United States Department of Agriculture
National Agricultural Statistics Service

CITRUS

DECEMBER FORECAST
MATURITY TEST RESULTS AND FRUIT SIZE

Cooperating with the Florida Department of Agriculture and Consumer Services
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December 10, 2024

Florida All Orange Production Down 20 Percent from the October Forecast
Florida Non-Valencia Orange Down 17 Percent
Florida Valencia Orange Production Down 22 Percent
Florida All Grapefruit Production Down 14 Percent
Florida Lemon Production Unchanged
Florida Tangerine and Mandarin Production Down 13 Percent

FORECAST DATES - 2024-2025 SEASON

January 10, 2025	April 10, 2025
February 11, 2025	May 12, 2025
March 11, 2025	June 12, 2025
July 11, 2025	

Citrus Production by Type – States and United States

Crop and State	Production [1]		2024-2025 Forecasted Production [1]	
	2022-2023	2023-2024	October	December
	(1,000 boxes)	(1,000 boxes)	(1,000 boxes)	(1,000 boxes)
Non-Valencia Oranges [2]				
Florida	**6,150**	**6,760**	**6,000**	**5,000**
California [3]	36,000	38,200	39,000	39,000
Texas [3]	570	690	400	400
United States	42,720	45,650	45,400	44,400
Valencia Oranges				
Florida	**9,670**	**11,200**	**9,000**	**7,000**
California [3]	8,600	9,300	8,700	8,700
Texas [3]	560	490	450	450
United States	18,830	20,990	18,150	16,150
All Oranges				
Florida	**15,820**	**17,960**	**15,000**	**12,000**
California [3]	44,600	47,500	47,700	47,700
Texas [3]	1,130	1,180	850	850
United States	61,550	66,640	63,550	60,550
Grapefruit				
Florida-All	**1,810**	**1,790**	**1,400**	**1,200**
Red	**1,560**	**1,550**	**1,200**	**1,050**
White	**250**	**240**	**200**	**150**
California [3] [4]	4,500	4,300	4,200	4,200
Texas [3]	2,250	2,400	1,900	1,900
United States	8,560	8,490	7,500	7,300
Lemons [3]				
Florida [5]	**(NA)**	**(NA)**	**500**	**500**
Arizona	1,400	950	900	900
California	25,800	24,600	26,000	26,000
United States	27,200	25,550	27,400	27,400
Tangerines and Mandarins [6]				
Florida	**480**	**450**	**400**	**350**
California [3]	23,500	27,400	25,000	25,000
United States	23,980	27,850	25,400	25,350

(NA) Not Available.

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

[2] Early non-Valencia (including Navel) and midseason non-Valencia varieties in Florida; Navel and miscellaneous varieties in California; Early and mid-season varieties in Texas.

[3] Estimates carried forward from October.

[4] Includes pummelos in California.

[5] Estimates began with the 2024-2025 crop year.

[6] Includes tangelos.

All Oranges 12.0 Million Boxes

The 2024-2025 Florida all orange forecast released today by the USDA Agricultural Statistics Board is 12.0 million boxes, down 20 percent from the October forecast. If realized, this will be 33 percent less than last season's final production. The forecast consists of 5.00 million boxes of non-Valencia oranges (early, mid-season, and Navel varieties) and 7.00 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 5.00 Million Boxes

The forecast of non-Valencia production is 5.00 million boxes, down 1.00 million boxes from the October forecast. Final fruit size is projected to be below average at harvest. Current droppage is above the maximum and projected to be above the maximum at harvest. The Navel forecast, included in the non-Valencia forecast is 150,000 boxes, comprising 3 percent of the non-Valencia total.

Valencia Oranges 7.00 Million Boxes

The forecast of Valencia production is 7.00 million boxes, down 2.00 million boxes from October. Current fruit size is average and is projected to be average at harvest. Current droppage is projected to be above the maximum at harvest.

All Grapefruit 1.20 Million Boxes

The forecast of all grapefruit production is 1.20 million boxes, down 200,000 boxes from the October forecast. If realized, this will be 33 percent less than last season's final production. The red grapefruit, at 1.05 million boxes, is lowered 150,000 boxes from the October forecast. Fruit size of red grapefruit at harvest is projected to be above average, and droppage is projected to above the maximum. The white grapefruit forecast is down 50,000 boxes to 150,00 boxes. Projected fruit size of white grapefruit at harvest is above average and projected droppage is above average.

Lemons 500,000 Boxes

The forecast of lemons is 500,000 boxes, carried over from the October forecast.

Tangerines and Mandarins 350,000 Boxes

The forecast of tangerines and mandarins is 350,000 boxes, down 50,000 boxes from the October forecast. This forecast number includes all certified tangerine and tangelo varieties.

Reliability

To assist users in evaluating the reliability of the December 1 Florida production forecasts, the "Root Mean Square Error," a statistical measure based on past performance, is computed. The deviation between the December 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 December 1 Florida all orange production forecast is 10.6 percent. However, if you exclude the four abnormal production seasons (four hurricane seasons), the "Root Mean Square Error" is 9.1 percent. This means chances are 2 out of 3 that the current all orange production forecast will not be above or below the final estimate by more than 10.6 percent, or 9.1 percent excluding abnormal seasons. Chances are 9 out of 10 (90 percent confidence level) that the difference will not exceed 18.4 percent, or 15.9 percent excluding abnormal seasons.

Changes between the December 1 Florida all orange forecast and the final estimates during the past 20 years have averaged 6.91 million boxes (6.28 million, excluding abnormal seasons), ranging from 0.95 million boxes to 18.2 million boxes including abnormal seasons, (1.30 to 16.3 million boxes excluding abnormal seasons). The December 1 forecast for all oranges has been below the final estimate 2 times, above 18 times, (below 2 times, above 14 times, excluding abnormal seasons). The difference does not imply that the December 1 forecast this year is likely to understate or overstate final production.

Forecast Components, by Type – Florida: December 2024

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

Type	Bearing trees	Fruit per tree	Droppage	Fruit per box
	(1,000 trees)	(number)	(percent)	(number)
ORANGES				
Early-midseason (non-Valencia) [1]	9,725	392	59	328
Navel	480	123	65	146
Valencia	20,124	244	60	253
GRAPEFRUIT				
Red	1,357	271	43	116
White	161	369	35	106

[1] Excludes Navels.

Maturity

Regular bloom fruit samples (311 orange and 94 grapefruit) were collected from groves on established routes in Florida's five major citrus producing areas on November 25-26, 2024, and tested by the USDA, NASS, Florida Field Office on December 2-4, 2024.

Unadjusted Maturity Tests – Florida: 2023-2024 and 2024-2025

[Averages of regular bloom fruit from sample groves. Samples were run through an FMC 091B machine using pneumatic pressure. This machine utilizes a 0.025 short strainer with a 1-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	
	2023-2024	2024-2025	2023-2024	2024-2025	2023-2024	2024-2025	2023-2024	2024-2025	2023-2024	2024-2025
	(percent)	(percent)	(percent)	(percent)			(pounds)	(pounds)	(pounds)	(pounds)
ORANGES										
Early N-V (115-106)										
Sep 1	1.06	1.17	9.63	8.95	9.15	7.75	45.59	44.16	4.39	3.95
Oct 1	0.82	0.86	9.05	8.88	11.19	10.53	45.89	47.68	4.16	4.23
Nov 1	0.67	0.69	9.09	9.08	13.67	13.23	48.82	50.03	4.44	4.54
Dec 1	0.62	0.57	9.27	8.92	14.98	15.90	50.80	52.42	4.71	4.68
Midseason N-V (54-55)										
Sep 1	1.20	1.46	9.18	8.77	7.73	6.09	43.61	44.81	4.00	3.93
Oct 1	0.98	1.07	9.26	8.74	9.56	8.27	46.74	49.00	4.33	4.28
Nov 1	0.78	0.88	9.02	8.74	11.70	10.12	49.49	50.96	4.47	4.46
Dec 1	0.72	0.72	9.26	9.11	13.03	12.97	51.67	53.26	4.79	4.85
Valencia (149-150)										
Sep 1	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Oct 1	1.76	1.79	9.14	8.64	5.31	4.89	45.58	47.15	4.17	4.08
Nov 1	1.46	1.46	9.20	8.69	6.41	6.04	49.08	50.79	4.52	4.42
Dec 1	1.22	1.17	9.53	8.97	7.92	7.79	51.41	54.54	4.90	4.90
GRAPEFRUIT										
Red Seedless (42-46)										
Sep 1	1.49	1.56	10.92	9.53	7.37	6.14	40.09	37.53	4.38	3.58
Oct 1	1.26	1.30	10.29	9.47	8.16	7.28	43.87	45.19	4.52	4.28
Nov 1	1.23	1.25	10.03	9.13	8.21	7.33	48.85	47.82	4.91	4.37
Dec 1	1.22	1.17	9.72	9.35	7.97	8.07	50.77	51.29	4.94	4.80
White Seedless (46-48)										
Sep 1	1.64	1.60	10.90	9.44	6.66	5.93	39.14	37.98	4.26	3.59
Oct 1	1.41	1.36	10.49	9.43	7.47	6.97	42.94	44.44	4.51	4.18
Nov 1	1.34	1.31	10.18	9.11	7.62	6.97	48.83	47.90	4.97	4.37
Dec 1	1.35	1.24	10.13	8.91	7.56	7.24	50.20	50.75	5.08	4.52

(NA) Not available.

Size Frequency Measurement Distributions, by Type – Florida: November

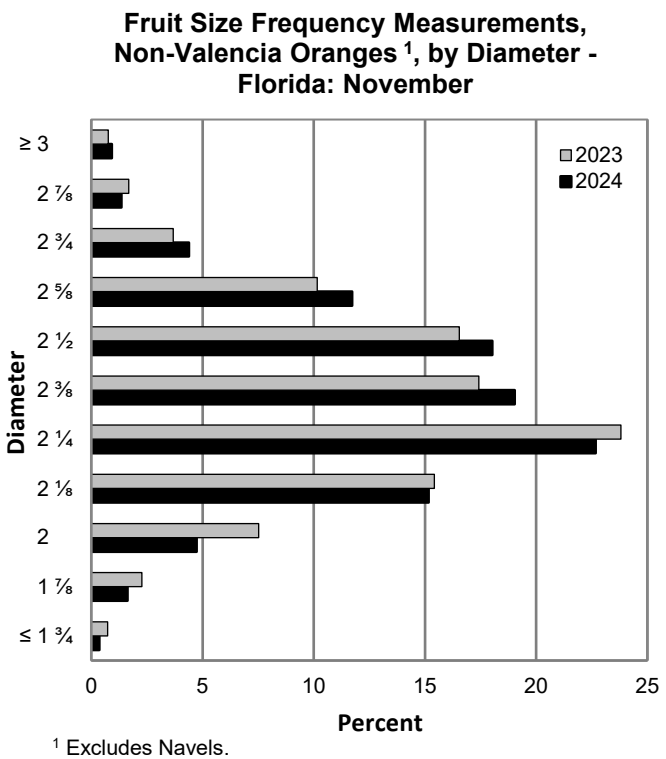
[Size frequency distributions from the November size survey are shown in the following table. The distributions are by percent of fruit falling within the size range of each 4/5-bushel container. These frequency distributions include fruit from regular bloom and exclude fruit from summer bloom.]

Type and number of fruit per 4/5–bushel containers	2022	2023	2024
	(percent)	(percent)	(percent)
NON-VALENCIA ORANGES [1]			
64 or less	0.1	0.1	0.2
80	1.1	1.4	1.1
100	7.2	7.8	9.2
125	25.0	23.5	25.9
163 or more	66.6	67.2	63.6
NAVEL ORANGES			
64 or less	48.7	42.4	26.5
80	29.0	30.3	38.5
100	16.7	19.0	13.5
125	5.0	6.0	13.0
163 or more	0.6	2.3	8.5
VALENCIA ORANGES			
64 or less	0.0	0.3	0.3
80	1.5	2.6	3.4
100	11.1	13.2	20.9
125	30.7	31.2	34.4
163 or more	56.7	52.7	41.0

Type and number of fruit per 4/5–bushel containers	2022	2023	2024
	(percent)	(percent)	(percent)
RED GRAPEFRUIT [2]			
32 or less	0.2	1.4	1.7
36	2.3	5.3	7.4
40	6.1	9.2	10.1
48	9.1	14.5	17.5
56	13.2	16.4	19.4
63 or more	69.1	53.2	43.9
WHITE GRAPEFRUIT [2]			
32 or less	1.2	0.6	3.6
36	5.2	4.8	15.9
40	7.7	9.0	17.7
48	13.3	17.9	18.7
56	17.3	19.0	10.0
63 or more	55.3	48.7	34.1

[1] Excludes Navels.
[2] Excludes seedy.

The charts below show the distribution of fruit sizes in 2023 compared to 2024. The diameter measurements shown are the minimum values of each eighth inch range, except for the smallest values.



[1] Excludes Navels.