The real cost of HLB in Florida

By Ariel Singerman

This article summarizes the major changes in the cost of production for processed oranges in Florida since the outbreak of huanglongbing (HLB). To deal with the disease, growers have significantly changed their cultural practices. Those changes have had a considerable impact on the cost of production per acre.

NOMINAL COSTS VS. REAL COSTS

However, given that inflation also causes the overall level of prices to increase over time, economists use the terms “nominal” and “real” dollars to refer to the current dollar value and the constant dollar value, respectively. The difference between the two is that the real dollar value denotes an amount that has been adjusted for inflation. So, by taking inflation into account, estimates can be provided of the real increase in the cost of production per acre to deal with HLB.

Figure 1 shows the annual nominal and real cultural costs of production for processed oranges in Southwest Florida on a per acre basis. The nominal cost of production per acre (denoted by blue bars) increased from $880 in 2003–04 to $1,875 in 2017–18, which is a $995 per acre increase during that period.

While such an increase was mainly driven by growers using more foliar sprays and fertilizer, part of the increase was due to inflation. So, to quantify the increase in cost due to the change in cultural practices alone, focus instead on the real cost of production (denoted by orange bars in Figure 1), which increased from $1,212 in 2003–04 to $1,875 in 2017–18. Thus, the real increase in cost of production per acre during that period was $663. Most of the increase can be attributed to growers’ efforts to manage HLB.

COSTS PER ACRE VS. PER BOX

Interestingly, however, the maximum increase in the real cost of production per acre relative to 2003–04 occurred in 2014–15, for a total of $908. But, since 2015–16, growers have been spending less, in real terms, in their groves (as denoted by the increasingly smaller orange bars in Figure 1). So, why has the real cost of production per acre been decreasing lately? This
The greater increase in cost per box relative to price has resulted in a lack of profitability for the average grower, particularly during the last few seasons.

not translate into an increase in yield. Therefore, the decision of growers to decrease their expense on inputs is a rational economic choice.

It is also interesting to note that even though the increase in the cost of production per acre has been significant, the increase in the cost of production per box has been even higher. Figure 3 (page 12) shows that the real cultural cost of production, on a per box basis, went up from $2.83 in 2003–04 to $15.37 in 2017–18, which represents a 443 percent increase.

Given that Hurricane Irma impacted yield in 2017–18, a more appropriate comparison is to 2016–17, when the real cost of production per box was $10.85. This still represents a 283 percent increase relative to 2003–04.

The reason for the higher percentage increase in the cost of production per box relative to per acre is due to the simultaneous increase in cost per acre and decrease in yield per acre. During the same period, on-tree prices per box increased (due to the decrease in supply), but they did so by a smaller percentage. Thus, the greater increase in cost per box relative to price has resulted in a lack of profitability for the
Figure 3. Real cost of production per box for processed Valencia oranges in Southwest Florida
Source: Ariel Singerman, UF/IFAS CREC, multiple annual cost of production reports

Figure 4. Number of citrus operations in Florida
Source: U.S. Department of Agriculture-National Agricultural Statistics Service

Figure 5. Number of juice processing facilities and packinghouses in Florida
Source: Florida Department of Agriculture and Consumer Services
The number of juice-processing facilities in Florida decreased from 41 in 2003–04 to 14 in 2016–17.

SUMMARY

The real cultural cost to manage HLB in processed orange groves in Florida is estimated to be $663 per acre, which represents a 67 percent increase compared to pre-HLB levels. However, and perhaps more importantly, the real cultural cost of production per box increased by 283 percent. Because of the multiple challenges (chiefly, those imposed by HLB) growers have been facing, their numbers have decreased substantially since 2002.

It is good news that citrus production in Florida is up this season not only relative to last season (in which Hurricane Irma hit), but also relative to 2016–17. However, issues such as the decreasing trend in pounds solid per box are evidence that the challenges posed by HLB continue.

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