United States Department of Agriculture
National Agricultural Statistics Service

CITRUS

FEBRUARY FORECAST
MATURITY TEST RESULTS AND FRUIT SIZE

Cooperating with the Florida Department of Agriculture & Consumer Services
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February 9, 2016

Florida All Orange Production Unchanged
Florida Non-Valencia Orange Production Unchanged
Florida Valencia Orange Production Unchanged
Florida All Grapefruit Down 3 Percent
Florida All Tangerine Production Up 7 Percent
Florida Tangelo Production Unchanged
FCOJ Yield 1.45 Gallons per Box (42° Brix)

2015-2016 SEASON FORECAST DATES

March 9, 2016	April 12, 2016
May 10, 2016	June 10, 2016
July 12, 2016	

Citrus Production by Type and State – United States

Crop and State	Production [1]			2015-2016 Forecasted Production [1]	
	2012-2013	2013-2014	2014-2015	January	February
	(1,000 boxes)	(1,000 boxes)	(1,000 boxes)	(1,000 boxes)	(1,000 boxes)
Non-Valencia Oranges [2]					
Florida	**67,100**	**53,300**	**47,400**	**36,000**	**36,000**
California [3]	42,500	38,700	39,500	42,000	42,000
Texas [3]	1,504	1,401	1,170	1,130	1,130
United States	111,104	93,401	88,070	79,130	79,130
Valencia Oranges					
Florida	**66,500**	**51,400**	**49,400**	**33,000**	**33,000**
California [3]	12,000	10,800	9,500	10,000	10,000
Texas [3]	289	376	282	280	280
United States	78,789	62,576	59,182	43,280	43,280
All Oranges					
Florida	**133,600**	**104,700**	**96,800**	**69,000**	**69,000**
California [3]	54,500	49,500	49,000	52,000	52,000
Texas [3]	1,793	1,777	1,452	1,410	1,410
United States	189,893	155,977	147,252	122,410	122,410
Grapefruit					
Florida-All	**18,350**	**15,650**	**12,900**	**10,800**	**10,500**
White	**5,250**	**4,150**	**3,250**	**2,300**	**2,300**
Red	**13,100**	**11,500**	**9,650**	**8,500**	**8,200**
California [3]	4,500	3,850	3,800	3,700	3,700
Texas [3]	6,100	5,700	4,250	5,100	5,100
United States	28,950	25,200	20,950	19,600	19,300
Lemons					
California [3]	21,000	18,800	20,500	20,000	20,000
Arizona [3]	1,800	1,800	2,000	1,600	1,600
United States	22,800	20,600	22,500	21,600	21,600
Tangelos					
Florida	**1,000**	**880**	**680**	**400**	**400**
Tangerines					
Florida-All	**3,280**	**2,900**	**2,270**	**1,400**	**1,500**
Early [4]	**1,910**	**1,750**	**1,445**	**800**	**800**
Honey	**1,370**	**1,150**	**825**	**600**	**700**
California [3 5]	13,000	14,700	18,200	21,000	21,000
Arizona [5 6]	160	150	170	(NA)	(NA)
United States	16,440	17,750	20,640	22,400	22,500

NA Not available.
[1] 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.
[2] Navel and miscellaneous varieties in California. Early (including Navel) and midseason varieties in Florida and Texas. Includes small quantities of Temples in Florida.
[3] Estimates carried forward from January forecast.
[4] Fallglo and Sunburst varieties.
[5] Includes tangelos and tangors.
[6] Estimates discontinued in 2015-2016.

Regressions

Regression data used are from the 2006-2007 through 2014-2015 seasons. All references to "average", "minimum", and "maximum" refer to these 9 seasons unless noted.

All Oranges 69.0 Million Boxes

The 2015-2016 Florida all orange forecast released today by the USDA Agricultural Statistics Board is 69.0 million boxes, unchanged from January, and 29 percent less than last season's final production. The total includes 36.0 million boxes of the non-Valencia oranges (early, midseason, Navel, and Temple varieties) and 33.0 million boxes of Valencia oranges. For the previous 9 seasons used in the regressions, the February all orange forecast has deviated from final production by an average of 5 percent, with 4 seasons above and 5 below, and differences ranging from 4 percent below to 10 percent above.

Non-Valencia Oranges 36.0 Million Boxes

The forecast of non-Valencia production is unchanged at 36.0 million boxes. Size and drop components were final last month. The Row Count survey conducted January 27-28, 2016, shows 78 percent of the early-midseason rows, and 93 percent of the Navel rows are harvested. Estimated utilization to February 1, with an allocation for non-certified fruit, is 29.5 million boxes. The Navel forecast, included in the non-Valencia portion of the forecast, remains at 1.0 million boxes.

Valencia Oranges 33.0 Million Boxes

The forecast of Valencia production is unchanged at 33.0 million boxes. Current fruit size is close to average and is projected to remain close to average at harvest. Current droppage is above the maximum and projected droppage at 40 percent would be above the maximum at harvest.

All Grapefruit 10.5 Million Boxes

The forecast of all grapefruit production is lowered 300,000 boxes with the change made in the red grapefruit variety. The red grapefruit forecast is now 8.2 million boxes, while the white grapefruit continues at 2.3 million boxes. Fruit size and drop are final in this report. Both white and red grapefruit sizes are less than the minimum. Final droppage rates for both white and red grapefruit are the highest in series dating back to 1968-1969. The Row Count survey conducted January 27-28, 2016, indicated 35 percent of the red grapefruit rows and 23 percent of the white grapefruit rows are harvested.

All Tangerines 1.5 Million Boxes

The forecast of all tangerine production is raised to 1.5 million boxes with the change made in the Honey tangerine variety. The forecast of early tangerine varieties (Fallglo and Sunburst) remain at 800,000 boxes, with harvest complete for the season. The later maturing Honey tangerine forecast is raised 100,000 boxes to 700,000 boxes due to an increase in fruit size and a reduction in the droppage rate. Even so, final Honey fruit size is below average, requiring 304 pieces of fruit to fill a 1-3/5 bushel box. The final droppage rate of 47 percent is close to the maximum.

Tangelos 400 Thousand Boxes

The tangelo forecast remains at 400,000 boxes. Estimated utilization to February 1 is 376,000 boxes, which includes an allocation for non-certified fruit. The Row Count survey conducted January 27-28, 2016, showed 74 percent of the rows are harvested.

FCOJ Yield 1.45 Gallons per Box

The projection for frozen concentrated orange juice (FCOJ) is lowered to 1.45 gallons per box of 42° Brix concentrate. The yield projection for the non-Valencia oranges is lowered to 1.35 gallons per box while the projection for Valencia oranges is lowered to 1.60 gallons per box. Last season's final yield for all oranges was 1.502203 gallons per box, as reported by the Florida Department of Citrus. Last season's final yields for the components were 1.419546 for non-Valencia oranges and 1.584149 for Valencia oranges.

Forecast Components, by Variety — Florida: February 2016

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

Type	Bearing trees	Fruit per tree	Droppage	Fruit per box
	(1,000 trees)	(number)	(percent)	(number)
ORANGES				
Early-midseason	21,650	744	32	284
Navel	944	229	24	141
Valencia	30,249	520	40	225
GRAPEFRUIT				
White	1,087	449	34	132
Red	3,236	439	40	127

Maturity

Regular bloom fruit samples were collected from groves on established routes January 27-28, 2016 in Florida's five major citrus producing areas and tested January 29 and February 1, 2016. All comparisons are made to February 1, 2015. Solids (Brix) are higher for early oranges, but lower for midseason and late oranges. Lower acid levels have resulted in higher ratios for all fruit types. Unfinished juice per box is higher for early and late oranges but lower for midseason oranges. Solids per box is higher for early oranges, but lower for midseason and late oranges.

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

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)
ORANGES										
Early (34-23)										
Sep 1	1.41	1.28	9.01	9.06	6.45	7.18	43.42	44.99	3.91	4.07
Oct 1	1.07	0.93	9.02	9.55	8.57	10.39	49.39	55.00	4.45	5.25
Nov 1	0.93	0.78	9.64	10.41	10.57	13.67	52.47	49.54	5.06	5.17
Dec 1	0.85	0.68	10.41	10.80	12.35	15.92	52.15	51.24	5.43	5.53
Jan 1	0.75	0.60	10.86	10.86	14.60	18.59	50.05	50.05	5.43	5.44
Feb 1	0.76	0.63	11.44	11.50	15.19	18.52	49.70	50.74	5.69	5.84
Midseason (21-20)										
Sep 1	1.59	1.50	8.88	9.02	5.69	6.13	42.67	44.68	3.79	4.03
Oct 1	1.18	1.12	8.94	9.30	7.59	8.70	48.72	49.05	4.36	4.56
Nov 1	1.06	0.92	9.72	10.40	9.41	11.72	52.52	52.08	5.10	5.41
Dec 1	0.99	0.76	10.66	10.97	10.97	14.80	52.32	52.08	5.56	5.70
Jan 1	0.85	0.69	11.46	11.39	13.60	16.98	52.21	53.25	5.98	6.06
Feb 1	0.98	0.75	11.97	11.75	12.38	16.09	51.22	51.21	6.12	6.03
Late (148-143)										
Sep 1	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Oct 1	2.08	1.91	8.69	8.58	4.22	4.55	45.19	48.35	3.93	4.15
Nov 1	1.76	1.59	9.10	9.35	5.22	5.94	50.36	52.57	4.58	4.92
Dec 1	1.48	1.30	9.70	9.74	6.61	7.56	53.87	54.75	5.23	5.33
Jan 1	1.26	1.04	10.85	10.25	8.72	10.00	54.83	57.22	5.95	5.87
Feb 1	1.18	0.97	11.32	10.66	9.71	11.19	55.20	55.93	6.25	5.96

NA Not available.

Citrus Maturity Test Averages, by Areas — Florida: February 1, 2014-2015 and 2015-2016

Fruit type (number of groves)	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)
ORANGES										
Late										
Indian River (29-26)	1.25	1.00	11.53	11.09	9.34	11.25	54.42	56.31	6.28	6.25
Other Areas (119-117)	1.16	0.96	11.27	10.56	9.80	11.18	55.39	55.85	6.24	5.90

Fruit Size Comparisons by Types to Previous Seasons

Size frequency distributions from the January 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.

Citrus Size Frequency Measurement Distributions, by Type — Florida: January Survey

Type and number of fruit per 4/5 – bushel containers	2014	2015	2016
	(percent)	(percent)	(percent)
VALENCIA ORANGES			
64 or less	2.4	1.9	5.2
80	11.9	11.5	15.3
100	29.8	30.4	32.8
125	31.4	32.3	27.8
163 or more	24.5	23.9	18.9
HONEY TANGERINES			
80 or less	15.2	12.3	14.2
100	22.0	15.6	23.8
120	26.0	19.2	24.9
176	14.3	11.8	12.3
210 or more	22.5	41.1	24.8

Type and number of fruit per 4/5 – bushel containers	2014	2015	2016
	(percent)	(percent)	(percent)
WHITE GRAPEFRUIT [1]			
32 or less	6.0	5.9	3.1
36	10.9	10.6	5.9
40	11.9	14.2	9.2
48	14.5	18.3	11.9
56	11.3	14.0	13.0
63 or more	45.4	37.0	56.9
RED GRAPEFRUIT			
32 or less	3.4	3.8	2.9
36	8.3	9.3	7.2
40	10.8	14.8	11.5
48	15.7	16.4	15.7
56	11.9	12.1	13.1
63 or more	49.9	43.6	49.6

[1] Excludes seedy.

The charts below show the distribution of fruit sizes in 2015 compared to 2016. The diameter measurements shown are the minimum values of each eighth inch range, except for the smallest values.