Summary of 2010-2011 Citrus Budget for the Southwest Florida Production Region

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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 were developed by surveying custom operators, suppliers, growers, colleagues with UF/IFAS and County Extension Agents in each production region.

Although there were changes in the prices of fertilizer (25% increase) and chemical (2% decrease) inputs and application costs (2% increase), there were no significant changes in total average cultural production costs per acre between 2009-2010 and 2010-2011. Growers have increased their focus on controlling the Asian citrus psyllid that transmits HLB-greening disease incorporating more aerial and low-volume ground spray applications to reduce total spray costs.

The 2010-2011 comparative budget summary for processed oranges in southwest Florida is shown in Table 1. The estimated costs represent a traditional citrus canker and HLB-greening management program. The budget shows the total cost 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 such as to identify and remove infected trees along with adding new spray programs to control the insect vector, the Asian citrus psyllid. During the past couple of years, many growers have decided not to remove HLB symptomatic trees and have begun adding a foliar nutritional formulation to their air-blast ground spray applications. 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 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, and 3. Table 4 provides comparative costs between the traditional citrus HLB-greening management program (Table 1) and seven foliar nutrient programs added to the traditional program. All eight HLB management programs in Table 4 focus on controlling the Asian citrus psyllid.

The budgets shown in Table 1 list 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 increase the tree replacement costs by double or more. 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 Table 2 and are presented **with** 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. The per acre yields used in Tables 2 and 3 represent above average production for Hamlin oranges in the Southwest Florida production region. The yield per acre reflects an additional 2.3% average annual HLB tree loss for all age trees. Table 3 shows the delivered-in costs with resetting.

In previous citrus budgets, the traditional citrus psyllid HLB-greening management has included a soil-applied Temik treatment in January along with five ground spray applications. With the use of Temik discontinued, the 2010-11 spray programs (refer to Table 1) include a total of eight applications; 125 GPA ground sprays, ultra low-volume ground sprays and aerial sprays. The additional spray costs ($83.48/acre) for citrus black spot (CBS) control are shown in Table 4.

Break-even prices for processed Hamlin oranges are in Table 5 for yields ranging from 300 to 600 boxes per acre. With **no resetting**, the delivered-in break-even process ranged from $1.415 to $0.926 per pound solids and from $8.774 to $5.741 per box. With **resetting**, break-even prices ranged from $1.570 to $1.003 per pound solids and from $9.734 to $6.221 per box.

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. "Average Packing Charges for Florida Fresh Citrus – 2010-11 Season." UF/IFAS CREC Website: www.crec.ifas.ufl.edu/extension/economics September 2011. 2 pages.

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Muraro, Ronald P. "Planting and Annual Cultural Maintenance Costs for Reset-Replacement Trees in a Florida Citrus Grove – 2011." UF/IFAS CREC Website: www.crec.ifas.ufl.edu/extension/economics September 2011. 3 pages.

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Muraro, Ronald P. "Summary of 2010-2011 Citrus Budgets for the Indian River Citrus Production Region." UF/IFAS CREC Website: www.crec.ifas.ufl.edu/extension/economics September 2011. 14 pages.

Muraro, Ronald P. "Summary of 2010-2011 Citrus Budgets for the Central Florida (Ridge) Citrus Production Region." UF/IFAS CREC Website: www.crec.ifas.ufl.edu/extension/economics September 2011. 13 pages.

Table 1. A Listing of Estimated Comparative **Southwest Florida** Production Costs Per Acre for **Processed Oranges**, 2010-2011[z]

Costs represent a mature (10+ years old) Southwest Florida Orange Grove.	Processed Cultural Program **With Canker-Greening**	
PRODUCTION/CULTURAL COSTS[y]		
Weed Management/Control:		
Mechanical Mow Middles (3 times per year)	$ 29.74	
Chemical Mow Middles (3 times per year)	17.79	
General Grove Work (2 labor hours per acre)	32.64	
Herbicide (1/2 tree acre treated):		
(See Supplemental Table 1 - Herbicide Programs #1, #2 and #3)	115.74	
Total Weed Management Costs		195.91
Spray/Pest Management: (See Supplemental Table 3)		
With Greening: Spray Programs #1, #2, #3, #4, #5, #6, #7 and #8		372.05
Fertilizer (Bulk): 4 Applications		342.05
(See Supplemental Table 2 - Fert Prog #4; 17-4-17-2.4MgO @ 220 lbs N)		
Dolomite (one ton applied every 3 years) (Material/Application)		15.57
Pruning[x]: Topping ($26.83/A ÷ 2 yrs)	13.42	
Hedging ($25.75/A ÷ 2 yrs)	12.88	
Chop/Mow Brush after Hedging ($15.24/A ÷ 2 yrs)	7.72	
Total Pruning Cost		34.02
Irrigation: Microsprinkler System[w]	173.17	
Clean Ditches (Weed Control)	17.24	
Ditch and Canal Maintenance	16.23	
Water Control (Pump water in/out of Ditches and Canals)	15.63	
Total Irrigation Cost		222.27
Mandatory Citrus Canker Decontamination Costs		31.77
Field Inspections for Citrus Greening (4 inspections @ $27.41)		109.64
TOTAL PROCESSED PRODUCTION COSTS WITHOUT TREE REPLACEMENT-RESET COSTS		1,323.28
Tree Replacement – 1 thru 3 years of age (**7 trees/acre with greening**)		
Remove Trees: Pull, Stack & Burn (Clip-Shear & Front End Loader)	41.23	
Prepare Site and Plant Tree (includes reset trees)	96.67	
Supplemental Fertilizer, Sprays, Sprout, etc. (Trees 1-3 years old)	136.43	
Total Tree Replacement Cost		274.33
TOTAL PROCESSED PRODUCTION COSTS WITH TREE REPLACEMENT-RESET COSTS		$1,597.61

Source: Ronald P. Muraro, University of Florida-IFAS, Citrus Research and Education Center, Lake Alfred, FL, September 2011.

Footnotes Refer to Table 1.

[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 exceptions 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% 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 and 4.

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% 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 $14.21 per acre; 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 $36.80 per acre; etc.

[x]Per acre costs shown in parenthesis are for 2011.

[w]Irrigation Expense includes the following:

	Microsprinkler	Drip
Variable Operating Expense (Diesel)*	$ 75.57	$ 67.11
Fixed-Variable Expense (annual maintenance repairs to system)	41.04	37.95
Total Cash Expenses**	$116.61	$106.06
Fixed-Depreciation Expense	56.56	45.25
Total Cash and Fixed Expense	$173.17	$150.32

* Adjusted for higher fuel costs.

** Where applies, there may be an additional cost of $15.63 per acre for water control in/out of ditches and canals plus $16.23 per acre for ditch and canal maintenance plus $17.24 for weed control in ditches and canals.

Source: Ronald P. Muraro, Extension Farm Management Economist, University of Florida, IFAS, CREC, Lake Alfred, FL, September 2011.

Table 2. Estimated Total Delivered-in Cost for **Southwest Florida Hamlin Oranges** Grown for the **Processed Juice Market With** Citrus Canker and HLB-Greening, 2010-11

Represents a mature (10+ years old) Southwest Florida Orange Grove	Processed Cultural Program **With Canker-Greening and NO Resetting - Tree Replacement**		
	$/Acre	$/Box	$/P.S.
Total Production/Cultural Costs	$1,323.28	$2.889	$0.4660
Interest on Operating (Cultural) Costs	66.16	0.144	0.0233
Management Costs	48.00	0.105	0.0169
Taxes/Regulatory Costs:			
Property Tax/Water Management Tax	61.00	0.133	0.0215
Total Direct Grower Costs	$1,498.44	$3.272	$0.5277
Interest on Average Capital Investment Costs	321.22	0.701	0.1131
Total Grower Costs	$1,819.66	$3.973	$0.6408
Harvesting and Assessment Costs:			
Pick/Spot Pick, Roadside & Haul and Canker Decontamination	1,125.76	2.458	0.3965
DOC Assessment	114.50	0.250	0.0403
Total Harvesting and Assessment Costs	1,240.26	2.708	0.4368
Total Delivered-In Cost	$3,059.92	$6.681	$1.0776
145 trees per acre	Refer to cultural program shown in Table 1.		
P.S. = Pound Solids	Yield: 458 boxes/acre; 6.4 P.S./box		

Source: Ronald P. Muraro, Extension Farm Management Economist, University of Florida, IFAS, CREC, Lake Alfred, FL, September 2011.

Table 3. Estimated Total Delivered-in Cost for **Southwest Florida Hamlin Oranges** Grown for the **Processed Juice Market With** Citrus Canker and HLB-Greening, 2010-11

Represents a mature (10+ years old) Southwest Florida Orange Grove	Processed Cultural Program **With Canker-Greening and WITH Resetting - Tree Replacement**		
	$/Acre	$/Box	$/P.S.
Total Production/Cultural Costs	$1,597.61	$3.488	$0.5626
Other Grower Costs	510.10	1.114	0.1796
Total Grower Costs	$2,107.71	$4.602	$0.7423
Total Harvesting and Assessment Costs	1,240.26	2.708	0.4368
Total Delivered-In Cost	$3,347.97	$7.310	$1.1790

Source: Ronald P. Muraro, Extension Farm Management Economist, University of Florida, IFAS, CREC, Lake Alfred, FL, September 2011.

Table 4. Comparative Costs of Alternative Citrus Psyllid-HLB Greening Management Programs for a Southwest Florida 10+ Year Processed Orange Grove – 2010-11

	Traditional HLB Management Without Additional Foliar Nutrients[a]	Alternative "1" [b] Traditional HLB Management With 4 Applications of Foliar Nutrients	Alternative "2" [c] Traditional HLB Management With 5 Applications of Foliar Nutrients	Alternative "3" [d] Traditional HLB Management With 4 Applications of Foliar Nutrients	Alternative "4" [e] Traditional HLB Management With 4 Applications of Foliar Nutrients	Alternative "5" [f] Traditional HLB Management With 5 Applications of Foliar Nutrients	Alternative "6" [g] Traditional HLB Management With 6 Applications of Foliar Nutrients	Alternative "7" [h] Aerial & LV Ground HLB Management With 3 Applications of Foliar Nutrients
	$/Acre	$/Acre	$/Acre	$/Acre	$/Acre	$/Acre	$/Acre	$/Acre
General Production Costs[i]	483.97	483.97	483.97	483.97	483.97	483.97	483.97	483.97
Spray-Pesticide & Diseases[a] (includes HLB-psyllid control)	372.05	364.62	364.62	364.62	364.62	364.62	364.62	215.15
Black Spot Spray Costs[j]	83.48	83.48	83.48	83.48	83.48	83.48	83.48	83.48
HLB Foliar Nutrient Program**	–	114.07	258.14	181.07	191.07	241.14	345.21	579.40
Fertilizer Costs[k]	357.62	350.55	335.02	349.14	329.37	339.25	309.60	327.96
Tree Removal & Site Cleanup[l]	66.64	56.60	56.60	56.60	56.60	56.60	56.60	56.60
HLB Scouting	109.64	–	–	–	–	–	–	–
Total Production Costs Without Reset Trees	1,473.40	1,453.29	1,581.83	1,518.88	1,509.11	1,569.06	1,643.48	1,746.56
Cost Difference: Traditional HLB Less Foliar Nutrient Program Without Reset Trees	0.00	20.11	(108.43)	(45.48)	(35.71)	(95.66)	(170.08)	(273.16)
Reset Trees & 3-Year Care[1]	207.69	123.65	123.65	123.65	123.65	123.65	123.65	–
Total Production Costs With Reset Trees	1,681.09	1,576.94	1,705.48	1,642.53	1,632.76	1,692.71	1,767.13	1,746.56
Cost Difference: Traditional HLB Less Foliar Nutrient Program With Reset Trees	0.00	104.15	(24.39)	38.56	48.33	(11.62)	(86.04)	(65.47)

**For a description of the foliar nutrient programs used in this table, refer to Fritz M. Roka's Southwest Florida Research and Education foliar nutritional field day handout, June 2011.
**Except for Alternative #7, assumes that 3-foliar applications are included with traditional HLB spray program; the remaining foliar nutrient applications will require additional PTO 125 GPA ground applications.

[a] TRADITIONAL HLB SPRAY PROGRAM: Material and application costs for five PTO 125 GPA ground sprays, two aerial sprays, one LV ground application and NO additional foliar nutritional sprays. Except for Alternative #7, the traditional HLB spray program was used for each alternative. Where foliar nutrient sprays were applied, the total spray costs were adjusted to account for foliar micro-nutrients applied. The spray program for Alternative #7 consisted of 5 aerial and 5 LV ground sprays.
[b] Alternative #1: a Chemical dynamics foliar nutritional program; 4 – foliar nutrients applications.
[c] Alternative #2: a Diamond R Generic foliar nutritional program; 5 – foliar nutrients applications.
[d] Alternative #3: a Florida Phosphorus Fortress foliar nutritional program; 4 – foliar nutrients applications.
[e] Alternative #4: a Griffin foliar nutritional program; 4 – foliar nutrients applications.
[f] Alternative #5: a KeyPlex foliar nutritional program; 5 – foliar nutrients applications.
[g] Alternative #6: a Plant Food Systems foliar nutritional program; 6 – foliar nutrients applications.
[h] Alternative #7: a Boyd Mix foliar nutritional program; all three foliar nutritional applications are by PTO 250 GPA ground sprayers.
[i] Weed middle management/herbicide, hedging/topping, irrigation-ditch maintenance, canker decontamination.
[j] Additional sprays for Black Spot control; one ground spray in mid-late May with copper and strobilurin and a strobilurin added to summer spray.
[k] Fertilizer materials and four applications at 55 pounds of nitrogen per acre or 220 pounds per acre annually; where foliar nutrient sprays applied, cost of fertilizer materials were adjusted to account for foliar nutrients applied. Includes prorated annual lime-calcium cost of $15.54 per acre.
[l] With HLB scouting, annual tree loss is assumed to average 4.5% (2.5% normal attrition plus 2% HLB) or 7 trees per acre; without removing HLB symptomatic trees, the annual tree loss is assumed to be 3.3% or 5 trees per acre. Included with tree removal costs are site cleanup and/or replant preparation.
Reset costs include nursery reset tree, planting costs and three-year reset maintenance costs.

Note: Refer to UF/IFAS CREC website for summary budget costs for Southwest Florida orange production; website address: www.crec.ifas.ufl.edu/extension/economics.

SOURCE: Ronald P. Muraro, University of Florida-IFAS, Citrus Research and Education Center, Lake Alfred, FL, September 2011.

Table 5. Delivered-in Break-even Price for Processed Hamlin Oranges in Southwest Florida, 2010-11

Box Yield Per Acre						
300	350	400	450	500	550	600
With Citrus Canker and HLB-Greening		Delivered-in Price Per Box				
NO Resetting-Tree Replacement						
$8.774	$7.907	$7.257	$6.752	$6.347	$6.016	$5.741
WITH Resetting-Tree Replacement						
$9.734	$8.730	$7.977	$7.392	$6.923	$6.540	$6.221
With Citrus Canker and HLB-Greening		Delivered-in Price Per Pound Solids[a]				
NO Resetting-Tree Replacement						
$1.415	$1.275	$1.171	$1.089	$1.024	$0.970	$0.926
WITH Resetting-Tree Replacement						
$1.570	$1.408	$1.287	$1.192	$1.117	$1.055	$1.003

[a]Assumes 6.2 pound solids per box.

Supplemental Table 1. Herbicide programs used in the Southwest Florida citrus production budgets 2010-2011

Program	Materials/Ingredients	Amount treated acre	Price/unit	Cost/acre[a]
#1	Solicam 80 DF	3 lbs	$21.48	$32.22
	Karmex WP	4 lbs	5.19	10.38
	Roundup PowerMax	4 pts	2.23	4.46
	Adjuvant-Surfactant	1 pt	2.69	1.34
	Material Cost			48.40
	Application Cost/Acre	1 time	$10.37	10.37
	Total Cost/Application for Program #1			**$58.76**
#2	Prowl H_20	6 pts	$ 4.69	$ 14.07
	Simazine 4L	8 pts	2.64	10.56
	Roundup PowerMax	4 pts	2.23	4.46
	Adjuvant-Surfactant	1 pt	2.69	1.34
	Material Cost			30.43
	Application Cost/Acre	1 time	$10.37	10.37
	Total Cost/Application for Program #2			**$40.80**
#3	Roundup PowerMax	4 pt	$ 2.23	$ 4.46
	Adjuvant-Surfactant	1 pt	2.69	1.34
	Material Cost			5.80
	Application Cost/Acre	1 time	$10.37	10.37
	Total Cost/Application for Program #3			**$16.17**
#4	Roundup PowerMax (chemical mow)	1 pt	$2.23	$1.11
	Adjuvant-Surfactant	0.5 pt	2.69	0.67
	Material Cost			1.79
	Application Cost/Acre	1 time	$4.82	4.82
	Total Cost/Application for Program #4			**$6.60**

[a]Herbicide applied to 50% of grove area.

Supplemental Table 2. Fertilizer programs used in the Southwest Florida citrus production budgets 2010-2011

Program	Analysis/Material Applied	Amount/ Acre	Cost/ Acre
#1 – 4 applications	15-2-15-3 MgO	1,200 lbs	$256.20
(180 lbs of nitrogen/acre)	Application Cost		31.41
	Total Fertilizer Costs for Program #1		$287.61
#2 – 4 applications	16-0-16-4 MgO	1,250 lbs	$278.59
(200 lbs of nitrogen/acre)	Application Cost		31.41
	Total Fertilizer Costs for Program #2		$310.00
#3 – 4 applications	16-2-16-3 MgO	1,000 lbs	$226.13
(160 lbs of nitrogen/acre)	Application Cost		31.41
	Total Fertilizer Costs for Program #3		$257.53
#4 – 4 applications	17-4-17-2.4 MgO	1,300 lbs	$310.64
(220 lbs of nitrogen/acre)	Application Cost		31.41
	Total Fertilizer Costs for Program #4		$342.05
Dolomite/Lime	Dolomite	2,000 lbs	$39.82
(one application every 3 years)	Application Cost		6.90
	Total Dolomite Costs/Acre		$46.71
	Annual Dolomite Costs/Acre		$15.57

Supplemental Table 3. Spray programs used in the Southwest Florida citrus production budgets 2010-2011

Program	Analysis/Material Applied	Amount/Acre	Cost/Acre
#1 (at first Flush or February)	Danitol	1 pt	$19.49
	Aerial LV Fix Wing (+/- 5 GPA)		5.39
	Total Spray Program #1 Cost		**$24.88**
#2 (April – Post Bloom)	Dimethoate 4EC	1 pt	$ 5.88
	Copper (Kocide 3000)	2.5 lbs	15.44
	Zn (Zinc)	3 lbs	5.40
	Mn (Manganese)	3 lbs	1.74
	B (Borates)	0.25 lb	0.29
	Adjuvant-Surfactant LI 700	1 pt	2.69
	Total Materials Cost		$31.43
	PTO-Air Blast Sprayer @ 125 GPA		24.07
	Total Spray Program #2 Cost		**$55.50**
#3 (late April or early May)	Mustang	4.3 ozs	$ 4.48
	Copper (Kocide 3000)	2 lbs	12.35
	Total Materials Cost		16.83
	PTO-Air Blast Sprayer @ 125 GPA		24.07
	Total Spray Program #3 Cost		**$40.91**
#4 (mid-late May)	Copper (Kocide 3000)	2 lbs	$13.59
	PTO-Air Blast Sprayer @ 125 GPA		24.07
	Total Spray Program #4 Cost		**$37.66**
#5 (early-mid June – 1st summer oil)	Movento	10 ozs	$42.62
	Copper (Kocide 3000)	2.5 lbs	15.44
	Spray Oil (97+%)	3 gals	15.99
	Total Materials Cost		74.04
	PTO-Air Blast Sprayer @ 125 GPA		24.07
	Total Spray Program #5 Cost		**$98.12**
#6 (late July or August – 2nd summer oil)	Provado	10 ozs	$ 6.86
	Spray Oil (97+%)	5 gals	26.65
	Total Materials Cost		$33.51
	PTO-Air Blast Sprayer @ 125 GPA		24.07
	Total Spray Program #6 Cost		**$57.59**
#7 (September for Processed Fruit)	Delegate	4 ozs	$ 29.01
	Ground LV Sprayer Every Middle		10.50
	Total Spray Program #7 Cost		**$39.52**

Supplemental Table 3. Spray programs used in the Southwest Florida citrus production budgets 2010-2011 (cont'd.)

Program	Analysis/Material Applied	Amount/Acre	Cost/Acre
#8 (late October or November for Processed Fruit)	Imidan 70W	1 lb	$ 9.81
	Adjuvant-Surfactant LI 700	1 pt	2.69
	Total Materials Cost		$12.50
	Aerial LV Fix Wing (+/- 5 GPA)		5.39
	Total Spray Program #8 Cost		**$17.89**
#9 (late September or October)	Malathion 5 EC	2 pts	$ 7.97
	Vendex 50W	2 lbs	36.27
	Total Materials Costs		$44.24
	Fixed Wing Aerial Spray @ 10 GPA		7.42
	Total Spray Program #9 Cost		**$51.66**
#10 (late September or October)	Vendex 50W	2 lbs	$36.27
	Fixed Wing Aerial Spray @ 10 GPA		7.42
	Total Spray Program #10 Cost		**$43.69**
#11 (February and/or November)	Danitol	1 pt	$19.49
	Aerial LV Fix Wing (+/- 5 GPA)		5.39
	Total Spray Program #11 Cost		**$24.88**
#12 (February and/or November)	Malathion 5 EC	2 pts	$ 7.97
	Aerial LV Fix Wing (+/- 5 GPA)		5.39
	Total Spray Program #12 Cost		**$13.36**
#13 (April and/or May)	Dimethoate 4EC	1 pt	$ 5.88
	Ground LV Sprayer Every Other Middle		6.77
	Total Spray Program #13 Cost		**$12.65**