

# THE STATUS OF CITRUS LABOR

## Harvesting charges for Florida citrus

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**T**his article summarizes the charges for harvesting citrus in Florida during the 2016–17 season. The estimates provided are key for computing on-tree prices and to estimate economic returns to citrus growers. The estimates are based on a survey of harvesters conducted in May 2017. A total of 15 harvesters participated in the survey. The total harvested area of all participants accounted for 79,996 acres, representing 18 percent of total citrus-bearing acreage in Florida.

Since citrus harvesting is manual and labor-intensive, the cost of labor is a key component of harvesting. A large proportion of the labor used for harvesting citrus in Florida is hired under the H-2A temporary agricultural worker program. The program allows hiring non-U.S. citizens to work on farms during the harvesting season. The wage rate for people hired in Florida under the H-2A program, known as the Adverse Effect Wage Rate (AEWR), was \$11.20 per hour in 2017. In comparison, Florida's minimum wage in 2017 was \$8.10 per hour.

However, there are additional mandatory costs associated with employee compensation; those include Social Security, unemployment tax and workers' compensation insurance. Some of these costs are relevant only when employing domestic workers, whereas other costs are relevant when employing domestic or H-2A workers.

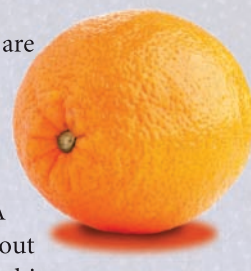
According to regulations, the domestic minimum wage is applicable only if the entire harvesting crew is composed of domestic workers. If any H-2A workers are employed, the employer must provide the same benefits to domestic and foreign workers. Thus, if a company employs both H-2A and domestic workers, then the employer must pay all of its workers the highest of the following: the AEWR, the federal minimum wage, the state minimum wage, the applicable prevailing wage or the agreed-upon collective bargaining rate. Generally, the highest wage is the AEWR. In addition, harvesting companies using the H-2A program also incur costs related to housing, in-bound and out-bound transportation for workers, recruitment and administrative costs.

Since domestic harvesting workers are in short supply, harvesting companies often end up employing a majority of H-2A workers. Among the companies surveyed, the average proportion of harvesting crews hired under the H-2A program was 89 percent. In fact, eight out of the 13 companies that responded to this question reported that 100 percent of their crews were hired under H-2A. The lowest proportion of H-2A workers hired by any single company in the sample was 20 percent, but it was also the company reporting the smallest harvested area. The rest of the companies all reported their crews were composed of at least 75 percent H-2A workers. Therefore, costs associated with employing H-2A workers are embedded in the harvesting charges presented in this report.

Harvesting charges are classified into picking, roadsiding and hauling. Data were collected to obtain estimates for each of the three categories. The average, minimum and maximum for picking, roadsiding and hauling charges are presented in Table 1 (page 8) by variety, for both fresh and processed fruit. Table 1 also includes the percentage change since last season.

### PICKING

Average picking charges for all varieties showed a marginal increase of 1 percent for fresh fruit and 4 percent for processed fruit, compared to the 2015–16 season. However, picking charges for some varieties showed substantial changes relative to last season. As shown in Table 1, the average picking charge for fresh early and mid-season oranges was \$1.32/box, up 11 percent compared to last season. Such increase was due to the minimum picking charge reported this year being \$1.30/box, up from \$1.10/box last season. The average picking charge for processed early and mid-season oranges was \$1.30/box, down 5 percent compared to last season, which is likely due to the different sample of harvesters that responded to the survey this year. The same applies



**Table 1.** Estimated Average Picking, Roadsiding and Hauling Charges for Florida Citrus, 2016–17

Fresh Fruit					Processed Fruit			
Picking Charges	Min.	Max.	Average	Change from 2015–16	Min.	Max.	Average	Change from 2015–16
	\$/box				\$/box			
Early and Mid-season Oranges	1.30	1.35	1.32	11%	1.05	2.00	1.30	-5%
Valencia Oranges	1.15	1.43	1.32	6%	1.05	2.05	1.43	2%
Valencia Oranges (after May 15)	1.20	1.50	1.33	-4%	1.10	2.10	1.42	-10%
Pink/Red Grapefruit	0.75	1.00	0.87	4%	0.85	1.85	1.16	15%
White/Marsh Grapefruit	0.85	0.96	0.92	5%	1.00	1.30	1.13	8%
Tangelos	1.66	2.10	1.92	-5%	1.40	2.00	1.70	-21%
Tangerines (including Temples)	1.50	2.50	2.06	-6%	1.95	3.00	2.48	42%
Average for all varieties								
Roadsiding Charges	Min.	Max.	Average	Change from 2015–16	Min.	Max.	Average	Change from 2015–16
	\$/box				\$/box			
Early and Mid-season Oranges	1.10	1.44	1.31	10%	0.96	1.50	1.09	0%
Valencia Oranges	0.98	1.50	1.26	-2%	0.96	2.25	1.20	4%
Valencia Oranges (after May 15)	1.08	1.52	1.24	-17%	1.00	1.32	1.12	-11%
Pink/Red Grapefruit	1.01	1.19	1.09	7%	0.90	1.84	1.15	13%
White/Marsh Grapefruit	1.11	1.19	1.15	15%	0.90	1.34	1.03	1%
Tangelos	1.25	2.24	1.71	-19%	1.15	1.50	1.33	2%
Tangerines (including Temples)	1.35	2.19	1.76	-22%	1.26	2.50	1.95	22%
Average for all varieties								
Hauling Charges	Average All Varieties			Change from 2014–15	Average All Varieties			Change from 2014–15
	\$/box				\$/box			
0 to 30 miles	0.48			1%	0.44			0%
31 to 50 miles	0.55			7%	0.52			-3%
51 to 80 miles	0.68			13%	0.65			5%
81 to 100 miles	0.83			15%	0.68			-3%
100+ miles	1.00			14%	0.80			25%
	Average			10%	Average			5%

to the small changes observed in average picking charges for Valencia oranges.

The average picking charge for processed pink/red grapefruit was estimated at \$1.16/box, up 15 percent compared to 2015–16. This increase was due to the maximum picking charge reported this year being \$1.85/box, up from \$1.10/box last season. At \$1.70/box, processed tangelos showed the largest decrease (-21 percent) in picking charges compared to 2015–16. The average picking charge for tangerines was \$2.48/box, up 42 percent compared to last season. Both tangelos and

tangerines are the varieties for which the lowest number of survey responses were obtained. Thus, the relative low number of responses for those two varieties contributes to a larger variation when computing average charges.

## ROADSIDING

Average roadsiding charges for all varieties of fresh and processed fruit showed a decrease of 4 percent and an increase of 5 percent, respectively, compared to last year. Specifically, the average roadsiding charges for early and mid-season



oranges did not change significantly.

Contrastingly, Valencia oranges harvested after May 15 for fresh and processed this season were \$1.24 and \$1.12/box, respectively — both showing a decrease larger than 10 percent compared to last season. This is due to the few responses obtained last year for this variety.

As was the case with picking charges, tangelos and tangerines also show the largest percentage change in roadsiding charges compared to last season.

## HAULING

Average hauling charges for all varieties of fresh and processed fruit increased 10 percent and 5 percent, respectively, compared to last season. The average charges for hauling fresh fruit more than 50 miles increased more than 10 percent compared to 2015–16, and so has the average charge for hauling processed fruit more than 100 miles. The average hauling distance of fruit, which was estimated at 65 miles, is down from 91 miles in the 2015–16 season.

## TARPING

An additional component of the total harvesting charge can be the cost to tarp the hauling trailer. All trailers hauling citrus fruit from regions of Florida where citrus black spot is present are required to be tarped.

Citrus black spot is a fungal disease that affects yield and fruit quality. It was first detected in Florida in March 2010. Quarantined regions include parts of Lee, Collier and Hendry counties. Polk County also has a small quarantined area in its southernmost area.

According to the survey responses, the average time to install and remove the tarp from the trailer was 57 minutes, and the additional cost was \$21 per load.

## TOTAL HARVESTING

Table 2 presents the estimates for the average total harvesting charges by variety, for fresh and processed fruit, using the hauling charges for 51 to 80 miles. The average total harvesting charges for fresh and processed oranges were \$3.28 and \$3.16 per box, respectively. For grapefruit, the average total harvesting charges were \$2.65 and \$2.90 per box for fresh and processed fruit, respectively. For specialty fruit, the charges were \$4.46 and \$4.73 per box.

The significantly higher charges for harvesting specialty fruit may be attributed to the extra labor needed to clip, pick and handle these thin-peel varieties so that the fruit is not damaged. Moreover, hauling costs for processed specialty fruit can typically be higher than those for other processed varieties because they are not shipped in a fully loaded trailer. This prevents the fruit on the bottom from becoming crushed by the weight of fruit loaded on top.

Typically, the charges for fresh-fruit picking and roadsiding are higher than those for processed fruit. However, both last season and this season, the opposite was found for Valencia oranges, pink/red grapefruit, white/Marsh grapefruit

**Table 2.** Estimated Average of Total Harvesting Charges for Florida Citrus, 2016–17<sup>1</sup>

	Fresh Fruit	Processed Fruit
	\$/box	\$/box
Early and Mid-season Oranges	3.30	3.03
Valencia Oranges	3.25	3.27
Valencia Oranges (after May 15)	3.25	3.19
Sweet Oranges Average <sup>2</sup>	3.28	3.16
Pink/Red Grapefruit	2.64	2.95
White/Marsh Grapefruit	2.74	2.80
Grapefruit Average <sup>2</sup>	2.65	2.90
Tangelos	4.31	3.67
Tangerines (including Temples)	4.50	5.08
Specialty Citrus Average <sup>2</sup>	4.46	4.73

<sup>1</sup>Assuming hauling costs for 51 to 80 miles of \$0.68 per box for fresh fruit and \$0.65 per box for processed fruit.

<sup>2</sup>Weighted average by production at state level for fresh and processed markets based on the U.S. Department of Agriculture-National Agricultural Statistics Service 2015–16 Florida Citrus Statistics.

and tangerines. A possible explanation for this seemingly counterintuitive finding could be that as the impact of huanglongbing (HLB) increases, only the blocks with trees having lower infection levels yield fruit that qualifies for the fresh market. Since those trees are likely to have more fruit, the cost of harvesting such blocks is lower. Contrastingly, as the number of blocks with trees that have a higher infection level increases, and the volume of fruit they yield is lower, harvesting costs of such blocks increase.

## CONCLUSION

The cost of harvesting citrus on a per-box basis has been increasing in the last few years. The negative effect of HLB on fruit production can sensibly be argued to be a main contributor to such increase. As a result of the disease's impact on production, the Florida citrus industry has begun a consolidating process, and harvesting companies are no exception. In addition, lower volume and size of fruit reduces harvesting productivity per block and thereby increases costs per box.

However, it is worth noting that since yields have been declining in the last few years, the average cost of harvesting per acre — as a percentage of the total delivered-in cost — has decreased from approximately 45 percent in 2004–05 to 21 percent in 2016–17. 🍊

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