
Diplodia Stem End Rot is a Complex Disease

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Traditionally Diplodia stem end rot (DSER) has been considered a post-harvest disease of some concern for packers but not a major concern for those growing citrus for juice. In the last 7 years, more growers have noticed problems with DSER occurring on trees rather than in the packing sheds. At the same time, we have been asked to investigate why citrus trees are collapsing. As we explored these two seemingly unrelated problems, we have routinely isolated species within the genus *Lasiodiplodia*. So far

we have identified six species (see figure) isolated from a range of sources from trunk disorders to fruit with DSER symptoms to asymptomatic fruit. All the species were tested for the ability to cause DSER. We found all species cause DSER to different degrees when inoculated, with *L. iraniensis* being the most aggressive and *L. thailandica* the least. We have also tested several for the ability to cause disease in young tree trunks and all of the tested species were able to cause discoloration of the vascular tissue and dieback. Why

does this matter? It is commonly found that different species in a complex like for *Lasiodiplodia* have different sensitivities to fungicides. We also do not understand the relationship between the trunk dieback and stem end rot. Do all the fungi cause the same symptoms in the field? Are there regional differences in distribution? There are many unknowns in this system as to why we are seeing more disease and whether something in the environment has changed to make DSER and trunk dieback more common.