



CITRUS NOVEMBER FORECAST

MATURITY TEST RESULTS AND FRUIT SIZE

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November 8, 2013

Florida All Orange Production Down 6 Percent From Last Season
Florida Non-Valencia Orange Production Down 14 Percent
Florida Valencia Orange Production Up 1 Percent
Florida All Grapefruit Production Down 3 Percent
Florida All Tangerine Production Up 14 Percent
Florida Tangelo Production Unchanged

FORECAST DATES	–	2013-2014 SEASON
December 10, 2013		April 9, 2014
January 10, 2014		May 9, 2014
February 10, 2014		June 11, 2014
March 10, 2014		July 11, 2014

Citrus Production by Type and State – United States

Crop and State	Production ¹			Forecasted Production ¹
	2010-2011 (1,000 boxes)	2011-2012 (1,000 boxes)	2012-2013 (1,000 boxes)	2013-2014 (1,000 boxes)
Non-Valencia Oranges²				
Florida.....	70,300	74,200	67,100	58,000
California.....	48,000	45,500	44,000	44,000
Texas.....	1,700	1,108	1,499	1,400
United States.....	120,000	120,808	112,599	103,400
Valencia Oranges				
Florida.....	70,200	72,500	66,500	67,000
California.....	14,500	12,500	12,500	12,500
Texas.....	249	311	289	364
United States.....	84,949	85,311	79,289	79,864
All Oranges				
Florida.....	140,500	146,700	133,600	125,000
California.....	62,500	58,500	56,500	56,500
Texas.....	1,949	1,419	1,788	1,764
United States.....	204,949	206,119	191,888	183,264
Grapefruit				
Florida-All.....	19,750	18,850	18,350	17,800
White.....	5,850	5,350	5,250	4,800
Colored.....	13,900	13,500	13,100	13,000
California.....	4,310	4,000	4,000	4,000
Texas.....	6,300	4,800	6,100	5,190
United States.....	30,360	27,650	28,450	26,990
Lemons				
California.....	20,500	20,500	21,000	21,500
Arizona.....	2,500	750	1,800	1,785
United States.....	23,000	21,250	22,800	23,285
Tangelos				
Florida.....	1,150	1,150	1,000	1,000
Tangerines				
Florida-All.....	4,650	4,290	3,280	3,750
Early ³	2,600	2,330	1,910	2,050
Honey.....	2,050	1,960	1,370	1,700
California ⁴	10,600	10,800	13,000	13,500
Arizona ⁴	300	200	200	200
United States.....	15,500	15,290	16,480	17,450

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 tangerines in Texas and Temples in Florida.

³ Fallglo and Sunburst varieties.

⁴ Includes tangelos and tangors.

All Oranges 125.0 Million Boxes

The 2013-2014 Florida all orange forecast released today by the USDA Agricultural Statistics Board is 125.0 million boxes, a 6 percent decrease from last season's production. If realized, this would be the lowest production since the freeze-affected 1989-1990 season. The total is comprised of 58.0 million boxes of non-Valencia oranges (early, midseason, Navel, and Temple varieties) and 67.0 million boxes of Valencia oranges. The Navel orange forecast is 2.1 million boxes, 4 percent of the non-Valencia total.

The hurricane seasons of 2004-2005 and 2005-2006 have been excluded from the usual 10-year regression analysis and from comparisons of the current season to previous seasons. For those previous 8 seasons, average actual production is 157.5 million boxes. The initial forecast has deviated from final production by an average of 4 percent with 7 seasons above and 1 below, with differences ranging from 1 percent below to 15 percent above.

The estimated number of bearing trees for all oranges is 56.8 million, down 1 percent from the previous season. Trees planted in 2010 and earlier are considered bearing this season. Field work for the latest Commercial Citrus Inventory was completed in July 2013. Attrition rates were applied to the results to determine the number of bearing trees which are used to weight and expand objective count data in the forecast model.

The early months of 2013 brought little precipitation and average temperatures to the citrus growing region. Significant rainfall returned in late spring and slowly eliminated drought conditions by the first week in July. Seasonal temperatures together with above average precipitation continued throughout the summer months and kept the citrus groves drought-free through mid-October. Dry seasonal conditions returned during the final weeks of October as the harvest began.

The procedures used in this forecast are the same as used in past seasons. The methodology is described on page 5 of this report. All references to "average" refer to the average of the previous 8 non-hurricane seasons.

Non-Valencia Oranges 58.0 Million Boxes

The **non-Valencia** forecast of 58.0 million boxes is 14 percent lower than last season's production. The estimated number of bearing trees (excluding Navels) is 23.7 million, down 1 percent from the previous season. The estimated fruit per tree for early-midseason oranges is 918, a decrease of 11 percent from last season. Projected fruit size is below the minimum, requiring an estimated 284 pieces of fruit to fill a 90-pound box. Projected droppage is near the maximum at 18 percent.

The prorated forecast shows a decrease of 1.4 million boxes in the Southern area compared to last season. The Indian River area shows a decrease of 100 thousand boxes and all other areas show a combined decrease of 7.6 million boxes when compared to 2012-2013.

The **Navel** forecast of 2.1 million boxes is 5 percent lower than last season's production. The estimated number of bearing trees is 985 thousand, down 2 percent from the previous season. The estimated fruit per tree is 429, an increase of 4 percent from last season. Projected fruit size is near the minimum, requiring an estimated 142 pieces of fruit to fill a 90-pound box. Projected droppage is above average at 19 percent.

Valencia Oranges 67.0 Million Boxes

The **Valencia** forecast of 67.0 million boxes is 1 percent higher than last season's production. The estimated number of bearing trees is 32.1 million, down 1 percent from the previous season. The estimated fruit per tree is 614, a decrease of 7 percent from last season. Projected fruit size is below the minimum, requiring an estimated 234 pieces of fruit to fill a 90-pound box. Projected droppage is above average at 18 percent.

The prorated forecast shows a decrease of 1.6 million boxes in the Southern area compared to last season. The Indian River area shows an increase of 900 thousand boxes and all other areas show a combined increase of 1.2 million boxes when compared to 2012-2013.

FCOJ Yield 1.60 Gallons per Box

The projection for frozen concentrated orange juice (FCOJ) is 1.60 gallons per box of 42° Brix concentrate. Last season's final yield for all oranges was 1.587680 gallons per box, as reported by the Florida Department of Citrus. Projections for the components will be published in January. Record yields are 1.597195 gallons per box for the early-midseason category in 2008-2009, and 1.790343 gallons per box for the late oranges (Valencias) in 2007-2008. The record yield for all oranges is 1.672737 gallons per box set in 2007-2008.

Forecast Components, by Variety — Florida: November 2013

[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)
ORANGES				
Early-midseason.....	23,660	918	18	284
Navel.....	985	429	19	142
Valencia.....	32,149	614	18	234
GRAPEFRUIT				
White.....	1,282	555	20	122
Colored.....	3,617	500	20	122

Citrus Production and Prorated Forecast, by Production Area – 2012-2013 and 2013-2014

[Forecasts based on fruit populations. The possible differences between growing areas, concerning average fruit size, loss from droppage, and harvest patterns, can alter the prorated estimates]

Production Area	Oranges				Grapefruit			
	Non-Valencia		Valencia		White		Colored	
	2012-2013 (1,000 boxes)	2013-2014 (1,000 boxes)						
Indian River.....	1,800	1,700	2,700	3,600	3,700	4,000	8,100	9,200
Southern.....	16,700	15,300	24,400	22,800	500	250	2,300	1,700
Other.....	48,600	41,000	39,400	40,600	1,050	550	2,700	2,100
Florida Total.....	67,100	58,000	66,500	67,000	5,250	4,800	13,100	13,000

Distribution of Estimated Fruit Population, by Type, Area, and Age Groups — Florida

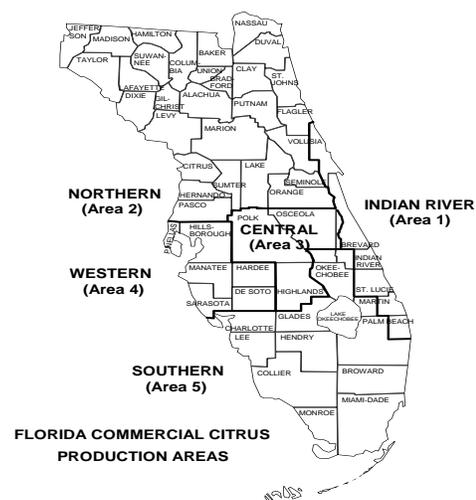
[Distribution of fruit population in September as determined by multiplying average fruit per tree from the Limb Count Survey by bearing age trees]

Areas and age groups	Oranges				Grapefruit			
	Non-Valencia		Valencia		White		Colored	
	2012-2013 (percent)	2013-2014 (percent)	2012-2013 (percent)	2013-2014 (percent)	2012-2013 (percent)	2013-2014 (percent)	2012-2013 (percent)	2013-2014 (percent)
Indian River.....	3	3	5	5	77	83	70	71
Northern.....	7	6	3	3	(Z)	1	4	2
Central.....	30	31	35	35	13	9	10	10
Western.....	36	34	24	23	2	2	3	4
Southern.....	24	26	33	34	8	5	13	13
3 - 5 years.....	3	3	2	2	1	1	3	3
6 - 8 years.....	5	4	4	4	1	1	4	4
9 - 13 years.....	13	12	14	11	4	4	6	6
14 - 23 years.....	37	34	48	44	48	35	36	31
24 yrs & over.....	42	47	32	39	46	59	51	56

(Z) Less than half of the unit shown.

Expected Gift Fruit Shipments Under the 6-R Program and Non-Certified Usage, by Type — Florida: 2013-2014

Type	1,000 boxes
Non-Valencia Oranges.....	1,000
Valencia Oranges.....	500
White Grapefruit.....	200
Colored Grapefruit.....	500
Tangelos.....	100
Tangerines.....	300



Maturity

Regular bloom fruit samples were collected from groves on established routes in Florida's five major citrus producing areas and tested in the Florida Agricultural Statistics Service (FASS) laboratory October 30-November 1, 2013. The orange sample size is 323 and the grapefruit sample size is 97. All comparisons are made to November 2012. Acid levels are higher on all fruit types, while solids (Brix) are lower on all orange varieties but higher on grapefruit. Ratios, unfinished juice and solids per box are lower for all fruit types.

Citrus Unadjusted Maturity Tests — Florida: 2012-2013 and 2013-2014

[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	
	2012-2013 (percent)	2013-2014 (percent)	2012-2013 (percent)	2013-2014 (percent)	2012-2013	2013-2014	2012-2013 (pounds)	2013-2014 (pounds)	2012-2013 (pounds)	2013-2014 (pounds)
ORANGES										
Early (119-119)										
Sep 1.....	1.24	1.47	9.37	9.24	7.69	6.41	46.43	42.38	4.35	3.92
Oct 1.....	0.98	1.06	9.49	9.47	9.88	9.06	47.47	47.42	4.51	4.49
Nov 1.....	0.76	0.89	10.25	10.04	13.71	11.52	51.38	44.64	5.27	4.48
Midseason (55-55)										
Sep 1.....	1.41	1.69	9.35	9.26	6.77	5.59	45.84	43.30	4.28	4.01
Oct 1.....	1.19	1.31	9.57	9.56	8.24	7.54	48.79	48.37	4.67	4.63
Nov 1.....	0.92	1.11	10.46	10.29	11.69	9.53	52.07	45.75	5.45	4.71
Late (150-149)										
Sep 1.....	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Oct 1.....	2.16	2.18	8.81	8.66	4.17	4.01	45.00	46.32	3.97	4.01
Nov 1.....	1.69	1.84	9.29	9.26	5.60	5.11	51.32	50.85	4.77	4.71
GRAPEFRUIT										
White Seedless (47-49)										
Sep 1.....	1.53	1.78	9.92	10.08	6.50	5.70	35.02	31.46	3.47	3.17
Oct 1.....	1.44	1.55	9.83	9.87	6.83	6.39	36.32	35.65	3.57	3.51
Nov 1.....	1.33	1.54	9.89	10.21	7.48	6.68	42.68	39.49	4.22	4.03
Colored Seedless (49-48)										
Sep 1.....	1.52	1.70	10.16	10.00	6.70	5.91	35.45	33.13	3.60	3.31
Oct 1.....	1.41	1.48	10.03	9.84	7.12	6.71	37.62	36.51	3.77	3.59
Nov 1.....	1.34	1.43	9.99	10.17	7.52	7.16	41.84	40.56	4.18	4.12

(NA) Not available.

Citrus Maturity Test Averages, by Areas — Florida: November 1, 2012-2013 and 2013-2014

Fruit type (number of groves) test date	Acid		Solids (Brix)		Ratio		Unfinished juice per box		Solids per box	
	2012-2013 (percent)	2013-2014 (percent)	2012-2013 (percent)	2013-2014 (percent)	2012-2013	2013-2014	2012-2013 (pounds)	2013-2014 (pounds)	2012-2013 (pounds)	2013-2014 (pounds)
ORANGES										
Early										
Indian River (9-8).....	0.73	1.00	10.09	10.14	13.99	10.40	52.80	43.49	5.35	4.41
Other Areas (110-111)...	0.76	0.88	10.26	10.03	13.69	11.60	51.27	44.72	5.26	4.48
Midseason										
Indian River (11-11).....	0.93	1.16	10.55	10.33	11.51	9.24	49.90	45.02	5.27	4.64
Other Areas (44-44).....	0.91	1.09	10.44	10.28	11.73	9.60	52.61	45.93	5.49	4.73
Late										
Indian River (27-29).....	1.78	1.88	9.36	9.48	5.30	5.14	51.48	50.19	4.81	4.76
Other Areas (123-120)...	1.67	1.83	9.27	9.20	5.67	5.10	51.28	51.01	4.76	4.69
GRAPEFRUIT										
White Seedless										
Indian River (38-38).....	1.34	1.58	10.04	10.42	7.50	6.65	42.29	39.27	4.25	4.09
Other Areas (9-11).....	1.26	1.41	9.28	9.48	7.39	6.78	44.32	40.24	4.11	3.81
Colored Seedless										
Indian River (40-39).....	1.37	1.44	10.03	10.26	7.39	7.16	41.47	40.94	4.15	4.20
Other Areas (9-9).....	1.21	1.38	9.83	9.78	8.13	7.15	43.45	38.88	4.27	3.80

All Grapefruit 17.8 Million Boxes

The forecast of grapefruit production is 17.8 million boxes, 3 percent lower than last season's production. The total is comprised of 4.8 million boxes of white grapefruit and 13.0 million boxes of colored grapefruit. All grapefruit bearing trees are estimated to be 4.9 million, up less than 1 percent from the previous season.

The **white** grapefruit forecast of 4.8 million boxes is 9 percent lower than last season's production. The estimated number of bearing trees is down 3 percent from the previous season. The estimated fruit per tree is 555, an increase of 1 percent from last season. Projected fruit size is below the minimum, requiring an estimated 122 pieces of fruit to fill an 85-pound box. Projected droppage is above average at 20 percent.

The **colored** grapefruit forecast of 13.0 million boxes is 1 percent lower than last season's final production. The estimated number of bearing trees is up 1 percent from the previous season. The estimated fruit per tree is 500, an increase of 2 percent from last season. Projected fruit size is close to the minimum, requiring an estimated 122 pieces of fruit to fill an 85-pound box. Projected droppage is above average at 20 percent.

All Tangerines 3.75 Million Boxes

The forecast of all tangerines is 3.75 million boxes, 14 percent higher than last season's production. The total is comprised of 2.05 million boxes of the early varieties (Fallglo and Sunburst) and 1.7 million boxes of the later maturing Honey variety. All tangerine bearing trees are estimated to be 1.69 million, down 4 percent from last season.

The **Fallglo** tangerine forecast of 550 thousand boxes is 7 percent lower than last season's final production. The estimated number of bearing trees is down 2 percent from the previous season. The estimated fruit per tree is 999, an increase of 16 percent from last season. Final fruit size is above average, requiring an estimated 255 pieces of fruit to fill a 95-pound box. Final droppage is average at 16 percent.

The **Sunburst** tangerine forecast of 1.50 million boxes is 14 percent higher than last season's final production. The estimated number of bearing trees is down 4 percent from the previous season. The estimated fruit per tree is 1,128, a 16 percent increase from last season. Projected fruit size is near the minimum, requiring an estimated 404 pieces of fruit to fill a 95-pound box. Projected droppage is above average at 31 percent.

The **Honey** tangerine forecast of 1.7 million boxes is 24 percent higher than last season's final production. The estimated number of bearing trees is down 3 percent from last season. The estimated fruit per tree is 1,092, a 1 percent increase from last season. Projected fruit size is below average, requiring an estimated 293 pieces of fruit to fill a 95-pound box. Projected droppage is above average at 40 percent.

Tangelos 1.0 Million Boxes

The tangelo forecast of 1.0 million boxes is equal to last season's final production. The estimated number of bearing trees is down 6 percent from the previous season. The estimated fruit per tree is 905, an increase of 4 percent from last season. Projected fruit size is near the minimum, requiring an estimated 302 pieces of fruit to fill a 90-pound box. Projected droppage is above average at 9 percent.

Forecast Procedures

All citrus forecasts are based on actual fruit counts and measurements. The objective count method uses four components:

- (1) bearing age trees provided from the latest Commercial Citrus Inventory;
- (2) average fruit per tree obtained from the Limb Count survey using randomly selected trees and limbs;
- (3) fruit size from the fruit measurement survey and
- (4) fruit loss from the drop survey.

These measurements are used in the forecast models, which use data from the 2003-2004 through 2013-2014 seasons, excluding the hurricane seasons of 2004-2005 and 2005-2006.

The latest tree inventory is used to determine estimated tree numbers. All trees planted in 2010 and earlier are included for the current season. An attrition factor was applied to these tree numbers (by age and area) to account for losses since the inventory period.

Statistically valid procedures are used to provide unbiased estimates of fruit count. Samples are drawn with known probabilities from the Commercial Citrus Inventory, taking into account the variability in fruit per tree. Limbs are randomly selected from sample trees. Fruit on these limbs are counted in the mid-July to mid-September period.

Fruit size and loss surveys were conducted in August, September, and October. Results of these surveys are used in the models to project the fruit size at harvest and the fruit population expected to be available for harvest.

Citrus Size Frequency Measurement Distributions, by Type — Florida: October

Type and number of fruit per 4/5 – bushel containers	2011	2012	2013	Type and number of fruit per 4/5 – bushel containers	2011	2012	2013
	(percent)	(percent)	(percent)		(percent)	(percent)	(percent)
NON-VALENCIA ORANGES ¹				WHITE GRAPEFRUIT ²			
64 or less.....	2.0	0.5	0.4	32 or less.....	7.3	2.2	1.3
80.....	10.6	3.4	2.8	36.....	15.2	8.0	4.8
100.....	33.5	16.3	12.7	40.....	15.2	9.9	7.2
125.....	34.7	31.6	27.1	48.....	17.6	12.8	12.5
163 or more.....	19.2	48.2	57.0	56.....	13.7	12.9	11.2
NAVEL ORANGES				COLORED GRAPEFRUIT			
64 or less.....	42.4	30.0	25.1	32 or less.....	6.9	0.8	1.3
80.....	35.8	29.6	30.1	36.....	12.7	3.3	3.0
100.....	18.1	23.0	24.3	40.....	15.6	8.1	6.4
125.....	2.9	10.3	12.7	48.....	18.0	13.5	11.7
163 or more.....	0.8	7.1	7.8	56.....	13.6	12.9	11.8
VALENCIA ORANGES				FALLGLO TANGERINES			
64 or less.....	1.4	0.8	0.4	80 or less.....	90.0	-	20.0
80.....	12.7	5.1	2.9	100.....	5.0	28.0	45.0
100.....	36.4	21.7	15.3	120.....	5.0	35.0	35.0
125.....	32.7	34.8	30.0	176.....	-	10.0	-
163 or more.....	16.8	37.6	51.4	210 or more.....	-	27.0	-
TANGELOS				SUNBURST TANGERINES			
80 or less.....	28.5	11.2	7.6	100 or less.....	33.7	12.1	6.5
100.....	35.4	20.2	15.9	120.....	29.7	18.2	15.2
120.....	21.7	28.4	23.0	176.....	16.6	19.5	10.4
156 or more.....	14.4	40.2	53.5	210 or more.....	20.0	50.2	67.9

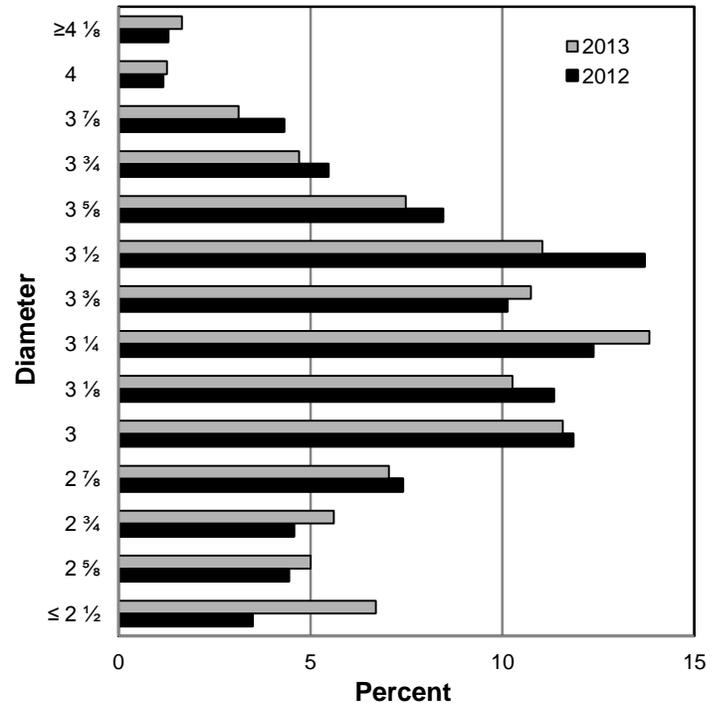
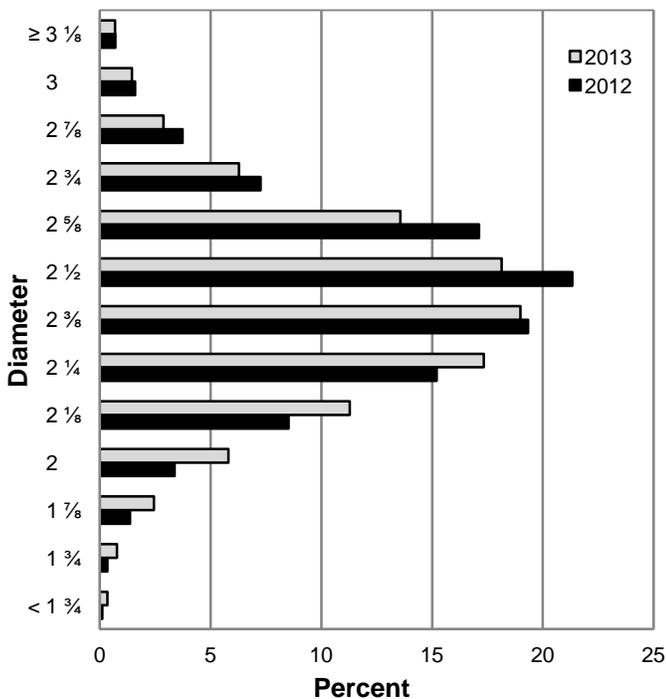
- Represents zero.

¹ Excludes Navel and Temple varieties.

² Excludes seedy.

Fruit Size Frequency Measurements, Non-Valencia Oranges ¹, by Diameter - Florida: October

Fruit Size Frequency Measurements, Colored Grapefruit, by Diameter - Florida: October



¹ Excludes Navel and Temple varieties.