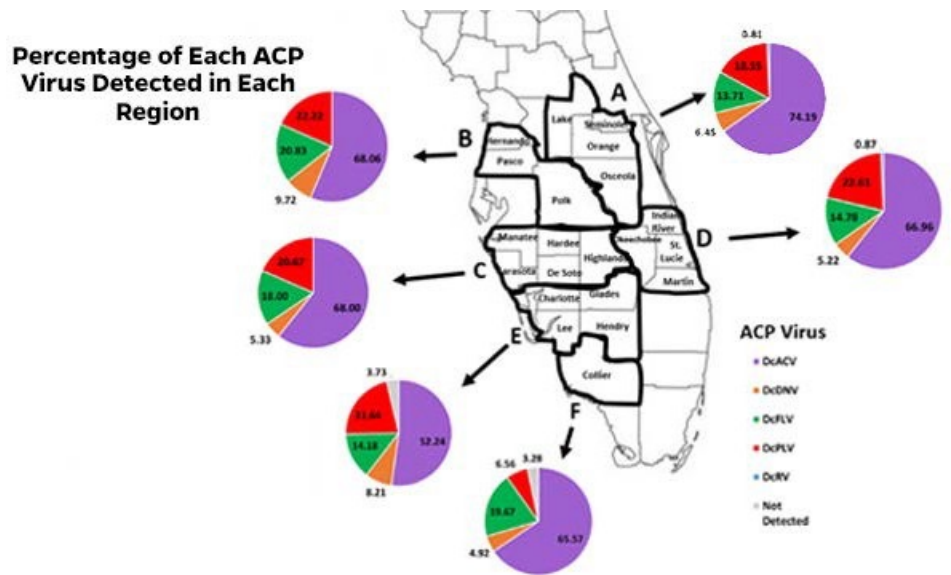


Can We Use an Insect Virus to Control ACP in the Groves?

Researchers: Kellee Britt, Amit Levy, Ozgur Batuman

Contact: Ozgur Batuman
obatuman@ufl.edu

UF/IFAS SWFREC



There is an increased need to reduce growers' dependence on environmentally harmful and non-specific insecticides by switching to more biologically-focused control options for ACP. Insect-specific viruses have been proposed as natural and biological alternatives to control ACP or reduce disease transmission to citrus trees. This research project focused on detecting and monitoring the prevalence of previously identified viruses of the ACP throughout Florida. To do that, we utilized molecular

techniques (e.g., PCR) for surveying the *Diaphorina citri* associated C virus (DcACV), the *Diaphorina citri* flavi-like virus (DcFLV), the *Diaphorina citri* reovirus (DcRV), the *Diaphorina citri* picorna-like virus (DcPLV), and the *Diaphorina citri* densovirus (DcDNV) in ACP populations from twenty-one of Florida's major citrus producing counties grouped into six regions (A through F, see the figure). These surveys showed the significant prevalence of DcACV throughout all the regions in Florida, followed by DcPLV. DcRV was the least

prevalent virus detected in Florida ACPs. Nevertheless, most of these viruses were consistently detected throughout the year, indicating their persistent presence in this insect. This information can be valuable for choosing which virus to use as a future biological control. That's why we are now studying to learn more about these viruses, better understand why they are there and know if they are pathogenic or specific to the ACP, thus avoiding beneficial insects such as honeybees.

Funding



National Institute of Food and Agriculture
 U.S. DEPARTMENT OF AGRICULTURE