

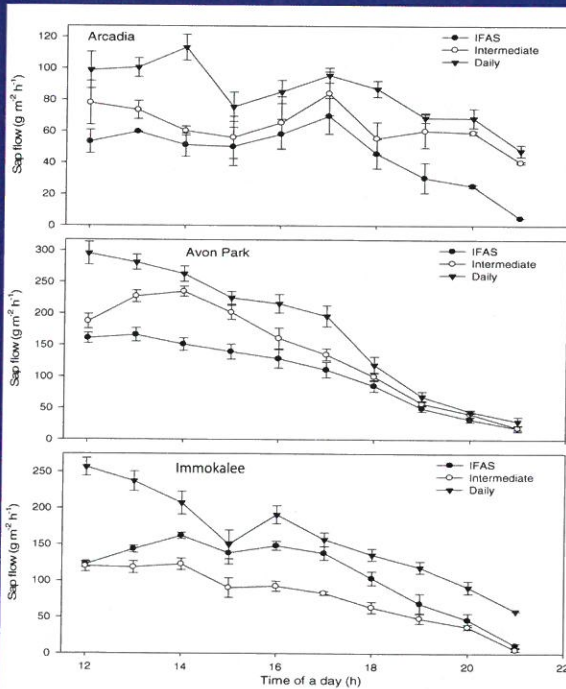
CITRUS IRRIGATION

IRRIGATION TREATMENTS

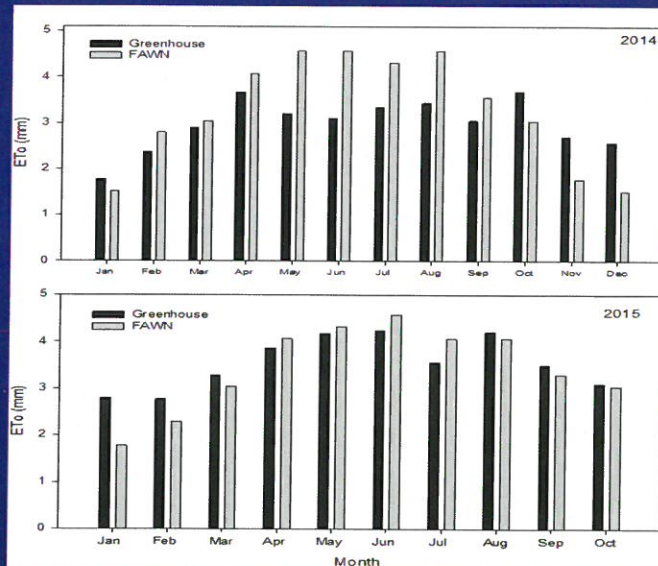
- Treatments
 - Daily irrigation (DAILY)
 - Irrigation using current UF/IFAS recommendation (IFAS)
 - Intermediate irrigation (the moderate of the former two) (INTERMEDIATE)
- Conclusions
 - Greater water use by greening infected trees from daily irrigation than current IFAS recommendations
 - Daily resulted in improved irrigation management compared with current IFAS or Intermediate irrigation schedule
 - Tree water use or crop coefficient (Kc) must be evaluated to determine if water amount for daily irrigation can be reduced

WATER REQUIREMENTS FOR HLB INFECTED CITRUS TREES

- Trial
 - Started November 2013-young trees about three years old planted in lysimeters filled with Immokalee fine sand
 - Conducted in greenhouses at the UF/IFAS Southwest Florida REC
 - Twelve Valencia (6 HLB positive and 6 HLB negative) and 12 Hamlin (6 HLB positive and 6 HLB negative) trees on Swingle
 - The study monitors changes in water use using weighing scales and monitoring soil moisture every 30 minutes
 - Irrigation event is triggered automatically on a daily basis to refill water loss from the previous day
- Goals
 - Compare water use between Hamlin and Valencia oranges under greenhouse conditions, and
 - Compare water use between HLB positive and HLB negative (healthy) trees
- Conclusions
 - Similar Kc for Valencia and Hamlin orange trees
 - HLB-affected trees take up less water than healthy trees because of reduced leaf area; about 35% less in 2014 and 21% less in 2015
 - Greater fruit yield per tree for healthy trees



Sap flow meter-measures sap and water flowing throughout the trees. For research trials, the sap flow meter measures water uptake.



2014: greenhouse ETo similar for both greenhouse and open field except summer months because of lower light levels
 2015: grow lights added above trees to increase summer light levels and improve ETo

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