



UNITED STATES DEPARTMENT OF AGRICULTURE  
AGRICULTURAL RESEARCH SERVICE  
WASHINGTON, D.C.

**NOTICE TO CITRUS GROWERS AND NURSERYMEN RELATIVE TO THE NAME  
AND RELEASE OF US SUPERNA CITRUS SCION**

The United States Department of Agriculture, Agricultural Research Service, hereby releases for propagation the US SUPERNA (formerly tested as 6-13-44, 88-2, USDA 88-2, and Lee × Nova). US SUPERNA is a seedless selection from 'Lee' × 'Nova' mandarin hybrids produced from a cross made by Jack Hearn in Central Florida in 1966. It is unusual in being a diploid, non-irradiated hybrid, from conventional seedy parents that is virtually seedless (only a few fruit have 1-2 seeds) even when viable pollen is abundant. It has extraordinarily rich flavor, with little rag, and peels fairly easily.

US SUPERNA is reported to produce modest but acceptable crops in California where it is expected to be grown for high value fruit on limited acreage. The fruit ripens from late November through February in California, typically falling between optimal maturity for 'Clemenules' and 'Tango'/'W Murcott'. Fruit are mandarin- to orange-like in appearance, with no or few seeds, a somewhat pebbly dark orange to orange-yellow peel of medium thickness, medium-firm juicy orange flesh, medium to very large size for a mandarin (typically 90-125 g in California). Fruit height and width are about equal, and the fruit frequently but not always have a blossom-end "navel" from secondary fruit development. Fruit peel easily. Many tasters describe the taste as being rich and distinctive, among the most flavorful and sweet citrus they have eaten. Jack Hearn, who was the citrus scion breeder for USDA for 32 years, indicates it is the "best tasting" citrus he produced in his career. Trees are of medium vigor and have an unusually spreading canopy for a mandarin-type. US SUPERNA appears to be relatively cold-hardy, based on anecdotal observations and an experimental report using diverse 'Lee' × 'Nova' seedlings. While generating little interest in Florida, as described below, California growers have planted more extensive groves, and scientists have conducted some replicated trials. A University of California planting in the Coachella Valley compared US SUPERNA with 10 other mandarin hybrids. US SUPERNA was one of three selections with the lowest crop load ratings (only 'Caffin' clementine and TDE-1 were lower), but also one of two selections showing the lowest levels of granulation.

US SUPERNA has been tested for fruit quality in several other locations by the University of California, in trials not suited to comparison between cultivars. In Riverside trees on citrange rootstocks at 5-10 years of age, sampled between late October and mid-December, mean fruit

weight was 111 g (mean of ten fruit/tree ranged from 71 to 152 g), averaged 0.5 seed per fruit, averaged 12.0 Brix (range 9.8-14.1), and averaged 0.80 for titratable acidity (range 0.55-1.4). Trees had scanty crops for four years but were scored as medium in crop load thereafter. In more extensive trials at Lindcove, trees on a range of rootstocks at 2-12 years of age were sampled between late October and mid-December, mean fruit weight was 124 g (mean of ten fruit/tree ranged from 62 to 184 g), averaged 0.3 seed per fruit, averaged 12.8 Brix (range 9.1-15.5), and averaged 0.80 for titratable acidity (range 0.72-2.1). In trials at Irvine trees on citrange rootstocks at 4-8 years of age were sampled between late October and mid-December, mean fruit weight was 93 g (mean of ten fruit/tree ranged from 51 to 148 g), averaged 0.5 seed per fruit, averaged 12.1 Brix (range 9.1-15.5), and averaged 1.1 for titratable acidity (range 0.72-2.1 which was an outlier).

About 100 acres of US SUPERNA reportedly have been planted in California. Cropping of US SUPERNA is reported to be only about half that of 'Tango'/W Murcott' per acre, but due to its distinctive flavor, seedlessness and easy peeling, it is reported that interest is increasing. Most commercial growers report that US SUPERNA does not respond well to degreening/sweating, so it is necessary to allow color to develop on the tree. Fruit have been reported to develop off-flavors following some wax applications; most growers sell the fruit unwaxed, and it maintains good postharvest quality and longevity.

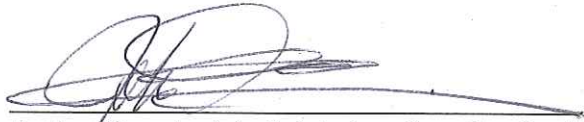
US SUPERNA has many highly desirable characteristics which make it a potentially valuable addition to the cultivar mix for local markets, gift-fruit-shippers, home orchardists, and other niche users. It is anticipated to be of value in regions with a Mediterranean climate like California with no or minimal use in Florida and other subtropical climate regions. It is anticipated that thousands of trees of US SUPERNA will be propagated, planted and grown for high quality, unique specialty citrus production.

Although initially selected in Florida, US SUPERNA trees in Florida crop very poorly, bearing an acceptable commercial yield only once in 20 years of observation at the USDA Leesburg Farm, even when gibberellic acid was applied at bloom to enhance parthenocarpic fruit set. For this reason, very few trees have been planted in Florida, and such planting is not expected. Poorer fruit set of some parthenocarpic citrus is frequently observed in subtropical vs. Mediterranean climates. Fruit mature in November and December in Florida producing large fruit (150-200 g) in part from low crop loads. Fruit peel fairly readily but are not true "zipper-skin" types in Florida where the peel tends to adhere to the calyx end of the fruit before full maturity but are much easier peeling in California. Trees that are at the USDA Leesburg Farm display above-average tolerance to huanglongbing.

Small quantities of US SUPERNA budwood are available from the Citrus Clonal Protection Program operated through the University of California, Riverside (information on obtaining budwood can be found at <http://www.ccpp.ucr.edu>) and from the Florida Division of Plant Industry Bureau of Budwood Protection (information on obtaining budwood can be found at <http://www.freshfromflorida.com/pi/budwood/bwprocedure.html>).

ARS GIVES NO WARRANTIES OR GUARANTEES, EXPRESSED OR IMPLIED, FOR THE MATERIAL, INCLUDING MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

Signature:

A handwritten signature in blue ink, consisting of a large, stylized initial 'A' followed by a long horizontal stroke.

Acting Deputy Administrator, Crop Production and Protection  
Agricultural Research Service, U.S. Department of Agriculture

6/20/19  
Date