

## ***Phytophthora* propagules count may go down in the rhizosphere of citrus trees grown on raised beds**

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*Phytophthora nicotianae* infection causing gummosis, root rot and foot rot is common in the Lower Rio Grande Valley (LRGV) citrus, and results in serious economic losses. In LRGV, citrus trees are planted on flat beds and are under flood irrigation, a practice that favors buildup of large *Phytophthora* propagule densities in the soil due to over watering, tree trunk wetting, and spread of the disease as zoospores are transported along with irrigation water to adjacent trees. This study is undertaken to assess the effect of raised beds on *Phytophthora* germinable propagules in the soil compared to flat beds. Three-year-old grapefruit trees (*Citrus paradisi* Macf. cv. Rio Red) grown on sour orange rootstock were used. For each treatment two rows were covered with plastic mulch and two left uncovered. Plastic ground covers facilitate controlling pests such as *Diaprepes abbreviatus* root weevil and lowering evaporative water loss from the ground. Trees were flood irrigated, although in the case of trees on raised beds water only covered the wide furrows in between the rows. Preliminary data indicate a significantly lower number ( $P < .05$ ) of *Phytophthora* propagules in soil samples collected under the canopy of citrus trees growing in bedded rows compared to trees on flat grounds. Future studies will be undertaken to quantify *Phytophthora* propagules in soil samples from different citrus orchards collected at different times of the year. The results of this study will be used to determine threshold intervention for organic and chemical treatments and prepare guidelines for the local growers on cultural and irrigation practices to lower the incidence and spread of *Phytophthora* diseases.