Since 2009-10, the CCPP has been a part of the National Clean Plant Network (NCPN) for specialty crops.

**CCPP’s mission**
The purpose of the CCPP is to provide a safe mechanism for the introduction of citrus varieties from any citrus-growing area of the world into California for research, variety improvement, or use by citrus enthusiasts and by the commercial nurseries and growers of the state to support a profitable, competitive and sustainable citrus industry. This mechanism includes disease diagnosis and pathogen elimination, followed by maintenance and distribution of true-to-type, primary propagative materials of citrus scion and rootstock varieties.

**How does the CCPP fulfill its mission?**
The CCPP fulfills its primary objectives by performing the following activities/functions:

1. Introduction of propagative materials of citrus varieties into the state of California.
2. Testing of the introduced propagative materials for graft-transmissible diseases/pathogens.
3. Elimination of any disease causing pathogens from the propagative materials.
4. Maintenance and continuous disease testing of the established trees sources for citrus propagative materials.
5. Distribution of true-to-type citrus propagative materials for the needs of the California citrus industry, scientists and citrus enthusiasts.
6. Extension and outreach activities related to citrus pathogens and varieties for the education of the industry and the public.

**CCPP facilities**
The CCPP operates at three different facilities. The Rubidoux Quarantine Facility, Riverside, CA for the biological detection of citrus pathogens and the execution of citrus therapeutic protocols. The UC Riverside Citrus Diagnostic & Research Laboratory for diagnostic and research activities. The Lindcove Research and Extension Center, Exeter, CA Foundation & Evaluation Block Facility for trueness-to-type evaluation and budwood distribution.

**What is the CCPP?**
The Citrus Clonal Protection Program (CCPP) was established in 1956 under the name Citrus Variety Improvement Program. Today, it stands as a cooperative program with the University of California, Riverside (UC Riverside), the California Department of Food and Agriculture (CDFA), the United States Department of Agriculture Animal and Plant Health Inspection Service (USDA-APHIS) and the California citrus industry represented by the California Citrus Nursery Board (CCNB) and the Citrus Research Board (CRB).
A CCPP success story of collaboration

Since the inception of the Citrus NCPN in 2009-10, and in combination with the continued support from the California’s citrus industry, the CCPP has been receiving all the support needed to foster fruitful collaborations with a large number of scientists, educators, growers, nurserymen, and regulators, leading to exponential programmatic growth. For example, when the citrus viroid testing became mandatory in 2010 under the CDFA’s “Citrus Nursery Stock Pest Cleanliness Program”, the CCPP was able to develop and implement a comprehensive protocol for the high throughput detection of citrus viroids. The impact of this development is clearly demonstrated in Graph 1, where the dramatic increase in the testing capacity of the program (bars) reduced the levels of viroid infections (line) in citrus nurseries from a maximum of 9.5% to a minimum of 0.5%.

In addition, the Citrus NCPN has been instrumental in the CCPP’s capacity to sustain and steadily increase the number of citrus accessions completing therapy (Graph 2) and being distributed to the citrus industry and the public (Graph 3). This CCPP growth has been a critical element in the fight against the spread of the deadly Huanglongbing (HLB) disease of citrus in California.

NCPN CITRUS

The National Clean Plant Network (NCPN) for Citrus is an association of clean plant centers, scientists, educators, state and federal regulators, and nurseries and growers from the citrus industry concerned with the health of citrus propagative materials. It was established in 2009-10 and is part of the NCPN for specialty crops that operates under the umbrella of the United States Department of Agriculture (USDA).

References

Authors
Georgios Vidalakis, University of California, Riverside
Irene Lavagi, University of California, Riverside
Fatima Osman, University of California, Riverside

Our partners
Start clean, stay clean
ncpncitrus.org
June 2017