



# CITRUS MARCH FORECAST MATURITY TEST RESULTS AND FRUIT SIZE

Cooperating with the Florida Department of Agriculture and Consumer Services  
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**Florida All Orange Production Unchanged from February Forecast**  
**Florida Non-Valencia Orange Production Unchanged**  
**Florida Valencia Orange Production Unchanged**  
**Florida All Grapefruit Production Unchanged**  
**Florida All Tangerine and Tangelo Production Up 2 Percent**

FORECAST DATES - 2017-2018 SEASON	
April 10, 2018	May 10, 2018
June 12, 2018	July 12, 2018

Crop and State	Production <sup>1</sup>		2017-2018 Forecasted Production <sup>1</sup>	
	2015-2016 (1,000 boxes)	2016-2017 (1,000 boxes)	February (1,000 boxes)	March (1,000 boxes)
<b>Non-Valencia Oranges <sup>2</sup></b>				
Florida .....	<b>36,100</b>	<b>33,000</b>	<b>19,000</b>	<b>19,000</b>
California <sup>3</sup> .....	47,200	39,300	35,000	35,000
Texas <sup>3</sup> .....	1,351	1,090	1,430	1,430
United States .....	84,651	73,390	55,430	55,430
<b>Valencia Oranges</b>				
Florida .....	<b>45,600</b>	<b>35,750</b>	<b>26,000</b>	<b>26,000</b>
California .....	11,300	11,000	11,000	9,500
Texas <sup>3</sup> .....	340	280	400	400
United States .....	57,240	47,030	37,400	35,900
<b>All Oranges</b>				
Florida .....	<b>81,700</b>	<b>68,750</b>	<b>45,000</b>	<b>45,000</b>
California .....	58,500	50,300	46,000	44,500
Texas <sup>3</sup> .....	1,691	1,370	1,830	1,830
United States .....	141,891	120,420	92,830	91,330
<b>Grapefruit</b>				
Florida-All .....	<b>10,800</b>	<b>7,760</b>	<b>4,650</b>	<b>4,650</b>
White .....	<b>2,490</b>	<b>1,480</b>	<b>850</b>	<b>850</b>
Red .....	<b>8,310</b>	<b>6,280</b>	<b>3,800</b>	<b>3,800</b>
California <sup>3</sup> .....	3,800	4,000	4,200	4,200
Texas <sup>3</sup> .....	4,800	4,800	4,100	4,100
United States .....	19,400	16,560	12,950	12,950
<b>Lemons <sup>3</sup></b>				
California .....	21,000	20,500	20,500	20,500
Arizona .....	1,600	1,650	1,250	1,250
United States .....	22,600	22,150	21,750	21,750
<b>Tangelos</b>				
Florida .....	<b>390</b>	<b>(NA)</b>	<b>(NA)</b>	<b>(NA)</b>
<b>Tangerines and Tangelos</b>				
Florida-All <sup>4</sup> .....	<b>1,415</b>	<b>1,620</b>	<b>860</b>	<b>880</b>
Early <sup>5</sup> .....	<b>785</b>	<b>600</b>	<b>(NA)</b>	<b>(NA)</b>
Royal <sup>6</sup> .....	<b>(NA)</b>	<b>210</b>	<b>(NA)</b>	<b>(NA)</b>
Honey .....	<b>630</b>	<b>530</b>	<b>(NA)</b>	<b>(NA)</b>
Tangelos .....	<b>(NA)</b>	<b>280</b>	<b>(NA)</b>	<b>(NA)</b>
California <sup>3,7</sup> .....	21,700	23,900	21,000	21,000
United States .....	23,115	25,520	21,860	21,880

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; tangelos-90 in Florida for 2015-2016, and tangerines and mandarins in California-80, Florida-95.

<sup>2</sup> 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.

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

<sup>4</sup> 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.

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

<sup>6</sup> Beginning in 2016-2017, Temples have been reclassified as Royal tangerines.

<sup>7</sup> Includes tangelos and tangors in California.

## Regressions

Regression data used are from the 2007-2008 through 2016-2017 seasons. All references to “average”, “minimum”, and “maximum” refer to these 10 seasons unless noted.

### All Oranges 45.0 Million Boxes

The 2017-2018 Florida all orange forecast released today by the USDA Agricultural Statistics Board is 45.0 million boxes, unchanged from the February forecast. If realized, this will be 35 percent less than last season’s production. The forecast consists of 19.0 million boxes of non-Valencia oranges (early, midseason, and Navel varieties) and 26.0 million boxes of Valencia oranges. For the previous 10 seasons, the March forecast has deviated from final production by an average of 4 percent, with 5 seasons above and 5 below, with differences ranging from 13 percent below to 9 percent above.

### Non-Valencia Oranges 19.0 Million Boxes

The forecast of non-Valencia production is unchanged at 19.0 million boxes. The Row Count survey conducted February 26-27, 2018, showed 99 percent of the early-midseason rows and 96 percent of the Navels rows are harvested. Estimated utilization for non-Valencia oranges to March 1, with an allocation for non-certified fruit, is 18.9 million boxes. The Navel forecast, included in the non-Valencia portion of the forecast, remains at 500 thousand boxes.

### Valencia Oranges 26.0 Million Boxes

The forecast of Valencia production is unchanged at 26.0 million boxes. Current fruit size is below average and is projected to be below average at harvest, requiring 237 pieces to fill a 90-pound box. 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. The white grapefruit forecast is unchanged at 850 thousand boxes. The red grapefruit forecast is unchanged at 3.80 million boxes. The Row Count survey conducted February 26-27, 2018, indicated 89 percent of the red grapefruit rows and 92 percent of the white grapefruit rows are harvested.

### Tangerines and Tangelos 880 Thousand Boxes

The forecast for the tangerine and tangelo production is increased 20 thousand boxes to 880 thousand boxes. If realized, this production level will be 46 percent less than last season’s production. This forecast number includes all certified tangerine and tangelo varieties.

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

[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)
<b>ORANGES</b>				
Early-midseason non-Valencia ....	19,569	741	62	286
Navel.....	913	252	68	140
Valencia .....	28,390	510	53	237
<b>GRAPEFRUIT</b>				
White.....	722	396	66	107
Red .....	2,834	385	50	107

## Maturity

Regular bloom fruit samples were collected from groves on established routes February 26-27, 2018 in Florida's five major citrus producing areas and tested February 28, 2018. Only Valencia oranges were collected and tested this month. All comparisons are made to March 1, 2017. Solids (Brix) are lower. Lower acid levels have resulted in higher ratios. Unfinished juice per box is higher and solids per box is lower.

Indian River comparisons are made to fruit from other areas for this test period. Indian River oranges have a higher acid level and a higher solids (Brix) with a lower ratio. Unfinished juice per box is lower and solids per box are higher for oranges in the Indian River District when compared to other areas.

### Unadjusted Maturity Tests — Florida: March 1, 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)
<b>Valencia Oranges</b> (146-145)										
Sep 1 .....	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Oct 1 .....	1.99	1.84	8.83	8.74	4.53	4.81	46.09	48.57	4.07	4.25
Nov 1 .....	1.66	1.54	9.15	8.80	5.57	5.80	49.95	51.64	4.57	4.55
Dec 1 .....	1.41	1.26	10.06	9.18	7.19	7.43	52.39	53.18	5.27	4.88
Jan 1 .....	1.22	1.06	10.82	10.10	9.01	9.70	54.16	54.30	5.86	5.49
Feb 1 .....	1.09	1.00	11.48	10.69	10.66	10.78	55.55	54.59	6.38	5.83
Mar 1 .....	0.99	0.86	11.96	11.16	12.14	13.05	54.49	54.63	6.51	6.10

NA Not available.

### Unadjusted Maturity Test Averages, by Areas — Florida: March 1, 2016-2017 and 2017-2018

Fruit type (number of groves)	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)
<b>Valencia Oranges</b>										
Indian River (28-29) .....	1.03	0.93	12.56	11.73	12.36	12.69	54.75	54.30	6.87	6.37
Other Areas (118-116) .....	0.99	0.85	11.81	11.02	12.09	13.13	54.42	54.71	6.43	6.03

## Size Frequency Measurement Distributions, by Type — Florida: February Survey

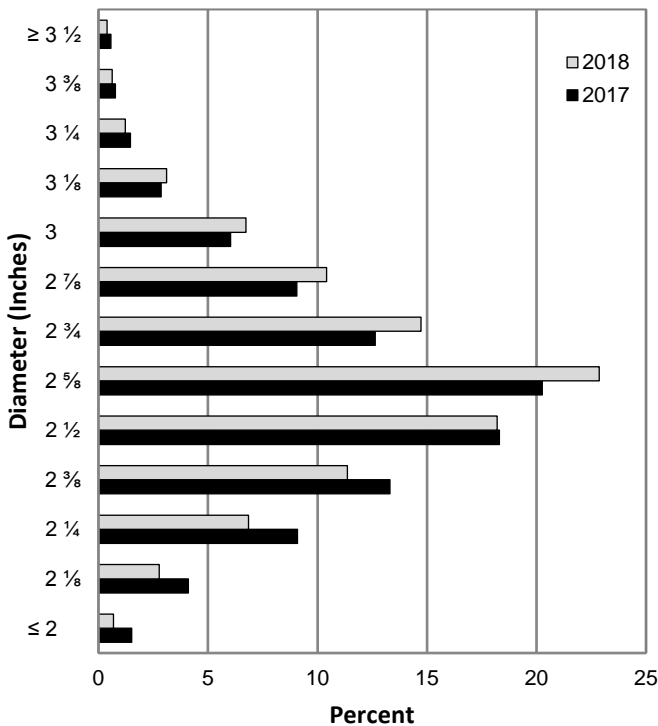
[Size frequency distributions from the February size survey are shown in the following table. The distributions are by percent of fruit falling within the size range of each 4/5-bushel container. These frequency distributions include fruit from regular bloom and exclude fruit from summer bloom]

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>VALENCIA ORANGES</b>				<b>WHITE GRAPEFRUIT <sup>1</sup></b>			
64 or less .....	6.5	4.1	3.4	32 or less .....	2.1	1.9	0.0
80 .....	15.7	11.4	13.2	36 .....	5.0	4.7	0.0
100 .....	31.9	26.5	30.2	40 .....	6.2	5.8	0.0
125 .....	28.0	30.0	31.5	48 .....	7.6	13.7	15.0
163 or more .....	17.9	28.0	21.7	56 .....	11.5	13.1	10.0
				63 or more .....	67.6	60.8	75.0
<b>HONEY TANGERINES</b>				<b>RED GRAPEFRUIT <sup>1</sup></b>			
80 or less .....	13.6	12.0	3.4	32 or less .....	3.6	1.8	18.0
100 .....	20.9	27.8	14.7	36 .....	8.1	3.2	22.0
120 .....	25.2	27.2	27.9	40 .....	13.4	7.0	9.5
176 .....	12.1	12.2	19.8	48 .....	16.9	15.0	10.5
210 or more .....	28.2	20.8	34.2	56 .....	10.9	12.5	8.0
				63 or more .....	47.1	60.5	32.0

<sup>1</sup> Excludes seedy.

The charts below show the distribution of fruit sizes in 2018 compared to 2017. The diameter measurements shown are the minimum values of each eighth inch range, except for the smallest value.

**Fruit Size Frequency Measurements, Valencia Oranges, by Diameter - Florida: February Survey**



**Fruit Size Frequency Measurements, Red Seedless Grapefruit, by Diameter - Florida: February Survey**

