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2016-17 CITRUS CROP FORECAST

THE NUMBERS ARE DOWN,
BUT GROWERS ARE NOT OUT.

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Citrus grower goes undercover

Ed Pines' solution to citrus greening is to grow fruit in a citrus undercover production system.

By Catalina Pines

t's said that necessity is the mother of all invention, and today I toured one way the citrus industry is fighting back against greening," said Florida Commissioner of Agriculture Adam Putnam on Twitter after touring Precision Citrus on September 23.

In these trying times for the Florida citrus industry, innovation seems to be the one positive factor driving the fight against citrus greening disease or huanglongbing (HLB). As a citrus grower with extensive experience in the industry, Ed Pines has seen firsthand the devastating effects of HLB in terms of poor fruit quality and low yields. His concern for the future of the industry has led him to adapt his growing practices, following research guidelines from the University of Florida/Institute of Food and Agricultural Sciences (UF/IFAS) and forming alliances with local and international industry leaders to develop a commercially applicable citrus undercover production system (CUPS) as an immediate solution to the current crisis.

Citrus is a way of life in Florida and the agricultural backbone of the state's economy. Florida is currently harvesting the smallest crop in 52 years, and production continues to decline. There is no cure in sight for HLB, and our current production practices are unsustainable.

Production costs continue to rise as we increase the use of chemical inputs in a futile attempt to control the disease. The time has come to modify our horticultural practices in order to maintain the critical fruit volume the citrus industry needs to maintain its infrastructure. Our communities cannot wait for a scientific cure or resistant rootstocks that yield the quality and quantity of fruit needed while risking the loss of jobs, as growers, processing plants and packers go out of business.

Pines created Precision Citrus, LLC with the objective of delivering to the consumer a consistent supply of the high-quality, great-tasting fruit Florida was known for before HLB. The company offers consulting and operation management services through its affiliate, EIP Citrus Management, LLC.

REDUCED INPUTS

"Our structures eliminate the HLB vector from our groves and allow us to be precise with our inputs and agricultural practices," Pines explains. This translates into limited use of insecticides and pesticides and no need for bactericides. Additionally, he believes the CUPS method promotes better use of natural resources, as it reduces water use and promotes more concise use of land.

"It is important that our methods help bring a sustainable, long-term solution, taking into consideration the



conservation of our natural resources as well as consumer demands for less chemicals and better quality in our fruit," says Pines.

FRUIT GROWN

Precision Citrus expects a limited fruit supply for the 2017-18 season, which will be sold under its Florida Sunshine trademark. The company's current operation in Lake Wales includes 20 acres of screened enclosures growing easy-peel, seedless mandarins. Planting of Early Pride and Tango, both on C-35 rootstock, was completed in August. The trees are planted in the ground to take advantage of the soil characteristics.

ABOUT THE STRUCTURES

The structures are built with galvanized steel poles set in concrete, standing 20 feet above ground level to provide airflow above the tree canopy for heat dissipation and for frost/freeze protection. The anti-insect mesh cover is designed



A tree 18 days after planting in the citrus undercover production system at Precision

Growers and visitors including Florida Commissioner of Agriculture Adam Putnam, far right, got an early look at newly planted trees in the citrus undercover production system at **Precision Citrus.**

to diffuse light and wind, reducing tree stress, avoiding sunburn, wind and hail damage and minimizing the risk of canker. Additionally, as international trade continues to expand, CUPS will protect growing operations from new, exotic insects and diseases.

The structures are equipped with automated micro-jet irrigation systems and weather/soil monitoring stations to track soil moisture, evaporation rates, temperature and other factors. These systems ensure optimization of water and fertilizer use.

JOINT EFFORT

The visionary concept Precision Citrus is pursuing is the result of individual efforts by leaders in various fields, including the research and support of Arnold Schumann and other members of the UF/IFAS faculty. Dundee Citrus Growers Association has been instrumental in the development process supporting CUPS as a long-term, viable solution for its grower members, and Farm Credit of Central Florida has facilitated the project.

Pines says the biggest developmental challenge with the CUPS project was finding a structure that would stand up to the Florida climate. Precision Citrus selected ULMA Agricola, a European engineering company specializing in the design of protected systems for agriculture. The structures are customdesigned and engineered to meet the individual needs and requirements of specific locations and growing operations. Precision Citrus is now the distributor for ULMA Agricola products in the United States.

Catalina Pines is vice president at EIP Citrus Management, LLC in Vero Beach.