Florida Citrus Advanced Technology Program

QUARTERLY & FINAL REPORTS: Control of Citrus Greening, Canker & Emerging Diseases of Citrus

Instructions Complete the fields based on your project specs. When finished, save the form to your local disk using a unique name. Then, go to **http://research.fcprac.com**, and log in with your user name and password using Researcher Login in the lower left. Find this project title and click on **Submit a Report**. Update your profile information if needed, then upload this report as directed.

2009-2010 REPORT	CATEGORY (drop-down)	TODAY'S DATE (m/d/yr)
◉ *Quarterly Report* ○ *Annual Report* ○ *Final*	Genetics	7/1/09

WHAT IS THE "HEADLINE" FOR THIS REPORT (e.g. a one-sentence "newspaper headline" describing what you accomplished)

Towards faster flowering and fruiting of genetically engineered oranges

TITLE and CONTACT INFORMATION

Proposal Title Accelerating the Commercialization of Transformed Juvenile Citrus

Principal Investigator Jude W. Grosser	*PI Last Name* Grosser
Email jgrosser@ufl.edu	*FDACS Contract Number* Grosser-jw-87
Phone 863-956-1151	*Project Duration (years)* 3 *Year of Project* 1
Organization University of Florida	*Total Direct Funds (current year)* $178,000

REPORT UPDATE (650 words; provide details about your headline)

Juvenile sweet oranges were grafted to several rootstocks with potential to induce scion precosity. Trees will subsequently be transferred to our early fruiting structure to encourage precocious flowering and fruit set. Seed of the same clones were planted to provide juvenile seedlings for planned experiments.

Transformation experiments comparing transformation efficiency of various selected sweet oranges were initiated, including several clones that have previously shown precocious bearing in field trials.

In Arabidopsis and other plants, the overexpression of a FLOWERING LOCUS T (FT) gene in transgenic plants leads to accelerated flowering. In the Moore lab we have cloned and sequenced the three citrus FT genes and placed them individually in transformation vector plasmids. We have initiated Agrobacterium-mediated transformation experiments with Carrizo citrange, sweet orange, and grapefruit.