

Summary of 2007-2008 Citrus Budget for the Southwest Florida Production Region

Ronald P. Muraro, Extension Economist
University of Florida, IFAS, CREC, Lake Alfred, FL

Citrus budgets are tabulated annually for the Central, Southwest and Indian River citrus production regions of Florida. The attached budget costs are for the Southwest Florida citrus production region. These costs may not represent your particular grove situation. However, they represent the most current comparative cost estimates for Florida citrus. The budget costs items for the **Southwest Florida** are more representative of an **owner-managed operation; not a custom-managed operation**.

Budget analysis provides the basis for many grower decisions. Budgets can be used to calculate potential profits, determine cash requirements and determine break-even prices. The budget costs presented will serve as a format for growers to analyze their own individual records. The cost data was developed by surveying custom operators, suppliers, growers, colleagues with UF/IFAS and County Extension Agents in each production region.

From 2006-2007 and 2007-2008 seasons, average cultural production costs increased 21% for processed oranges and 14% for fresh market grapefruit. The high cost of fuel and energy increased equipment application costs 11% over the 2006-2007 season. Overall increase in chemical prices averaged 8%. However, fertilizer prices had the greatest impact on costs in 2007-2008 increasing an average of 80% over 2006-2007. High demand for plant nutrients throughout the developing world, especially Brazil, China and India, along with the increases in transportation costs, were the causes for the increase in fertilizer costs.

The 2007-2008 summary comparative budget summary for a processed orange cultural program is shown in Table 1 and for a fresh market cultural program is shown in Table 2. Two scenarios are presented for each budget: 1) Typical/Historic Cultural Program **Without Citrus Canker and Greening** and 2) Cultural Program **With Citrus Canker and Greening**. Scenario one represents costs of typical grove practices which have been historically performed for citrus grown in Southwest Florida, but does not include citrus canker and greening management control programs. Scenario two is the same cultural program for scenario one but expanded to include the additional costs for managing citrus canker and greening. Each budget scenario shows a Total Per Acre **Without** and **With resetting-tree replacement**.

With the introduction of citrus greening in 2005, Florida citrus growers have had to develop new management strategies to identify and remove infected trees along with adding new spray programs to control the insect vector, the Asian citrus psyllid. Likewise, with the end of the citrus canker eradication program in 2006, to reduce the impact of canker infestations on new tree flushes and reduce fruit drop, copper spray material is being added with each spray tank mix. For fruit grown for the fresh fruit market, additional costs are incurred by growers to assure that the blocks and fruit can be certified "canker free" for shipments to the U.S. domestic and European markets. The estimated additional costs required to manage citrus greening and canker and were based on the cultural programs being implemented in UF/IFAS CREC research groves and information from citrus growers. These costs were incorporated into Tables 1, 2, 3, 4, 5 and 6.

The budgets shown in Table 1 lists the costs of individual grove care practices normally performed in a citrus grove. These costs reflect current grove practices being performed by growers. The estimated costs are for a mature grove (10+ years old); the grove care costs for a specific grove site may differ depending upon the tree age; tree density and the actual grove practices performed. For example, tree losses due to blight, tristeza or citrus greening could double, if not

increase more, the tree replacement costs. Travel and set-up costs may vary due to the size of a citrus grove and the distance from the grove equipment barn. Citrus canker and greening control costs will also vary between individual blocks due to variety and fresh or processed market destination.

The comparative budget costs are shown as an expanded “**delivered-in**” format in Tables 3 and 5 and are presented **with** and **without** the additional citrus greening cultural management costs as well as no resetting and resetting. The delivered-in costs include cultural/production, management, regulatory and harvesting costs. For processed juice cultural program, the costs are presented in per acre, per box and per pound solids cost units. For the fresh fruit cultural program, the costs are presented in per acre, per box and per packed carton cost units. The per acre yields used in Tables 3 and 5 represent above average production for Hamlin oranges and grapefruit in the Southwest Florida production region. The decreased yield per acre for the “with greening” expanded budget reflects an additional 2.3% average annual tree loss for all age trees. Tables 4 and 6 show the delivered-in costs with resetting.

Without the additional cultural management costs for citrus canker and greening and **no resetting**, the delivered-in breakeven price ranged from \$1.319 to \$0.883 per pound solids; with resetting the breakeven price ranged from \$1.403 to \$0.925 per pound solids. With the additional citrus greening costs and no resetting, the delivered-in breakeven prices ranged from \$1.517 to \$0.982 per pound solids; **with resetting** the breakeven price ranged from \$1.658 to \$1.052 per pound solids.

Breakeven prices for fresh market grapefruit are shown in Table 8 for yields ranging from 350 to 650 boxes per acre. **Without** the additional cultural management costs for citrus canker and greening and **no resetting**, the delivered-in breakeven price ranged from \$7.81 to \$5.53 per box; with resetting the breakeven price ranged from \$7.98 to \$5.62 per box. **With** the additional citrus canker and greening costs and no resetting, the delivered-in breakeven price ranged from \$9.38 to \$6.37 per box; **with resetting** these breakeven price ranged from \$9.82 to \$6.61 per box. Also, in Table 9, the total estimated F.O.B. cost for fresh packed grapefruit is shown. The F.O.B. costs are presented for “fresh fruit packout percentage rates” ranging from 25% to 100%.

The three ADDENDA tables provide the detailed information on the herbicide, spray and fertilizer programs used in the comparative budgets.

Additional information on budgeting and cost analysis can be obtained by contacting the author, your County Extension Citrus Agent, or going to the Lake Alfred UF/IFAS CREC **Extension-Economics** website: <http://www.crec.ifas.ufl.edu/Extension/Economics>.

Reference-Source Information

- Muraro, Ronald P. “Summary of 2008 Ridge and Indian River-South Florida Citrus Caretaker Custom Rate Charges.” UF/IFAS CREC Website: www.crec.ifas.ufl.edu/Extension/Economics September 2008. 5 pages.
- Muraro, Ronald P. “Average Packing Charges for Florida Fresh Citrus – 2007-08 Season.” UF/IFAS CREC Website: www.crec.ifas.ufl.edu/Extension/Economics September 2008. 2 pages.
- Muraro, Ronald P. “Estimated Average Picking, Roadsiding and Hauling Charges for Florida Fresh Citrus – 2007-08 Season.” UF/IFAS CREC Website: www.crec.ifas.ufl.edu/Extension/Economics September 2008. 2 pages.
- Muraro, Ronald P. “Summary of 2007-2008 Citrus Budgets for the Indian River Citrus Production Region.” UF/IFAS CREC Website: www.crec.ifas.ufl.edu/Extension/Economics September 2008. 10 pages.
- Muraro, Ronald P. “Summary of 2007-2008 Citrus Budgets for the Central Florida (Ridge) Citrus Production Region.” UF/IFAS CREC Website: www.crec.ifas.ufl.edu/Extension/Economics September 2008. 8 pages.

Table 1. A Listing of Estimated Comparative **Southwest Florida** Production Costs Per Acre for **Processed Oranges**, 2007-2008^z

Costs represent a mature (10+ years old) Southwest Florida Orange Grove.	Processed Cultural Program	
	Without Canker-Greening	With Canker-Greening
PRODUCTION/CULTURAL COSTS^y		
Weed Management/Control:		
Mechanical Mow Middles (3 times per year)	\$ 28.35	\$ 28.35
Chemical Mow Middles (3 times per year)	26.48	26.48
General Grove Work (2 labor hours per acre)	31.30	31.30
Herbicide (1/2 tree acre treated): (See Addenda Table 1 - Herbicide Programs #1, #2 & #3)	<u>115.23</u>	<u>115.23</u>
Total Weed Management Costs	201.36	201.36
Spray/Pest Management: (See Addenda Table 2)	175.23	422.68
Without Greening: Spray Programs #7 and #8		
With Greening: Spray Programs #1, #3 @ 2, #4, #9 and #10		
Fertilizer (Bulk): 4 Applications (See Addenda Table 3 - Fert Prog #4; 17-4-17-2.4MgO @ 220 lbs N)	413.83	413.83
Dolomite (one ton applied every 3 years) (Material/Application)	14.76	14.76
Pruning^x: Topping (\$30.00/A ÷ 2.5 yrs)	12.00	12.00
Hedging (\$30.37/A ÷ 2 yrs)	15.33	15.33
Chop/Mow Brush after Hedging (\$15.60/A ÷ 2 yrs)	<u>7.80</u>	<u>7.80</u>
Total Pruning Cost	35.13	35.13
Irrigation: Microsprinkler System ^w	210.32	210.32
Clean Ditches (Weed Control)	18.56	18.56
Ditch and Canal Maintenance	17.48	17.48
Water Control (Pump water in/out of Ditches and Canals)	<u>16.72</u>	<u>16.72</u>
Total Irrigation Cost	263.08	263.08
Mandatory Citrus Canker Decontamination Costs	31.67	31.67
Field Inspections for Citrus Greening (4 inspections @ \$25.99)	—	103.96
TOTAL PROCESSED PRODUCTION COSTS WITHOUT TREE REPLACEMENT-RESET COSTS	<u>1,135.06</u>	<u>1,486.47</u>
Tree Replacement – 1 thru 3 years of age (4 trees/acre without greening; 7 trees/acre with greening)		
Remove Trees: Pull, Stack & Burn (Clip-Shear & Front End Loader)	27.32	39.83
Prepare Site and Plant Tree (includes reset trees)	61.12	99.89
Supplemental Fertilizer, Sprays, Sprout, etc. (Trees 1-3 years old)	<u>68.92</u>	<u>140.28</u>
Total Tree Replacement Cost	<u>157.36</u>	<u>280.00</u>
TOTAL PROCESSED PRODUCTION COSTS WITH TREE REPLACEMENT-RESET COSTS	<u>1,292.42</u>	<u>1,766.47</u>

^zThe listed estimated comparative costs are for the example grove situation and may not represent your particular grove situation in Southwest Florida.

Source: Ronald P. Muraro, University of Florida-IFAS, Citrus Research and Education Center, Lake Alfred, FL, September 2008.

Table 2. A Listing of Estimated Comparative **Southwest Florida** Production Costs Per Acre for **Fresh Market Grapefruit**, 2007-2008^z

Costs represent a mature (10+ years old) Southwest Florida Grapefruit Grove.	Fresh Market Cultural Program	
	Without Canker-Greening	With Canker-Greening
PRODUCTION/CULTURAL COSTS^y		
Weed Management/Control:		
Mechanical Mow Middles (3 times per year)	\$ 28.35	\$ 28.35
Chemical Mow Middles (3 times per year)	26.48	26.48
General Grove Work (2 labor hours per acre)	31.30	31.30
Herbicide (1/2 tree acre treated): (See Addenda Table 1 - Herbicide Programs #1, #2 and #3)	<u>115.23</u>	<u>115.23</u>
Total Weed Management Costs	201.36	201.36
Spray/Pest Management: (See Addenda Table 2)	322.30	656.45
Without Greening: Spray Programs #4, #5 @ 2, #6, #11 and #12		
With Greening: Spray Programs #1, #2, #4, #5 @ 3, #6, #9, #10 and #11		
Fertilizer (Bulk):4 Applications (See Addenda Table 3 - Fert Prog #3; 16-2-16-3MgO @ 160 lbs N)	310.30	310.30
Dolomite (one ton applied every 3 yrs) – Material/Application	14.76	14.76
Pruning^x: Topping (\$30.00/A ÷ 2.5 yrs)	12.00	12.00
Hedging (\$30.37/A ÷ 2 yrs)	15.33	15.33
Chop/Mow Brush after Hedging (\$15.60/A ÷ 2 yrs)	7.80	7.80
Raise Skirts of Trees (\$14.80/A ÷ 2 yrs)	<u>7.40</u>	<u>7.40</u>
Total Pruning Cost	42.53	42.53
Irrigation: Microsprinkler System ^w	210.32	210.32
Clean Ditches (Weed Control)	18.56	18.56
Ditch and Canal Maintenance	17.48	17.48
Water Control (Pump water in/out of Ditches and Canals)	<u>16.72</u>	<u>16.72</u>
Total Irrigation Cost	263.08	263.08
Field Inspections for Citrus Greening (4 inspections @ \$25.99)	—	103.96
Clean blocks Before Certification and Harvesting	—	32.91
Inspections Before “Canker Free” Certification (2 inspections @ \$25.99)	—	51.98
Mandatory Citrus Canker Decontamination Costs	<u>31.67</u>	<u>31.67</u>
TOTAL PROCESSED PRODUCTION COSTS WITHOUT TREE REPLACEMENT-RESET COSTS	<u>1,186.00</u>	<u>1,709.00</u>
Tree Replacement – 1 thru 3 years of age (3 trees/acre without greening; 6 trees/acre with greening)		
Remove Trees: Pull, Stack & Burn (Clip-Shear & Front End Loader)	20.49	34.14
Prepare Site and Plant Tree (includes reset trees)	45.84	85.62
Supplemental Fertilizer, Sprays, Sprout, etc. (Trees 1-3 years old)	<u>51.69</u>	<u>120.24</u>
Total Tree Replacement Cost	<u>118.02</u>	<u>240.00</u>
TOTAL PROCESSED PRODUCTION COSTS WITH TREE REPLACEMENT-RESET COSTS	<u>1,304.02</u>	<u>1,949.00</u>

^zThe listed estimated comparative costs are for the example grove situation and may not represent your particular grove situation in Southwest Florida.

Source: Ronald P. Muraro, University of Florida-IFAS, Citrus Research and Education Center, Lake Alfred, FL, September 2008.

^y Southwest Florida production area refers to those counties in the Florida Agricultural Statistics Service “Southern Production Area.” However, the costs shown are applicable to other South Central Florida counties such as DeSoto and Sarasota counties.

Where **equipment use** or **application** is listed (mowing, spray and herbicide application, etc.), the costs include a charge for equipment repairs, maintenance, labor and overhead management charges/costs. The exception are costs items such as hedging and topping where average custom charges are used. A **management charge** for equipment supervision and fruit marketing is not included. Management charges/costs could be based on a monthly charge (\$3 to \$6/acre) or percentage of gross sales. In addition to these charges, a harvesting supervision cost (10¢ to 20¢/box) for overseeing and coordinating harvesting may be charged. Other cost items which are not included in the budget are ad valorem taxes and interest on grove investment. In addition to these cost items, overhead and administrative costs, such as water drainage/district taxes, crop insurance, and other grower assessments, can add up to 12 percent to the total grove care costs. These costs vary from grove to grove depending on age, location, and time of purchase or establishment and are estimated in the expanded Tables 3, 4, 5 and 6.

The budget costs in this report represent an **owner-managed operation** for the production of oranges for processing and grapefruit for the fresh market. Therefore, the **10 percent handling and supervision charge** added to the material cost for a custom-managed operation is **not included** in the costs.

The budget cost items have been revised to reflect current grove practices being used by growers—e.g., chemical mowing, different spray materials, and rates of fertilization, microsprinkler irrigation, more reset trees, hedging and topping practices, etc. Therefore, the revised costs for each grove practice shown may be higher, or lower, than previously reported.

Although the estimated annual per acre grove costs listed are representative for a mature citrus grove (10+ years old), the grove care costs for a specific grove site may differ depending upon the tree age, tree density and the grove practices performed; e.g., spot herbicide for grass/brush regrowth under trees could add an additional \$11.52 per acre; Diaprepes control could add \$93.18 per acre for each foliar application; extensive tree loss due to blight, tristeza, or citrus greening could substantially increase the tree replacement and care costs; travel and set-up costs may vary due to size of the citrus grove and distance from grove equipment barn and could add \$36.08 per acre; etc.

^xPer acre costs shown in parenthesis are for 2008.

^wIrrigation Expense includes the following:

	<u>Microsprinkler</u>	<u>Drip</u>
Variable Operating Expense (Diesel)*	\$ 93.16	\$ 89.14
Fixed-Variable Expense (annual maintenance repairs to system)	<u>60.60</u>	<u>53.82</u>
Total Cash Expenses**	\$153.76	\$142.96
Fixed-Depreciation Expense	<u>56.56</u>	<u>45.25</u>
Total Cash and Fixed Expense	<u>\$210.32</u>	<u>\$188.21</u>

* Adjusted for higher fuel costs.

** Where applies, there may be an additional cost of \$16.72 per acre for water control in/out of ditches and canals plus \$18.56 per acre for ditch and canal maintenance plus \$17.48 for weed control in ditches and canals.

Source: Ronald P. Muraro, Extension Farm Management Economist, University of Florida, IFAS, CREC, Lake Alfred, FL, September 2008.

Table 3. Estimated Total Delivered-in Cost for **Southwest Florida Hamlin Oranges** Grown for the **Processed Juice Market Without and With** Citrus Canker and Greening, 2007-08

Represents a mature (10+ years old) Southwest Florida Orange Grove	Processed Cultural Program Without Canker-Greening and NO Resetting - Tree Replacement*			Processed Cultural Program With Canker-Greening and NO Resetting - Tree Replacement**		
	\$/Acre	\$/Box	\$/P.S.	\$/Acre	\$/Box	\$/P.S.
Total Production/Cultural Costs	\$1,135.06	\$2.230	\$0.3597	\$1,486.47	\$3.281	\$0.5293
Interest on Operating (Cultural) Costs	56.75	0.111	0.0180	74.32	0.164	0.0265
Management Costs	48.00	0.094	0.0152	48.00	0.106	0.0171
Taxes/Regulatory Costs:						
Property Tax/Water Management Tax	<u>61.00</u>	<u>0.120</u>	<u>0.0193</u>	<u>61.00</u>	<u>0.135</u>	<u>0.0217</u>
Total Direct Grower Costs	\$1,300.81	\$2.556	\$0.4122	\$1,669.79	\$3.686	\$0.5945
Interest on Average Capital Investment Costs	<u>321.22</u>	<u>0.631</u>	<u>0.1018</u>	<u>321.22</u>	<u>0.709</u>	<u>0.1144</u>
Total Grower Costs	\$1,622.03	\$3.187	\$0.5140	\$1,991.01	\$4.395	\$0.7089
Harvesting and Assessment Costs:						
Pick/Spot Pick, Roadside & Haul and Canker Decontamination	1,287.26	2.529	0.4079	1,145.64	2.529	0.4079
DOC Assessment	<u>122.16</u>	<u>0.240</u>	<u>0.0387</u>	<u>108.72</u>	<u>0.240</u>	<u>0.0387</u>
Total Harvesting and Assessment Costs	1,409.42	2.769	0.4466	1,254.36	2.769	0.4466
Total Delivered-In Cost	<u>\$3,031.45</u>	<u>\$5.956</u>	<u>\$0.9606</u>	<u>\$3,245.37</u>	<u>\$7.164</u>	<u>\$1.1555</u>
145 trees per acre	Refer to cultural program shown in Table 1.*			Refer to cultural program shown in Table 1.**		
P.S. = Pound Solids	Yield: 509 boxes/acre; 6.2 P.S./box			Yield: 453 boxes/acre; 6.2 P.S./box		

Source: Ronald P. Muraro, Extension Farm Management Economist, University of Florida, IFAS, CREC, Lake Alfred, FL, September 2008.

Table 4. Estimated Total Delivered-in Cost for **Southwest Florida Grapefruit** Grown for the **Fresh Fruit Market Without** and **With** Citrus Canker and Greening, 2007-08

Represents a mature (10+ years old) Southwest Florida Grapefruit Grove	Fresh Market Cultural Program Without Canker-Greening and NO Resetting - Tree Replacement*			Fresh Market Cultural Program With Canker-Greening and NO Resetting - Tree Replacement**		
	\$/Acre	\$/Box	\$/Carton	\$/Acre	\$/Box	\$/Carton
Total Production/Cultural Costs	\$1,186.00	\$2.259	\$1.1295	\$1,709.00	\$4.002	\$2.0012
Interest on Operating (Cultural) Costs	59.30	0.113	0.0565	85.45	0.200	0.1001
Management Costs	48.00	0.091	0.0457	48.00	0.112	0.0562
Taxes/Regulatory Costs:						
Property Tax/Water Management Tax	61.00	0.116	0.0581	61.00	0.143	0.0714
Fly Protocol Cost	<u>56.65</u>	<u>0.108</u>	<u>0.0477</u>	<u>56.65</u>	<u>0.133</u>	<u>0.0477</u>
Total Direct Grower Costs	\$1,410.95	\$2.688	\$1.3375	\$1,960.10	\$4.590	\$2.2766
Interest on Average Capital Investment Costs	<u>321.22</u>	<u>0.612</u>	<u>0.3059</u>	<u>321.22</u>	<u>0.752</u>	<u>0.3761</u>
Total Grower Costs	\$1,732.16	\$3.299	\$1.6434	\$2,281.31	\$5.343	\$2.6527
Harvesting and Assessment Costs:						
Pick/Spot Pick, Roadside & Haul and Canker Decontamination	1,319.85	2.514	1.2570	1,073.48	2.514	1.2570
DOC Assessment	<u>183.75</u>	<u>0.350</u>	<u>0.1750</u>	<u>149.45</u>	<u>0.350</u>	<u>0.1750</u>
Total Harvesting and Assessment Costs	1,503.60	2.864	1.4320	1,222.93	2.864	1.4320
Total Delivered-In Cost	<u>\$3,235.76</u>	<u>\$6.163</u>	<u>\$3.0754</u>	<u>\$3,504.24</u>	<u>\$8.207</u>	<u>\$4.0847</u>
119 trees per acre	Refer to cultural program shown in Table 2.*			Refer to cultural program shown in Table 2.*		
Two cartons per box	Assumes 100% packout			Assumes 100% packout		
	Yield: 525 boxes/acre			Yield: 427 boxes/acre		

Source: Ronald P. Muraro, Extension Farm Management Economist, University of Florida, IFAS, CREC, Lake Alfred, FL, September 2008.

Table 5. Estimated Total Delivered-in Cost for **Southwest Florida Hamlin Oranges** Grown for the **Processed Juice Market Without** and **With** Citrus Canker and Greening, 2007-08

Represents a mature (10+ years old) Southwest Florida Orange Grove	Processed Cultural Program Without Canker-Greening and WITH Resetting - Tree Replacement			Processed Cultural Program With Canker-Greening and WITH Resetting - Tree Replacement		
	\$/Acre	\$/Box	\$/P.S.	\$/Acre	\$/Box	\$/P.S.
Total Production/Cultural Costs	\$1,292.42	\$2.539	\$0.4095	\$1,766.47	\$3.899	\$0.6290
Other Grower Costs	<u>486.97</u>	<u>0.957</u>	<u>0.1543</u>	<u>486.97</u>	<u>1.075</u>	<u>0.1734</u>
Total Grower Costs	\$1,779.39	\$3.496	\$0.5638	\$2,253.44	\$4.974	\$0.8023
Total Harvesting and Assessment Costs	1,409.42	2.769	0.4466	1,254.36	2.769	0.4466
Total Delivered-In Cost	<u>\$3,188.81</u>	<u>\$6.265</u>	<u>\$1.0105</u>	<u>\$3,507.80</u>	<u>\$7.743</u>	<u>\$1.2489</u>

Source: Ronald P. Muraro, Extension Farm Management Economist, University of Florida, IFAS, CREC, Lake Alfred, FL, September 2008.

Table 6. Estimated Total Delivered-in Cost for **Southwest Florida Grapefruit** Grown for the **Fresh Fruit Market Without** and **With** Citrus Canker and Greening, 2007-08

Represents a mature (10+ years old) Southwest Florida Grapefruit Grove	Fresh Market Cultural Program Without Canker-Greening and WITH Resetting - Tree Replacement			Fresh Market Cultural Program With Canker-Greening and WITH Resetting - Tree Replacement		
	\$/Acre	\$/Box	\$/Carton	\$/Acre	\$/Box	\$/Carton
Total Production/Cultural Costs	\$1,304.02	\$2.484	\$1.2419	\$1,949.00	\$4.564	\$2.2822
Other Grower Costs	<u>486.86</u>	<u>0.927</u>	<u>0.4637</u>	<u>486.86</u>	<u>1.140</u>	<u>0.5701</u>
Total Grower Costs	\$1,790.88	\$3.411	\$1.7056	\$2,435.86	\$5.705	\$2.8523
Total Harvesting and Assessment Costs	<u>1,503.60</u>	<u>2.864</u>	<u>1.4320</u>	<u>1,222.93</u>	<u>2.864</u>	<u>1.4320</u>
Total Delivered-In Cost	<u>\$3,294.48</u>	<u>\$6.275</u>	<u>\$3.1376</u>	<u>\$3,658.79</u>	<u>\$8.569</u>	<u>\$4.2843</u>

Source: Ronald P. Muraro, Extension Farm Management Economist, University of Florida, IFAS, CREC, Lake Alfred, FL, September 2008.

Table 7. Break-even Price for Processed Hamlin Oranges in Southwest Florida, 2007-08

		Boxes Per Acre					
300	350	400	450	500	550	600	
							Delivered-in Price Per Pound Solids ^a
<u>Without Canker-Greening</u>							
NO Resetting-Tree Replacement							
\$1.319	\$1.194	\$1.101	\$1.028	\$0.970	\$0.922	\$0.883	
WITH Resetting-Tree Replacement							
\$1.403	\$1.267	\$1.164	\$1.084	\$1.021	\$0.968	\$0.925	

<u>With Canker-Greening</u>							
NO Resetting-Tree Replacement							
\$1.517	\$1.364	\$1.249	\$1.160	\$1.089	\$1.030	\$0.982	
WITH Resetting-Tree Replacement							
\$1.658	\$1.485	\$1.355	\$1.254	\$1.174	\$1.107	\$1.052	

^aAssumes 6.2 pounds solids per box.

Table 8. Break-even Price for Fresh Market Grapefruit in Southwest Florida, 2007-08

		Boxes Per Acre					
350	400	450	500	550	600	650	
							Delivered-in Price Per Box
<u>Without Canker-Greening</u>							
NO Resetting-Tree Replacement							
\$7.81	\$7.19	\$6.71	\$6.33	\$6.01	\$5.75	\$5.53	
WITH Resetting-Tree Replacement							
\$7.98	\$7.34	\$6.84	\$6.45	\$6.12	\$5.85	\$5.62	

<u>With Canker-Greening</u>							
NO Resetting-Tree Replacement							
\$9.38	\$8.57	\$7.93	\$7.43	\$7.01	\$6.67	\$6.37	
WITH Resetting-Tree Replacement							
\$9.82	\$8.95	\$8.28	\$7.74	\$7.29	\$6.92	\$6.61	

Table 9.--Estimated F.O.B. cost for fresh market Southwest Florida Red grapefruit, 2007-08 – **with Citrus Canker and Greening and Resetting**

	Percent Packout 25.00% Box Yield Per Acre 427			Percent Packout 40.00% Box Yield Per Acre 427			Percent Packout 55.00% Box Yield Per Acre 427		
	Per Acre	Per Box	Per Carton	Per Acre	Per Box	Per Carton	Per Acre	Per Box	Per Carton
Total Production/ Cultural Costs	\$1,949.00	\$18.258	\$9.1288	\$1,949.00	\$11.411	\$5.7055	\$1,949.00	\$8.299	\$4.1495
Interest on Operating (Cultural Costs)	85.45	0.800	0.4002	85.45	0.500	0.2501	85.45	0.364	0.1819
Management	48.00	0.450	0.2248	48.00	0.281	0.1405	48.00	0.204	0.1022
Taxes/Regulatory	117.65	1.102	0.5510	117.65	0.689	0.3444	117.65	0.501	0.2505
Interest on Average Capital Investment	321.22	3.009	1.5045	321.22	1.881	0.9403	321.22	1.368	0.6839
Harvesting (Pick, Haul, Etc.) and DOC Assessment	<u>1,222.93</u>	<u>11.456</u>	<u>5.7280</u>	<u>1,222.93</u>	<u>7.160</u>	<u>3.5800</u>	<u>1,222.93</u>	<u>5.207</u>	<u>2.6036</u>
Total Delivered-In Cost	\$3,744.24	\$35.075	\$17.5374	\$3,744.24	\$21.922	\$10.9609	\$3,744.24	\$15.943	\$7.9716
Packing & Selling	949.01	8.890	4.4450	1,518.41	8.890	4.4450	2,087.82	8.890	4.4450
Net Costs of Fresh Eliminations ^a	<u>-545.39</u>	<u>-5.109</u>	<u>-2.5545</u>	<u>-436.31</u>	<u>-2.555</u>	<u>-1.2773</u>	<u>-327.23</u>	<u>-1.393</u>	<u>-0.6967</u>
Total F.O.B. Costs	<u>\$4,147.86</u>	<u>\$38.856</u>	<u>\$19.4279</u>	<u>\$4,826.34</u>	<u>\$28.257</u>	<u>\$14.1286</u>	<u>\$5,504.82</u>	<u>\$23.440</u>	<u>\$11.7199</u>
	Percent Packout 75.00% Box Yield Per Acre 427			Percent Packout 85.00% Box Yield Per Acre 427			Percent Packout 100.00% Box Yield Per Acre 427		
	Per Acre	Per Box	Per Carton	Per Acre	Per Box	Per Carton	Per Acre	Per Box	Per Carton
Total Production/ Cultural Costs	\$1,949.00	\$6.086	\$3.0429	\$1,949.00	\$5.370	\$2.6849	\$1,949.00	\$4.564	\$2.2822
Interest on Operating (Cultural) Costs	85.45	0.267	0.1334	85.45	0.235	0.1177	85.45	0.200	0.1001
Management	48.00	0.150	0.0749	48.00	0.132	0.0661	48.00	0.112	0.0562
Taxes/Regulatory	117.65	0.367	0.1837	117.65	0.324	0.1621	117.65	0.276	0.1378
Interest on Average Capital Investment	321.22	1.003	0.5015	321.22	0.885	0.4425	321.22	0.752	0.3761
Harvesting (Pick, Haul, Etc.) and DOC Assessment	<u>1,222.93</u>	<u>3.819</u>	<u>1.9093</u>	<u>1,222.93</u>	<u>3.369</u>	<u>1.6847</u>	<u>1,222.93</u>	<u>2.864</u>	<u>1.4320</u>
Total Delivered-In Cost	\$3,744.24	\$11.692	\$5.8458	\$3,744.24	\$10.316	\$5.1581	\$3,744.24	\$8.769	\$4.3844
Packing & Selling	2,546.99	8.890	4.4450	2,886.58	8.890	4.4450	3,395.98	8.890	4.4450
Net Costs of Fresh Eliminations ^a	<u>-162.64</u>	<u>-0.508</u>	<u>-0.2539</u>	<u>-97.58</u>	<u>-0.269</u>	<u>-0.1344</u>	<u>0.00</u>	<u>0.000</u>	<u>0.0000</u>
Total F.O.B. Costs	<u>\$6,128.59</u>	<u>\$20.074</u>	<u>\$10.0369</u>	<u>\$6,533.24</u>	<u>\$18.937</u>	<u>\$9.4686</u>	<u>\$7,140.22</u>	<u>\$17.659</u>	<u>\$8.8294</u>

^a"Net Eliminations Cost" equals the average yield of 5.00 pound solids per box times \$0.58 per pound solids less packinghouse elimination charge and cannery hauling charge of \$1.20 per box.

Addenda Table 1. Herbicide programs used in the Southwest Florida citrus production budgets – 2007-2008.

Program	Materials/Ingredients	Amount treated acre	Cost/acre*
#1	Solicam 80 DF	3 lbs	\$23.30
	Karmex WP	4 lbs	9.32
	Roundup Weather Max	4 pts	<u>11.81</u>
			\$44.43
	Application Cost/Acre	1 time	<u>\$10.31</u>
	Total Cost/Application		<u>\$54.74</u>
#2	Prowl H20	4 pts	\$ 7.33
	Simazine 4L	8 pts	8.94
	Roundup Weather Max	4 pts	<u>11.81</u>
			\$28.08
	Application Cost/Acre	1 time	<u>\$10.31</u>
	Total Cost/Application		<u>\$38.39</u>
#3	Simazine 4L	0 pts	\$ 0.00
	Roundup Weather Max	4 pts	<u>11.81</u>
			\$11.81
	Application Cost/Acre	1 time	<u>\$10.31</u>
	Total Cost/Application		<u>\$22.12</u>
#4	Roundup Weather Max (chemical mow)	1 pt	<u>\$2.95</u>
			\$2.95
	Application Cost/Acre	1 time	<u>\$5.88</u>
		Total Cost/Application	<u>\$8.83</u>

*Herbicide 50% of grove area covered.

Addenda Table 2. Spray programs used in the Southwest Florida citrus production budgets – 2007-2008.

Program	Analysis/Material Applied	Amount/Acre	Cost/Acre
#1 (January)	Temik 15G	33 lbs	\$ 99.66
	Custom application		<u>15.67</u>
	Total Spray Program #1		<u>\$115.33</u>
#2 (at first Flush or February; Fresh Fruit)	Danitol	1 pt	\$17.26
	Copper (Kocide 3000)	2.5 lbs	<u>15.18</u>
	Total materials cost		\$32.43
	PTO-Air Blast Sprayer @ 125 GPA		<u>\$24.84</u>
	Total Spray Program #2		<u>\$57.27</u>
#3 (at first Flush or February and/or October; Processed Fruit)	Danitol	1 pt	\$17.26
	PTO-Air Blast Sprayer @ 125 GPA		<u>24.84</u>
	Total Spray Program #3		<u>\$42.09</u>

Addenda Table 2. Spray programs used in the Southwest Florida citrus production budgets – 2007-2008 (cont'd.).

Program	Analysis/Material Applied	Amount/Acre	Cost/Acre
#4 (April – Post Bloom and Nutritionals)	Lorsban 4EC	5 pts	\$10.76
	Copper (Kocide 3000)	2.5 lbs	15.18
	Zn (Zinc)	3 lbs	6.33
	Mn (Manganese)	3 lbs	1.95
	B (Borates)	0.25 lb	0.20
	PTO-Air Blast Sprayer @ 125 GPA		<u>24.84</u>
	Total Spray Program #4		<u>\$59.26</u>
#5 (Spray every 3 weeks from late April-early May)	Copper (Kocide 3000)	2.5 lbs	\$15.18
	PTO-Air Blast Sprayer @ 125 GPA		<u>24.84</u>
	Total Spray Program #5		<u>\$40.02</u>
#6 (late May or early June)	Agrimek (if no mite resistance)	5 ozs	\$21.11
	Mustang	4.3 ozs	5.67
	Copper (Kocide 3000)	2.5 lbs	15.18
	Spray Oil (97+%)	3 gals	<u>14.22</u>
	Total material cost		56.18
	PTO-Air Blast Sprayer @ 125 GPA		<u>24.84</u>
	Total Spray Program #6		<u>\$81.02</u>
#7 (late May or early June)	Copper (50%; Kocide 3000)	4 lbs	\$24.28
	Spray Oil (97+%)	5 gals	<u>23.70</u>
	Total material cost		47.98
	PTO Air Blast Sprayer @ 125 GPA		<u>24.84</u>
	Total Spray Program #7		<u>\$72.82</u>
#8 (early July or mid-August)	Spray Oil (97+%)	5 gals	\$ 23.70
	Copper (50%; Kocide 3000)	4 lbs	24.28
	Agrimek (if no mite resistance)	5 ozs	21.21
	Zn (Zinc)	3 lbs	6.33
	Mn (Manganese)	3 lbs	1.95
	B (Borates)	0.25 lbs	<u>0.20</u>
	Total material cost		\$77.67
	PTO Air Blast Sprayer @ 125 GPA		<u>24.84</u>
	Total Spray Program #8		<u>\$102.41</u>
#9 (late June or July)	Provado	16 ozs	\$25.73
	Copper (Kocide 3000)	2.5 lbs	15.18
	Spray Oil (97+%)	5 gals	<u>23.70</u>
	Total material cost		64.61
	PTO Air Blast Sprayer @ 125 GPA		<u>24.84</u>
	Total Spray Program #9		<u>\$89.45</u>
#10 (late July or August)	Lorsban 4EC	5 pts	\$10.76
	Copper (Kocide 3000)	2.5 lbs	15.18
	Spray Oil (97+%)	5 gals	<u>23.70</u>
	Total materials cost		49.64
	PTO Air Blast Sprayer @125 GPA		<u>24.84</u>
	Total Spray Program #10		<u>\$74.48</u>

Addenda Table 2. Spray programs used in the Southwest Florida citrus production budgets – 2007-2008 (cont'd.).

Program	Analysis/Material Applied	Amount/Acre	Cost/Acre
#11 (late September or October)	Danitol	1 pt	\$17.26
	Vendex 50W	2 lbs	34.63
	Total material costs		51.89
	Fixed Wing Aerial Spray @ 10 GPA		7.75
	Total Spray Program #11		<u>\$59.64</u>
#12 (late September or October)	Vendex 50W	2 lbs	\$34.63
	Fixed Wing Aerial Spray @ 10 GPA		7.75
	Total Spray Program #12		<u>\$42.38</u>

Addenda Table 3. Fertilizer programs used in the Southwest Florida citrus production budgets – 2007-2008.

Program	Analysis/Material Applied	Amount/Acre	Cost/Acre
#1 – 4 applications	15-2-15-2.4 MgO	180 lbs	\$313.88
	Application cost		27.16
	Total Program #1		<u>\$341.04</u>
#2 – 4 applications	16-0-16-4 MgO	200 lbs	\$347.20
	Application cost		27.16
	Total Program #2		<u>\$374.36</u>
#3 – 4 applications	16-2-16-3 MgO	160 lbs	\$283.12
	Application cost		27.16
	Total Program #3		<u>\$310.28</u>
#4 – 4 applications	17-4-17-2.4 MgO	220 lbs	\$386.68
	Application cost		27.16
	Total Program #4		<u>\$413.84</u>