



# CITRUS NOVEMBER FORECAST MATURITY TEST RESULTS AND FRUIT SIZE

Cooperating with the Florida Department of Agriculture and Consumer Services  
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November 8, 2018

**Florida All Orange Production Down 3 percent from October Forecast**  
**Florida Non-Valencia Orange Production Down 6 Percent**  
**Florida Valencia Orange Production Unchanged**  
**Florida All Grapefruit Production Down 4 Percent**  
**Florida All Tangerine and Tangelo Unchanged**

FORECAST DATES	2018-2019 SEASON
December 11, 2018	April 9, 2019
January 11, 2019	May 10, 2019
February 8, 2019	June 11, 2019
March 8, 2019	July 11, 2019

## Citrus Production by Type – States and United States

Crop and State	Production <sup>1</sup>		2018-2019 Forecasted Production <sup>1</sup>	
	2016-2017 (1,000 boxes)	2017-2018 (1,000 boxes)	October (1,000 boxes)	November (1,000 boxes)
<b>Non-Valencia Oranges <sup>2</sup></b>				
Florida .....	<b>33,000</b>	<b>18,950</b>	<b>34,000</b>	<b>32,000</b>
California <sup>3</sup> .....	39,300	35,900	40,000	40,000
Texas <sup>3</sup> .....	1,090	1,530	1,800	1,800
United States .....	73,390	56,380	75,800	73,800
<b>Valencia Oranges</b>				
Florida .....	<b>35,850</b>	<b>26,000</b>	<b>45,000</b>	<b>45,000</b>
California <sup>3</sup> .....	9,000	9,500	9,000	9,000
Texas <sup>3</sup> .....	280	350	600	600
United States .....	45,130	35,850	54,600	54,600
<b>All Oranges</b>				
Florida .....	<b>68,850</b>	<b>44,950</b>	<b>79,000</b>	<b>77,000</b>
California <sup>3</sup> .....	48,300	45,400	49,000	49,000
Texas <sup>3</sup> .....	1,370	1,880	2,400	2,400
United States .....	118,520	92,230	130,400	128,400
<b>Grapefruit</b>				
Florida-All .....	<b>7,760</b>	<b>3,880</b>	<b>6,700</b>	<b>6,400</b>
Red .....	<b>6,280</b>	<b>3,180</b>	<b>5,500</b>	<b>5,300</b>
White .....	<b>1,480</b>	<b>700</b>	<b>1,200</b>	<b>1,100</b>
California <sup>3</sup> .....	4,400	4,000	3,900	3,900
Texas <sup>3</sup> .....	4,800	4,800	6,200	6,200
United States .....	16,960	12,680	16,800	16,500
<b>Lemons <sup>3</sup></b>				
California .....	20,500	21,200	20,000	20,000
Arizona .....	1,550	1,000	1,400	1,400
United States .....	22,050	22,200	21,400	21,400
<b>Tangerines and Tangelos</b>				
Florida-All <sup>4</sup> .....	<b>1,620</b>	<b>750</b>	<b>1,200</b>	<b>1,200</b>
Early <sup>5</sup> .....	<b>600</b>	<b>(NA)</b>	<b>(NA)</b>	<b>(NA)</b>
Royal .....	<b>210</b>	<b>(NA)</b>	<b>(NA)</b>	<b>(NA)</b>
Honey .....	<b>530</b>	<b>(NA)</b>	<b>(NA)</b>	<b>(NA)</b>
Tangelo .....	<b>280</b>	<b>(NA)</b>	<b>(NA)</b>	<b>(NA)</b>
California <sup>3,6</sup> .....	23,800	19,200	23,000	23,000
United States .....	25,420	19,950	24,200	24,200

NA Not available.

<sup>1</sup> 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.

<sup>2</sup> Navel and miscellaneous varieties in California. Early non-Valencia (including Navel) and midseason varieties in Florida and Texas.

<sup>3</sup> Estimates carried forward from October.

<sup>4</sup> 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.

<sup>5</sup> Fallglo and Sunburst varieties.

<sup>6</sup> Includes tangelos and tangors in California.

## All Oranges 77.0 Million Boxes

The 2018-2019 Florida all orange forecast released today by the USDA Agricultural Statistics Board is lowered to 77.0 million boxes, down 2.00 million boxes from the October forecast. If realized, this forecast will be 71 percent more than last season's final production. The forecast consists of 32.0 million boxes of the non-Valencia oranges (early, midseason, and Navel varieties) and 45.0 million boxes of the Valencia oranges. Regression data used are from the 2008-2009 through 2016-2017 seasons. All references to "average", "minimum", and "maximum" refer to those 9 seasons unless noted. The hurricane affected 2017-2018 season is excluded from the regressions.

## Non-Valencia Oranges 32.0 Million Boxes

The forecast of non-Valencia production is lowered 2.00 million boxes to 32.0 million boxes. Projected fruit size is below the minimum, requiring an estimated 348 pieces to fill a 90-pound box. If realized, this will be the smallest size on record, dating back to the start of the Size and Drop survey in 1960-1961. Current droppage is above average and is projected to be above average at harvest. The Navel forecast, included in the non-Valencia forecast, is unchanged at 800 thousand boxes, and is 3 percent of the non-Valencia total. Current Navel size is below average, and droppage is above average.

## Valencia Oranges 45.0 Million Boxes

The forecast of Valencia production is unchanged at 45.0 million boxes. Projected fruit size is below the minimum, requiring an estimated 257 pieces to fill a 90-pound box. If realized, this will be the smallest size on record, dating back to the start of the Size and Drop survey in 1960-1961. Current droppage is above average and projected to be above average at harvest.

## All Grapefruit 6.40 Million Boxes

The forecast of all grapefruit production is lowered to 6.40 million boxes. If realized, this forecast will be 65 percent more than last season's hurricane affected crop. The red grapefruit forecast is now 5.30 million boxes. The white grapefruit forecast is 1.10 million boxes. Fruit size of red grapefruit at harvest is projected to be below average and droppage is projected to be above average. Projected fruit size of white grapefruit at harvest is below average, while projected droppage is above average.

## Tangerines and Tangelos 1.20 Million Boxes

The forecast for tangerine and tangelos is unchanged at 1.20 million boxes, 60 percent more than last season's hurricane affected utilization of 750 thousand boxes. This forecast number includes all certified tangerine and tangelo varieties.

### Forecast Components, by Type – Florida: November 2018

[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)
<b>ORANGES</b>				
Early-midseason (Non-Valencia) .....	19,718	813	26	348
Navel.....	951	213	27	143
Valencia .....	29,262	609	28	257
<b>GRAPEFRUIT</b>				
Red .....	2,573	369	35	127
White.....	540	362	34	124

## Maturity

Regular bloom fruit samples (325 orange and 100 grapefruit) were collected from groves on established routes in Florida's five major citrus producing areas and tested by the Florida Agricultural Statistics Service (FASS) on October 29 - 31, 2018. All comparisons are made to November 1, 2017. Acid levels are lower only on Valencia oranges, and solids (brix) are higher on all fruit types. Ratios are higher on all fruit types except midseason (non-Valencia) oranges. Unfinished juice per box is lower on all fruit types except red grapefruit. Solids per box are lower on early (non-Valencia) and midseason (non-Valencia) oranges. The table at the bottom of the page compares Indian River fruit to that of other production areas.

### Unadjusted Maturity Tests – Florida: 2017-2018 and 2018-2019

[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	
	2017-2018	2018-2019	2017-2018	2018-2019	2017-2018	2018-2019	2017-2018	2018-2019	2017-2018	2018-2019
	(percent)	(percent)	(percent)	(percent)			(pounds)	(pounds)	(pounds)	(pounds)
<b>ORANGES</b>										
Early N-V (117-120)										
Sep 1 .....	1.17	1.19	9.10	8.84	7.96	7.51	43.84	43.68	3.99	3.86
Oct 1 .....	0.88	0.86	9.22	9.22	10.72	10.94	49.19	49.09	4.53	4.52
Nov 1 .....	0.69	0.69	9.48	9.75	13.95	14.36	52.65	50.27	4.99	4.90
Midseason N-V (55-55)										
Sep 1 .....	1.27	1.32	8.97	8.93	7.22	6.84	44.70	44.64	4.01	3.99
Oct 1 .....	0.95	0.94	9.38	9.31	10.05	10.02	51.51	49.78	4.84	4.64
Nov 1 .....	0.76	0.80	9.85	10.00	13.19	12.84	54.28	50.84	5.34	5.08
Valencia (150-150)										
Sep 1 .....	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Oct 1 .....	1.84	1.90	8.74	8.56	4.83	4.54	48.52	46.30	4.24	3.96
Nov 1 .....	1.54	1.52	8.80	9.15	5.82	6.11	51.74	49.87	4.56	4.56
<b>GRAPEFRUIT</b>										
Red Seedless (47-50)										
Sep 1 .....	1.43	1.44	9.84	9.72	6.88	6.79	36.95	38.91	3.64	3.79
Oct 1 .....	1.28	1.22	9.55	9.48	7.50	7.80	43.62	44.99	4.16	4.26
Nov 1 .....	1.15	1.16	9.29	10.00	8.13	8.69	48.31	50.27	4.49	5.02
White Seedless (48-50)										
Sep 1 .....	1.53	1.53	9.75	9.84	6.39	6.45	36.95	36.37	3.60	3.58
Oct 1 .....	1.34	1.36	9.51	9.61	7.12	7.10	43.93	42.63	4.18	4.10
Nov 1 .....	1.25	1.26	9.47	9.75	7.61	7.79	48.68	48.13	4.62	4.69

NA Not available.

### Unadjusted Maturity Test Averages, by Areas – Florida: November 2017-2018 and 2018-2019

Fruit type (number of groves) test date	Acid		Solids (Brix)		Ratio		Unfinished juice per box		Solids per box	
	2017-2018	2018-2019	2017-2018	2018-2019	2017-2018	2018-2019	2017-2018	2018-2019	2017-2018	2018-2019
	(percent)	(percent)	(percent)	(percent)			(pounds)	(pounds)	(pounds)	(pounds)
<b>ORANGES</b>										
Early N-V										
Indian River (9-9) .....	0.76	0.73	9.56	10.03	12.74	13.88	52.02	47.58	4.95	4.77
Other Areas <sup>1</sup> (108-111)	0.68	0.68	9.48	9.73	14.06	14.39	52.71	50.49	5.00	4.91
Midseason N-V										
Indian River (2-2) .....	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Other Areas <sup>1</sup> (53-53) .....	0.76	0.80	9.85	10.00	13.18	12.84	54.37	50.82	5.35	5.08
Valencia										
Indian River (29-29) .....	1.74	1.72	9.23	9.48	5.32	5.56	51.16	47.22	4.73	4.47
Other Areas (121-121) .....	1.49	1.47	8.70	9.07	5.93	6.24	51.88	50.50	4.52	4.58
<b>GRAPEFRUIT</b>										
Red Seedless										
Indian River (36-42) .....	1.14	1.14	9.26	9.99	8.16	8.83	48.43	50.83	4.48	5.07
Other Areas <sup>1</sup> (11-8) .....	1.19	1.27	9.43	10.06	7.99	8.01	47.70	47.34	4.51	4.76
White Seedless										
Indian River (40-42) .....	1.25	1.25	9.63	9.84	7.75	7.87	48.65	48.41	4.69	4.76
Other Areas <sup>1</sup> (8-8) .....	1.25	1.26	8.97	9.26	7.19	7.36	48.76	46.66	4.38	4.31

D Withheld to avoid disclosing data for individual operations.

<sup>1</sup> Includes Central, Northern, Southern, and Western areas.

### Size Frequency Measurement Distributions, by Type – Florida: October

[Size frequency distributions from the October 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]

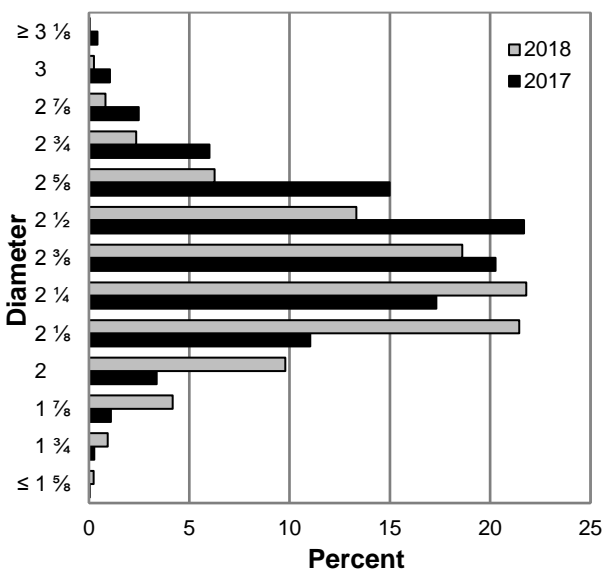
Type and number of fruit per 4/5-bushel containers	2016	2017	2018	Type and number of fruit per 4/5-bushel containers	2016	2017	2018
	(percent)	(percent)	(percent)		(percent)	(percent)	(percent)
<b>NON-VALENCIA ORANGES <sup>1</sup></b>				<b>RED GRAPEFRUIT <sup>2</sup></b>			
64 or less .....	0.3	0.2	0.0	32 or less.....	0.8	2.0	0.6
80.....	2.0	2.3	0.6	36 .....	4.2	7.7	1.9
100.....	10.1	12.9	4.7	40 .....	9.2	10.9	5.4
125.....	21.6	31.2	17.7	48 .....	14.6	15.4	9.8
163 or more.....	66.0	53.4	77.0	56 .....	14.6	14.5	12.2
				63 or more.....	56.6	49.5	70.1
<b>NAVEL ORANGES</b>				<b>WHITE GRAPEFRUIT <sup>2</sup></b>			
64 or less .....	38.0	43.5	34.4	32 or less.....	0.9	2.8	1.2
80.....	26.0	29.1	27.6	36 .....	4.7	7.2	4.4
100.....	18.5	20.6	20.6	40 .....	7.7	12.4	8.3
125.....	10.2	5.3	11.0	48 .....	12.6	18.4	14.3
163 or more.....	7.3	1.5	6.4	56 .....	12.7	15.7	12.5
				63 or more.....	61.4	43.5	59.3
<b>VALENCIA ORANGES</b>				<b>FALLGLO TANGERINES</b>			
64 or less .....	0.8	0.5	0.1	80 or less.....	11.8	14.3	14.6
80.....	4.4	3.4	0.8	100 .....	23.2	19.3	13.5
100.....	17.2	16.4	7.7	120 .....	13.2	25.0	19.2
125.....	28.8	30.7	23.3	176 .....	10.0	12.1	6.9
163 or more.....	48.8	49.0	68.1	210 or more .....	41.8	29.3	45.8
<b>TANGELOS</b>				<b>SUNBURST TANGERINES</b>			
80 or less .....	8.9	7.5	2.1	100 or less.....	6.0	12.3	0.4
100.....	16.9	23.9	11.2	120 .....	7.6	21.3	9.6
120.....	20.0	20.7	22.1	176 .....	12.4	13.0	8.8
156 or more.....	54.2	47.9	64.6	210 or more .....	74.0	53.4	81.2

<sup>1</sup> Excludes Navels.

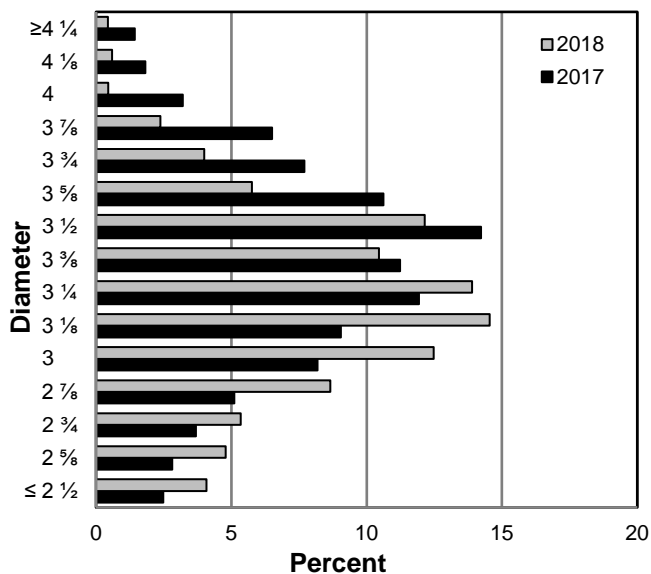
<sup>2</sup> Excludes seedy.

The charts below show the distribution of fruit sizes in 2017 compared to 2018. 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 <sup>1</sup>, by Diameter - Florida: October**



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



<sup>1</sup> Excludes Navels.