Ground Cover Growing Systems for Tea Production in Florida

SHANNON K. MCAMIS¹, BALA RATHINASABAPATHI², AND BRANTLEE SPAKES-RICHTER¹*

¹Plant Pathology Department, University of Florida, IFAS, Gainesville, FL
²Horticultural Sciences Department, University of Florida, IFAS, Gainesville, FL

Abstract

Tea, the second most consumed beverage in the world after water, is produced by brewing leaves of Camellia sinensis. Florida has a suitable climate and soils for tea production. As the Citrus industry in Florida is affected by greening disease, tea is proposed as an emerging new alternative crop. Our research aims to find sustainable production methods for growing tea under Florida field conditions. To understand potential impacts of cover crops on tea production, in 2018 three tea accessions (‘Large leaf,’ ‘Red leaf,’ and ‘Fairhope’) were installed at two sites in north central Florida to test three groundcover types: perennial peanut, a crimson clover rotation, and weed-barrier cloth. Plant growth, survival, insect damage, and disease incidence and severity were observed over the following two years. The effects of the plant variety and groundcover type were examined. As of Summer 2020, ‘Large leaf’ had the highest survival rate, while the weed barrier cloth treatment experienced lowest survival rate among groundcovers. In Spring 2021, the weed barrier cloth treatment had the lowest incidence of insect damage and disease. The ‘Fairhope’ accession experienced the highest incidence of insect damage, but lower incidence of disease compared to ‘Large leaf.’ Two shade tree species—persimmon and mulberry—were established during this experiment, so that future work could explore the performance and impact of different shade trees as well as other components of the production system.

The abstract was presented at the 2021 FSHS Annual Meeting.

*Corresponding author. Email: bsr@ufl.edu