FACT SHEET

National Clean Plant Network

Start clean, stay clean.

Blackberry yellow vein disease

What is blackberry yellow vein disease?

Blackberry yellow vein disease is a complex disease that emerged in the southeastern United States at the turn of the 21st century. The disease is widespread along the east coast from the mid-Atlantic throughout the mid-south and rarely seen along the west coast. The disease is caused by a combination of viruses, the identity of which is less important than the number of viruses infecting a plant.

What are the symptoms of blackberry yellow vein disease?

The symptoms of blackberry yellow vein disease vary and are usually only found on part of the canopy. Typically, diseased plants develop yellowing along the main veins of the leaf. Later symptomatic areas may turn necrotic. Other symptoms include mottling, vein clearing, ringspots, and blotching. In severe cases the disease may lead to plant death.

How serious is it?

The disease causes rapid decline in yield and affected fields become unproductive in 5-7 years versus the normal 20 years, resulting in yield losses and increased production costs.

Where has it been found?

The disease is widespread along the east coast from Maryland south and the Midsouth (Arkansas, Mississippi, Oklahoma, Tennessee, Texas). The disease is present in California but it is not widespread. Major production areas in the Pacific Northwest are not affected by the disease.

When was it found?

The disease was first observed in the Carolinas in the 1990s but has increased to cause epidemics since 2000.

How does it spread?

Blackberry yellow vein is not a typical disease as there is not a single causal agent but rather symptoms appear when two or more viruses infect blackberries. To date the viruses that are associated with the disease can be transmitted by pollen, seed, nematodes, eriophyid mites, whiteflies, thrips, mealybugs, or aphids.

How is it treated?

Given the number of viruses and vectors associated with the disease it is not economical to actively control all vectors. The better approach is to start with clean material, tested free for all the viruses associated with the diseases and plant in areas that have not had previous history of the major viruses associated with the disease.

What are the viruses associated with the disease?

There are several viruses associated with the disease symptoms. All prominent viruses in affected fields are RNA viruses and include blackberry yellow vein associated virus which is transmitted by whiteflies, blackberry leaf mottle associated virus transmitted by eriophyid mites, blackberry chlorotic ringspot virus transmitted by seed and pollen, tobacco ringspot virus transmitted by nematodes, seed and pollen, blackberry vein banding associated virus transmitted by mealybugs and blackberry virus E and Y, both speculated to be transmitted by eriophyid mites.

How is it detected? How can I get my plants tested?

There are tests available for all viruses associated with blackberry yellow vein disease. Several of the companies that offer testing for plant viruses can test for those associated with the disease.

For the latest information see:

http://www.ncpnberries.org

References:

Tzanetakis, I.E., Susaimuthu, J., Sabanadzovic S., and Martin R.R. 2017. Blackberry Yellow Vein Disease Complex (BYVD). Pp. 71-75. In: Martin, R.R., Ellis, M.A., Williamson, B. and Williams, R.N. (Ed) Compendium of Raspberry and Blackberry Diseases and Insects 2nd Edition. APS Press, St. Paul, MN.