United States Department of Agriculture
National Agricultural Statistics Service

CITRUS

MAY FORECAST
MATURITY TEST RESULTS

Cooperating with the Florida Department of Agriculture and Consumer Services
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Florida All Orange Production is Down less than 1 Percent from April
Florida Non-Valencia Orange Production Down 1 Percent
Florida Valencia Orange Production Unchanged
Florida All Grapefruit Production Down 6 Percent
Florida All Tangerine and Tangelo Down 3 Percent

FORECAST DATES - 2019-2020 SEASON	
June 11, 2020	July 10, 2020

Citrus Production by Type – States and United States

Crop and State	Production [1]		2019-2020 Forecasted Production [1]	
	2017-2018	2018-2019	April	May
	(1,000 boxes)	(1,000 boxes)	(1,000 boxes)	(1,000 boxes)
Non-Valencia Oranges [2]				
Florida	**18,950**	**30,400**	**30,000**	**29,650**
California [3]	35,900	42,000	40,000	40,000
Texas [3]	1,530	2,210	1,800	1,800
United States	56,380	74,610	71,800	71,450
Valencia Oranges				
Florida	**26,100**	**41,450**	**40,000**	**40,000**
California [3]	8,300	9,400	8,500	8,500
Texas [3]	350	290	500	500
United States	34,750	51,140	49,000	49,000
All Oranges				
Florida	**45,050**	**71,850**	**70,000**	**69,650**
California [3]	44,200	51,400	48,500	48,500
Texas [3]	1,880	2,500	2,300	2,300
United States	91,130	125,750	120,800	120,450
Grapefruit				
Florida-All	**3,880**	**4,510**	**5,200**	**4,900**
Red	**3,180**	**3,740**	**4,300**	**4,100**
White	**700**	**770**	**900**	**800**
California [3]	3,800	4,100	4,300	4,300
Texas [3]	4,800	6,100	5,800	5,800
United States	12,480	14,710	15,300	15,000
Lemons [3]				
Arizona	1,000	1,350	1,900	1,900
California	21,200	23,700	21,000	21,000
United States	22,200	25,050	22,900	22,900
Tangerines and Tangelos				
Florida [4]	**750**	**990**	**1,050**	**1,020**
California [3 5]	19,200	26,500	23,000	23,000
United States	19,950	27,490	24,050	24,020

[1] 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.
[2] Navel and miscellaneous varieties in California. Early non-Valencia (including Navel) and midseason non-Valencia varieties in Florida and Texas.
[3] Estimates carried forward from April forecast
[4] Includes all certified varieties of tangerines and tangelos.
[5] Includes tangelos and tangors.

All Oranges 69.7 Million Boxes

The 2019-2020 Florida all orange forecast released today by the USDA Agricultural Statistics Board is 69.7 million boxes, down 1 percent from the April forecast. If realized, this will be 3 percent less than last season's revised final production. The total includes 29.7 million boxes of the non-Valencia oranges (early, midseason, and Navel varieties) and 40.0 million boxes of Valencia oranges.

Non-Valencia Oranges 29.7 Million Boxes

The forecast of non-Valencia orange production is finalized at 29.7 million boxes. Harvest is complete for the included varieties. The Navel forecast, included in the non-Valencia portion of the forecast, is 800,000 boxes, 3 percent of the non-Valencia total.

Valencia Oranges 40.0 Million Boxes

The forecast of Valencia orange production is unchanged at 40.0 million boxes. Weekly certifications in April averaged 3.28 million boxes. The Row Count survey conducted April 29-30, 2020 indicated 82 percent of the Valencia rows are harvested. Estimated utilization to May 1, including an allocation for other use, is 29.9 million boxes. Processors were surveyed regarding fruit processed through April 30th and the estimated quantity remaining to be processed to the end of the season. Analysis of estimated utilization to the first of the month, and results of the processors report support holding the Valencia orange forecast.

All Grapefruit 4.90 Million Boxes

The forecast of all grapefruit production is now 4.90 million boxes. The white grapefruit forecast is lowered to 800,000 boxes. The red grapefruit forecast is lowered to 4.10 million boxes. Estimated utilization to May 1, with an allocation for non-certified use, of white grapefruit is 784,000 boxes and of red grapefruit is 4.04 million boxes. The Row Count survey conducted April 29-30, 2020, indicated harvest is relatively complete for these varieties.

Tangerines and Tangelos 1.02 Million Boxes

The forecast for tangerines and tangelos is lowered 30,000 boxes to 1.02 million boxes. Harvest of tangerines and tangelos is over. Utilization to May 1, with an allocation for non-certified fruit, is 1.02 million boxes. This forecast number includes all certified tangerine and tangelo varieties.

Reliability

To assist users in evaluating the reliability of the May 1 Florida production forecasts, the "Root Mean Square Error," a statistical measure based on past performance, is computed. The deviation between the May 1 production forecast and the final estimate is expressed as a percentage of the final estimate. The average of squared percentage deviations for the latest 20-year period is computed. The square root of the average becomes statistically the "Root Mean Square Error." Probability statements can be made concerning expected differences in the current forecast relative to the final end-of-season estimate, assuming that factors affecting this year's forecast are not different from those influencing recent years.

The "Root Mean Square Error" for the May 1 Florida all orange production forecast is 2.0 percent. If you exclude the three abnormal production seasons (three hurricane seasons), the "Root Mean Square Error" is 2.0 percent. This means chances are 2 out of 3 that the current all orange production forecast will not be above or below the final estimates by more than 2.0 percent, including or excluding abnormal seasons. Chances are 9 out of 10 (90 percent confidence level) that the difference will not exceed 3.5 percent including or excluding abnormal seasons.

Changes between the May 1 Florida all orange forecast and the final estimates during the past 20 years have averaged 2.37 million boxes (2.39 million, excluding abnormal seasons), ranging from 0.10 million boxes to 5.60 million boxes including abnormal seasons, (0.50 to 5.60 million boxes excluding abnormal seasons). The May 1 forecast for all oranges has been below the final estimate 12 times, above 8 times, (below 11 times, above 6 times, excluding abnormal seasons). The difference does not imply that the May 1 forecasts this year are likely to understate or overstate final production.

Maturity

Regular bloom fruit samples were collected from groves on established routes April 29-30, 2020 in Florida's five major citrus producing areas and tested May 1, 2020. Only Valencia oranges were collected and tested this month. All comparisons are made to May 1, 2019. Acids and solids (Brix) are lower; ratios are higher. Unfinished juice per box and solids per box are higher.

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 lower for Valencia oranges in the Indian River District when compared to other areas.

Unadjusted Maturity Tests – Florida: May 1, 2018-2019 and 2019-2020

[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	
	2018-2019	2019-2020	2018-2019	2019-2020	2018-2019	2019-2020	2018-2019	2019-2020	2018-2019	2019-2020
	(percent)	(percent)	(percent)	(percent)			(pounds)	(pounds)	(pounds)	(pounds)
Valencia Oranges (49-37)										
Oct 1	1.88	2.12	8.54	9.26	4.59	4.45	46.73	47.25	3.99	4.37
Nov 1	1.46	1.60	9.02	9.65	6.25	6.13	50.56	50.96	4.56	4.92
Dec 1	1.22	1.37	9.58	9.55	7.87	7.22	52.67	53.23	5.05	5.08
Jan 1	1.04	1.11	10.43	10.23	10.17	9.32	52.52	54.15	5.48	5.53
Feb 1	0.99	0.96	10.86	10.72	11.07	11.36	52.65	54.63	5.72	5.86
Mar 1	0.84	0.83	11.40	10.96	13.57	13.30	53.90	55.35	6.14	6.07
Apr 1	0.79	0.75	11.71	11.41	14.87	15.26	54.87	56.20	6.42	6.42
May 1	0.65	0.62	11.81	11.77	18.37	19.05	54.37	55.82	6.43	6.57

Unadjusted Maturity Test Averages, by Areas – Florida: May 1, 2018-2019 and 2019-2020

Fruit type (number of groves)	Acid		Solids (Brix)		Ratio		Unfinished juice per box		Solids per box	
	2018-2019	2019-2020	2018-2019	2019-2020	2018-2019	2019-2020	2018-2019	2019-2020	2018-2019	2019-2020
	(percent)	(percent)	(percent)	(percent)			(pounds)	(pounds)	(pounds)	(pounds)
Valencia Oranges										
Indian River (6-19)	0.71	0.64	12.42	12.01	17.47	18.90	52.73	54.39	6.51	6.55
Other Areas (43-18)	0.64	0.61	11.72	11.52	18.50	19.20	54.60	57.32	6.42	6.60