



# CITRUS NOVEMBER FORECAST MATURITY TEST RESULTS AND FRUIT SIZE

Cooperating with the Florida Department of Agriculture and Consumer Services  
2290 Lucien Way, Suite 300, Maitland, FL 32751-7057  
(407) 648-6013 · (855) 271-9801 FAX · [www.nass.usda.gov/fl](http://www.nass.usda.gov/fl)

November 10, 2015

**Florida All Orange Production Down 8 Percent**  
**Florida Non-Valencia Orange Production Down 8 Percent**  
**Florida Valencia Orange Production Down 8 Percent**  
**Florida All Grapefruit Production Down 1 Percent**  
**Florida All Tangerine Production Unchanged**  
**Florida Tangelo Production Down 11 Percent**  
**FCOJ Yield Lowered to 1.58 Gallons per Box (42° Brix)**

FORECAST DATES	–	2015-2016 SEASON
December 9, 2015		April 12, 2016
January 12, 2016		May 10, 2016
February 9, 2016		June 10, 2016
March 9, 2016		July 12, 2016

## Citrus Production by Type and State – United States

Crop and State	Production <sup>1</sup>			2015-2016 Forecasted Production <sup>1</sup>	
	2012-2013	2013-2014	2014-2015	October (1,000 boxes)	November (1,000 boxes)
<b>Non-Valencia Oranges <sup>2</sup></b>					
<b>Florida</b> .....	<b>67,100</b>	<b>53,300</b>	<b>47,400</b>	<b>40,000</b>	<b>37,000</b>
California <sup>3</sup> .....	42,500	38,700	39,500	43,000	43,000
Texas <sup>3</sup> .....	1,504	1,401	1,170	1,317	1,317
United States.....	111,104	93,401	88,070	84,317	81,317
<b>Valencia Oranges</b>					
<b>Florida</b> .....	<b>66,500</b>	<b>51,400</b>	<b>49,400</b>	<b>40,000</b>	<b>37,000</b>
California <sup>3</sup> .....	12,000	10,800	9,500	9,500	9,500
Texas <sup>3</sup> .....	289	376	282	366	366
United States.....	78,789	62,576	59,182	49,866	46,866
<b>All Oranges</b>					
<b>Florida</b> .....	<b>133,600</b>	<b>104,700</b>	<b>96,800</b>	<b>80,000</b>	<b>74,000</b>
California <sup>3</sup> .....	54,500	49,500	49,000	52,500	52,500
Texas <sup>3</sup> .....	1,793	1,777	1,452	1,683	1,683
United States.....	189,893	155,977	147,252	134,183	128,183
<b>Grapefruit</b>					
<b>Florida-All</b> .....	<b>18,350</b>	<b>15,650</b>	<b>12,900</b>	<b>12,300</b>	<b>12,200</b>
<b>White</b> .....	<b>5,250</b>	<b>4,150</b>	<b>3,250</b>	<b>2,800</b>	<b>2,700</b>
<b>Red</b> .....	<b>13,100</b>	<b>11,500</b>	<b>9,650</b>	<b>9,500</b>	<b>9,500</b>
California <sup>3</sup> .....	4,500	3,850	3,800	3,500	3,500
Texas <sup>3</sup> .....	6,100	5,700	4,250	4,000	4,000
United States.....	28,950	25,200	20,950	19,800	19,700
<b>Lemons <sup>3</sup></b>					
California.....	21,000	18,800	20,500	19,500	19,500
Arizona.....	1,800	1,800	2,000	1,600	1,600
United States.....	22,800	20,600	22,500	21,100	21,100
<b>Tangelos</b>					
<b>Florida</b> .....	<b>1,000</b>	<b>880</b>	<b>680</b>	<b>450</b>	<b>400</b>
<b>Tangerines</b>					
<b>Florida-All</b> .....	<b>3,280</b>	<b>2,900</b>	<b>2,270</b>	<b>1,750</b>	<b>1,750</b>
<b>Early <sup>4</sup></b> .....	<b>1,910</b>	<b>1,750</b>	<b>1,445</b>	<b>1,000</b>	<b>1,000</b>
<b>Honey</b> .....	<b>1,370</b>	<b>1,150</b>	<b>825</b>	<b>750</b>	<b>750</b>
California <sup>3,5</sup> .....	13,000	14,700	18,200	19,000	19,000
Arizona <sup>3,5</sup> .....	160	150	170	(NA)	(NA)
United States.....	16,440	17,750	20,640	20,750	20,750

NA Not available.

<sup>1</sup> Net pounds per box: oranges in California-80, Florida-90, Texas-85; grapefruit in California-80, Florida-85, Texas-80; lemons-80, tangelos-90; tangerines and mandarins in Arizona and 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 tangerines in Texas and Temples in Florida.

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

<sup>4</sup> Fallglo and Sunburst varieties.

<sup>5</sup> Includes tangelos and tangors.

## All Oranges 74.0 Million Boxes

The 2015-2016 Florida all orange forecast released today by the USDA Agricultural Statistics Board is 74.0 million boxes, down 6.0 million boxes from the initial October forecast. If realized, this forecast will be 24 percent less than last season's production and the least since the 1963-64 season of 58.3 million boxes (including Temples). The forecast consists of 37.0 million boxes of the non-Valencia oranges (early, midseason, Navel, and Temple varieties) and 37.0 million boxes of the Valencia oranges. Regression data used are from the 2006-2007 through 2014-2015 seasons. For those previous 9 seasons, the November forecast has deviated from final production by an average of 7 percent, with 8 seasons above and 1 below, with differences ranging from 1 percent below to 19 percent above. All references to "average", "minimum", and "maximum" refer to the previous 9 seasons unless noted.

## Non-Valencia Oranges 37.0 Million Boxes

The forecast of non-Valencia production is lowered to 37.0 million boxes. Current size is below the average and projected to be near the minimum at harvest. Current droppage is above the maximum and is projected to continue above the maximum until harvest. The Navel forecast, included in the non-Valencia forecast, is unchanged at 1.1 million boxes. If realized, this utilization will be the lowest in a series dating back to 1979-1980 when separate Navel forecasts began. Current Navel size is about average and droppage is above the maximum.

## Valencia Oranges 37.0 Million Boxes

The forecast of Valencia production is down 3.0 million boxes to 37.0 million boxes. Current fruit size is slightly below the average and is projected, at harvest, to be near the minimum recorded last season. Current droppage is above the maximum and projected to be the highest on record since 1960-1961 for a non-freeze or non-hurricane season.

## All Grapefruit 12.2 Million Boxes

The forecast of all grapefruit production is lowered 100,000 boxes to 12.2 million boxes. The change is in the white grapefruit forecast now at 2.7 million boxes. The red grapefruit forecast is unchanged at 9.5 million boxes. Current fruit size of white grapefruit is below the minimum while current droppage is above the maximum. Current fruit size of red grapefruit is below average, while current droppage is above the maximum.

## All Tangerines 1.75 Million Boxes

The forecast of all tangerine production is unchanged at 1.75 million boxes. The early tangerine forecast (Fallglo and Sunburst varieties) continues at 1.0 million boxes, consisting of 300,000 boxes of Fallglo tangerines and 700,000 boxes of Sunburst tangerines. Harvest of Fallglo tangerines is ending, while the Sunburst tangerine harvest is underway. Fallglo final size is close to the minimum, while final droppage is close to the maximum at 45 percent. Sunburst current size is close to average and is projected to be about average at harvest. Sunburst droppage is projected to be well above average at 29 percent. The forecast of the later maturing Honey variety remains at 750,000 boxes. Current Honey size is close to the minimum, but current droppage is close to the maximum.

## Tangelos 400 Thousand Boxes

The forecast of tangelo production is lowered to 400 thousand boxes, the lowest since 1958-1959's production of 300,000 boxes. Tangelo projected fruit size is below average requiring 292 pieces of fruit to fill a 90-pound box. Droppage is projected to be above the maximum at 20 percent.

## FCOJ Yield 1.58 Gallons per Box

The projection for frozen concentrated orange juice (FCOJ) declined to 1.58 from 1.61 gallons per box of 42° Brix concentrate in October. Last season's final yield for all oranges was 1.502203 gallons per box, as reported by the Florida Department of Citrus. Yield projections for the early-midseason and late components will be published in January. All projections of yield assume the processing relationships this season will be similar to those of the past several seasons.

## Forecast Components, by Type – Florida: November 2015

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

Type	Bearing trees (1,000 trees)	Fruit per tree (number)	Droppage (percent)	Fruit per box (number)
<b>ORANGES</b>				
Early-midseason.....	21,650	744	26	293
Navel.....	944	229	26	138
Valencia.....	30,249	520	32	235
<b>GRAPEFRUIT</b>				
White.....	1,087	449	32	122
Red.....	3,236	439	27	115

## Maturity

Regular bloom fruit samples (325 orange and 98 grapefruit) were collected from groves on established routes in Florida's five major citrus producing areas and tested in the Florida Department of Agriculture and Consumer Services, Division of Fruit and Vegetables, Florida Agricultural Statistics Service (FASS) laboratory November 2-4, 2015. All comparisons are made to November 1, 2014. Acid levels are lower and solids (Brix) are higher for all fruit types, resulting in higher ratios. Unfinished juice per box is lower for all varieties except late oranges. Solids per box are higher for all orange types but lower for grapefruit types. The lower table shows Indian River fruit have higher acid levels for all types and higher solids per box for all except the early oranges.

### Citrus Unadjusted Maturity Tests – Florida: 2014-2015 and 2015-2016

[Averages of regular bloom fruit from sample groves. Juice and solids per box are unadjusted and not comparable to juice processing plant test results. 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. The beam settings are also identical to past tests and no restrictors are used]

Fruit type (number of groves) test date	Acid		Solids (Brix)		Ratio		Unfinished juice per box		Solids per box	
	2014-2015	2015-2016	2014-2015	2015-2016	2014-2015	2015-2016	2014-2015	2015-2016	2014-2015	2015-2016
	(percent)	(percent)	(percent)	(percent)			(pounds)	(pounds)	(pounds)	(pounds)
<b>ORANGES</b>										
Early (120-120)										
Sep 1.....	1.38	1.26	9.12	9.14	6.69	7.33	43.72	44.82	3.98	4.09
Oct 1.....	1.01	0.91	9.05	9.42	9.11	10.50	49.01	52.40	4.43	4.93
Nov 1.....	0.87	0.75	9.68	10.30	11.28	13.89	51.55	50.41	4.99	5.19
Midseason (55-55)										
Sep 1.....	1.53	1.42	9.10	9.08	6.05	6.51	44.18	45.82	4.02	4.16
Oct 1.....	1.14	1.06	9.09	9.21	8.08	8.93	49.77	49.59	4.52	4.57
Nov 1.....	1.01	0.89	9.80	10.37	9.96	11.89	52.25	51.35	5.12	5.33
Late (150-150)										
Sep 1.....	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Oct 1.....	2.08	1.91	8.69	8.57	4.23	4.55	45.17	48.46	3.92	4.15
Nov 1.....	1.76	1.60	9.10	9.35	5.22	5.91	50.35	52.44	4.58	4.90
<b>GRAPEFRUIT</b>										
White Seedless (50-49)										
Sep 1.....	1.64	1.65	9.97	9.75	6.11	5.91	34.69	34.89	3.46	3.40
Oct 1.....	1.47	1.48	9.76	9.49	6.68	6.45	38.25	38.94	3.73	3.69
Nov 1.....	1.38	1.36	9.72	9.79	7.11	7.23	42.77	41.39	4.16	4.05
Red Seedless (47-49)										
Sep 1.....	1.64	1.58	9.91	9.74	6.08	6.19	34.87	35.29	3.45	3.44
Oct 1.....	1.44	1.37	9.60	9.58	6.69	7.02	39.10	42.42	3.75	4.06
Nov 1.....	1.42	1.29	9.94	9.97	7.05	7.74	42.99	42.44	4.27	4.23

NA Not available.

### Citrus Maturity Test Averages, by Areas – Florida: November 1, 2014-2015 and 2015-2016

Fruit type (number of groves) test date	Acid		Solids (Brix)		Ratio		Unfinished juice per box		Solids per box	
	2014-2015	2015-2016	2014-2015	2015-2016	2014-2015	2015-2016	2014-2015	2015-2016	2014-2015	2015-2016
	(percent)	(percent)	(percent)	(percent)			(pounds)	(pounds)	(pounds)	(pounds)
<b>ORANGES</b>										
Early										
Indian River (9-9).....	0.93	0.79	9.79	10.71	10.93	13.97	50.96	45.89	4.99	4.91
Other Areas (111-111)...	0.87	0.75	9.67	10.27	11.31	13.88	51.60	50.78	4.99	5.21
Midseason										
Indian River (11-8).....	1.06	1.01	9.79	10.75	9.34	10.87	50.73	51.40	4.96	5.53
Other Areas (44-47).....	1.00	0.87	9.81	10.31	10.11	12.06	52.63	51.34	5.16	5.29
Late										
Indian River (29-29).....	1.86	1.71	9.20	9.64	4.99	5.69	50.01	51.15	4.60	4.93
Other Areas (121-121)...	1.73	1.58	9.08	9.28	5.28	5.96	50.43	52.75	4.58	4.90
<b>GRAPEFRUIT</b>										
White Seedless										
Indian River (38-38).....	1.40	1.37	9.88	9.88	7.13	7.24	42.92	41.11	4.24	4.07
Other Areas (12-11).....	1.32	1.31	9.23	9.45	7.07	7.22	42.32	42.36	3.92	4.00
Red Seedless										
Indian River (40-40).....	1.42	1.30	9.94	10.04	7.03	7.73	42.84	42.87	4.26	4.30
Other Areas (7-9).....	1.38	1.24	9.90	9.64	7.20	7.80	43.85	40.55	4.34	3.90

### Citrus 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	2013	2014	2015	Type and number of fruit per 4/5-bushel containers	2013	2014	2015
	(percent)	(percent)	(percent)		(percent)	(percent)	(percent)
<b>NON-VALENCIA ORANGES <sup>1</sup></b>				<b>WHITE GRAPEFRUIT <sup>2</sup></b>			
64 or less.....	0.4	0.3	0.5	32 or less.....	1.3	1.5	0.8
80.....	2.8	2.7	2.9	36.....	4.8	4.8	4.1
100.....	12.7	12.3	13.4	40.....	7.2	9.8	6.2
125.....	27.1	28.0	27.8	48.....	12.5	13.7	11.8
163 or more.....	57.0	56.7	55.4	56.....	11.2	14.2	11.7
				63 or more.....	63.0	56.0	65.4
<b>NAVEL ORANGES</b>				<b>RED GRAPEFRUIT</b>			
64 or less.....	25.1	39.8	41.3	32 or less.....	1.3	1.9	2.0
80.....	30.1	30.5	28.4	36.....	3.0	4.1	5.0
100.....	24.3	17.8	18.4	40.....	6.4	7.9	9.5
125.....	12.7	8.0	8.6	48.....	11.7	13.8	15.2
163 or more.....	7.8	3.9	3.3	56.....	11.8	14.5	13.0
				63 or more.....	65.8	57.8	55.3
<b>VALENCIA ORANGES</b>				<b>FALLGLO TANGERINES</b>			
64 or less.....	0.4	0.3	0.5	80 or less.....	20.0	-	15.0
80.....	2.9	3.1	4.4	100.....	45.0	3.0	13.3
100.....	15.3	16.7	19.7	120.....	35.0	6.0	10.0
125.....	30.0	32.2	33.8	176.....	-	6.0	10.8
163 or more.....	51.4	47.7	41.6	210 or more.....	-	85.0	50.9
<b>TANGELOS</b>				<b>SUNBURST TANGERINES</b>			
80 or less.....	7.6	13.5	14.4	100 or less.....	6.5	7.0	14.0
100.....	15.9	20.0	21.6	120.....	15.2	14.7	20.6
120.....	23.0	19.6	20.2	176.....	10.4	12.8	16.6
156 or more.....	53.5	46.9	43.8	210 or more.....	67.9	65.5	48.8

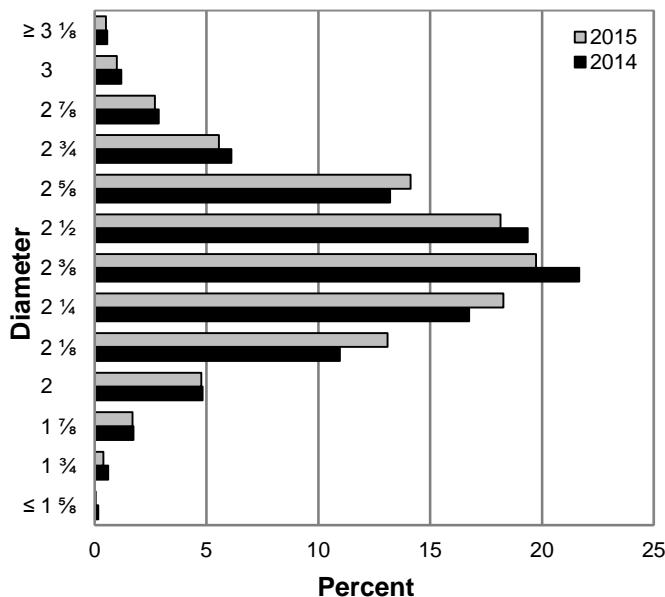
- Represents zero.

<sup>1</sup> Excludes Navel and Temple varieties.

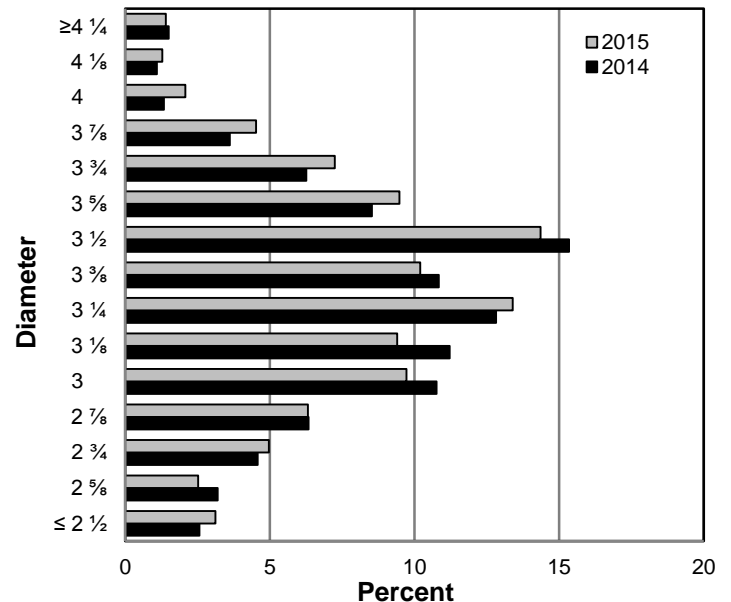
<sup>2</sup> Excludes seedy.

The charts below show the distribution of fruit sizes in 2014 compared to 2015. 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 Navel and Temple varieties.