Forecasting The Future

Multiple factors impact long-term prospects for citrus production.

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An economic summit was held this spring at the Citrus Research and Education Center in Lake Alfred. The summit included economists from Florida and Brazil along with USDA representatives and individuals from government agencies in Sao Paulo, Brazil.

The headline-making news from the conference was the suggestion by Brazilian representatives of possible interest in supporting a generic advertising program in Europe in an effort to promote lagging OJ demand there. Another less "newsworthy" result was the release of a long-term production forecast for sweet oranges for both Florida and Sao Paulo, which incorporates the impact of citrus greening disease on future orange production in both locations.

Taking A Head Count

Given the excellent data provided by the Florida Agricultural Statistics Service (FASS), an accurate tree inventory of citrus trees in Florida exists. An accurate, current tree inventory is the first step in the development of a longer term production forecast. FASS also provides per-tree yield data by tree age interval and location, which are used to develop yield curves. One lesson learned in the last 10 years is that with much higher tree densities (number of trees per acre), the yield curve has shifted significantly. Per-tree yields stop increasing when trees reach 10 to 12 years of age instead of continuing to increase to age 20+, which was the case when tree density was much lower.

Another lesson learned was that average fruit yield in the flatwoods groves of Southwest Florida is lower than realized in the ridge counties of Polk and Highlands. Therefore it is important to know tree location as well as tree age and variety.

Accounting For Change

The art of long-term fruit production forecasting is to predict how the tree inventory will change over time. The tree inventory is affected by the rate of new planting and tree removal due to disease, urban development, and weather events. We know new planting is related to the future economic prospects of the industry. When prices were very high after the freezes of the 1980s, there was rapid investment in new citrus plantations. When prices were depressed in the early 2000s, the rate of new tree planting declined. We have estimated the relationship between new tree planting and on-tree prices that reflects the expected profitability of future citrus production and the willingness of growers to undertake new tree investment. Citrus greening affects long-term fruit production through its direct effect on tree removal. Since it adds an additional element of risk to new tree investment, it also indirectly affects new plantings.

Economists at the Florida Department of Citrus and the University of Florida continue to work on how to incorporate the effect of greening on fruit production in Florida. Look for our results in the near future. FG

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