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ISOLATION OF GENES POTENTIALLY REGULATING MANGO FLOWERING

T.L. Davenport*, Taifang Zhang, and Z. Ying

University of Florida, IFAS, Tropical Research and Education Center, 1890 Homestead, FL. 33031

Floral induction of mango is thought to be determined by interaction of a short-lived, florigenic promoter that is up-regulated in leaves during exposure to cool temperatures and an age-dependent vegetative promoter at the time that initiation of shoot growth occurs. *Constans* gene is widely conserved in plants and appears to be responsible for induction of a floral signaling mRNA (FT) that is synthesized in leaves and transported in phloem to buds to induce flowering in Arabidopsis. In the present study, a *Co*nstans-*L*ike *Mangifera indica* gene *(MiCOL*) was isolated from mango and characterized. At the protein level, MiCOL was 79%, 76% and 62% identical to MdCOL2, MdCOL1 and AtCO respectively. We are currently trying to rescue Arabidopsis *constans* mutant plants with the *MiCOL* gene and to determine if transcription rates correlate with cool temperatures in mango plants. We are also investigating the functionality of the FT gene in mango.