

Avocado Branch Canker (formerly Dothiorella Canker)

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Introduction:

One type of canker on California avocado trees can occur on twigs, branches (Fig 1) or trunks and is caused by a complex of fungal pathogens which include many species in the Botryosphaeriaceae family. Canker pathogens can enter and initiate infection through wounds on the bark surface (Fig 3). Pruning wounds are a typical point of entry of fungal spores, as well as wounds due to mechanical injury and frost damage. Members of the fungal family Botryosphaeriaceae have a worldwide distribution and cause cankers and stem-end rot (Fig 4) on a wide variety of woody hosts.

Symptom.

Symptoms of avocado cankers include exudation of a reddish sap that dries to a brown and white powder. Bark may be cracked, darkly discolored, or slightly sunken. With older cankers, bark may be friable and easily removed from the damaged area. Under the canker, inner bark and wood is red-brown to brown, instead of the normal pale color (Fig 3). When the branch is cut, a characteristic wedge-shaped canker extending deep into the xylem may be visible (Fig 2). If much of the xylem becomes infected, limbs may collapse and leaves quickly turn brown but remain attached. They also show leaf scorch (Fig 5).

Disease Management:

The chemical treatment of any open wounds on the tree would be the primary means of protecting against *Botryosphaeriaceae* spores entering and initiating infection.

Cultural Practices:

- Avoid pruning during or immediately after rain
- Prune out dead limbs and twigs where the pathogen pycnidia (spore forming structure)
- Dispose dead wood and old fruit away from avocado trees
- Pruning wounds should be protected
- Proper irrigation and fertilizer management



Fig 1. Avocado branch dieback



Fig 2. Perennial canker on the branch



Fig 3. Perennial canker on the wood



Fig 4. Stem-end rot



Fig 5. Leaf scorch

References:
 McDonald, V., Lynch, S.C., Eskalen, A., 2009 First Report *Neofusicoccum australe*, *N. luteum*, and *N. parvum* associated with avocado branch canker in California. *Plant Disease*, 93 (9) 967.
 Eskalen, A., McDonald, V 2010. Avocado branch canker (formerly Dothiorella canker) . *Avocado Yearbook* 2009. 92-75-84