

Summary of 2003-2004 Citrus Budget for the Indian River Production Region

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Annually, citrus budgets are tabulated for the Central, Southwest and Indian River citrus production regions of Florida. The attached budget costs are for the example grove situation described in the expanded citrus budget series titled: “Budgeting Costs and Returns for the Indian River” region. The budget 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 **Indian River** represent a **custom managed operation**.

The 2003-2004 comparative budgets are presented in three scenarios: 1) Low Cost Processed Cultural Program Alternative; 2) Processed/Reduced Fresh Cost Cultural Program; and 3) Typical/Historical Fresh Cultural Program. Scenario one represents a possible “**one year**” low cost alternative that would allow growers to provide a maintenance cultural program in a low on-tree price situation. Scenario two represents a typical processed orange cultural program and/or reduced cost fresh fruit program. The third scenario represents typical costs of grove practices which have been performed for citrus grown for the fresh fruit market.

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

Each budget lists the cost of individual grove care practices normally performed in a citrus grove. These costs are categorized into cumulative sub-totals of irrigated processed and irrigated fresh fruit program and reflecting current grove practices being used 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 grove practices performed. For example, extensive tree loss due to blight or tristeza could at least double, if not increase more, the tree replacement and care costs. Also, travel and set-up costs may vary due to the size of a citrus grove and the distance from the grove equipment barn. The mandatory decontamination requirements to control the spread of citrus canker add to the total operational costs. These costs are shown in the expanded “delivered-in” cost table.

Included with the budget summaries are estimated “**delivered-in**” costs for Indian River White/Marsh grapefruit. The “delivered-in” costs represent cultural programs for both the processed juice fruit and fresh fruit markets. The estimated delivered-in costs include total cultural/production, management, regulatory and harvesting costs.

Additional information on budgeting and cost analysis can be obtained by contacting the author or your County Extension Agent or going to the Extension or Economics section of the EDIS website:
<http://edis.ifas.ufl.edu>

Table 1. A listing of estimated comparative Indian River citrus production costs per acre for grapefruit, 2003-2004²

Costs represent a mature (10+ years old) Indian River Grapefruit Grove.	Low Cost Processed Cultural Program One Year Alternative	Processed and Reduced Fresh Cost Cultural Program	Typical/Historical Fresh Fruit Cultural Program
PRODUCTION/CULTURAL COSTS:^v			
Weed Management/Control:			
Mechanical Mow Middles (3 times per year)	\$ 29.73	\$ 29.73	\$ 29.73
Chemical Mow Middles (2 times per year)	11.24	11.24	11.24
General Grove Work (2 labor hours per acre)	25.34	25.34	25.34
Herbicide (1/2 tree acre treated):			
Application (6 glyphosate or 3 residual applications)	\$73.26	\$36.63	\$36.63
Material	<u>48.48</u>	<u>88.89</u>	<u>88.89</u>
Total Herbicide Cost	121.74	125.52	125.52
Spray:			
Post Bloom: Application (150 GPA)	—	28.67	28.67
Material	—	<u>56.87</u>	<u>56.87</u>
Total Post Bloom Cost	—	85.54	85.54
Summer Oil #1: Application (250 GPA)	28.67	28.67	28.67
Material	<u>60.42</u>	<u>62.54</u>	<u>62.54</u>
Total Summer Oil #1 Cost	89.09	91.21	91.21
Summer Oil #2: Application (PTO -- 250 GPA)	28.67	28.67	28.67
Material	<u>29.42^x</u>	<u>20.54</u>	<u>20.54</u>
Total Summer Oil #2 Cost	58.09	49.21	49.21
Fertilizer (Bulk): 3 Applications	21.87	21.87	21.87
Material (12-2-12-2.4 MgO @ 125 lbs N and 100 lbs N per acre)	<u>100.78</u>	<u>80.91</u>	<u>100.78</u>
Total Fertilizer Cost	122.65	102.78	122.65
Dolomite (one ton applied every 3 years)			
Material/Application	12.54	12.54	12.54
Pruning:			
Topping (\$27.50/A ÷ 2 yrs) ^w	13.75	13.75	13.75
Hedging (\$24.50/A ÷ 1.5 yrs) ^w	16.33	16.33	16.33
Chop/Mow Brush after Hedging (\$8.52/A ÷ 1.5 yrs) ^w	5.68	5.68	5.68
Raise Skirts of Trees (\$13.00/A ÷ 2 yrs) ^w	—	<u>6.50</u>	<u>6.50</u>
Total Pruning Cost	35.76	42.26	42.26
Tree Replacement — 1 thru 3 years of age: (5 trees/acre)			
Remove Trees: Pull, Stack & Burn 5 Trees with Front-end Loader	23.70	23.70	23.70
Prepare Site and Plant Tree (Includes 5 reset trees)	—	59.55	59.55
Supplemental Fertilizer, Tree Wraps Maintenance, Sprout, etc. (Trees 1-3 years old)	<u>31.05</u>	<u>46.20</u>	<u>46.20</u>
Total Tree Replacement Cost	54.75	129.45	129.45
Irrigation: Microsprinkler System ^v	152.07	152.07	152.07
Clean Ditches (Weed Control)	13.05	13.05	13.05
Ditch and Canal Maintenance	14.76	14.76	14.76
Water Control (Pump water in/out of Ditches and Canals)	<u>12.71</u>	<u>12.71</u>	<u>12.71</u>
Total Irrigation Cost	<u>192.59</u>	<u>192.59</u>	192.59
IRRIGATED PROCESSED FRUIT PRODUCTION COSTS	<u>\$753.52</u>	<u>\$897.41</u>	
Supplemental Post Bloom Spray: (2 Applications)			
Application (125 GPA)		49.70	49.34
Material (Copper)		<u>19.60</u>	<u>18.48</u>
Total Supplemental Post Bloom Spray Cost		69.30	67.82
Fall Miticide Spray: Application (125 GPA)		20.42	24.67
Material		<u>32.72</u>	<u>31.36</u>
Total Fall Miticide Spray Cost		<u>53.14</u>	<u>56.03</u>
IRRIGATED FRESH FRUIT PRODUCTION COSTS		<u>\$1,019.85</u>	<u>\$1,041.13</u>

^vThe listed estimated comparative costs are for the example grove situation described in the Economic Information Report Series entitled: "Budgeting Costs and Returns for Indian River Citrus Production" and may not represent your particular grove situation in Indian River.

SOURCE: Ronald P. Muraro, University of Florida-IFAS, Citrus Research and Education Center, Lake Alfred, FL, August 2004.

^yIndian River production area refers to the citrus producing counties on Florida's east coast.

Where **equipment use** or **application** is listed (discing, hedging, spray application, etc.), an **average custom charge** (cost) is used which includes a charge for equipment repairs, maintenance, labor and overhead management charges/costs. A **management charge** for equipment supervision and fruit marketing is not included. Management charges/costs could be based on a monthly charge (\$3-\$4/acre) or percentage of gross sales. In addition to these charges, a harvesting supervision cost (10¢/box 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.

Included in the materials expense is a supervision (or handling) charge of 10% of cost/price of the materials.

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 \$16.60 per acre; Diaprepes control could add \$73.20 per acre for each foliar application; extensive tree loss due to blight or tristeza could substantially increase the tree replacement and care costs; spray applications to control citrus leafminer and nematicide applications of such as Temik (\$119.33/acre) could increase the total cultural costs per acre above the average costs shown in the comparative budgets; travel and set-up costs may vary due to size of the citrus grove and distance from grove equipment barn and could add \$25.98 per acre; etc.

^xSpray materials include copper (Cu), oil and nutritionals.

^wPer acre costs shown in parenthesis are for 2003.

^vIrrigation Expense includes the following:

	<u>Microsprinkler</u>	<u>Drip</u>
Variable Operating Expense (Diesel)	\$ 41.98	\$ 37.88
Fixed-Variable Expense (annual maintenance repairs to system)	<u>46.76</u>	<u>40.50</u>
Total Cash Expenses*	\$ 88.74	\$ 78.38
Fixed-Depreciation Expense	<u>56.56</u>	<u>45.25</u>
Total Cash and Fixed Expense	<u>\$145.30</u>	<u>\$123.63</u>

* Where applies, there may be an additional cost of \$11.05 per acre for water control in/out of ditches and canals plus \$14.76 per acre for ditch and canal maintenance plus \$13.05 for weed control in ditches and canals.

Source: Ronald P. Muraro, Extension Farm Management Economist, University of Florida, IFAS, CREC, Lake Alfred, Florida, August 2004.

Table 2. Estimated total delivered-in cost for Indian River White grapefruit grown for the fresh/processed market under three cultural cost programs, 2003-04

Represents a mature (10+ years old) Indian River White Grapefruit Grove	Processed White Grapefruit Low Cost Cultural Program One-Year Alternative			Fresh Packed White Grapefruit Reduced Cost Cultural Program			Fresh Packed White Grapefruit Cultural Program		
	\$/Acre	\$/Box	\$/P.S.	\$/Acre	\$/Box	\$/Carton	\$/Acre	\$/Box	\$/Carton
Total Production/Cultural Costs	\$ 753.52	\$1.693	\$0.3603	\$1,019.85	\$2.292	\$1.1459	\$1,041.13	\$2.340	\$1.1698
Interest on Operating (Cultural) Costs	20.72	0.047	0.0099	50.99	0.115	0.0573	52.06	0.117	0.0585
Management Costs	48.00	0.108	0.0230	48.00	0.108	0.0539	48.00	0.108	0.0539
Taxes/Regulatory Costs:									
Property Tax/Water Management Tax	47.04	0.106	0.0225	44.80	0.101	0.0503	44.80	0.101	0.0503
Water Drainage District Tax	63.00	0.142	0.0301	60.00	0.135	0.0674	60.00	0.135	0.0674
Fly Protocol Cost	–	–	–	54.73	0.123	0.0615	52.13	0.117	0.0586
Canker Decontamination Costs	<u>6.18</u>	<u>0.014</u>	<u>0.0030</u>	<u>6.18</u>	<u>0.014</u>	<u>0.0069</u>	<u>4.54</u>	<u>0.010</u>	<u>0.0051</u>
Total Taxes/Regulatory Costs	<u>116.22</u>	<u>0.261</u>	<u>0.0556</u>	<u>165.71</u>	<u>0.372</u>	<u>0.1862</u>	<u>161.47</u>	<u>0.363</u>	<u>0.1814</u>
Total Direct Grower Costs	\$ 938.46	\$2.109	\$0.4487	\$1,284.55	\$2.887	\$1.4433	\$1,302.66	\$2.927	\$1.4637
Interest on Average Capital Investment Costs	<u>321.22</u>	<u>0.722</u>	<u>0.3609</u>	<u>321.22</u>	<u>0.722</u>	<u>0.3609</u>	<u>321.22</u>	<u>0.722</u>	<u>0.3609</u>
Total Grower Costs	\$1,259.68	\$2.831	\$0.8096	\$1,605.77	\$3.608	\$1.8042	\$1,623.87	\$3.649	\$1.8246
Harvesting and Assessment Costs:									
Pick/Spot Pick, Roadside & Haul and Canker Decontamination	838.83	1.885	0.4011	928.27	2.086	1.0430	928.27	2.086	1.0430
Fruit Drenching (Fresh)	–	–	–	75.65	0.170	0.0850	75.65	0.170	0.0850
DOC Assessment	<u>106.80</u>	<u>0.240</u>	<u>0.0511</u>	<u>111.25</u>	<u>0.250</u>	<u>0.1250</u>	<u>111.25</u>	<u>0.250</u>	<u>0.1250</u>
Total Harvesting and Assessment Costs	945.63	2.125	0.4521	1,115.17	2.506	1.2530	1,115.17	2.506	1.2530
Total Delivered-In Cost	<u>\$2,205.30</u>	<u>\$4.956</u>	<u>\$1.2617</u>	<u>\$2,720.94</u>	<u>\$6.114</u>	<u>\$3.0572</u>	<u>\$2,739.04</u>	<u>\$6.155</u>	<u>\$3.0776</u>
Two cartons per box P.S. = Pound Solids Yield: 445 boxes/acre @ 4.7 P.S. per box 95 trees per acre	Refer to cultural program shown on Table 1. Two summer oil sprays with oil, copper, and miticide			Refer to cultural program shown on Table 1. Assumes 100% packout			Refer to cultural program shown in Table 1. Assumes 100% packout		

Source: Ronald P. Muraro, Extension Farm Management Economist, University of Florida, IFAS, CREC, Lake Alfred, Florida, August 2004.