



CITRUS COMMERCIAL CITRUS INVENTORY PRELIMINARY REPORT

Cooperating with the Florida Department of Agriculture & Consumer Services
1222 Woodward St. · Orlando, FL 32803
(407) 648-6013 · (407) 648-6029 FAX · www.nass.usda.gov/fl

September 19, 2008

ALL CITRUS ACREAGE REDUCED TO 576,577

The 2008 total citrus acreage at 576,577 is the lowest since record keeping began with the 1966 tree inventory. Although the gross loss is less than that reported in the three prior censuses, it represents an 11 percent drop. In addition to urban development, pushing due to canker and greening, and abandonment of non-productive groves, the reduction includes two large areas being converted to reservoirs by a water management district. With nurseries lost to canker and the regulations now in effect, few new citrus trees were available. Only 22,128 acres of new plantings were counted.

Acreage decreases were recorded in 25 of the 30 counties included in the survey. Martin County suffered the greatest loss in acreage at 34 percent and is reduced by 11,869 acres. Hendry lost 9,799. Even with a loss of 5,023 acres, Polk continues to lead with 81,375. Hendry, Highlands, and DeSoto follow with over 60,000 acres each. Osceola and Hillsborough had substantial losses of almost 25 percent since the last census. For total trees, Hendry remains the leader with 10.6 million, followed by Polk with 9.7 million, and DeSoto with 8.2 million trees.

ALL ORANGE ACREAGE DROPS TO 496,518

All orange acreage at 496,518 is the lowest since the 1986 census, when a record low of 466,252 remained following several major freezes. After a recovery period, acreage surpassed 600,000 in 1992 and remained above that level until the recent hurricanes beginning in 2004. The Southern area leads with 30 percent of acres, followed by the Central and Western which combine for 55 percent.

Total trees are down seven percent and non-bearing account for just six percent of the total. Valencia trees comprise 56 percent of the total orange trees; early-midseason-Navel oranges, which include Temples for the first time, account for almost 44 percent; and the unidentified, primarily non-bearing, trees make up the remainder.

GRAPEFRUIT ACREAGE DECREASED TO 56,881

Grapefruit acreage has fallen over 50 percent in only eight years to a new low of 56,881. The Indian River District, although devastated by losses to canker and urban development, has the highest inventory with almost three-fourths of the state total.

Colored seedless acres total 38,125 and white acres are at 17,711. Only 670 acres of seedy grapefruit remain. Due to the limited availability of resets over the past three years, only 3.6 percent of the total grapefruit trees are listed in the non-bearing category.

SPECIALTY ACREAGE SHRINKS TO 23,178

Specialty fruit acreage has continued to decline across the state and now stands at 23,178, less than one-fourth of the record 101,615 acres in 1970. Temples are now included with oranges. Tangelo acreage is down 18 percent, with the Minneola variety least affected. The tangerine relationship is changing as early varieties decline at a faster rate. Honey tangerines now account for 49 percent with 7,585 acres. Sunburst remains at 80 percent of the early tangerine total with 6,268 acres. Fallglo account for of 1,582 total acres. True lemons have held steady since 2006.

FLORIDA COMMERCIAL CITRUS: Acreage

Census year	Oranges	Grapefruit	Specialty fruit	Total
1966	673,086	103,224	81,772	858,082
1968	713,400	119,883	97,966	931,249
1970	715,806	124,050	101,615	941,471
1972	659,418	124,142	94,459	878,019
1974	642,431	130,326	91,341	864,098
1976	628,567	137,909	85,893	852,369
1978	616,020	136,342	78,873	831,235
1980	627,174	139,944	78,165	845,283
1982	636,864	139,939	71,053	847,856
1984	573,991	134,680	52,694	761,365
1986	466,252	117,845	40,395	624,492
1988	536,737	119,606	41,586	697,929
1990	564,809	125,300	42,658	732,767
1992	608,636	135,166	47,488	791,290
1994	653,370	146,915	53,457	853,742
1996	656,598	144,416	56,673	857,687
1998	658,390	132,817	54,053	845,260
1999	--	121,258	--	--
2000	665,529	118,145	48,601	832,275
2002	648,806	105,488	43,009	797,303
2004	622,821	89,048	36,686	748,555
2006	529,241	63,419	28,713	621,373
2008	496,518	56,881	23,178	576,577

FLORIDA COMMERCIAL CITRUS: Acreage changes since previous census

Census year	Two year change		Net change	Total
	Gross loss	New plantings		
1966	(First census via aerial photography)			858,082
1968	13,910	87,077	+73,167	931,249
1970	26,114	36,336	+10,222	941,471
1972 ^{1/}	82,948	19,496	-63,452	878,019
1974	40,181	26,260	-13,921	864,098
1976	40,518	28,789	-11,729	852,369
1978 ^{1/}	49,127	27,993	-21,134	831,235
1980	25,925	39,973	+14,048	845,283
1982 ^{1/}	51,942	54,515	+2,573	847,856
1984 ^{1/}	159,719	73,228	-86,491	761,365
1986 ^{1/}	185,598	48,725	-136,873	624,492
1988	52,240	125,677	+73,437	697,929
1990 ^{1/}	85,858	120,696	+34,838	732,767
1992	74,704	133,227	+58,523	791,290
1994	45,214	107,666	+62,452	853,742
1996	35,947	39,892	+3,945	857,687
1998	49,325	36,898	-12,427	845,260
2000	59,541	46,531	-12,985	832,250
2002	77,197	42,225	-34,972	797,303
2004 ^{2/}	88,875	40,127	-48,748	748,555
2006 ^{2/}	150,805	23,623	-127,182	621,373
2008	66,924	22,128	-44,796	576,577

^{1/} January freezes in 1971, 1977, 1981, 1982, 1985, and 1986. December freezes in 1983, 1985, and 1989.

^{2/} August and September hurricanes in 2004, October hurricane in 2005.

ALL CITRUS: Number of acres, by variety and year set

Year set	All citrus	Oranges						Tangelos	Other citrus
		Early	Midseason	Temples	Late	Uniden- tified	Total		
Acres									
Pre-1964	22,419	5,999	3,223	498	10,711	0	20,431	415	40
1964-1973	26,334	5,417	3,172	572	8,503	3	17,667	518	68
1974-1983	44,783	16,982	2,924	60	15,484	0	35,450	126	63
1984-1986	35,160	14,564	1,431	154	15,014	0	31,163	290	66
1987-1989	100,312	34,126	3,891	323	47,729	0	86,069	1,118	448
1990-1992	114,859	34,133	4,889	145	56,797	0	95,964	1,348	524
1993-1995	48,610	13,513	2,964	82	24,628	0	41,187	467	510
1996-1998	45,989	11,157	2,662	129	27,823	0	41,771	317	206
1999-2001	55,350	18,233	3,379	99	29,804	11	51,526	274	169
2002-2004	47,560	19,122	3,023	60	20,485	76	42,766	392	190
Bearing	541,376	173,246	31,558	2,122	256,978	90	463,994	5,265	2,284
2005	13,073	5,362	583	12	5,074	894	11,925	39	40
2006	12,849	4,305	739	4	4,729	2,123	11,900	32	61
2007	9,279	3,225	379	2	3,210	1,883	8,699	9	13
Non-bearing	35,201	12,892	1,701	18	13,013	4,900	32,524	80	114
Total	576,577	186,138	33,259	2,140	269,991	4,990	496,518	5,345	2,398

Continued

ALL CITRUS: Number of trees, by variety and year set

Year set	All citrus	Oranges						Tangelos	Other citrus
		Early	Midseason	Temples	Late	Uniden- tified	Total		
1, 000 Trees									
Pre-1964	2,166.9	568.0	324.9	45.2	1,061.0	0.0	1,999.1	33.9	3.6
1964-1973	2,783.2	606.3	359.4	64.8	970.7	0.4	2,001.6	52.4	8.1
1974-1983	5,131.7	1,973.1	360.2	5.8	1,850.8	0.0	4,189.9	13.2	7.5
1984-1986	4,490.5	1,831.0	175.5	19.1	1,995.6	0.0	4,021.2	34.9	7.4
1987-1989	13,890.7	4,746.6	532.3	41.3	6,789.0	0.0	12,109.2	149.9	67.2
1990-1992	16,263.5	4,725.1	666.3	17.8	8,427.1	0.0	13,836.3	185.6	73.2
1993-1995	6,897.4	1,817.7	436.8	10.5	3,556.8	0.0	5,821.8	67.4	102.7
1996-1998	6,241.8	1,486.0	362.0	16.5	3,807.2	0.0	5,671.7	46.4	30.7
1999-2001	7,139.3	2,340.7	462.2	12.5	3,858.7	1.2	6,675.3	34.9	23.2
2002-2004	5,995.6	2,413.2	388.7	7.0	2,597.2	8.4	5,414.5	49.0	25.6
Bearing	71,000.6	22,507.7	4,068.3	240.5	34,914.1	10.0	61,740.6	667.6	349.2
2005	1,603.9	636.5	68.0	1.7	642.0	106.6	1,454.8	5.6	5.1
2006	1,604.6	538.1	98.2	0.6	592.6	254.1	1,483.6	4.5	6.9
2007	1,167.0	412.5	48.6	0.2	414.1	220.9	1,096.3	1.5	1.4
Non-bearing	4,375.5	1,587.1	214.8	2.5	1,648.7	581.6	4,034.7	11.6	13.4
Total	75,376.1	24,094.8	4,283.1	243.0	36,562.8	591.6	65,775.3	679.2	362.6

Continued

ALL CITRUS: Number of acres, by variety and year set

Year set	Grapefruit					Tangerines				
	White seedless	Colored seedless	Seedy	Unidentified	Total	Fallglo	Sunburst	Early ^{1/}	Honey	Total
	Acres									
Pre-1964	740	370	202	0	1,312	0	0	0	221	221
1964-1973	4,219	3,418	90	0	7,727	0	0	0	354	354
1974-1983	1,485	7,073	58	0	8,616	0	100	100	428	528
1984-1986	358	2,668	51	0	3,077	9	256	265	299	564
1987-1989	3,053	6,525	84	0	9,662	180	1,794	1,974	1,041	3,015
1990-1992	3,699	8,453	93	0	12,245	576	2,537	3,113	1,665	4,778
1993-1995	1,300	2,407	39	0	3,746	530	850	1,380	1,320	2,700
1996-1998	1,181	1,210	19	0	2,410	129	279	408	877	1,285
1999-2001	763	1,633	16	0	2,412	96	169	265	704	969
2002-2004	824	2,790	13	3	3,630	22	145	167	415	582
Bearing	17,622	36,547	665	3	54,837	1,542	6,130	7,672	7,324	14,996
2005	6	816	0	62	884	12	77	89	96	185
2006	49	445	4	196	694	12	28	40	122	162
2007	34	317	1	114	466	16	33	49	43	92
Non-bearing	89	1,578	5	372	2,044	40	138	178	261	439
Total	17,711	38,125	670	375	56,881	1,582	6,268	7,850	7,585	15,435

^{1/} Fallglo and Sunburst varieties.

ALL CITRUS: Number of trees, by variety and year set

Year set	Grapefruit					Tangerines				
	White seedless	Colored seedless	Seedy	Unidentified	Total	Fallglo	Sunburst	Early ^{1/}	Honey	Total
	1,000 Trees									
Pre-1964	57.7	29.0	18.8	0.0	105.5	0.0	0.0	0.0	24.8	24.8
1964-1973	362.7	307.9	8.4	0.0	679.0	0.0	0.0	0.0	42.1	42.1
1974-1983	148.9	699.3	5.5	0.0	853.7	0.0	12.5	12.5	54.9	67.4
1984-1986	39.9	300.1	4.9	0.0	344.9	2.7	33.4	36.1	46.0	82.1
1987-1989	350.7	765.9	8.1	0.0	1,124.7	26.4	256.8	283.2	156.5	439.7
1990-1992	418.9	1,001.9	8.9	0.0	1,429.7	90.2	381.3	471.5	267.2	738.7
1993-1995	142.3	316.6	3.3	0.0	462.2	84.6	130.6	215.2	228.1	443.3
1996-1998	139.9	150.0	1.8	0.0	291.7	20.5	43.1	63.6	137.7	201.3
1999-2001	79.0	188.6	1.6	0.0	269.2	14.0	21.6	35.6	101.1	136.7
2002-2004	93.5	334.3	1.0	0.3	429.1	2.7	19.8	22.5	54.9	77.4
Bearing	1,833.5	4,093.6	62.3	0.3	5,989.7	241.1	899.1	1,140.2	1,113.3	2,253.5
2005	0.7	101.9	0.0	8.0	110.6	1.6	10.7	12.3	15.5	27.8
2006	5.5	56.7	0.3	23.5	86.0	1.9	3.7	5.6	18.0	23.6
2007	3.3	39.1	0.0	12.3	54.7	2.2	4.3	6.5	6.6	13.1
Non-bearing	9.5	197.7	0.3	43.8	251.3	5.7	18.7	24.4	40.1	64.5
Total	1,843.0	4,291.3	62.6	44.1	6,241.0	246.8	917.8	1,164.6	1,153.4	2,318.0

^{1/} Fallglo and Sunburst varieties.

ALL CITRUS: Acreage and tree numbers, by county and year of inventory ^{1/}

County	2002	2004	2006	2008	2002	2004	2006	2008
	<i>Acres</i>				<i>1,000 trees</i>			
Brevard	8,293	6,249	5,080	4,451	891.1	664.0	553.5	477.5
Broward	8	0	●	●	0.4	0	●	●
Charlotte	20,493	20,183	11,883	11,991	3,031.5	2,998.9	1,708.6	1,710.5
Citrus	147	146	145	138	17.6	17.1	16.9	15.5
Collier	33,567	34,878	33,394	31,596	4,948.0	5,101.1	4,881.7	4,634.0
DeSoto	70,365	68,559	61,083	61,426	9,282.3	9,080.1	8,181.7	8,239.5
Glades	10,384	10,103	8,555	9,052	1,664.7	1,640.9	1,390.0	1,392.8
Hardee	54,961	54,414	45,084	45,109	6,466.7	6,462.6	5,511.5	5,463.5
Hendry	94,139	93,155	79,726	69,927	14,444.7	14,298.1	12,280.5	10,576.8
Hernando	1,046	971	921	895	125.3	113.0	106.6	101.9
Highlands	77,391	74,623	62,671	62,599	10,282.9	9,962.1	8,252.9	8,025.6
Hillsborough	23,734	19,187	14,783	11,248	2,605.0	2,131.1	1,628.9	1,259.0
Indian River	56,012	47,539	40,191	39,013	6,191.3	5,322.3	4,504.3	4,344.1
Lake	18,835	17,486	15,198	13,100	2,598.3	2,415.2	2,122.5	1,829.2
Lee	11,874	11,067	10,658	10,373	1,665.9	1,549.2	1,489.3	1,417.1
Manatee	21,922	20,316	18,548	18,389	2,735.9	2,590.5	2,431.0	2,391.9
Marion	1,208	1,212	1,185	1,180	149.1	149.6	146.1	143.8
Martin	42,208	40,330	35,038	23,169	5,947.6	5,732.2	5,024.3	3,388.1
Miami-Dade	388	●	●	●	67.5	●	●	●
Okeechobee	12,035	11,891	9,222	8,327	1,479.0	1,460.9	1,056.9	940.1
Orange	6,884	5,593	4,548	3,674	867.6	666.4	549.4	437.8
Osceola	14,313	13,804	12,170	9,197	1,624.5	1,594.1	1,411.0	1,082.2
Palm Beach	7,964	4,542	1,668	^{2/}	1,128.8	699.8	256.4	^{2/}
Pasco	10,467	9,831	8,190	7,957	1,395.6	1,323.7	1,140.9	1,113.6
Pinellas	38	^{2/}	^{2/}	^{2/}	3.6	^{2/}	^{2/}	^{2/}
Polk	100,202	95,050	86,398	81,375	11,625.5	11,147.1	10,222.5	9,699.1
Putnam	199	205	182	190	33.4	33.8	30.5	29.5
St. Lucie	92,490	82,987	51,387	48,073	11,266.2	10,342.0	6,637.6	6,151.0
Sarasota	2,182	1,684	1,652	1,502	236.6	190.5	187.7	170.5
Seminole	1,322	1,147	529	491	138.7	122.5	59.6	56.9
Volusia	1,448	1,344	1,231	1,083	141.5	130.4	120.9	108.7
Other Counties ^{2/}	21	59	53	1,052	2.4	5.8	5.3	175.9
TOTAL	796,540	748,555	621,373	576,577	103,059.2	97,945.0	81,909.0	75,376.1

^{1/} Broward excluded beginning 2006; Miami-Dade excluded beginning in 2004.

^{2/} Includes Alachua only in 2002; Alachua and Pinellas in 2004; Alachua and Pinellas in 2006; and Alachua, Palm Beach, and Pinellas in 2008.

ALL CITRUS: Acreage and tree numbers, by variety and year of inventory

Variety	2002	2004	2006	2008	2002	2004	2006	2008
	<i>Acres</i>				<i>1,000 trees</i>			
ORANGES:								
Hamlin	209,009	200,944	169,216	158,618	26,808.4	26,037.0	22,082.1	20,477.3
Navel	19,752	16,340	12,211	10,443	2,499.3	2,094.0	1,568.6	1,331.5
Ambersweet	5,318	3,355	2,194	1,447	734.7	460.2	302.1	193.9
Other early	18,731	19,569	16,549	15,630	2,483.6	2,588.2	2,226.2	2,092.1
Pineapple	45,840	41,521	31,124	26,640	5,664.8	5,197.3	3,950.7	3,366.5
Other mids	7,234	8,077	6,477	6,619	1,003.8	1,134.8	895.0	916.6
Temples ^{1/}	●	●	●	2,140	●	●	●	243.0
Early-midseason-Navel	305,884	289,806	237,771	221,537	39,194.6	37,511.5	31,024.7	28,620.9
Valencia	325,758	321,991	285,769	269,991	44,303.7	44,076.4	39,126.0	36,562.8
Unidentified	17,164	11,024	5,701	4,990	2,252.8	1,390.6	698.7	591.6
TOTAL ORANGES	648,806	622,821	529,241	496,518	85,751.1	82,978.5	70,849.4	65,775.3
GRAPEFRUIT:								
Seedy	1,907	1,236	833	670	173.2	115.2	80.5	62.6
White seedless	40,179	32,199	20,927	17,711	4,094.7	3,368.0	2,189.1	1,843.0
Colored seedless	62,328	54,619	41,232	38,125	6,935.2	6,147.2	4,648.8	4,291.3
Unidentified	1,074	994	427	375	126.1	117.9	53.0	44.1
TOTAL GRAPEFRUIT	105,488	89,048	63,419	56,881	11,329.2	9,748.3	6,971.4	6,241.0
SPECIALTY:								
TANGELOS:								
Orlando Tangelos	6,337	4,908	3,757	3,014	792.7	625.7	484.4	387.8
Minneola Tangelos	2,863	2,896	2,103	2,030	349.3	355.3	255.9	247.3
Other Tangelos	708	855	681	301	98.8	148.6	119.0	44.1
TOTAL TANGELOS	9,908	8,659	6,541	5,345	1,240.8	1,129.6	859.3	679.2
TANGERINES:								
Robinson Tangerines ^{2/}	1,230	●	●	●	169.4	●	●	●
Fallglo Tangerines	2,992	2,370	1,765	1,582	486.1	366.9	268.4	246.8
Sunburst Tangerines	10,786	9,305	7,148	6,268	1,637.9	1,398.6	1,058.1	917.8
Dancy Tangerines ^{2/}	411	●	●	●	45.2	●	●	●
Early Tangerines	15,419	11,675	8,913	7,850	2,338.6	1,765.5	1,326.5	1,164.6
Honey Tangerines	9,724	9,635	8,333	7,585	1,463.0	1,460.2	1,268.6	1,153.4
TOTAL TANGERINES	25,143	21,310	17,246	15,435	3,801.6	3,225.7	2,595.1	2,318.0
Temples ^{1/}	4,793	3,578	2,542	●	568.9	413.0	293.3	●
K-Early Citrus ^{2/}	155	●	●	●	22.0	●	●	●
Limes ^{2/}	404	●	●	●	70.1	●	●	●
True Lemons	742	759	603	602	128.6	130.6	105.3	104.5
Meyer Lemons ^{2/}	70	66	●	●	13.9	13.1	●	●
Other Citrus ^{2/}	1,031	2,314	1,781	1,796	133.0	306.2	235.2	258.1
TOTAL SPECIALTY	42,246	36,686	28,713	23,178	5,978.9	5,218.2	4,088.2	3,359.8
TOTAL CITRUS	796,540	748,555	621,373	576,577	103,059.2	97,945.0	81,909.0	75,376.1

^{1/} Beginning with 2008 Commercial Citrus Inventory, Temples are included in oranges. Previously, Temples were listed under Specialty.

^{2/} Beginning with the 2004 Commercial Citrus Inventory, Robinson and Dancy tangerines, K-Early Citrus Fruit, and limes are included in Other Citrus. Beginning with the 2006 Commercial Citrus Inventory, Meyer Lemons are included in Other Citrus.

ALL CITRUS: Number of acres, by area and year of inventory

Area	Oranges		Grapefruit		Specialty types		Total	
	2006	2008	2006	2008	2006	2008	2006	2008
	<i>Acres</i>							
Indian River	52,863	50,007	46,339	42,145	4,521	3,704	103,723	95,856
Northern	25,783	23,233	1,193	1,076	4,530	3,883	31,506	28,192
Central	144,298	139,768	5,807	4,741	9,075	7,144	159,180	151,653
Western	136,045	133,293	1,949	1,667	3,188	2,749	141,182	137,628
Southern	170,252	150,217	8,131	7,252	7,399	5,698	185,782	163,167
TOTAL	529,241	496,518	63,419	56,881	28,713	23,178	621,373	576,577

CITRUS INVENTORY PROCEDURES

This biennial inventory, the twenty-second in a series which began in January 1966, was conducted using digital imagery of peninsular Florida. Base maps are 2004 DOQQ's with newer high resolution imagery provided by FREACS, as available.

In 2005, all mapped records were transferred to a geographical information system for use with digital imagery. Changes are now detected by comparing imagery taken at different times. Each change observed by the photo interpreter is followed by a visit and ground check which usually results in a revised tree count for the grove. The ground checks are performed by experienced field personnel. Acreages can be verified using the GIS. Tree numbers are from actual tree counts or interpolations from measured acreage. Block sizes are reduced as necessary for dead trees or empty spaces, as well as barnyards, turn rows, swale ditches, and irrigation ponds.

A record for each separate planting or block is maintained in the data system. A new record is created for each new planting, and records of plantings which no longer exist are transferred to an inactive layer. Typically, in non-freeze years, less than one-third of all blocks require a visit to complete the biennial census. For this census period, nearly all blocks required a visit to update the records. Nine counties were selected for visits to every block. Additionally, data was collected on abandoned citrus acreage during the survey.

Production areas were redesigned in 1986 to give greater efficiency for objective forecasting purposes. The principal change was to place all the northern freeze-prone regions in a single area and to set apart the southern flatwoods plantings. The Indian River District follows the boundary of the Indian River Marketing District. This stratification provides greater homogeneity within each sampling stratum.

Personnel from the Division of Plant Industry and the Division of Fruit and Vegetables assisted in completing this survey with trained citrus technologists using four-wheel drive vehicles.

