



A tale of two diseases

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Is HLB the AIDS of the citrus world? Let's hope so.

The stories of the two diseases have similarities, and if citrus greening's narrative continues to trace that of AIDS, it means our most hopeful chapters are yet to come.

By this analogy, citrus greening is somewhere in the period of where AIDS was in the late 1980s or early 1990s.

A deadly disease had arrived from abroad and quickly began exacting a frightening toll. There was no cure, nor did it appear that one was imminent.

The drug AZT showed some success in slowing down — but not curing — AIDS. It extended life for only months or, at best, a couple of years. And it was prohibitively expensive.

COMBINATION IS KEY

University of Florida/IFAS research hasn't produced greening's AZT yet, but something more akin to the combination of drug therapies that would later emerge as a treatment. In the case of AIDS, the combination proved to have greater efficacy and fewer side effects than the original single pill.

The citrus greening program isn't a one-size-fits-all approach. Each grower will have to tweak his or her program to fit individual needs. However, components that should be incorporated into all grower programs include coordinated sprays through citrus health management areas (CHMAs), increased use of insecticides on young trees to control the psyllid, proper irrigation and fertilizer input, removal of unproductive trees and replanting with rootstocks that show improved tolerance to HLB.

COST CONSIDERATIONS

Just as in the early days of AIDS, though, treating citrus greening is costly. Production costs can soar well above \$2,000 per acre, close to triple the costs of growing oranges and grapefruit in the pre-greening era.

So while there may be steps you can take to keep trees alive in the biological sense, those measures are so costly that for many growers, greening is still an economic death sentence.

The AIDS story shows us the way to a future of hope, though. The AIDS combination therapy that emerged



UF/IFAS entomologist Kirsten Pelz-Stelinski is working on disrupting transmission of the pathogen responsible for citrus greening disease by its vector, the Asian citrus psyllid.

in 1996 — 15 years after the U.S. medical community recognized AIDS as a new disease — was affordable, at least for those with health insurance. Over the years, activists lobbied to get drug prices reduced, and support from national governments and foundations has made AIDS drugs much more affordable worldwide.

ADVOCACY ON THE AGENDA

There's an activism parallel with greening. The traditionally fragmented citrus industry has come together in support of funding to fight the disease. We saw the fruits of this in last year's Farm Bill, which for the first time dedicated \$125 million over five years specifically to citrus health research.

The U.S. Department of Agriculture recently announced the awarding of \$30 million of that money, with more than 60 percent headed to research programs in Florida.

UF/IFAS figures prominently in most of the Florida research. As a land-grant university, we intend to widely disseminate the results of this research. It's public money, so it should be public knowledge.

We need continued activism. More research that both speeds temporary fixes into your groves and seeks long-term solutions to HLB is absolutely essential. But we have to

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keep making the case for funding to support that quest.

SOLDIERING ON

Meanwhile, we'll continue sharing what we know through Extension services, coordinating CHMAs and organizing gatherings of experts like we did at the recent International Research Conference on HLB in Orlando and the subsequent Grower Day at the Citrus Research and Education Center in Lake Alfred.

More research that both speeds temporary fixes into your groves and seeks long-term solutions to HLB is absolutely essential.

We're pursuing many promising avenues for curtailing greening. Our scientists are investigating steam treatments, breeding HLB-tolerant rootstocks, developing a spray-on bactericide, taming the psyllid and striving to perfect those technologies to the point that you can actually afford to adopt them.

The tale of two diseases diverge here, though. The AIDS story is nearly 25 years older than that of citrus greening. So we don't yet have any Magic Johnsons of greening — people who prove we can live productive, vibrant lives for decades after infection.

Hopefully, UF/IFAS research and growers' perseverance will write new chapters in the citrus greening story that continue to follow and even catch up with the AIDS narrative. Someday, it may even deliver the fairy-tale ending of a cure. 🍊

Jack Payne is the University of Florida's senior vice president for agriculture and natural resources and head of UF's Institute of Food and Agricultural Sciences.

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