United States Department of Agriculture
National Agricultural Statistics Service

CITRUS

MARCH FORECAST

MATURITY TEST RESULTS AND FRUIT SIZE

Cooperating with the Florida Department and Agriculture and Consumer Services
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Florida All Orange Production Down 4 Percent from February Forecast
Florida Non-Valencia Orange Production Down 6 Percent
Florida Valencia Orange Production Down 3 Percent
Florida All Grapefruit Production Down 1 Percent
Florida All Tangerine and Tangelo Production Down 4 Percent
FCOJ Yield at 1.43 Gallons per Box (42º Brix)

FORECAST DATES	–	2016-2017 SEASON
April 11, 2017		May 10, 2017
June 9, 2017		July 12, 2017

Crop and State	Production [1]		2016-2017 Forecasted Production [1]	
	2014-2015	2015-2016	February	March
	(1,000 boxes)	(1,000 boxes)	(1,000 boxes)	(1,000 boxes)
Non-Valencia Oranges [2]				
Florida	**47,400**	**36,100**	**35,000**	**33,000**
California [3]	39,000	45,500	44,000	44,000
Texas [3]	1,170	1,351	1,450	1,450
United States	87,570	82,951	80,450	78,450
Valencia Oranges				
Florida	**49,550**	**45,500**	**35,000**	**34,000**
California	9,200	8,700	9,000	7,800
Texas [3]	282	340	350	350
United States	59,032	54,540	44,350	42,150
All Oranges				
Florida	**96,950**	**81,600**	**70,000**	**67,000**
California	48,200	54,200	53,000	51,800
Texas [3]	1,452	1,691	1,800	1,800
United States	146,602	137,491	124,800	120,600
Grapefruit				
Florida-All	**12,900**	**10,800**	**9,000**	**8,900**
White	**3,250**	**2,490**	**1,700**	**1,700**
Red	**9,650**	**8,310**	**7,300**	**7,200**
California [3]	4,800	3,800	4,100	4,100
Texas [3]	4,250	4,800	5,300	5,300
United States	21,950	19,400	18,400	18,300
Lemons [3]				
California	20,600	20,500	20,000	20,000
Arizona	2,000	1,750	1,550	1,550
United States	22,600	22,250	21,550	21,550
Tangelos				
Florida	**665**	**390**	**(NA)**	**(NA)**
Tangerines and Tangelos [4]				
Florida-All	**2,265**	**1,415**	**1,560**	**1,490**
Early [5]	**1,445**	**785**	**630**	**600**
Royal [6]	**(NA)**	**(NA)**	**220**	**220**
Honey	**820**	**630**	**390**	**390**
Tangelo	**(NA)**	**(NA)**	**320**	**280**
California [3]	18,700	21,700	23,000	23,000
Arizona [7]	170	(NA)	(NA)	(NA)
United States	21,135	23,115	24,560	24,490

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; tangerines and mandarins in Arizona and 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 2014-2015 and 2015-2016.

[3] Estimates carried forward from January.

[4] Includes tangelos and tangors in California. Beginning in 2016-2017, includes tangelos in Florida.

[5] Fallglo and Sunburst varieties.

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

[7] Estimates discontinued in 2015-2016.

Regressions

Regression data used are from the 2006-2007 through 2015-2016 seasons. All references to "average", "minimum", and "maximum" refer to these 10 seasons unless noted.

All Oranges 67.0 Million Boxes

The 2016-2017 Florida all orange forecast released today by the USDA Agricultural Statistics Board is lowered 3.00 million boxes to 67.0 million boxes. The total now includes 33.0 million boxes of the non-Valencia oranges (early, midseason, and Navel varieties) and 34.0 million boxes of Valencia oranges. For the previous 10 seasons used in the regressions, the March all orange forecast has deviated from final production by an average of 4 percent, with 6 seasons above and 4 below, and differences ranging from 13 percent below to 9 percent above.

Non-Valencia Oranges 33.0 Million Boxes

The forecast of non-Valencia production is lowered 2.00 million boxes to 33.0 million boxes. The Row Count survey conducted February 23-24, 2017, showed 98 percent of the early-midseason rows, and 92 percent of the Navel rows are harvested. Estimated utilization to March 1, with an allocation for non-certified fruit, is 32.6 million boxes. The Navel forecast, included in the non-Valencia portion of the forecast, is 850,000 boxes, 3 percent of the non-Valencia total.

Valencia Oranges 34.0 Million Boxes

The forecast of Valencia production is down 1.00 million boxes to 34.0 million boxes. Current fruit size is close to the minimum and is projected to remain close to the minimum until harvest, requiring 243 pieces to fill a 90-pound box. Current droppage is below the maximum and projected droppage at 29 percent would be below the maximum at harvest.

All Grapefruit 8.90 Million Boxes

The forecast of all grapefruit production is lowered 100,000 boxes to 8.90 million boxes. The change was made in the red grapefruit forecast, now at 7.20 million boxes. The white grapefruit forecast is held at 1.70 million boxes. The Row Count survey conducted February 23-24, 2017, indicated 78 percent of the red grapefruit rows and 57 percent of the white grapefruit rows are harvested.

Tangerines and Tangelos 1.49 Million Boxes

The forecast of all tangerine production is lowered 70,000 boxes to 1.49 million boxes. The forecast of early tangerine varieties (Fallglo and Sunburst) is final at 600,000 boxes with 225,000 boxes of Fallglo tangerines and 375,000 boxes of Sunburst tangerines. Harvest is complete for these varieties this season. The Royal tangerine forecast is held at 220,000 boxes. The later maturing Honey tangerine forecast is unchanged at 390,000 boxes. The Row Count Survey conducted February 23-24, 2017 indicated 15 percent of the Royal tangerine rows were harvested and 36 percent of the Honey tangerine rows were harvested.

The tangelo forecast is lowered 40,000 boxes to 280,000 boxes. Estimated utilization to March 1 is 265,000 boxes, which includes an allocation for non-certified fruit. The Row Count survey conducted February 23-24, 2017, showed 90 percent of the rows are harvested.

FCOJ Yield 1.43 Gallons per Box

The projection for frozen concentrated orange juice (FCOJ) is unchanged at 1.43 gallons per box of 42° Brix concentrate. Projections for the components are 1.34 gallons per box for the early-midseason portion, and 1.54 gallons per box for the late (Valencia) portion. Last season's final yield, as reported by the Florida Department of Citrus were: 1.405527 gallons per box for all oranges, 1.347046 gallons per box for early-midseason oranges, and 1.472983 gallons per box for late (Valencia) oranges.

Forecast Components, by Type – Florida: March 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	Fruit per tree	Droppage	Fruit per box
	(1,000 trees)	(number)	(percent)	(number)
ORANGES				
Early-midseason	20,872	766	26	317
Navel	1,005	219	27	144
Valencia	28,925	450	29	243
GRAPEFRUIT				
White	832	410	44	143
Red	3,092	393	36	132

Maturity

Regular bloom fruit samples were collected from groves on established routes on February 23-24, 2017 in Florida's five major citrus producing areas and tested February 27, 2017. All comparisons are made to March 1, 2016. Only late oranges were collected and tested this month. Acids and solids (Brix) are also higher, but ratios are lower. Unfinished juice per box is lower, while solids per box is higher.

Indian River comparisons are made to fruit from other areas in the second table. Indian River late oranges have a higher acid level, solids (Brix) and a higher ratio. Unfinished juice per box and solids per box are higher in the Indian River District when compared to other areas.

Citrus Unadjusted Maturity Tests – Florida: 2015-2016 and 2016-2017

[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	
	2015-2016	2016-2017	2015-2016	2016-2017	2015-2016	2016-2017	2015-2016	2016-2017	2015-2016	2016-2017
	(percent)	(percent)	(percent)	(percent)			(pounds)	(pounds)	(pounds)	(pounds)
Late Oranges (128-146)										
Oct 1	1.92	1.99	8.60	8.83	4.53	4.53	48.28	46.09	4.15	4.07
Nov 1	1.60	1.66	9.36	9.15	5.90	5.57	52.47	49.95	4.91	4.57
Dec 1	1.31	1.41	9.74	10.06	7.53	7.19	54.75	52.39	5.33	5.27
Jan 1	1.04	1.22	10.25	10.82	10.01	9.01	57.20	54.16	5.86	5.86
Feb 1	0.97	1.09	10.68	11.48	11.18	10.66	56.16	55.55	6.00	6.38
Mar 1	0.87	0.99	11.35	11.96	13.16	12.14	56.55	54.49	6.42	6.51

Citrus Maturity Test Averages, by Areas – Florida: March 1, 2015-2016 and 2016-2017

Fruit type (number of groves)	Acid		Solids (Brix)		Ratio		Unfinished juice per box		Solids per box	
	2015-2016	2016-2017	2015-2016	2016-2017	2015-2016	2016-2017	2015-2016	2016-2017	2015-2016	2016-2017
	(percent)	(percent)	(percent)	(percent)			(pounds)	(pounds)	(pounds)	(pounds)
Late Oranges										
Indian River (25-28)	0.89	1.03	11.92	12.56	13.57	12.36	55.69	54.75	6.64	6.87
Other Areas (103-118)	0.87	0.99	11.21	11.81	13.06	12.09	56.76	54.42	6.36	6.43

Fruit Size Comparisons by Types to Previous Seasons

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 off-bloom fruit.

Citrus Size Frequency Measurement Distributions, by Type – Florida: February Survey

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)
VALENCIA ORANGES				**WHITE GRAPEFRUIT** [1]			
64 or less	2.5	6.5	4.1	32 or less	4.1	2.1	1.9
80	11.2	15.7	11.4	36	11.2	5.0	4.7
100	30.1	31.9	26.5	40	13.5	6.2	5.8
125	30.9	28.0	30.0	48	18.1	7.6	13.7
163 or more	25.3	17.9	28.0	56	16.3	11.5	13.1
				63 or more	36.8	67.6	60.8
HONEY TANGERINES				**RED GRAPEFRUIT**			
80 or less	8.0	13.6	12.0	32 or less	6.3	3.6	1.8
100	15.2	20.9	27.8	36	10.3	8.1	3.2
120	17.4	25.2	27.2	40	14.3	13.4	7.0
176	12.9	12.1	12.2	48	14.1	16.9	15.0
210 or more	46.5	28.2	20.8	56	13.0	10.9	12.5
				63 or more	42.0	47.1	60.5

[1] 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.