

News from the Watershed

The Yellow Dragon: Citrus Greening is a major threat to the citrus industry in Florida

The yellow dragon, also known as “huanglongbing” or citrus greening has reared its ugly head in Florida. Citrus greening is considered one of the most serious threats to the citrus industry today. It is caused by bacteria, which is spread by an insect called the Asian citrus psyllid. Only infected psyllids can spread the disease. It was first discovered by farmers in southern China in the late 1800s. All types and varieties of citrus are vulnerable to this disease which affects the nutrient conducting system of the plants.

The Asian citrus psyllids are tiny insects (3-4 mm) but are certainly causing big problems for the citrus industry. The culprit can be identified by its mottled brown wings and eggs, which are bright yellow to orange in color. Generally, the insects sit at an angle to the shoots or leaves on the trees they are feeding on. The adult psyllid is active and leaps when disturbed. The young are yellowish orange and are always found on the new growth of the citrus tree. Immature psyllids do not leap around as the adults, but move slowly and are unable to fly. The insects can be difficult to see because of their small size, however, they do leave signs of their destruction. A white, waxy excretion is left behind by the babies as they move along and feed off of the citrus plants. The insects are mostly found on new growth and shoots of the trees and the population usually will increase during periods of active plant growth.

This disease has spread from eight to 23 counties since first discovered in Florida. It is not known how the Asian citrus psyllid entered the United States, however with travel, tourism, immigration and smuggling, many possibilities certainly exist.

The symptoms of citrus greening include leaf yellowing, blotchy mottling of leaves, twig dieback, poor flowering, small and misshapen fruit and stunted growth. The fruit may taste bitter and never develop fully. The affected seeds generally do not produce new trees and juice quality is poor. Although, detrimental to citrus, the disease poses no harm to humans or animals.

One of the biggest problems with the disease is that many affected citrus trees may not show symptoms right away. It can take up to two years for the tree to show signs of greening. In addition, some of the symptoms may resemble an indication of mineral deficiencies such as zinc. Once the pathogen makes its home in the tree, the branches and finally the entire tree will turn yellow. The infected psyllids will feed on the tree and then move on to a healthy plant and the process goes on and on and continues the spread of the disease throughout the grove.

Citrus greening can be spread in other ways as well. When grafting, if the bud wood used is infected, it will produce an infected tree. In addition, the insect itself can move from tree to tree, so if an infected tree is moved to another location, the healthy trees in the area will most likely become infected as well. According to the Florida Department of Agricultural and Consumer Services, the disease cannot be spread by casual contamination of personnel and tools or by wind and rain.

The control of the disease is to eradicate infected plants. In addition, it is critical that the infected trees are not mixed with healthy trees, therefore, inspections of incoming seedlings has become a necessity. According to the United States Department of Agriculture (USDA), “Other than tree removal, there is no effective control once a tree is infected and there is no known cure for the disease.” In addition, they report that “in areas of the world affected by citrus greening the average productive lifespan of

citrus trees has dropped from 50 or more years to 15 years or less. The trees in the orchards usually die 3-5 years after becoming infected and require removal and replanting. An infected tree produces fruit that is unsuitable for sale of fresh fruit or for juice.”

So, what is being done about this serious problem? The USDA’s Animal and Plant Health Inspection Service has issued a Federal order that requires host plants of the Asian citrus psyllid to be treated prior to being moved from areas where citrus greening occurs. In addition, host plants of this psyllid are prohibited from being shipped or moved outside of areas quarantined for citrus greening.

You can also help with the efforts to stop this serious disease. The USDA suggests that residents regularly inspect their citrus trees and look for signs of the disease or insects that match the above description. If you do suspect greening, contact the Florida Department of Agriculture’s toll-free helpline at 1-800-282-5153.