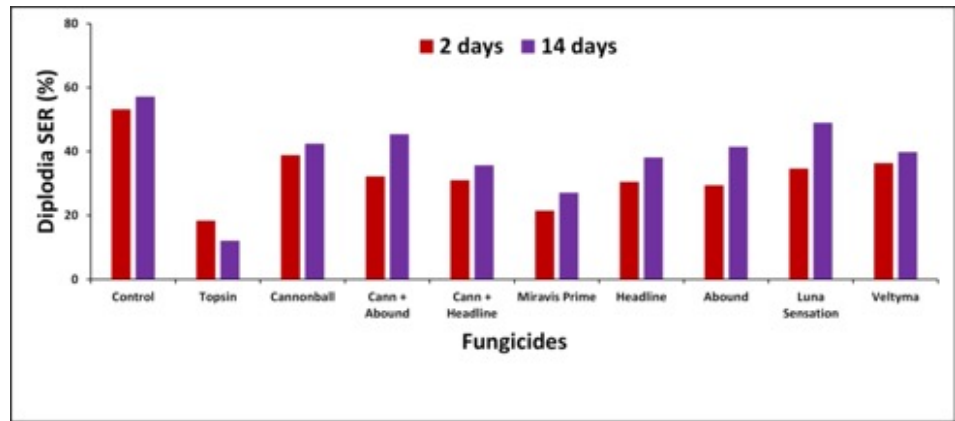


Effectiveness of Preharvest-applied Fungicides for Postharvest *Diplodia* Stem-end Rot Control on Grapefruit

Researchers: Mark A. Ritenour,
Liliana Cano

Contact: Mark A. Ritenour,
ritenour@ufl.edu

UF/IFAS IRREC



Take Home Message:

- Topsin® continues to perform best with preharvest application at controlling postharvest citrus decay, but it will not be available for citrus for the foreseeable future.
- Headline® usually significantly reduced postharvest decay.
- Miravis Prime® was consistently more effective than Headline® (and all other materials tested) at reducing postharvest decay, but not as effective as Topsin®. Miravis Prime® is not currently registered for use on most citrus but it is hoped grapefruit can be added to the label to provide an additional tool for decay control.

Effort Statement: Conducted an additional three field trials with the most effective materials from previous seasons.

Summary: Diplodia stem-end rot (SER) caused by *Lasiodiplodia* spp. is an important postharvest decay on fresh citrus in Florida. Huanglongbing (HLB) significantly increases *Lasiodiplodia* preharvest infection, leading to increased postharvest Diplodia SER. Evaluation of materials applied preharvest to reduce postharvest decay were conducted over four seasons on mostly red grapefruit, with one block of white grapefruit. A number of materials were tested over the years with the best performing candidates from the first three seasons being evaluated this past season. Materials tested this past season were: Topsin® 4.5 FL (thiophanate-methyl, “best-case fungicide” not registered for citrus), Headline® (pyraclostrobin), and Miravis Prime® (fludioxonil + pydiflumetofen). Application rates

were based on label instructions and, for materials with no preharvest citrus label, rates were based on their label for other crops or their postharvest label. Trees sprayed with water served as controls. Fruit were harvested 2 and 14 days after application. Harvested fruit were subjected to five days of degreening (5 ppm ethylene, 29°C, and 90% RH) and then incubated at 24°C with 90-95% RH for three weeks and Diplodia SER observed weekly. Supporting results from previous seasons, Topsin® demonstrated the greatest reduction in postharvest decay in 2022-23, followed by Miravis Prime®, and then by Headline® when fruit were harvested either 2 or 14 days after application. Miravis Prime® is not currently registered for use on most citrus but it is hoped grapefruit can be added to the label to provide an additional tool for decay control.

Funding:



Florida Citrus Packers through a
USDA Technical Assistance for
Specialty Crops grant