

## ***Early Intervention Keeps Root Rot at Bay***

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It's spring and the avocados are in bloom. If the trees are stressed from disease, perseamite or drought, they will often drop many of their leaves at this time, as well. The trees can look awfully bad. If the source of stress is avocado root rot, maybe this is the time to consider whether the trees should be babied along or cut down to start all over again.

Surprisingly, there are still growers who don't recognize the signs of root rot. This neglect may be due to lack of information or rather a denial of the "RR" words. Maybe the grower has replanted with resistant rootstocks and believes that it can't happen to him. It can. Early intervention can reduce the spread and severity of the disease and if replanting is necessary, several precautions can be followed to reduce the problem in the future. We now have an arsenal that can effectively combat the root rot problem.

To identify the disease, look first at the leaf canopy. Is it thinning and sparse? Is there dieback in the branches, exposing bare, sunburned ends? Are the leaves small and pale? If there is new leaf growth, does it frequently dry up with a reddish color? Are there numerous, small fruit which, because of a thin canopy, sunburns?

At ground level, because of lack of tree vigor, is there little or no leaf mulch? In digging around the root zone, are feeder roots found? If so, are they black and brittle?

In advanced stages of the disease, all these symptoms are found. Confirmation of the disease can be done by a commercial lab or by a fruit trap method with a green skin avocado. Remember that a report can come back indicating no fungus is present. If the trees look like they have the disease it may be necessary to retest or sample during a different time of year. Confirmation is important because anything that reduces plant water uptake can cause similar symptoms: gophers, drought, clogged emitters.

Using a disease rating scale of 0 to 5, with 5 being a dead tree, it is possible to see dieback and canopy thinning with a rating of 1. By the time you can see through the canopy (3 rating), it is usually commercially difficult to turn the trees around. By the time a tree has a rating of 3, there is not enough leaf cover to protect the fruit from sunburn.

Although Aliette® and Ridomil® can have a positive effect on the trees, trees rated as 3s are often too far gone to fully recover. Cut them down and save the chemicals for the neighboring trees. Think of it as an early thinning. Make sure the remaining trees are not being over-watered, and if they are losing their mulch, bring some in. As they lose their canopies, they cannot use as much water. Irrigating to the needs of healthier trees will drown the less healthy ones.

The neighboring trees will gradually fill in the hole, if their health can be maintained. Don't interplant with new trees. Trying to interplant young trees in a root rot situation where they must compete with larger trees with their different water requirements is a losing battle.

If trees continue to decline, fungicide use can be economically justified as long as the trees return good fruit. When they no longer do, it is time to turn off the water and remove the tree.

As large enough sections of the orchard open up, so that a separate irrigation block can be justified, now is the time to consider replanting. This is where the combination of new techniques can provide the new healthy grove.

Plant the trees on generous mounds or ridges'; making sure the mounded soil is mixed with the surface soil to prevent trees from eventually blowing over. Use a mix of resistant clonal rootstocks, and start the trees off with fungicide treatments for the first two years. Put down thick, woody mulch, and irrigate to the needs of the trees. Tensiometers are great for monitoring water needs.