

# **CITRUS** october forecast <u>maturity test results and fruit size</u>

### ALL ORANGES RECORD 252.0 MILLION BOXES

The 2003-04 Florida orange forecast released today by the USDA Agricultural Statistics Board is a record 252.0 million boxes. This is 24 percent more than the final utilization of last season and three percent more than the previous record high 244.0 million boxes in 1997-98. The total is divided into the early-midseason-Navel forecast of 137.0 million boxes and the late season (Valencia) forecast of 115.0 million boxes, also a record. All forecasts are based on tree inventory, fruit counts, and fruit measurements made by the Florida Agricultural Statistics Service. Analysis of these factors projects the quantity of fruit to be utilized during the season, including less than two percent for non-certified use. There has been no measurable amount of economic abandonment of oranges and none is anticipated this season.

During the past 10 seasons, the October all orange forecast has differed from final utilization by an average of 3.6 percent. Seasonal differences range from 9.4 percent below in 1999-00 to 7.5 percent above in 2000-01. October forecasts in four of the 10 seasons have been above and six below final production.

Weather conditions have been typical with the exception of above average rainfall all year. Because of the high rainfall totals (record amounts in some areas), trees are in excellent condition with multiple flushes of new growth observed all summer. Tropical storms moving around and through the State brought heavy rainfall, but no damaging

Citrus production, October 1, 2003
forecasts by varieties and states, with comparisons

	-		-			
Crop and State		Production				
	2000-01	2001-02	2002-03	2003-04		
		1,000	0 boxes			
Early, Midseason, and I	Navel Orang	es:				
<b>FLORIDA</b> California Texas Arizona	<b>128,000</b> 35,500 2,000 480	<b>128,000</b> 32,000 1,530 270	<b>112,000</b> 41,000 1,350 200	<b>137,000</b> 39,000 1,300 220		
Total Above Varieties	165,980	161,800	154,550	177,520		
Valencias:						
<b>FLORIDA</b> California Texas Arizona	<b>95,300</b> 19,000 235 420	<b>102,000</b> 19,500 210 250	<b>91,000</b> 21,000 220 270	<b>115,000</b> 20,000 250 250		
Total Valencias	114,955	121,960	112,490	135,500		
All Oranges:						
<b>FLORIDA</b> California Texas Arizona	<b>223,300</b> 54,500 2,235 900	<b>230,000</b> 51,500 1,740 520	<b>203,000</b> 62,000 1,570 470	<b>252,000</b> 59,000 1,550 470		
Total All Oranges	280,935	283,760	267,040	313,020		



October 10, 2003

FORECAST	DATES 2003-04	SEASON

November 12, 2003	December 11, 2003

winds. In the heavy soils and flatwoods areas, growers have been successfully moving excess water away from tree roots.

Less than one percent of the fruit counted for the forecast is of a non-regular bloom size and shape. July and later bloom fruit, not in the forecast, averaged less than one fruit per tree. Both amounts are lower than in recent seasons.

Bearing trees include those planted in 2000 and earlier as shown in the 2002 Commercial Citrus Inventory, updated by two seasons of attrition. These rates are assumed to follow the same trends as those observed between the 2000 and 2002 census periods and reflect the losses from tristeza and other diseases. This season, 75.9 million trees, or about three percent less than last season, are used to expand fruit counts and measurements.

Current fruit sizes are larger than the 10-season average. The average fruit per tree from the summer limb count survey is up over 28 percent from last season reflecting the heavy bloom period and excellent weather conditions this year. Combined with bearing trees, the resulting fruit population is 25 percent greater than last season. A shift among age groups resulted in an increase in fruit population in all but age 3, trees 9-13 years old, which represent 26 percent of the total. Age group 4, trees 14-23 years, is expected to produce about 40 percent. The older trees (age 5) are bearing 26 percent of the total fruit population.

The procedures used in all forecasts are identical with past seasons. The methodology is described on page six of this report.

## FCOJ YIELD 1.55 GALLONS PER BOX

The all orange FCOJ yield projection is 1.55 gallons per box of 42 degrees Brix concentrate. This is slightly higher than last season's final yield of 1.54 gallons per box as reported by the Florida Citrus Processors Association. The record high yield of 1.63 gallons occurred in the 1998-99 season. A separate projection for fruit going into the early-midseason and late categories will be made in the January release. All projections of yield assume the processing relationships of recent seasons. Results of the latest maturity tests are found on pages 3 and 4.

U.S. Department of Agriculture National Agricultural Statistics Service Florida Department of Agriculture and Consumer Services Division of Marketing and Development University of Florida Institute of Food and Agricultural Sciences

### EARLY-MIDSEASONS 137.0 MILLION BOXES

The early-midseason-Navel forecast is 137.0 million boxes, 22 percent more than harvested last season, and surpassed only by the 140.0 million boxes produced in the 1997-98 season. It is also seven percent more than the 128.0 million boxes produced in both the 2000-01 and 2001-02 seasons.

Excluding Navels, 32.2 million bearing trees were used in the expansions, down six percent from last season. Bearing tree numbers have been declining since the 1998-99 season.

The average fruit per tree from the limb count survey (weighted by the 25 cell age/area matrix) is 30 percent more than last season and the highest in over ten years. There is virtually no off-bloom this season. The Western area had the highest fruit per tree average followed closely by the Central counties. Together, these counties represent 65 percent of the total fruit population. The early portion, mostly Hamlins, represents 84 percent of the early-mid fruit population, the same as last season.

Fruit size in September is larger than the ten season average. Growth rates from August have been above average because of the abundant rainfall. It is anticipated these growth rates will continue. Average size will be larger at harvest than the previous seven, with the exception of last season. At this size, it is expected that it will take only six more fruit than last season to make a 90 pound equivalent box.

Droppage is low at this time, however the heavy fruit set is expected to lead to average droppage. Fruit splitting, which would be expected because of the heavy rainfall, has been very low. Future weather conditions could alter this projection for droppage.

# NAVEL ORANGES 5.0 MILLION BOXES

The Navel forecast is 5.0 million boxes, seven percent less than last season's 5.4 million boxes harvested. This forecast includes an allocation of 1.0 million boxes for non-certified and gift fruit. The current forecast is 22 percent less than the record 6.4 million boxes utilized in the 1996-97 season.

The number of bearing trees has been declining since the 1996-97 season and now are estimated at 2.2 million, seven percent less than last season. Average fruit per tree is 17 percent less than last season and the lowest since the 1999-2000 season. Fruit sizes are larger than the average and growth rates have been above normal because of the heavy rainfall and low fruit per tree.

Fruit droppage is very low at this time and is expected to remain low all season. Harvest has begun with limited commercial shipments. A good portion of this crop is used by fund raising groups.

# VALENCIA ORANGES RECORD 115.0 MILLION BOXES

The Valencia forecast of 115.0 million boxes is a record, surpassing the previous record 104.0 million boxes harvested in the 1997-98 season. This forecast is 11 percent greater than that season and 26 percent more than the 91.0 million boxes harvested last season.

Estimated bearing tree numbers are down slightly at 41.6 million compared to 41.7 last season. A high proportion of the trees planted in the last few years have been Valencias and these trees are now coming into production.

Average fruit per tree increased 31 percent from last season's low level and is the highest average since the 1997-98 season. The fruit population distribution shows 56 percent of the crop in the Central and Western areas, up from last season's 54 percent. The Southern area, predominantly the Gulf District, has 32 percent as compared to 33 percent last season.

Components used in the October Forecast

Туре	Bearing trees	Fruit per tree	Percent droppage	Fruit per box
	(1,000)			
Early-Mid	32,161	1,236	10	231
Navel	2,158	379	11	130
Valencia	41,572	684	13	198

Even with the high average fruit per tree, current fruit sizes are above the ten year average and the growth rate has also been above normal levels. Above average rainfall all year has contributed to this excellent growth and fruit sizes at harvest are expected to be above the average. Droppage rates are very low at this time and are expected to remain low. Due to the longer time to maturity of Valencias than other orange varieties and weather conditions during the next several months, these fruit size and droppage assumptions could change and alter the expected crop size.

# **TEMPLES 1.4 MILLION BOXES**

The Temple forecast of 1.4 million boxes is 100,000 boxes or eight percent above last season's utilization of 1.3 million boxes. If attained, this would equal the freeze affected 1989-90 harvest with only two seasons lower.

Estimated bearing tree numbers are down nine percent from last season as growers replace trees with more desirable varieties. Average fruit per tree increased 22 percent from last season. Current fruit size is larger than average and rate of growth has been above average this summer. Size at harvest is expected to be larger than the average. Droppage rates are expected to be near normal levels at 10.5 percent.

# **TANGELOS 1.3 MILLION BOXES**

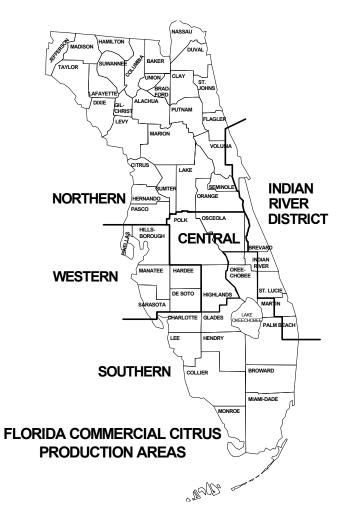
The estimated tangelo harvest of 1.3 million boxes is down 45 percent from last season and would the smallest harvest since the 1965-66 season. Bearing trees are down over six percent and average fruit per tree is down 52 percent. Possibly because of the above average rainfall, trees seemed to flush with new growth instead of blooming and setting fruit.

Average fruit sizes are large at this time because of the light fruit set and are expected to be larger than average at harvest. For the same reason, fruit droppage is expected to be less than average.

Expected gift fruit shipments under the 6-R program, and non-certified usage, 2003-04 season				
Туре	1,000 boxes			
Early and Midseason Oranges Valencia Oranges White Grapefruit Colored Grapefruit Temples Tangelos Tangerines	2,000 1,000 500 1,000 50 200 300			

Florida Citrus:	Distribution of estimated fruit population in
Septe	mber by areas and age groups <sup>1/</sup>

			inges	
Areas and	Early - M			encia
age groups	2002-03	2003-04	2002-03	2003-04
		Pe	rcent	
Indian River District Northern Central Western Southern	6 8 27 34 25	6 8 30 35 21	11 2 31 23 33	10 2 32 24 32
3 - 5 years 6 - 8 years 9 - 13 years 14 - 23 years 24 yrs & over	2 3 31 41 23	2 3 23 45 27	6 5 36 29 24	6 5 30 34 25
<b>A</b>		Seedless	Grapefruit	
Areas and	Wh	nite	Col	ored
age groups	2002-03	2003-04	2002-03	2003-04
Indian Diver		Pe	rcent	
Indian River District Northern Central	66 2/ 15	72 2/ 14	64 2 11	69 2 12
Western Southern	4 15	2 12	4 19	4 13



<sup>1/</sup> Distribution of fruit population in September as determined by multiplying average fruit per tree from the Limb Count Survey by bearing age trees. <sup>2/</sup> Less than one percent.

# Unadjusted Maturity Tests: Average of regular bloom fruit from sample groves, 2002-03 and 2003-04 seasons

Fruit type (No. groves)	Aci	id	Soli (Bri		Rat	tio	Unfinish per	•	Soli per l	
test date	2002-03	2003-04	2002-03	2003-04	2002-03	2003-04	2002-03	2003-04	2002-03	2003-04
	Perc		Perc		-	-	Pou		Poul	nds
ORANGES: Early (120-120)		Juice	and solids p	er box are l	unadjusted a	and not com	parable to p	plant test res	sults.	
Sep 1 Oct 1	1.29 0.89	1.21 0.83	9.41 9.82	9.34 9.68	7.46 11.41	7.85 11.82	45.30 51.79	42.64 49.07	4.26 5.08	3.98 4.75
Mid (55-55) Sep 1 Oct 1	1.42 1.01	1.43 1.06	9.03 9.58	9.35 9.73	6.46 9.68	6.63 9.39	45.90 52.84	44.12 49.26	4.14 5.06	4.13 4.79
Late (150-150) Sep 1 Oct 1	NA 2.04	NA 2.01	NA 8.70	NA 8.92	NA 4.34	NA 4.47	NA 48.96	NA 46.28	NA 4.26	NA 4.13
GRAPEFRUIT: White Seedless (47-5 Sep 1 Oct 1	50) 1.56 1.42	1.55 1.39	9.67 9.89	9.53 9.78	6.23 7.00	6.18 7.05	34.78 37.87	34.78 38.74	3.36 3.74	3.31 3.79
Colored Seedless (46 Sep 1 Oct 1	5-49) 1.55 1.34	1.49 1.33	10.19 10.41	9.81 10.12	6.60 7.80	6.58 7.63	36.03 39.28	34.79 40.26	3.68 4.09	3.42 4.07

NOTICE: 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   Groves sampled   Acid   Solids (Brix)   Ratio   Unfinished juice per box   Solids per box     Number   Percent   Percent   Percent   Pounds   Pounds     ORANGES:   Early   1995   120   1.03   9.30   9.25   50.50   4.70     1996   120   1.14   9.85   8.84   48.14   4.74     1997   120   0.99   9.80   10.17   47.27   4.63     1998   120   1.14   9.38   8.34   47.88   4.49     1999   120   1.20   9.36   7.94   46.51   4.35     2000   120   1.10   9.85   9.13   48.63   4.78     2001   120   0.89   9.82   11.41   51.79   5.08     2003   120   0.83   9.68   11.82   49.07   4.75     Midseason   1995   55   1.24   9.20   7.59   51.82   4.77	from sample groves, by types, as of October 1, 1995 through 2003						
type   sampled   (Brix)   [Juice per box   per box     Number   Percent   Percent   Pounds   Pounds     ORANGES:   1995   120   1.03   9.30   9.25   50.50   4.70     1996   120   1.14   9.85   8.84   48.14   4.74     1997   120   0.99   9.80   10.17   47.27   4.63     1998   120   1.14   9.38   8.34   47.88   4.49     1999   120   1.20   9.36   7.94   46.51   4.35     2000   120   1.10   9.85   9.13   48.63   4.78     2001   120   0.96   9.81   10.40   48.92   4.80     2002   120   0.89   9.82   11.41   51.79   5.08     2003   120   0.83   9.68   11.82   49.07   4.75     Midseason	Fruit	Groves	Aaid	Solids	Datio	Unfinished	Solids
ORANGES: Early     1995   120   1.03   9.30   9.25   50.50   4.70     1996   120   1.14   9.85   8.84   48.14   4.74     1997   120   0.99   9.80   10.17   47.27   4.63     1998   120   1.14   9.38   8.34   47.88   4.49     1999   120   1.20   9.36   7.94   46.51   4.35     2000   120   1.10   9.85   9.13   48.63   4.78     2001   120   0.96   9.81   10.40   48.92   4.80     2002   120   0.89   9.82   11.41   51.79   5.08     2003   120   0.83   9.68   11.82   49.07   4.75     Midseason	type	sampled	Aciu	(Brix)	Ralio	juice per box	per box
Early19951201.039.309.2550.504.7019961201.149.858.8448.144.7419971200.999.8010.1747.274.6319981201.149.388.3447.884.4919991201.209.367.9446.514.3520001201.109.859.1348.634.7820011200.969.8110.4048.924.8020021200.899.8211.4151.795.0820031200.899.8211.4151.795.0820031200.899.8211.4151.795.0820031200.899.8211.4151.795.0820031200.839.6811.8249.074.75Midseason9.767.0748.954.781995551.409.767.0748.954.781997541.149.438.4750.054.721998551.309.147.1948.254.411999551.419.106.5746.894.272000551.229.477.9449.784.712001551.019.589.6852.845.062003551.069.739.3949.264.79		Number	Percent	Percent		Pounds	Pounds
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	ORANGES:						
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	Early						
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	1995	120	1.03	9.30	9.25	50.50	4.70
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	1996	120	1.14	9.85	8.84	48.14	4.74
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	1997	120	0.99	9.80	10.17	47.27	4.63
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	1998	120	1.14	9.38	8.34	47.88	4.49
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	1999	120	1.20	9.36	7.94	46.51	4.35
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	2000	120	1.10	9.85	9.13	48.63	4.78
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	2001	120	0.96	9.81	10.40	48.92	4.80
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	2002	120	0.89	9.82	11.41	51.79	5.08
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	2003	120	0.83	9.68	11.82	49.07	4.75
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	Midseason						
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	1995	55	1.24	9.20	7.59	51.82	4.77
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	1996	55	1.40	9.76	7.07	48.95	4.78
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	1997	54	1.14	9.43	8.47	50.05	4.72
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	1998	55	1.30	9.14	7.19	48.25	4.41
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	1999	55	1.41	9.10	6.57	46.89	4.27
2002551.019.589.6852.845.062003551.069.739.3949.264.79Late	2000	55	1.22	9.47	7.94	49.78	4.71
2003551.069.739.3949.264.79Late19951502.398.603.6547.684.1019961502.408.933.7646.084.1119971502.108.844.3047.874.2319981502.448.653.6045.683.9519991502.518.553.4543.363.7120001502.458.803.6546.504.0920011502.198.874.1147.724.2320021502.048.704.3448.964.26	2001	55	1.17	9.56	8.39	49.75	4.76
Late19951502.398.603.6547.684.1019961502.408.933.7646.084.1119971502.108.844.3047.874.2319981502.448.653.6045.683.9519991502.518.553.4543.363.7120001502.458.803.6546.504.0920011502.198.874.1147.724.2320021502.048.704.3448.964.26	2002		1.01	9.58		52.84	5.06
19951502.398.603.6547.684.1019961502.408.933.7646.084.1119971502.108.844.3047.874.2319981502.448.653.6045.683.9519991502.518.553.4543.363.7120001502.458.803.6546.504.0920011502.198.874.1147.724.2320021502.048.704.3448.964.26	2003	55	1.06	9.73	9.39	49.26	4.79
19961502.408.933.7646.084.1119971502.108.844.3047.874.2319981502.448.653.6045.683.9519991502.518.553.4543.363.7120001502.458.803.6546.504.0920011502.198.874.1147.724.2320021502.048.704.3448.964.26	Late						
19971502.108.844.3047.874.2319981502.448.653.6045.683.9519991502.518.553.4543.363.7120001502.458.803.6546.504.0920011502.198.874.1147.724.2320021502.048.704.3448.964.26	1995					47.68	
19981502.448.653.6045.683.9519991502.518.553.4543.363.7120001502.458.803.6546.504.0920011502.198.874.1147.724.2320021502.048.704.3448.964.26	1996	150	2.40	8.93	3.76	46.08	4.11
19991502.518.553.4543.363.7120001502.458.803.6546.504.0920011502.198.874.1147.724.2320021502.048.704.3448.964.26	1997			8.84	4.30	47.87	4.23
20001502.458.803.6546.504.0920011502.198.874.1147.724.2320021502.048.704.3448.964.26	1998	150	2.44	8.65	3.60	45.68	3.95
20011502.198.874.1147.724.2320021502.048.704.3448.964.26							-
2002 150 2.04 8.70 4.34 48.96 4.26							
2003 150 2.01 8.92 4.47 46.28 4.13							
	2003	150	2.01	8.92	4.47	46.28	4.13

**Unadjusted Maturity Tests**: Averages of regular bloom fruit

## MATURITY

Results of the second maturity tests of the 2003-04 season for all but the late oranges, which were tested for the first time, are to the left. Samples tested are from groves on routes which cover all five major citrus producing areas.

Sample size for all types have remained constant for the past several seasons. The grapefruit sample size was 100 at the start of this season, which included 50 samples each for the white and colored seedless types. Only one colored sample was picked by October 1. None of 325 orange samples had been harvested.

Samples were collected September 29-30 and tested at the Orlando test laboratory of the Florida Agricultural Statistics Service. Only regular bloom fruit is collected and tested. A minimal amount of off-bloom occurred this season.

Rainfall throughout the growing season has been above normal levels in all areas. Lower interior and coastal areas have received more than the upper interior with some recording stations showing two or three times average for the year. Adverse effects on trees and fruit has been minimal.

In comparison to previous seasons, acid levels are very low, and the lowest for early and Valencia oranges in the ten year series. Acid in midseason fruit is second lowest in the seres, surpassing only last season. Grapefruit acid levels are near last season at this time which was also relatively low.

The ratio of solids to acid are the highest in the ten season series for early and Valencia oranges and second for midseasons. Similar to last season, grapefruit ratios are also high for this time of year. This indicates advanced maturity levels in comparison to other seasons.

Fresh fruit packers opened in mid-September. Varieties being shipped include early oranges, early tangerines, and grapefruit.

### Maturity test averages by areas, October 1, 2003

Fruit type	Groves sampled	Acid	Solids (Brix)	Ratio	Unfinished juice per box	Solids per box
	Number	Percent	Percent		Pounds	Pounds
ORANGES:						
Early						
Indian River Dist.	9	0.92	10.13	11.05	49.67	5.04
Other Areas	111	0.83	9.65	11.88	49.02	4.73
Midseason						
Indian River Dist.	10	1.02	9.65	9.47	48.98	4.73
Other Areas	45	1.07	9.75	9.37	49.33	4.80
Late						
Indian River Dist.	26	2.07	9.13	4.45	47.07	4.30
Other Areas	124	2.00	8.88	4.48	46.11	4.09
GRAPEFRUIT:						
White Seedless						
Indian River Dist.	38	1.43	9.91	6.93	38.68	3.83
Other Areas	12	1.27	9.39	7.45	38.94	3.66
Colored Seedless						
Indian River Dist.	38	1.36	10.22	7.52	40.32	4.12
Other Areas	11	1.22	9.76	8.03	40.04	3.91

### ALL GRAPEFRUIT 42.0 MILLION BOXES

The forecast of grapefruit for certified utilization (including an allocation of 1.5 million boxes of gift fruit and local sales) is 42.0 million boxes. If attained, this will be nine percent more than the 38.7 million boxes utilized last season. It will, however, be the second lowest amount since the freeze affected 1989-90 season when 35.7 million boxes were harvested. White grapefruit is forecast at 17.0 million boxes and colored varieties at 25.0 million.

Grapefruit:	2002-03 produc	tion and a pro	ration of the
2003-04 forecasts	based on fruit p	opulations, by	<sup>1</sup> production areas <sup>1/</sup>

Production Area	2002	2-03	2003	3-04
T Toddetion Area	White	Colored	White	Colored
		1,000	boxes	
Indian River	10,200	13,900	12,300	17,300
Southern	2,200	4,400	2,000	3,300
Other	3,800	4,200	2,700	4,400

<sup>1/</sup> The possible differences between growing areas, concerning average fruit size, loss from droppage, and harvest patterns, can alter the prorated estimates.

At the request of the Citrus Crop Estimates Advisory Committee, in any season in which economic abandonment of a portion of the crop is anticipated, an estimate of that amount is reported. With this season's forecast four million boxes below the previous five-season average utilization, no economic abandonment is anticipated. Changing economic conditions or assumptions during the season may warrant a reevaluation of this projection.

Citrus production, October 1, 2003

		and states, with		6
Crop and State		Production		Forecast
	2000-01	2001-02	2002-03	2003-04
		1,000	boxes	
Grapefruit:				
FLORIDA-All	46,000	46,700	38,700	42,000
White <sup>1/</sup>	18,700	18,900	16,200	17,000
Colored	<sup>2/</sup> 27,300	27,800	22,500	25,000
Texas	7,200	5,900	5,650	5,300
Arizona	250	160	130	90
California	6,300	5,900	5,600	5,500
Total Grapefruit	59,750	58,660	50,080	52,890
Lemons:				
California	22,600	18,300	24,000	23,000
Arizona	3,600	2,800	3,000	3,000
Total Lemons	26,200	21,100	27,000	26,000
Limes: Florida	250	150	3/	3/
Temples: Florida	1,250	1,550	1,300	1,400
Tangelos: Florida	2,100	2,150	2,350	1,300
K-Early: Florida	40	30	3/	3/
Tangerines:				
FLORIDA-AII	5,600	6,600	5,500	6,600
Early 4/	3,550	4,350	3,000	4,400
Honey	2,050	2,250	2,500	2,200
California 5/	2,200	2,200	2,500	2,500
Arizona 5/	650	620	430	600
Total Tangerines	8,450	9,420	8,430	9,700

<sup>1/</sup> Includes seedy. <sup>2/</sup> Excludes two million boxes of economic abandonment. <sup>3/</sup> No forecast. <sup>4/</sup> 2000-01 through 2001-02 -- Robinson, Fallglo, Sunburst, and Dancy; 2002-03 production and 2003-04 forecast -- Fallglo and Sunburst only. <sup>5/</sup> Includes tangelos. Components used in the October forecast

Туре	Bearing trees	Fruit per tree	Percent droppage	Fruit per box
	(1,000)			
White Grapefruit <sup>1/</sup>	3,333	497	9.0	81
Colored Grapefruit	5,461	503	10.5	91
	1			

<sup>1/</sup> Seedless variety only.

This season's bearing tree numbers include trees planted in 2000 and earlier. Attrition rates, calculated using the 2000 and 2002 editions of the Commercial Citrus Inventory, were used as a guide and applied to last season's estimated tree numbers. High rates of attrition are continuing due to disease, abandonment, and urbanization.

White grapefruit bearing tree numbers continue to decline as very few new groves are being planted. Estimated white seedless tree numbers used in the forecast model declined 12 percent from last season to 3.333 million. Average fruit per tree (fruit set) increased 25 percent from last season to 497. Average fruit sizes are anticipated to be larger than average, but smaller than last season. Growth rates have been above average in the summer months due to the abundance of rainfall. Droppage rates to harvest are anticipated near normal at nine percent.

**Colored** grapefruit bearing tree numbers are estimated at 5.461 million. This is 14 percent less than the trees used in last season's forecast model. As with white grapefruit, observed attrition continues at a high rate. Average fruit per tree increased 30 percent from last season to 503 and is above the previous five-season average of 451. Fruit sizes are slightly above average at this time and are projected to be slightly above average at harvest. As with white grapefruit, rates of growth during the summer have been above average. Droppage is projected at 10.5 percent, near the average of the last ten seasons.

#### ALL TANGERINES 6.6 MILLION BOXES

The forecast of all tangerines at 6.6 million boxes is 20 percent higher than last season's utilization of 5.5 million. The record utilization of 7.0 million occurred in the 1999-00 season. The forecast is comprised of the early varieties (Fallglo and Sunburst) at 4.4 million boxes and Honeys at 2.2 million.

**Fallglo** tangerines, the newest variety released, comprises about 20 percent of the early category forecast. Estimated bearing tree numbers are down four percent from last season, but as the trees are getting older, they are producing more fruit and a record amount is anticipated this season. Average fruit per tree is up 65 percent from last season, which was below the recent seasons' average. Average fruit size is anticipated to be smaller than last season and near the average. Droppage rates are projected near the average at 14 percent.

**Sunburst** tangerines comprise about 80 percent of the early category forecast. Bearing tree numbers are estimated to be down about six percent from last season. Average fruit per tree is over 70 percent higher than last season. Fruit growth rates during the summer have been above average, and the final sizes are expected to be above average. Droppage rates are expected near normal at nine percent.

The **Honey** forecast of 2.2 million boxes is down 12 percent from last season's 2.5 million boxes harvested. Bearing tree numbers are estimated only two percent less than last season, offset by the average fruit per tree being up two percent. Fruit growth rates have been above average this summer and final size at harvest is expected to be above average. Droppage rates are expected to be 35 percent, slightly below the ten season average.

### FORECAST PROCEDURES FOR THE 2003-04 SEASON

All citrus forecasts except seedy grapefruit are based on actual fruit counts and measurements. These objective count methods utilize: (1) the bearing age tree population provided from the latest aerial photography with field verifications, (2) the average fruit per tree obtained from the fruit count survey using randomly selected trees and limbs, and (3) the fruit measurement and fruit drop count surveys to determine fruit sizes and loss from fruit droppage.

The latest Commercial Citrus Inventory is the base used to determine forecast tree numbers for this season. All trees planted in 2000 and earlier are included. An attrition factor by age and area was applied to these base numbers to account for tree losses since the inventory period.

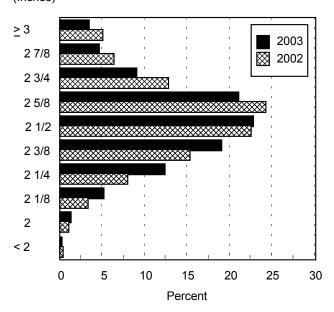
The same unbiased fruit count procedures were used as in all of the past 46 seasons. These include drawing the sample with known probabilities from the Commercial Citrus Inventory based on analyses of the variability in fruit per tree. Using random path procedures, count limbs on sample trees are preselected to improve accuracy. Fruit on these limbs is counted in the mid-July to mid-September period.

Fruit size surveys were conducted in August and September. The fruit loss surveys (drop count) were begun in August. These surveys, along with historical records, were used to project the fruit size at harvest and the fruit population that is expected to remain on trees at harvest.

The chart below describes the relationship of the September 2003 early and midseason orange (excluding Navels) fruit size measurements with those taken in September 2002. The diameter measurements shown are the minimum values of each eighth inch range, except for the smallest values.

Fruit Size: Early and midseason oranges (excluding Navels) size frequency by diameter from September measurements.





Size frequency distributions developed from the September 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 relate to fruit from regular bloom and exclude summer bloom in all years.

### Florida Citrus: Size frequency distributions from September measurements

Type of fruit and size in 4/5-bushel containers $2001$ $2002$ $2003$ PercentEarly and midseason oranges: (excluding Navels)64 and larger0.61.10.6802.16.84.810012.026.420.012528.937.136.0163 and smaller56.428.638.6Navel oranges:64 and larger25.031.444.38035.237.935.310026.922.715.21258.86.84.3163 and smaller4.11.20.9Valencia oranges:0.21.20.4802.38.55.310013.831.524.512529.535.437.2163 and smaller5.915.09.84010.722.616.84819.220.421.75616.612.813.263 and smaller44.819.230.6Colored seedless grapefruit:32 and larger2.38.24.0
Percent   Early and midseason oranges: (excluding Navels)   64 and larger 0.6 1.1 0.6   80 2.1 6.8 4.8   100 12.0 26.4 20.0   125 28.9 37.1 36.0   163 and smaller 56.4 28.6 38.6   Navel oranges: 64 and larger 25.0 31.4 44.3   80 35.2 37.9 35.3   100 26.9 22.7 15.2   125 8.8 6.8 4.3   163 and smaller 4.1 1.2 0.9   Valencia oranges: 64 and larger 0.2 1.2 0.4   80 2.3 8.5 5.3 100 13.8 31.5 24.5   125 29.5 35.4 37.2 163 and smaller 54.2 23.4 32.6   White seedless grapefruit: 32 and larger 2.8 10.0 7.9 36 5.9 15.0 9.8   40 10.7 22.6 16.8 4.8 <t< td=""></t<>
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Fallglo tangerines:
80 and larger 15.4 41.1 24.5
100 40.4 25.6 41.4
120 25.4 17.2 12.7
176 7.9 7.2 6.8
210 and smaller 10.9 8.9 14.6
Sunburst tangerines:
100 and larger 2.1 15.0 4.5
120 7.5 25.3 12.2
176 7.5 19.7 15.5
210 and smaller 82.9 40.0 67.8
Tangelos:
80 and larger 4.1 8.5 9.2
100 13.2 23.8 25.0
120 27.9 31.9 25.0
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