

Spring Avocado Management Considerations

For much of California's avocado growing region, it has been a very mild winter and spring. Summer-like conditions are already upon us. That means that before we know it trees will be in bloom and we'll be having to consider pest control and harvesting strategies.

Now is a great time to walk your grove and assess the condition of your trees with particular attention to the upcoming bloom. Bloom occurs primarily on last year's summer flush growth. Inflorescence buds at this time of year are round and swollen, and easily distinguished from the smaller, angular vegetative buds.

If your trees are carrying a heavy crop of fruit, they may not



A 1-year-old shoot showing strong inflorescence bud development.

Recovering from Snow Damage

The end of 2014 dealt a significant blow to some growers in Riverside and San Diego Counties in the form of a rare heavy, wet snow fall. The snow resulted in major limb breakage on a lot of trees in the affected area. If you had trees affected by the snow, you should have already removed the broken limbs and cleaned up the wounds by making smooth pruning cuts to promote healing. If you have not already done this, you need to clean up those wounds as soon as possible.

Although it's been a relatively dry winter, we have had some rain events in the weeks since the snow. That rain could have helped to spread fungal spores that cause branch canker (formerly known as *Dothiorella* canker). The wounds created by broken limbs, if not cleaned up, are perfect entry points for those fungal spores.

As spring continues to move forward, new growth will start to develop from below where limbs broke. Once this new growth begins to emerge, you should do a follow up pruning to remove any dead wood above the new growth. If you do not remove this dead wood, it too can serve as an entry point for branch canker pathogens. Best management guidelines for preventing branch canker can be found at www.californiaavocadogrowers.com/documents/pruning-practices-help-control-branch-canker-and-stem-end-rot.

Depending on the severity of limb breakage experienced, you may need to apply some whitewash to newly exposed branches, as you would after stumping, to prevent sunburn.

Although snow is not something avocado trees experience often, with proper follow up care, the trees will recover and be back into production in just a couple of years. 🥑

have produced a strong growth flush last summer, and as a result, you may experience a relatively weak bloom this spring. But all is not lost since a very small percentage of avocado flowers actually set fruit, regardless of bloom strength. However, fewer flowers to begin with does mean lower fruiting potential, so you will want to give some consideration to harvest strategy.

The current mature crop on a tree is still consuming resources (carbohydrates) as bloom and fruit set are occurring. Therefore, the tree must allocate the resources it has available between those mature fruit and the potential fruit for next year.

Dr. Iñaki Hormaza, a researcher at the Instituto de Hortofruticultura Subtropical y Mediterránea in Spain, presented data last year at a California Avocado Society seminar showing that strong flowers (those with higher starch content) set and retain a higher percentage of fruit. It is logical that if the tree is carrying a large crop of fruit and has a weak bloom, many of the individual flowers may also be weak (i.e., low starch content). Thus, some early size-picking to remove the largest fruit may be beneficial to fruit set by freeing up resources and improving flower strength. Removing a portion of the crop early will also help to ensure a strong summer flush, which will provide greater bloom potential next spring.

The warm winter also means that pest populations may build earlier than usual and require earlier treatment than normal. Growers should be working closely with their pest control advisors (PCAs) to monitor persea mite and avocado thrips populations, particularly if your grove has a history of these pests being problematic. And be prepared to take action if populations warrant it.

Persea mite populations are generally lowest in March and start to build as new flush develops; however, the mild winter may not have re-

duced the population as much as normal and populations can still be high in some groves. When temperatures are 63°F to 77°F, as they have been in many areas recently, persea mites can go from egg to adult in two to three weeks. If early flush is present, their numbers can build quickly.

Persea mites damage avocado trees by removing chlorophyll from

the leaves when feeding. As a result, once about 10 percent of the leaf surface is damaged, the leaves begin to drop. Because healthy leaves are critical to a healthy avocado tree and crop, persea mite damage can affect avocado growers' profitability.

Dr. Mark Hoddle, University of California, Riverside entomologist, developed an effective, rapid method

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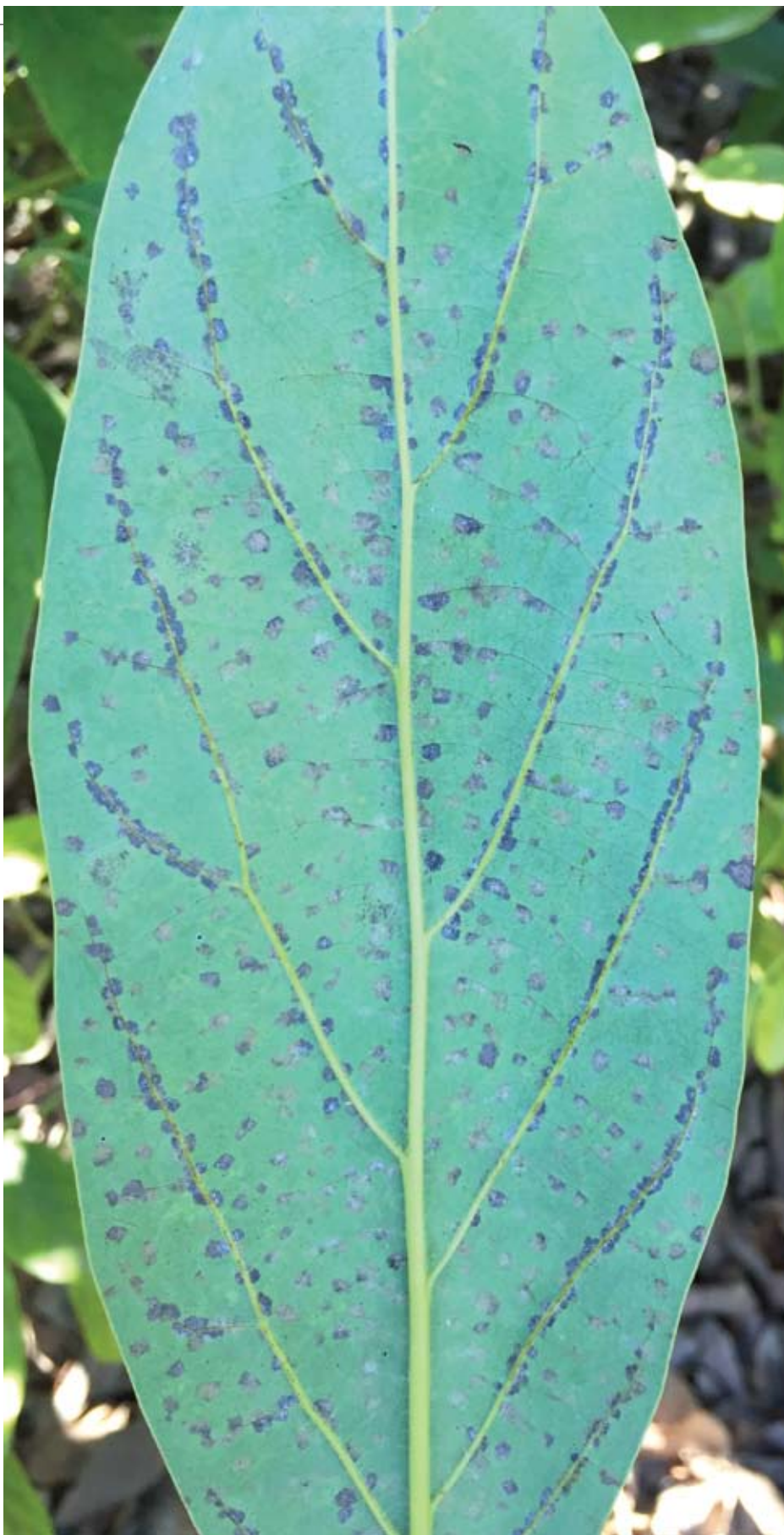
for assessing perseia mite populations, which can be found at www.californiaavocadogrowers.com/documents/persea-mite-sampling-handout. Treatment recommendations for perseia mite can be found at www.ipm.ucdavis.edu/.

Unlike perseia mites, avocado thrips populations build over the fall through spring on young leaves since this pest prefers cooler temperatures. If new flush is available and temperatures are within 68°F to 76°F, thrips populations can build quickly, especially if natural enemy populations are low.

Female thrips lay eggs on young fruit, and the feeding of the larvae damages the fruit, causing scarring that can leave the fruit unmarketable. Field data indicate that Hass fruit are most susceptible when 0.2 to 0.6 inches in length. Data collected by Drs. Mark Hoddle and Joe Morse in Ventura County showed that when thrips populations are 3-5 per leaf at 97, 75 and 36 days before bloom, feeding damage will cause 26-38 percent, 18-28 percent and 6-15 percent economic damage, respectively.

Thus in a year such as this, when temperatures are favorable for thrips development, growers should be vigilant to monitor populations closely and be prepared to take necessary action to avoid excessive fruit damage. General information about avocado thrips can be found at www.californiaavocadogrowers.com/documents/avocado-thrips-fact-sheet, and specific control recommendations can be found on the UC IPM website (www.ipm.ucdavis.edu/).

Careful attention to conditions this spring can help to ensure that current season fruit are harvested at peak quality, and that maximum set of clean fruit is achieved for next year. 🥑



A leaf showing heavy perseia mite damage (spots along the leaf veins) on the underside of the leaf.