

# 2019-2020 Annual Report

## Reducing Disease Risk by Discovery, Introduction and Commercialization of New Citrus Varieties

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Year 1 of 3 (30% Complete)

### Objectives

1. Identify Citrus Varieties to Introduce
2. Track Down Varieties and Submit to CCPP
3. Make Public Aware of Introduced Varieties

### Problem and Significance

California hobbyists would like to grow many citrus varieties that are not available from the Citrus Clonal Protection Program (CCPP). Small nurseries in California have sold some varieties. California hobbyists have propagated other varieties. Further varieties are readily available outside of California. Varieties that are desired by California hobbyists but unavailable in California present a disease threat in that hobbyists can graft from non-registered sources and spread Huanglongbing (HLB) and other diseases.

### Benefit to Industry

Making disease-free trees of desired varieties available will reduce the motivation of hobbyists to smuggle citrus budwood and propagate citrus trees with budwood that may be diseased. The benefit to the citrus industry is to reduce the threat of hobbyists spreading disease.

### Progress Summary

Fruitmentor has both a multilingual website and YouTube channels in multiple languages including English, Spanish, Chinese, Vietnamese, and Korean. The target audience for these is citrus hobbyists who are interested in propagating and growing citrus trees. The YouTube channels have more than 245,000 subscribers and the website email newsletter list has more than 14,000 subscribers. Email messages asking the audience about citrus varieties that they would like to grow were composed and translated into multiple

languages and sent to the email subscribers. By using a geotargeting feature of the email marketing software, it was possible to directly ask California hobbyists about citrus varieties of interest. YouTube community posts asking about varieties were also posted to the YouTube channels. Furthermore, a message was posted to an internet forum devoted to citrus hobbyists.

Hundreds of messages about citrus varieties were received from hobbyists. In addition, some varieties were known from both prior interaction with hobbyists and also internet research. From these an initial list was generated including around 70 varieties. This initial list was narrowed by removing varieties with patent or plant breeders' rights (PBR), varieties where there was no obvious source and varieties where it was not clear that there was sufficient interest. In addition, two varieties were removed from the list after a visit to a nursery revealed that CCPP introductions for the two varieties had already been initiated by the nursery. Yet another two varieties were removed from the list based upon tasting the varieties at the UC Riverside Citrus Variety Collection (CVC). For those two varieties misinformation on the internet had led to the hobbyist requests. One of them had been misidentified and the other had been thought to taste much better than it actually did.

The final list of varieties to pursue (Table 1) consisted of five varieties available from the CVC, four varieties available from the yards of residential citrus growers, and one variety available in a park in Fremont, California. Of these, CCPP introductions were initiated of the five from the Citrus Variety Collection, one from a residential citrus grower, and one from the park in Fremont.

Although it is expected that the varieties would be available from the CCPP after the end of this project, steps were taken to prepare to make the public aware of the varieties when they become available. Numerous photos were taken and video was shot of the varieties submitted to the CCPP. When they are available, this material will be used to make the public aware of the new varieties via publications on YouTube and on fruitmentor.com.

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**CRB Project # 5200-172**

<b><u>Variety</u></b>	<b><u>Location</u></b>	<b><u>Description</u></b>
Buoi Oi Pummelo	Westminster, CA	Popular pummelo among California's Vietnamese population. Dry flesh, pyriform, acidless.
Shatian / Sa Teen Yau Pummelo	CVC/USDA	A famous and highly requested Chinese pummelo variety. Pyriform and acidless.
Feminello Sfusato	CVC/USDA	A famous and highly requested Italian lemon variety.
Allspice Tangelo	CVC/USDA	Variety resulted from a cross of 'Imperial' grapefruit X 'Willowleaf' mandarin. Fruit has rich flavor and spicy fragrance.
Ujukitsu	CVC/USDA	Hybrid from Japan that may have a sweet orange parent. Small to medium sized fruit; round to pyriform; seedy. Has a lemony, sweet flavor.
Shiikwaasa	CVC/USDA	A small-fruited sour mandarin that is very popular in Japan.
Shinn Satsuma	Fremont, CA	Imported from Japan in the late 19 <sup>th</sup> century and sold by a nursery in Fremont.
Bien Hoa Pummelo	Fremont, CA	Trees have been sold by Vietnamese nurseries in California. Acidless, juicier than Buoi Oi.
Thanh Tra Pummelo	Fremont, CA	Trees have been sold by Vietnamese nurseries in California.
Orton Englehart Hybrid	Glendora, CA	Apparent cross between an orange and a grapefruit. The juice is high in sugar and acid, making it very flavorful. Trees were sold in Glendora, California.

*Table 1 List of varieties submitted or to be submitted to the Citrus Clonal Protection Program for cleanup.*

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