



CITRUS JANUARY FORECAST MATURITY TEST RESULTS AND FRUIT SIZE

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January 12, 2023

Florida All Orange Production Down 10 Percent from December Forecast
Florida Non-Valencia Orange Production Unchanged
Florida Valencia Orange Production Down 15 Percent
Florida All Grapefruit Production Down 17 Percent
Florida All Tangerine and Tangelo Production Down 17 Percent

FORECAST DATES - 2022-2023 SEASON	
February 8, 2023	May 12, 2023
March 8, 2023	June 9, 2023
April 11, 2023	July 12, 2023

Citrus Production by Type – States and United States

Crop and State	Production ¹		2022-2023 Forecasted Production ¹	
	2020-2021 (1,000 boxes)	2021-2022 (1,000 boxes)	December (1,000 boxes)	January (1,000 boxes)
Non-Valencia Oranges ²				
Florida	22,700	18,250	7,000	7,000
California.....	41,300	31,800	38,000	38,000
Texas.....	1,000	170	900	900
United States.....	65,000	50,220	45,900	45,900
Valencia Oranges				
Florida	30,250	22,800	13,000	11,000
California.....	7,700	8,600	9,100	8,100
Texas.....	50	30	250	250
United States.....	38,000	31,430	22,350	19,350
All Oranges				
Florida	52,950	41,050	20,000	18,000
California.....	49,000	40,400	47,100	46,100
Texas.....	1,050	200	1,150	1,150
United States.....	103,000	81,650	68,250	65,250
Grapefruit				
Florida-All	4,100	3,330	1,800	1,500
Red	3,480	2,830	1,620	1,320
White	620	500	180	180
California ³	4,200	4,100	4,100	4,300
Texas.....	2,400	1,700	2,000	2,200
United States.....	10,700	9,130	7,900	8,000
Lemons				
Arizona.....	750	950	1,150	1,500
California.....	20,100	24,900	23,000	22,000
United States.....	20,850	25,850	24,150	23,500
Tangerines and Tangelos				
Florida	890	750	600	500
California.....	28,800	17,400	20,000	22,000
United States.....	29,690	18,150	20,600	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 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 Includes pummelos in California.

All Oranges 18.0 Million Boxes

The 2022-2023 Florida all orange forecast released today by the USDA Agricultural Statistics Board is 18.0 million boxes, down 2.00 million from the December forecast. If realized, this will be 56 percent less than last season's final production. The forecast consists of 7.00 million boxes of non-Valencia oranges (early, mid-season, and Navel varieties) and 11.0 million boxes of Valencia oranges. A 9-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. Average fruit per tree includes both regular bloom and the first late bloom.

Non-Valencia Oranges 7.00 Million Boxes

The forecast of non-Valencia production is 7.00 million boxes. Final fruit size is close to the minimum, requiring 333 pieces to fill a 90-pound box. Final droppage of non-Valencia oranges (excluding Navels) at 76 percent is above the maximum. The Navel forecast, included in the non-Valencia forecast is 250,000 boxes, and is 4 percent of the non-Valencia total.

Valencia Oranges 11.0 Million Boxes

The forecast of Valencia production down 2.00 million boxes from the December forecast. Current fruit size is below the minimum and is projected to be below the minimum at harvest. Current droppage is above the maximum and projected to be above the maximum at harvest.

All Grapefruit 1.50 Million Boxes

The forecast of all grapefruit production is 1.50 million boxes, down 300,000 boxes from December. If realized, this will be 55 percent less than last season's final production. The red grapefruit forecast is down 300,000 boxes at 1.32 million boxes. Fruit size of red grapefruit at harvest is projected to be below average, and droppage is projected to be above the maximum. The white grapefruit forecast is unchanged at 180,000 boxes. Projected fruit size of white grapefruit at harvest is above average. White grapefruit droppage is projected to be above average.

Tangerines and Tangelos 500,000 Boxes

The forecast for tangerines and tangelos is 500,000 boxes, down 100,000 boxes from December and 33 percent less than last season's utilization of 750,000 boxes. This forecast number includes all certified tangerine and tangelo varieties.

Reliability

To assist users in evaluating the reliability of the January 1 Florida production forecasts, the "Root Mean Square Error," a statistical measure based on past performance, is computed. The deviation between the January 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 January 1 Florida all orange production forecast is 6.6 percent. If you exclude the three abnormal production seasons (three hurricane seasons) chances are still 6.6 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 6.6 percent, including or excluding abnormal seasons. Chances are 9 out of 10 (90 percent confidence level) that the difference will not exceed 11.4 percent including abnormal seasons, or 11.5 percent excluding abnormal seasons.

Changes between the January 1 Florida all orange forecast and the final estimates during the past 20 years have averaged 5.46 million boxes (5.04 million, excluding abnormal seasons), ranging from 0.30 million boxes to 12.7 million boxes (including and excluding abnormal seasons). The January 1 forecast for all oranges has been below the final estimate 5 times, above 15 times, (below 5 times, above 12 times, excluding abnormal seasons). The difference does not imply that the January 1 forecasts this year are likely to understate or overstate final production.

Forecast Components, by Type – Florida: January 2023

[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 (1,000 trees)	Fruit per tree (number)	Droppage (percent)	Fruit per box (number)
ORANGES				
Early-midseason (Non-Valencia) ¹ ..	15,841	474	76	333
Navel.....	653	106	69	137
Valencia	27,465	323	58	277
GRAPEFRUIT				
Red	1,574	381	56	134
White.....	180	448	36	117

¹ Excludes Navels.

Maturity

Regular bloom fruit samples were collected on December 27-28, 2022 from groves on established routes across Florida's citrus producing region, and tested by the USDA, NASS, Florida Field Office on December 29-30, 2022.

Unadjusted Maturity Tests — Florida: January 1, 2021-2022 and 2022-2023

[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 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	
	2021-2022	2022-2023	2021-2022	2022-2023	2021-2022	2022-2023	2021-2022	2022-2023	2021-2022	2022-2023
	(percent)	(percent)	(percent)	(percent)			(pounds)	(pounds)	(pounds)	(pounds)
ORANGES										
Early N-V (66-64)										
Sep 1	1.19	1.24	9.20	9.19	7.79	7.46	43.18	43.44	3.97	3.99
Oct 1	0.91	0.88	9.03	9.09	10.02	10.40	48.07	46.92	4.34	4.26
Nov 1	0.71	0.77	9.65	9.12	13.63	12.04	50.08	49.77	4.83	4.54
Dec 1	0.66	0.63	9.65	9.21	14.67	14.64	51.85	51.17	5.00	4.71
Jan 1	0.62	0.61	10.00	9.04	16.21	14.97	51.84	49.60	5.18	4.49
Midseason N-V (38-34)										
Sep 1	1.34	1.38	8.69	8.94	6.61	6.54	44.70	42.01	3.89	3.76
Oct 1	1.03	0.98	8.85	8.87	8.72	9.15	48.35	47.58	4.28	4.23
Nov 1	0.80	0.83	9.26	8.85	11.78	10.75	50.84	50.28	4.71	4.45
Dec 1	0.74	0.73	9.24	8.96	12.65	12.39	52.28	51.89	4.84	4.66
Jan 1	0.65	0.69	9.67	9.03	15.02	13.19	51.99	52.76	5.03	4.76
Valencia (150-147)										
Sep 1	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Oct 1	2.00	1.94	8.66	8.94	4.37	4.66	46.41	46.72	4.02	4.18
Nov 1	1.57	1.61	9.07	8.89	5.88	5.58	48.98	49.68	4.44	4.42
Dec 1	1.35	1.27	9.25	8.99	6.91	7.21	51.36	52.22	4.75	4.70
Jan 1	1.18	1.13	9.49	9.21	8.11	8.21	52.79	53.84	5.01	4.95

(N-V) Non-Valencia

(NA) Not available.

Size Frequency Measurement Distributions, by Type — Florida: December Survey

[Size frequency distributions from the December 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]

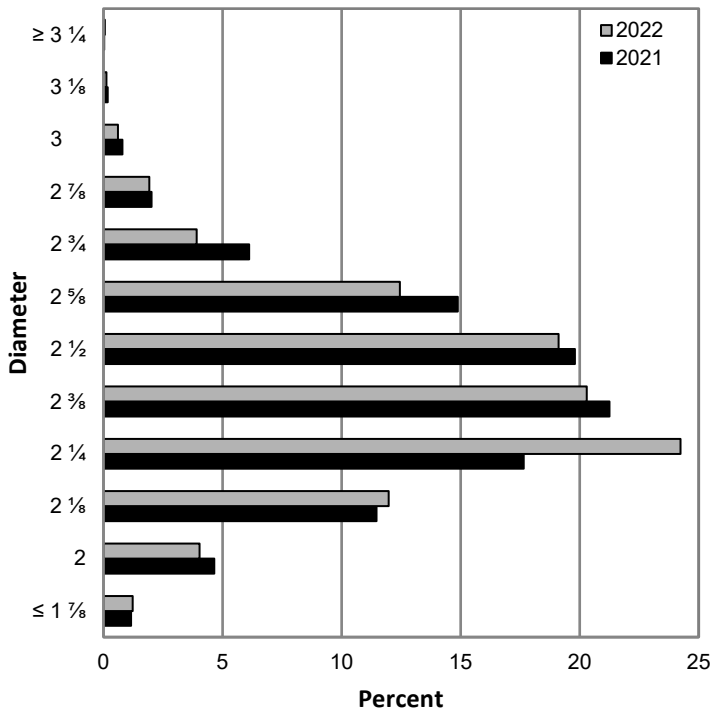
Type and number of fruit per 4/5 – bushel containers	2020 (percent)	2021 (percent)	2022 (percent)	Type and number of fruit per 4/5 – bushel containers	2020 (percent)	2021 (percent)	2022 (percent)
NON-VALENCIA ORANGES ¹				RED GRAPEFRUIT			
64 or less	1.2	0.1	0.1	32 or less	3.6	0.8	0.5
80	7.5	1.6	1.3	36	8.3	4.6	3.1
100	24.3	12.6	8.9	40	10.4	8.9	7.0
125	36.5	29.5	28.0	48	13.4	14.4	10.5
163 or more	30.5	56.2	61.7	56	17.4	17.0	13.2
VALENCIA ORANGES				WHITE GRAPEFRUIT ²			
64 or less	1.5	0.6	0.2	32 or less	2.9	7.0	0.6
80	8.7	4.1	2.5	36	10.3	16.3	6.1
100	27.5	18.4	14.0	40	16.1	16.8	14.8
125	33.7	31.8	34.1	48	15.5	20.5	17.6
163 or more	28.6	45.1	49.2	56	17.7	14.2	22.6
				63 or more	37.5	25.2	38.3

¹ Excludes Navels.

² Excludes seedy.

The charts below show the distribution of fruit sizes in 2021 compared to 2022. The diameter measurements shown are the minimum values of each eighth inch range, except for the smallest values.

Fruit Size Frequency Measurements, Non-Valencia Oranges ¹, by Diameter - Florida: December Survey



¹ Excludes Navels.

Fruit Size Frequency Measurements, Red Grapefruit, by Diameter - Florida: December Survey

