



CITRUS MATURITY TEST RESULTS AND FRUIT SIZE

DECEMBER FORECAST

Cooperating with the Florida Department of Agriculture and Consumer Services

2290 Lucien Way, Suite 300, Maitland, FL 32751-7058

(407) 648-6013 · (855) 271-9801 FAX · www.nass.usda.gov/fl

December 12, 2017

Florida All Orange Production Down 8 Percent from November Forecast
Florida Non-Valencia Orange Production Down 10 Percent
Florida Valencia Orange Production 7 Down Percent
Florida All Grapefruit Production Unchanged
Florida All Tangerine and Tangelo Production Down 4 Percent

FORECAST DATES - 2017-2018 SEASON			
January 12, 2018	April 10, 2018		
February 8, 2018	May 10, 2018		
March 8, 2018	June 12, 2018		
	July 12, 2018		

Crop and State	Production ¹		2017-2018 Forecasted Production ¹	
	2015-2016 (1,000 boxes)	2016-2017 (1,000 boxes)	November (1,000 boxes)	December (1,000 boxes)
Non-Valencia Oranges ²				
Florida	36,100	33,000	21,000	19,000
California ³	47,200	39,300	35,000	35,000
Texas ³	1,351	1,090	1,350	1,350
United States	84,651	73,390	57,350	55,350
Valencia Oranges				
Florida	45,600	35,750	29,000	27,000
California ³	11,300	11,000	11,000	11,000
Texas ³	340	280	300	300
United States	57,240	47,030	40,300	38,300
All Oranges				
Florida	81,700	68,750	50,000	46,000
California ³	58,500	50,300	46,000	46,000
Texas ³	1,691	1,370	1,650	1,650
United States	141,891	120,420	97,650	93,650
Grapefruit				
Florida-All	10,800	7,760	4,650	4,650
White	2,490	1,480	850	850
Red	8,310	6,280	3,800	3,800
California ³	3,800	4,000	4,200	4,200
Texas ³	4,800	4,800	5,300	5,300
United States	19,400	16,560	14,150	14,150
Lemons ³				
California	21,000	20,500	21,000	21,000
Arizona	1,600	1,650	1,600	1,600
United States	22,600	22,150	22,600	22,600
Tangelos				
Florida	390	(NA)	(NA)	(NA)
Tangerines and Tangelos				
Florida-All ⁴	1,415	1,620	950	910
Early ⁵	785	600	(NA)	(NA)
Royal ⁶	(NA)	210	(NA)	(NA)
Honey	630	530	(NA)	(NA)
Tangelo	(NA)	280	(NA)	(NA)
California ^{3,7}	21,700	23,900	23,000	23,000
United States	23,115	25,520	23,950	23,910

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-80; tangelos-90 in Florida for 2015-2016, 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. Includes small quantities of Temples in Florida for 2015-2016.

³ Estimates carried forward from October.

⁴ Prior to 2016-2017 includes Fallglo, Sunburst, and Honey tangerine varieties only. In 2016-2017, includes Fallglo, Sunburst, Royal, and Honey tangerine varieties and tangelos. Beginning in 2017-2018, includes all certified varieties of tangerines and tangelos.

⁵ Fallglo and Sunburst varieties.

⁶ Beginning in 2016-2017, Temples have been reclassified as Royal tangerines.

⁷ Includes tangelos and tangors in California.

All Oranges 46.0 Million Boxes

The 2017-2018 Florida all orange forecast released today by the USDA Agricultural Statistics Board is 46.0 million boxes, down 4.00 million boxes from the November forecast. If realized, this forecast will be 33 percent less than last season's production and the least since the 1944-1945 season of 42.2 million boxes. The forecast consists of 19.0 million boxes of the non-Valencia oranges (early, midseason, and Navel varieties) and 27.0 million boxes of the Valencia oranges. Regression data used are from the 2007-2008 through 2016-2017 seasons. For those previous 10 seasons, the December forecast has deviated from final production by an average of 6 percent, with 8 seasons above and 2 below, with differences ranging from 16 percent below to 16 percent above. All references to "average", "minimum", and "maximum" refer to the previous 10 seasons unless noted.

Non-Valencia Oranges 19.0 Million Boxes

The forecast of non-Valencia production is lowered 2.00 million boxes to 19.0 million boxes. Current fruit size is below average and projected to be below average at harvest. Current droppage is above the maximum and is projected to be above the maximum until harvest. The Navel forecast, included in the non-Valencia forecast, is lowered to 500 thousand boxes, and is 3 percent of the non-Valencia total. Final Navel size is below average and droppage is well above the maximum.

Valencia Oranges 27.0 Million Boxes

The forecast of Valencia production is reduced 2.00 million boxes to 27.0 million boxes. If realized, this will be the smallest Florida Valencia crop since the 1949-1950 season. Current fruit size is below average and is projected to be below average at harvest. Current droppage is above the maximum and projected to be above the maximum at harvest.

All Grapefruit 4.65 Million Boxes

The forecast of all grapefruit production is unchanged at 4.65 million boxes. If realized, this forecast will be 40 percent less than last season's production and the least recorded since the 1918-1919 season. The white grapefruit forecast is unchanged at 850 thousand boxes. The red grapefruit forecast is unchanged at 3.80 million boxes. Projected fruit size of white grapefruit at harvest is above average while projected droppage is above the maximum. Projected fruit size of red grapefruit at harvest is projected to be above average and droppage is projected to be above the maximum.

Tangerines and Tangelos 910 Thousand Boxes

The forecast for the tangerine and tangelos is reduced 40 thousand boxes to 910 thousand, 44 percent less than last season's production, and down 4 percent from last month. This forecast number includes all certified tangerine and tangelo varieties.

Forecast Components, by Type – Florida: December 2017

[Survey data is considered final in December for Navels, January for early-midseason 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.....	19,569	741	62	285
Navel.....	913	252	68	140
Valencia.....	28,390	510	55	235
GRAPEFRUIT				
White.....	722	396	64	107
Red.....	2,834	385	65	105

Maturity

Regular bloom fruit samples (295 orange and 82 grapefruit) were collected from groves on established routes in Florida's five major citrus producing areas on November 27-28, 2017, and tested in the Florida Department of Agriculture and Consumer Services, Division of Fruit and Vegetables, Florida Agricultural Statistics Service (FASS) laboratory November 29 - December 1, 2017. All comparisons are made to December 1, 2016. Acid levels and solids (Brix) are lower on all fruit types, but ratios are higher. Unfinished juice per box is higher for all for all varieties. Solids per box are lower for all orange varieties, higher for red grapefruit, and the same as last season for white grapefruit. The table at the bottom of the page 3 compares the Indian River fruit to that of other production areas. This month, ratios are higher for comparable fruit except Valencia oranges from the Indian River area. While unfinished juice per box and solids per box are higher for Indian River Valencia oranges and white seedless grapefruit, both measurements are lower for early non-Valencia oranges and red seedless grapefruit.

Unadjusted Maturity Tests – Florida: 2016-2017 and 2017-2018

[Averages of regular bloom fruit from sample groves. Juice and solids per box are unadjusted and not comparable to juice processing plant test results. For 2016-2017 all samples were run through an FMC 091 machine using mechanical pressure only. This machine utilizes a .040 short strainer and standard 5/8 inch orifice tube on all cups. For 2017-2018, 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	
	2016-2017	2017-2018	2016-2017	2017-2018	2016-2017	2017-2018	2016-2017	2017-2018	2016-2017	2017-2018
	(percent)	(percent)	(percent)	(percent)			(pounds)	(pounds)	(pounds)	(pounds)
ORANGES										
Early N-V (118-94)										
Sep 1	1.39	1.18	9.27	9.11	6.79	7.88	41.38	43.35	3.83	3.95
Oct 1	0.98	0.88	9.52	9.20	9.88	10.64	47.18	49.45	4.49	4.54
Nov 1	0.81	0.70	9.90	9.53	12.47	13.90	49.69	52.56	4.92	5.01
Dec 1	0.75	0.61	10.93	9.89	14.83	16.37	50.77	52.26	5.55	5.17
Midseason N-V (55-51)										
Sep 1	1.55	1.29	9.19	8.97	5.99	7.13	41.67	44.72	3.83	4.02
Oct 1	1.13	0.96	9.38	9.35	8.46	9.94	47.72	51.32	4.48	4.81
Nov 1	0.91	0.76	9.95	9.84	11.16	13.12	50.07	54.47	4.98	5.36
Dec 1	0.85	0.69	10.87	10.02	12.84	14.75	51.17	53.56	5.56	5.37
Valencia (148-150)										
Sep 1	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Oct 1	1.99	1.84	8.83	8.74	4.52	4.83	46.01	48.52	4.07	4.24
Nov 1	1.67	1.54	9.16	8.80	5.57	5.82	49.97	51.74	4.58	4.56
Dec 1	1.42	1.25	10.07	9.18	7.18	7.43	52.34	53.12	5.27	4.88
GRAPEFRUIT										
White Seedless (49-40)										
Sep 1	1.77	1.54	10.23	9.81	5.77	6.37	32.06	37.09	3.28	3.64
Oct 1	1.52	1.34	9.91	9.55	6.54	7.18	36.77	44.39	3.64	4.24
Nov 1	1.41	1.25	9.83	9.55	6.97	7.67	41.90	48.81	4.12	4.67
Dec 1	1.44	1.20	10.11	9.02	7.07	7.52	45.18	50.62	4.57	4.57
Red Seedless (44-42)										
Sep 1	1.71	1.44	10.14	9.87	5.94	6.87	33.09	36.99	3.35	3.65
Oct 1	1.44	1.29	9.90	9.55	6.87	7.46	36.66	43.96	3.63	4.20
Nov 1	1.28	1.15	9.73	9.31	7.62	8.11	43.27	48.53	4.21	4.52
Dec 1	1.32	1.09	10.12	9.35	7.72	8.65	46.23	50.62	4.68	4.74

N-V Non-Valencia.

NA Not available.

Maturity Test Averages, by Areas – Florida: November 1, 2016-2017 and 2017-2018

Fruit type (number of groves) test date	Acid		Solids (Brix)		Ratio		Unfinished juice per box		Solids per box	
	2016-2017	2017-2018	2016-2017	2017-2018	2016-2017	2017-2018	2016-2017	2017-2018	2016-2017	2017-2018
	(percent)	(percent)	(percent)	(percent)			(pounds)	(pounds)	(pounds)	(pounds)
ORANGES										
Early N-V										
Indian River (9-9)	0.72	0.62	11.03	10.07	15.27	16.54	51.44	50.89	5.69	5.12
Other Areas (109-85)	0.75	0.61	10.92	9.88	14.79	16.35	50.71	52.41	5.53	5.18
Midseason N-V										
Indian River (4-2)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Other Areas (47-49)	0.86	0.69	10.82	10.02	12.74	14.74	50.86	53.58	5.50	5.37
Valencia										
Indian River (29-29)	1.46	1.39	10.25	9.58	7.12	7.02	51.99	53.37	5.33	5.12
Other Areas (119-121)	1.41	1.22	10.02	9.08	7.19	7.53	52.43	53.07	5.25	4.82
GRAPEFRUIT										
White Seedless										
Indian River (38-33)	1.45	1.20	10.22	9.05	7.06	7.55	44.88	50.84	4.59	4.61
Other Areas (11-7)	1.38	1.20	9.75	8.89	7.11	7.40	46.21	49.56	4.50	4.41
Red Seedless										
Indian River (38-35)	1.31	1.07	10.16	9.31	7.82	8.71	46.78	50.61	4.75	4.71
Other Areas (6-7)	1.41	1.16	9.88	9.56	7.07	8.32	42.80	50.69	4.27	4.86

N-V Non-Valencia.

D Withheld to avoid disclosing data for individual operations.

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]

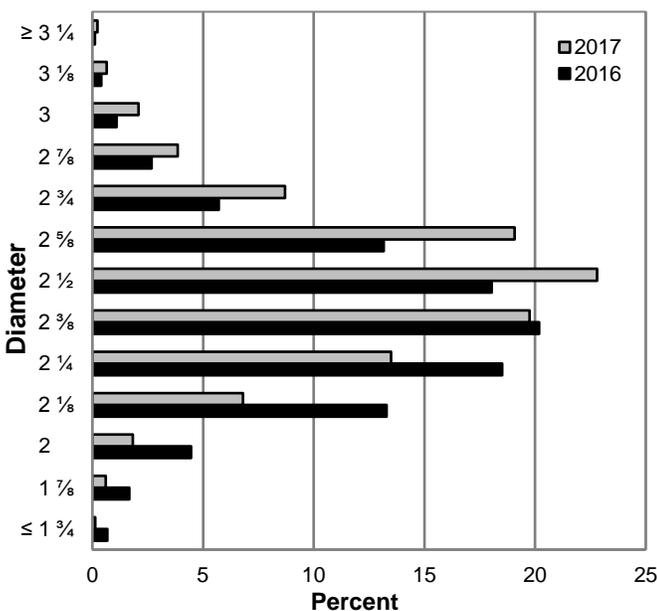
Type and number of fruit per 4/5-bushel containers	2015	2016	2017	Type and number of fruit per 4/5-bushel containers	2015	2016	2017
	(percent)	(percent)	(percent)		(percent)	(percent)	(percent)
NON-VALENCIA ORANGES ¹				WHITE GRAPEFRUIT ²			
64 or less	0.8	0.3	0.5	32 or less.....	0.9	1.1	4.0
80	4.4	2.5	4.0	36	5.1	3.9	11.7
100	18.3	12.3	18.0	40	7.8	8.5	12.4
125	30.5	26.1	34.9	48	13.0	10.3	16.6
163 or more	46.0	58.8	42.6	56	14.1	12.0	14.2
				63 or more.....	59.1	64.2	41.1
NAVEL ORANGES				RED GRAPEFRUIT			
64 or less	45.0	34.5	43.7	32 or less.....	1.2	0.6	4.1
80	26.8	25.6	32.2	36	3.7	4.5	11.9
100	17.5	21.0	15.3	40	7.9	7.5	14.2
125	7.5	13.7	7.0	48	13.6	13.4	16.2
163 or more	3.2	5.2	1.8	56	13.3	12.9	12.5
				63 or more.....	60.3	61.1	41.1
VALENCIA ORANGES				SUNBURST TANGERINES			
64 or less	1.3	1.8	1.2	100 or less.....	22.1	8.8	23.6
80	8.8	7.2	6.8	120	20.3	11.7	20.4
100	27.0	21.6	23.7	176	19.7	19.0	14.6
125	34.0	31.7	34.5	210 or more	37.9	60.5	41.4
163 or more	28.9	37.7	33.8				
TANGELOS				HONEY TANGERINES			
80 or less	25.6	20.3	27.7	80 or less	2.4	0.7	0.9
100	22.3	18.8	21.5	100	12.7	8.7	4.8
120	20.6	24.1	20.8	120	21.9	19.6	15.7
156 or more	31.5	36.8	30.0	176	17.1	16.9	19.3
				210 or more	45.9	54.1	59.3

¹ Excludes Navels.

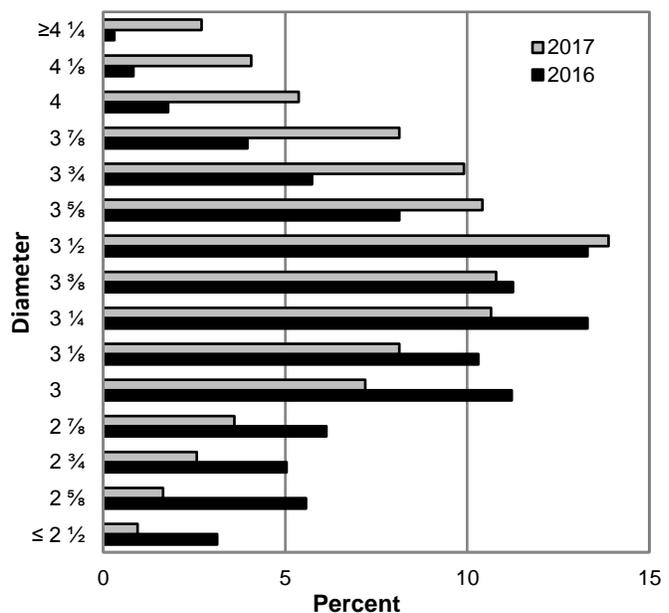
² Excludes seedy.

The charts below show the distribution of fruit sizes in 2017 compared to 2016. 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: November



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



¹ Excludes Navel varieties.