

Low Chill Report - Spring 2022

Background: In 2011, the Florida Olive Council began funding a research project to determine if the olive (*Olea europaea*) could be a viable cash crop for Florida. For the past decade the Council supported olive research statewide with test sites at UF/IFAS Research and Education Centers, Florida A&M University, South Florida College and 30 private groves.



Early Results: Current evidence suggests several olive cultivars native to the northern Mediterranean basin around 40° N. latitude (i.e., Spain, Italy and Greece) will produce commercially in northern Florida where annual chill¹ generally exceeds 400 hours but struggle farther south. However, some cultivars like cv. Arbequina and cv. Koroneiki bloom in south.

Low Chill Research: In 2017, after consultation with breeders in Spain (Rallo, León, Moreno), Greece (Voyiatzis), Israel (Lavee), Italy (Mazzuca), and Australia (Ravetti), the Council and partners sought to identify and secure olive cultivars native to lower latitudes where chill hours are often similar to southern Florida in hopes of finding a commercially viable cultivar.



Cuttings from 42 Middle East-North African (MENA) trees were secured from USDA Olive Germ Plasm at UC Davis and grafted to mature root stock (cv. Arbequina, Koroneiki) at Hardee County facility at Wauchula (27.49° N.) and Council facilities near Gainesville (29.52° N.).



Early Results: Several varieties from the MENA region grafted and rooted in 2017 and 2018, bloomed in 2021 and 2022. Current (March 2022) blooming varieties include: *Nabali*, *Sevillano #1*, *Azapa*², *Tohaffi of Egypt*, *Obliza* and *PsuNati*.

In addition, *Koroneiki* is currently blooming in St. Augustine and Wauchula. While oil and leaf chemistry have been documented in *Koroneiki*; yield is yet to be evaluated.

In 2021, cv. *Sikitita* (*Chiquitita*) bloomed at Hardee County research farm as did cv. *Arbequina*, cv. *Koroneiki* and cv. *Obliza*. Hardee County farm manager Myles Albritton reported oil production in 2021 and is exploring nutrition options to prompt increased bloomset. A full report on all 2022 blooming and observations from the nutrition trials will be published in the Fall 2022 Report.

Your support enables this research. If you have not done so, please remember to renew your Florida Olive Council membership at: www.floridaolive.org.

¹ A "chill hour" is one hour between 32° and 45° F. Olives must *accumulate* requisite chill hours during winter months in order to bloom.

² Azapa is native to South America (Peru, Chile)