

New Bugs, Old Bugs

Ben Faber

UC Cooperative Extension farm advisor , Ventura County

Gads, just when we think we are getting a handle on Persea mite, along comes a new pest of concern for avocado growers. This time it is a thrips which looks very similar to citrus thrips (*Scirtothrips citri*). According to USDA it is new to this country and is undescribed, although it is in the same genus as citrus thrips.

The pest was first noted by PCA Charlie Gribble in an orchard in Saticoy and in another in Oxnard this July. As of September 18, it has been found in 19 other orchards in those two areas. According to fruit and leaf damage symptoms, the pest is also found in Orange County. At this point, we do not know the full extent of the infestation. The thrips is a weak flyer, but its spread can be helped by contaminated clothing and equipment. Picking bins are also a potential source of contamination, especially since we do not know the pattern of the infestation.

The damage caused by the thrips consists of scarring to young fruit, often starting near the stem around the neck of the fruit. Feeding on the fruit stem can cause fruit drop. The thrips will feed on both surfaces of the leaf; causing random feeding lines on the undersurface and darkened leathery patches on the top surface. The feeding damage is most severe on new growth and young fruit. The primary problem of the pest is not defoliation, but fruit scarring and drop.

Since we do not know the name of the new thrips, we do not know where it has come from and therefore its full biology. Its relative, citrus thrips, is not known to be under strong biological control and as a result citrus growers will often spray for the problem. Two spray trials have been performed in Ventura, one with methomyl and the other with sabadilla. Both were effective in controlling the pest. Sabadilla is the preferred material since it is a soft pesticide, whereas the methomyl is very harsh on non-target species. Sabadilla, however, is not currently registered for avocado, and a Special Local Needs (SLN) use is being sought.

Unlike greenhouse thrips which likes a closed dark canopy, this new thrips prefers the sunny south side of the tree. On Persea mite infested trees, the thrips will feed throughout the canopy. In fact, Persea mite could be a predisposing factor to this pest by opening up a tree's canopy. Also, by causing a continuous flush of new growth on the tree, the thrips is constantly given new, succulent growth to feed on. Without Persea infestation, there could be periods when naturally occurring general predators, such as lacewing larvae and six-spotted thrips, could catch up to the pest population. Getting control of Persea, then, will help control this new pest.

We have been following a timing of release study of the Persea predators *Galendromus*

helveolus and *G. annectens*. In either March, May or July single release rates of 15,000 predators per acre were made in replicated treatments. Another treatment was made of 5,000 per acre, but the predators were released at that rate three times to coincide with the single release times. At each release, half of the predators were *helveolus* and the other half, *annectens*. During the recent count in August, the multiple release trees looked better and had higher recoverable predators than those where a single large release was made. Any trees that had received predators looked better than those not receiving them.

We are not out of the woods yet with *Persea*, but native populations of predators are increasing their numbers in response to the pest. We are learning better how to manage the release of the predators we do have, and the search is continuing for new, more effective predators. We are learning how to apply horticultural oils and water to knock the pest population back. Gradually, the trees will return to biological equilibrium and the threat from a new pest, such as this avocado thrips, will be less serious.