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

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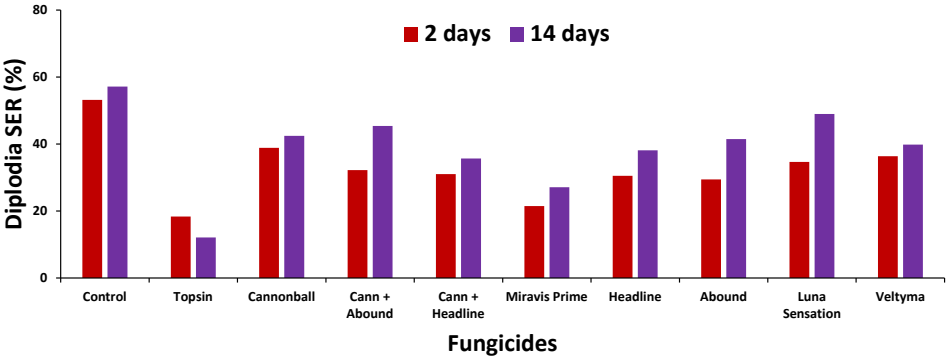

Figure: Effect of preharvest fungicides on the development of postharvest diplodia stem-end rot averaged from three red grapefruit groves in 2021-22 after degreening and storage.

Diplodia stem-end rot (SER) caused by *Lasiodiplodia* spp. is an important postharvest decay on fresh citrus in Florida. Huanglongbing (HLB or citrus greening) significantly increases *Lasiodiplodia* preharvest infection, leading to increased postharvest Diplodia SER. Evaluation of materials applied preharvest to reduce postharvest decay were conducted over three seasons on red grapefruit. Materials tested were: Topsin 4.5 FL (thiophanate-methyl), Amistar Top (azoxystrobin + difenoconazole), Graduate A+ (fludioxonil + azoxystrobin), Headline (pyraclostrobin), Mentor EC (propiconazole), Mertect 340F (thiabendazole), Switch 62.5 WG (fludioxonil + cyprodinil), Miravis Prime (fludioxonil + pydiflumetofen), Miravis Top (difenconazole + pydiflumetofen), Thyme Guard (thyme oil), Citrus Fix (2, 4-D), Cannonball (fludioxonil), Abound (azoxystrobin), Luna Sensation (fluopyram + trifloxystrobin) and Veltyma (pyraclostrobin + mefentrifluconazole). Fruit were harvested 2 and 14 days after application. Harvested fruit were subjected to 5 days of degreening (5 ppm ethylene, 85ºF) and then incubated at 75ºF for three weeks and Diplodia SER observed weekly.

Fruit treated with Topsin 4.5FL is considered a “best-case” treatment and performed best in all tests but use on citrus was abandoned in 2009. Miravis Prime (not yet registered for grapefruit) consistently showed good reduction in Diplodia SER control and appears to be a good candidate if it can be registered for grapefruit.

Funding

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