



# Could cranberries help citrus?

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**K**irsten Pelz-Stelinski came to Florida as an entomologist studying a variety of insects. HLB had arrived just before she did, and soon the Asian citrus psyllid became the singular focus of her research.

As she discovered more about how the psyllid transmits its deadly pathogen to trees, she drew upon her background in microbiology and expanded her expertise in it. Her attention expanded to include both pest and pathogen.



Pelz-Stelinski

## BROADENING THE KNOWLEDGE BASE

Pelz-Stelinski's career is emblematic of the University of Florida Institute of Food and Agricultural Sciences (UF/IFAS) approach to finding solutions to HLB. As her understanding of the problem grew, she went beyond entomology to seek other scientific approaches. Similarly, what started at UF/IFAS as primarily an entomology effort widened to include plant pathologists, geneticists, engineers, horticulturalists and more.

It also widened to include corporate

scientific collaborators. Soumya Roy, a food scientist for Ocean Spray, sees in Pelz-Stelinski a willingness to take novel approaches to HLB. Roy believes scientific progress depends on looking at problems through different lenses, and he sees a kindred spirit in Pelz-Stelinski. He also sees a scientist and a university with close ties to the state's commercial growers, a critical part of the feedback loop that brings insights from the field back into the lab.

## BIOCONTROL FOR HLB BACTERIA

Ocean Spray has invested in Pelz-Stelinski to help determine whether an antimicrobial extract from cranberries mitigates the spread of HLB-carrying bacteria through a tree. For the same reasons cranberry juice helps heal urinary tract infections, its natural chemical components may also work against bacteria in a citrus tree. Pelz-Stelinski's research in the greenhouse demonstrates that adding the antimicrobial to irrigation can reduce HLB symptoms.

If Ocean Spray can commercialize an effective and affordable antimicrobial, you would get another tool to cut skyrocketing production costs, help your bottom line and increase yields. A boost to Florida citrus production could then contribute to another Ocean Spray goal — its desire to revive a Florida citrus cooperative. That means another market for you.

Pelz-Stelinski and Roy are also excited by the potential environmental benefits of converting waste into a biocontrol for the bacteria that causes

HLB. If the science supports it, Ocean Spray would take a byproduct from juicing cranberries that would otherwise be waste and divert it back into food production. Use of a biocontrol on the bacteria could reduce reliance on synthetic chemicals to knock down the psyllid.

## COLLABORATION AND INVESTMENT

Ocean Spray and Pelz-Stelinski didn't come to this overnight. They have a five-year history together, building the science step by step. Ocean Spray's early investment was important beyond the discovery it fueled. It signaled that Pelz-Stelinski's work is relevant and relatable to the industry.

Their progress signals return on investment, for Ocean Spray, for the state and for you. We are able to leverage the state's financial investment in UF/IFAS to secure additional funding, finding solutions faster for Florida's citrus growers.

Pelz-Stelinski and Ocean Spray's discoveries lay the groundwork for securing support from the U.S. Department of Agriculture (USDA). The USDA recently delivered funding from its Multi-Agency Coordination System grants to Pelz-Stelinski to move her work from the greenhouse to the grove.

Pelz-Stelinski and Roy's next step is to test the antimicrobial in the real-world conditions of commercial groves. The trust you put in us at UF/IFAS makes that possible. So does the infrastructure and expertise that contribute to what I would argue is the world's leading scientific effort focused on citrus. That puts UF/IFAS in a position to pay big scientific dividends on investments in its research.

Those payoffs include a series of discoveries that have helped citrus growers manage HLB, building anew on each advance with research that comes at the problem from so many directions. Collaboration, versatility and partnership, in this case between Pelz-Stelinski and Ocean Spray, will continue to deliver solutions with the investment in science.

*Scott Angle is the University of Florida's vice president for agriculture and natural resources and leader of UF/IFAS.*