

## Summary of 2016/17 Central Florida (Ridge) and Indian River-Southwest Florida Citrus Custom Rate Charges

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We conducted a survey among citrus caretaking companies to collect data on custom rate charges to Florida citrus growers during the 2016/17 season. The questionnaire was sent by mail in December 2016. Cooperatives, their members, and growers performing their own cultural practices were not included in the survey. Therefore, the custom rates for growers who are members of such cooperatives, or the costs for growers who conduct their own cultural practices, may differ from the rates reported below.

Since Huanglongbing (HLB; citrus greening) was discovered in Florida in 2005, citrus acreage, yield, and production have decreased significantly. Consequently, the Florida citrus industry is currently undergoing a consolidation process, and caretaking companies are no exception. The response rate to our survey was 34%, but it is worth noting that some of the companies we contacted had gone out of business.

The caretakers and service providers that participated on this annual survey represented almost a fourth of the total citrus acreage in Florida. The rates reported below represent 53% of the Florida citrus acreage when also considering the acreage covered by aerial service companies. From the total pool of participants, nineteen are citrus caretakers and service providers from Central Florida (Ridge) and twelve are from the Indian River and Southwest Florida regions. Caretakers from Central Florida reported servicing more than 76,500 acres while those from Indian River and Southwest Florida reported approximately 28,000 acres. Thus, Central Florida participants accounted for roughly 48% of the total acreage in that region while those from the Indian River-Southwest Florida accounted for 9%. The difference in acreage representation between the two regions can be explained by the fact that large growers in Indian River and Southwest Florida perform their own cultural practices.

The average custom rate charges for the Central and Indian River – Southwest Florida regions are presented in Tables 1 and 2, respectively. Tables are organized with an itemized list of grove practices under different programs. The tables also include the minimum and maximum rates reported for each practice.

Comparative data from previous seasons, additional information on citrus budgeting and cost analysis, harvesting charges, packing charges, and more can be obtained by contacting your County Extension Citrus Agent or going to the UF/IFAS EDIS website: <http://edis.ifas.ufl.edu> or UF/IFAS CREC Economics Extension website: [www.crec.ifas.ufl.edu/extension/economics](http://www.crec.ifas.ufl.edu/extension/economics).

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Table 1. Listing of 2016/17 custom rates reported by nineteen central Florida citrus caretakers.

Grove Practice	Unit	Rate Reported		
		Min	Max	Average <sup>1</sup>
<b>Cultivation and Equipment<sup>2</sup></b>				
Backhoe	Hour	50.00	66.00	58.00
V-Mower	Hour	42.50	45.00	43.75
V-Mower	Acre	10.00	13.00	11.67
Rotovate	Hour	28.00	50.00	40.43
Ant Bait Application with ATV (not includes bait)	Hour	25.00	27.50	26.25
ATV with Driver	Hour	20.00	40.00	28.09
ATV with Driver for Imidacloprid Soil Drench Application	Hour	22.50	40.00	28.74
Flatbed Truck with Driver	Hour	31.50	60.00	42.38
Pickup Truck with Driver	Hour	25.00	50.00	37.46
Tractor with Driver	Hour	28.00	55.00	40.33
Water Supply Truck with Driver	Hour	30.00	43.90	36.77
General Labor <sup>3</sup>	Hour	13.50	20.00	16.78
Mechanic Labor <sup>3</sup>	Hour	25.00	65.00	45.17
Mechanic Labor with Truck	Hour	40.00	75.00	56.36
<b>Weed Management<sup>2</sup></b>				
Disc 7 to 8'	Hour	36.00	38.00	37.00
Disc 7 to 8'	Acre	8.75	14.00	11.75
Disc 9 to 10'	Hour	35.50	42.00	38.75
Disc 9 to 10'	Acre	12.00	16.00	13.67
Bush Hog	Hour	25.00	42.00	34.63
Mow 5 to 7'	Hour	36.50	37.75	37.13
Mow 5 to 7'	Acre	14.00	14.00	14.00
Mow 8 to 12'	Hour	24.00	42.50	35.80
Mow 8 to 12'	Acre	9.50	15.00	13.18
Mow 13 to 16'	Acre	13.00	16.00	14.13
Chopping	Hour	34.70	45.00	38.57
Herbicide Strip/Band (Single Boom)	Hour	38.55	41.50	40.03
Herbicide Strip/Band (Single Boom)	Acre	13.16	18.00	15.80
Herbicide Strip/Band (Double Boom)	Hour	42.00	60.00	51.00
Herbicide Strip/Band (Double Boom)	Acre	14.00	18.00	15.25
Chemical Mow	Acre	5.00	17.00	8.78
Chemical Mow	Hour	60.00	60.00	60.00

Table 1. Listing of 2016/17 custom rates reported by nineteen central Florida citrus caretakers (cont'd).

Grove Practice	Unit	Rate Reported		
		Min	Max	Average <sup>1</sup>
<b>Spraying Air Blast Sprayer With Electronic Sensors<sup>4</sup></b>				
PTO Powered (1,000 gallons tank)				
16 to 25 GPA	Acre	15.00	15.00	15.00
50 to 99 GPA	Acre	15.00	25.00	19.44
100 to 124 GPA	Acre	25.00	32.00	29.07
150 to 249 GPA	Acre	28.29	32.00	30.76
250 to 500 GPA	Acre	32.00	32.00	32.00
<b>Aerial Application<sup>2</sup></b>				
Fixed Wing 5 to 9 GPA	Acre	7.25	7.29	7.27
Fixed Wing 10 to 15 GPA	Acre	9.79	12.13	10.96
<b>Irrigation<sup>2</sup></b>				
Start/Stop, System Supervision	Hour	30.00	38.50	32.83
Start/Stop, System Supervision	Run	25.00	50.00	36.94
Maintenance of Drip System	Hour	14.90	15.00	14.98
Maintenance of Microsprinkler System	Hour	14.90	30.42	19.68
<b>Drainage System and Canal Management<sup>2</sup></b>				
Water Furrow Disc	Hour	35.00	45.00	40.00
Ditch Bank Mower	Hour	36.00	65.00	48.67
<b>Fertilizer Application and Soil Amendments<sup>2</sup></b>				
Injection of Liquid Fertilizer into Irrigation System	Hour	35.00	60.00	44.00
Injection of Liquid Fertilizer into Irrigation System	Acre	2.75	5.00	3.69
Fertilizer (every middle)	Acre	9.00	13.20	10.82
Fertilizer (every other middle)	Acre	5.00	13.20	7.86
VRT Spreader (every middle)	Acre	9.50	14.50	12.74
VRT Spreader (every other middle)	Acre	7.50	13.20	10.07
Hand Spread (young trees)	Hour	13.50	37.00	20.05
Fertilizer Spreader (young trees)	Hour	27.00	40.00	35.67
Lime or Dolomite Application	Acre	11.00	14.00	12.30
Lime or Dolomite Application	Ton	9.00	9.00	9.00

Table 1. Listing of 2016/17 custom rates reported by nineteen central Florida citrus caretakers (cont'd).

Grove Practice	Unit	Rate Reported		
		Min	Max	Average <sup>1</sup>
<b>Pruning<sup>2</sup></b>				
Hedging (double side)	Acre	19.00	20.00	19.25
Topping	Acre	25.00	35.00	28.50
Push brush out of the grove	Hour	60.00	95.00	71.90
Crop Brush	Hour	34.70	60.00	47.35
Mow Brush	Hour	25.00	62.38	43.99
Front-end Loader	Hour	60.00	95.00	68.03
<b>Tree Removal and Disposal<sup>2</sup></b>				
Tree Pushing	Hour	60.00	95.00	68.13
Tree Clipping	Hour	63.00	70.00	66.30
Hauling Clipped Tree Out of Grove	Hour	60.00	95.00	70.50
Herbicide spray tree stump	Hour	14.90	37.00	24.48
<b>Tree Resetting and Care<sup>2</sup></b>				
Tree Site Preparation <sup>5</sup>	Hour	28.00	38.00	33.00
Tree Planting and First Watering <sup>6</sup>				
1 to 5 trees per acre	Tree	2.00	3.10	2.40
6 to 10 trees per acre	Tree	1.75	2.90	2.18
11 to 25 trees per acre	Tree	2.00	2.40	2.10
26+ trees per acre	Tree	1.50	2.10	1.90
Solid set block	Tree	1.30	2.00	1.83
Tree Wrap Cost (solid set block)	Tree	0.25	0.50	0.40
Tree Wrap Installation	Hour	14.90	24.50	18.14
Sprouting and Pruning	Hour	14.90	24.50	18.34
Spot Herbicide Application	Hour	22.50	40.00	29.21
Neonicotinoids Drench Application (Psyllid Management)	Hour	22.50	40.00	28.90
Slow Release Fertilization Application	Hour	14.90	40.00	21.26
<b>Grove Management<sup>2</sup></b>				
Grove Care Supervision	Acre/Month	1.25	7.00	4.03
Chemicals and Fertilizers Handling/Supervision	Percent	5.00	25.00	14.69
Marketing and Fruit Handling	Box	0.05	0.20	0.14
Travel/Set up Charge	Hour	38.00	75.00	56.50

<sup>1</sup> Calculated by averaging the total number of data points reported.

<sup>2</sup> Rates include labor and equipment.

<sup>3</sup> Rates only include labor.

<sup>4</sup> Rates are based on every middle application.

<sup>5</sup> Includes disk and/or rotovate tree site.

<sup>6</sup> Does not include tree cost.

Table 2. Listing of 2016/17 custom rates reported by twelve Indian River & southwest citrus caretakers.

Grove Practice	Unit	Rate Reported		
		Min	Max	Average <sup>1</sup>
<b>Cultivation and Equipment<sup>2</sup></b>				
Backhoe	Hour	50.00	60.00	53.75
V-Mower	Acre	12.00	15.00	13.80
Rotovate	Hour	38.00	75.00	57.60
Ant Bait Application with ATV (not includes bait)	Hour	24.00	26.00	25.00
ATV with Driver	Hour	17.00	32.50	25.75
ATV with Driver for Imidacloprid Soil Drench Application	Hour	24.00	32.75	27.95
Flatbed Truck with Driver	Hour	24.00	75.00	50.80
Pickup Truck with Driver	Hour	24.00	56.00	40.08
Tractor with Driver	Hour	35.50	65.00	48.71
Water Supply Truck with Driver	Hour	24.00	45.00	38.00
General Labor <sup>3</sup>	Hour	15.00	24.00	18.11
Mechanic Labor <sup>3</sup>	Hour	40.00	85.00	68.00
Mechanic Labor with Truck	Hour	45.00	85.00	67.50
<b>Weed Management<sup>2</sup></b>				
Disc 7 to 8'	Hour	45.00	70.00	57.50
Disc 9 to 10'	Hour	40.00	46.00	43.00
Mow 8 to 12'	Acre	12.00	15.00	13.00
Mow 13 to 16'	Hour	50.50	80.00	65.17
Mow 13 to 16'	Acre	13.00	16.00	15.00
Herbicide Strip/Band (Single Boom)	Acre	15.00	20.50	17.38
Herbicide Strip/Band (Double Boom)	Acre	12.00	16.00	14.36
Chemical Mow	Acre	2.00	13.50	5.41
<b>Spraying Air Blast Sprayer with Electronic Sensors<sup>4</sup></b>				
PTO Powered (1,000 gallons tank)				
50 to 99 GPA		22.50	22.50	22.50
100 to 124 GPA	Acre	25.00	31.00	28.67
125 to 149 GPA	Acre	27.00	32.00	30.45
150 to 249 GPA	Acre	32.00	38.75	34.92
250 to 500 GPA	Acre	34.00	45.75	39.25
Greater than 500 GPA	Acre	45.50	50.00	47.75

Table 2. Listing of 2016/17 custom rates reported by twelve Indian River &amp; southwest citrus caretakers (cont'd).

Grove Practice	Unit	Rate Reported		
		Min	Max	Average <sup>1</sup>
<b>Aerial Application<sup>2</sup></b>				
Fixed Wing 5 to 9 GPA	Acre	6.00	10.00	7.67
Fixed Wing 10 to 15 GPA	Acre	8.00	15.00	10.50
<b>Irrigation<sup>2</sup></b>				
Start/Stop, System Supervision	Hour	38.00	50.00	42.67
Start/Stop, System Supervision	Run	28.00	35.00	31.50
Maintenance of Drip System	Hour	17.00	17.00	17.00
Maintenance of Microsprinkler System	Hour	17.00	28.50	24.45
<b>Drainage System and Canal Management<sup>2</sup></b>				
Water Furrow Disc	Hour	30.00	48.75	40.94
Water Furrow Cleaner	Hour	42.00	42.00	42.00
Water Furrow Shaper	Hour	40.00	90.00	65.00
Rotary Ditcher or Auger	Hour	30.00	30.00	30.00
Ditch Bank Mower	Hour	35.00	95.00	59.17
<b>Fertilizer Application and Soil Amendments<sup>2</sup></b>				
Injection of Liquid Fertilizer into Irrigation System	Hour	29.00	55.00	45.80
Fertilizer (every middle)	Acre	10.00	13.00	11.50
Fertilizer (every other middle)	Acre	10.00	13.00	11.50
VRT Spreader (every middle)	Acre	9.50	12.00	10.50
VRT Spreader (every other middle)	Acre	9.50	12.00	10.50
Hand Spread (young Trees)	Hour	18.50	24.00	20.83
Lime or Dolomite Application	Acre	15.00	20.00	16.67
<b>Pruning<sup>2</sup></b>				
Tree Skirting (single side)	Acre	20.00	30.00	25.00
Hedging (double side)	Acre	23.00	40.00	31.50
Topping	Acre	40.00	40.00	40.00
Push brush out of the grove	Hour	75.00	85.00	77.50
Mow Brush	Hour	25.00	65.00	48.75
Front-end Loader	Hour	70.00	85.00	75.83

Table 2. Listing of 2016/17 custom rates reported by twelve Indian River & southwest citrus caretakers (cont'd).

Grove Practice	Unit	Rate Reported		
		Min	Max	Average <sup>1</sup>
<b>Tree Removal and Disposal<sup>2</sup></b>				
Tree Pushing	Hour	70.00	85.00	75.83
Tree Clipping	Hour	70.00	85.00	77.50
Tree Grinding	Hour	230.00	230.00	230.00
Hauling Clipped Tree Out of Grove	Hour	70.00	85.00	76.00
Herbicide spray tree stump	Hour	20.00	27.50	23.75
<b>Tree Resetting and Care<sup>2</sup></b>				
Tree Site Preparation <sup>5</sup>	Hour	13.75	17.00	15.38
Tree Planting and First Watering <sup>6</sup>				
1 to 5 trees per acre	Tree	2.00	2.50	2.25
6 to 10 trees per acre	Tree	2.00	2.00	2.00
11 to 25 trees per acre	Tree	2.00	2.00	2.00
26+ trees per acre	Tree	2.00	2.00	2.00
Solid set block	Tree	1.50	2.00	1.83
Tree Wrap Cost (solid set block)	Tree	0.27	0.55	0.37
Tree Wrap Installation	Hour	13.75	14.00	13.88
Sprouting and Pruning	Hour	13.75	30.00	18.75
Spot Herbicide Application	Hour	13.75	40.00	27.04
Neonicotinoids Drench Application (Psyllid Management)	Hour	13.75	32.00	26.44
Slow Release Fertilization Application	Hour	13.75	30.00	19.85
<b>Grove Management<sup>2</sup></b>				
Grove Care Supervision	Acre/Month	3.00	5.00	4.13
Chemicals and Fertilizers Handling/Supervision	Percent	5.00	17.50	12.14
Marketing and Fruit Handling	Box	0.05	0.25	0.14

<sup>1</sup> Calculated by averaging the total number of data points reported.

<sup>2</sup> Rates include labor and equipment.

<sup>3</sup> Rates only include labor.

<sup>4</sup> Rates are based on every middle application.

<sup>5</sup> Includes disk and/or rotovate tree site, repair/rebuild beds.

<sup>6</sup> Does not include tree cost.

## **Acknowledgments**

We are grateful to caretakers and service providers who participated in the survey.

## **References**

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