85; lemons-80; and tangerines and mandarins in California-80, Florida-95.

² Navel and miscellaneous varieties in California. Early (including Navel) and midseason varieties in Florida and Texas.

³ Includes tangelos and tangors.

All Oranges 18.8 Million Boxes

The 2023-2024 Florida all orange forecast released today by the USDA Agricultural Statistics Board is lowered 1.00 million boxes to 18.8 million boxes. If realized, this will be 19 percent more than last season's revised production. The forecast consists of 6.80 million boxes of non-Valencia oranges (early, mid-season, and Navel varieties) and 12.0 million boxes of Valencia oranges. An 8-year regression was used for comparison purposes. All references to "average", "minimum", and "maximum" refer to the previous 10 seasons, excluding the 2017-2018 season, which was affected by Hurricane Irma, and the 2022-2023 season, which was affected by Hurricanes Ian and Nicole. Average fruit per tree includes both regular bloom and the first late bloom.

Non-Valencia Oranges 6.80 Million Boxes

The forecast of non-Valencia orange production is unchanged at 6.80 million boxes. Non-Valencia harvest is over for the season. The Row Count survey conducted March 26-27, 2024 showed the relatively complete harvest of early & mid-season non-Valencia rows. The Navel forecast, included in the non-Valencia portion of the forecast, is 180,000 boxes.

Valencia Oranges 12.0 Million Boxes

The forecast of Valencia orange production is reduced 1.00 million boxes from the previous forecast and is now 12.0 million boxes. Final fruit size is below the average, requiring 271 pieces to fill a 90-pound box. Final droppage, measured at 50 percent, is above the average. The Row Count survey conducted March 26-27, 2024, showed 51 percent of the Valencia crop harvested.

All Grapefruit 2.00 Million Boxes

The forecast of all grapefruit production is lowered 200,000 boxes to 2.00 million. The Row Count survey conducted March 26-27, 2024, indicated 97 percent of red and white grapefruit rows are harvested.

Tangerines and Tangelos 500,000 Boxes

The forecast for tangerines and tangelos is unchanged at 500,000 boxes. This forecast number includes all certified tangerine and tangelo varieties.

Reliability

To assist users in evaluating the reliability of the April 1 Florida production forecasts, the "Root Mean Square Error," a statistical measure based on past performance, is computed. The deviation between the April 1 production forecast and the final estimate is expressed as a percentage of the final estimate. The average of squared percentage deviations for the latest 20-year period is computed. The square root of the average becomes statistically the "Root Mean Square Error." Probability statements can be made concerning expected differences in the current forecast relative to the final end-of-season estimate, assuming that factors affecting this year's forecast are not different from those influencing recent years.

The "Root Mean Square Error" for the April 1 Florida all orange production forecast is 3.7 percent. If you exclude the four abnormal production seasons (four hurricane seasons), the "Root Mean Square Error" is 4.0 percent. This means chances are 2 out of 3 that the current all orange production forecast will not be above or below the final estimates by more than 3.7 percent including abnormal seasons, or 4.0 percent excluding abnormal seasons. Chances are 9 out of 10 (90 percent confidence level) that the difference will not exceed 6.3 percent including abnormal seasons, or 7.0 percent excluding abnormal seasons.

Changes between the April 1 Florida all orange forecast and the final estimates during the past 20 years have averaged 2.87 million boxes (3.15 million, excluding abnormal seasons), ranging from 0.05 million boxes to 5.7 million boxes including abnormal seasons, (1.3 to 5.7 million boxes excluding abnormal seasons). The April 1 forecast for all oranges has been below the final estimate 9 times, above 11 times, (below 8 times, above 8 times, excluding abnormal seasons). The difference does not imply that the April 1 forecasts this year are likely to understate or overstate final production.

Forecast Components, by Type – Florida: April 2024

[Survey data is considered final in December for Navels, January for early & mid-season (non-Valencia) oranges, February for grapefruit, and April for Valencia oranges]

Type	Bearing trees (1,000 trees)	Fruit per tree (number)	Droppage (percent)	Fruit per box (number)
ORANGES				
Early & mid-season (Non-Valencia) ¹	13,299	342	43	336
Navel.....	570	138	37	138
Valencia.....	24,868	279	50	271
GRAPEFRUIT				
Red.....	1,418	356	34	119
White.....	194	479	25	109

¹ Excludes Navels.

Maturity

Regular bloom fruit samples were collected from groves on established routes March 26-27, 2024, in Florida's five major citrus producing areas and tested March 28, 2024. Only Valencia oranges were collected and tested this month.

Unadjusted Maturity Tests – Florida: April 1, 2022-2023 and 2023-2024

[Averages of regular bloom fruit from sample groves. Juice and solids per box are unadjusted and not comparable to juice processing plant test results. Samples were run through an FMC 091B machine using pneumatic pressure. This machine utilizes a 0.025 short strainer and a 1.00-inch orifice tube for the 3 inch cup and a 1.25 inch orifice tube for the 4 inch and 5 inch cups.]

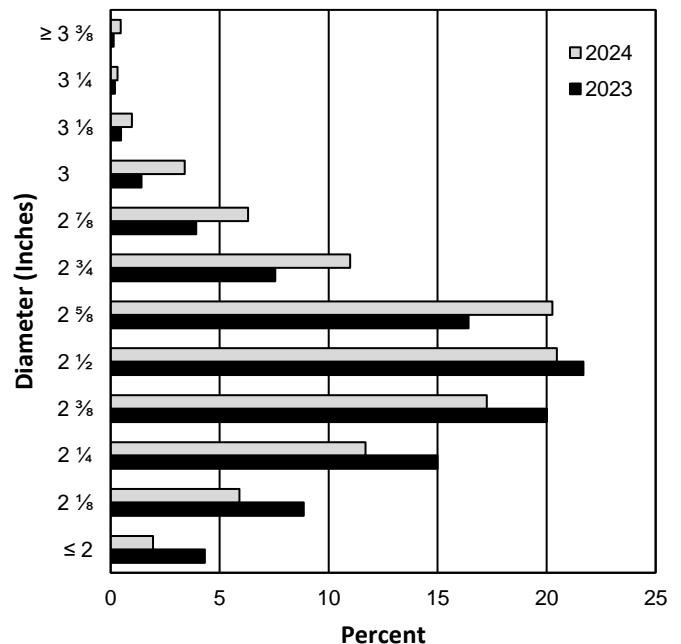
Fruit type (number of groves) test date	Acid		Solids (Brix)		Ratio		Unfinished juice per box		Solids per box	
	2022-2023 (percent)	2023-2024 (percent)	2022-2023 (percent)	2023-2024 (percent)	2022-2023	2023-2024	2022-2023 (pounds)	2023-2024 (pounds)	2022-2023 (pounds)	2023-2024 (pounds)
Valencia Oranges (44-75)										
Oct 1	1.89	1.78	8.75	9.15	4.69	5.24	46.59	45.45	4.08	4.16
Nov 1	1.63	1.46	8.95	9.24	5.55	6.45	50.60	49.19	4.53	4.55
Dec 1	1.24	1.23	8.89	9.64	7.27	7.95	52.68	51.76	4.69	4.99
Jan 1	1.12	1.09	9.01	9.76	8.12	9.14	54.56	53.44	4.91	5.22
Feb 1	0.97	0.96	9.16	10.11	9.56	10.64	55.94	54.84	5.13	5.55
Mar 1	0.88	0.89	9.54	10.07	10.95	11.46	55.25	54.86	5.27	5.53
Apr 1	0.72	0.77	9.21	10.38	12.89	13.69	54.32	54.52	5.00	5.67

Fruit Size Comparisons to Previous Seasons

Size frequency distributions from the March size survey are shown in the below table. The distributions are by percent of fruit falling within the size range of each 4/5-bushel container. These frequency distributions include fruit from regular bloom and exclude fruit from summer bloom.

The chart to the right shows the distribution of fruit sizes in 2023 compared to 2024. The diameter measurements shown are the minimum values of fruit measured, except for the smallest value.

**Fruit Size Frequency Measurements,
Valencia Oranges, by Diameter –
Florida: March**



Citrus Size Frequency Measurement Distributions, by Type – Florida: March

Type and number of fruit per 4/5 – bushel containers	2022	2023	2024
	(percent)	(percent)	(percent)
VALENCIA ORANGES			
64 or less	0.8	0.6	1.1
80.....	5.1	2.9	6.5
100.....	20.8	16.1	23.0
125.....	31.8	32.2	32.6
163 or more	41.5	48.2	36.8