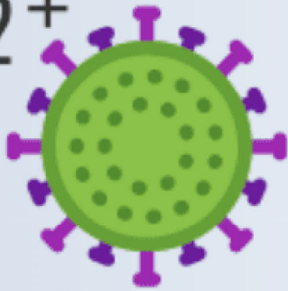


# Blackberry yellow vein disease (BYVD): a major threat to blackberry production in the United States.

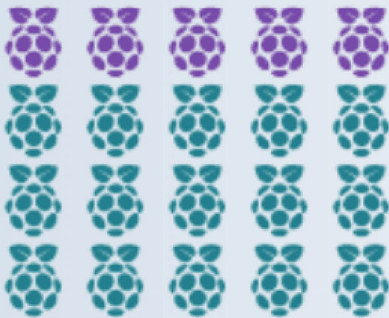
2+



## Did you know?

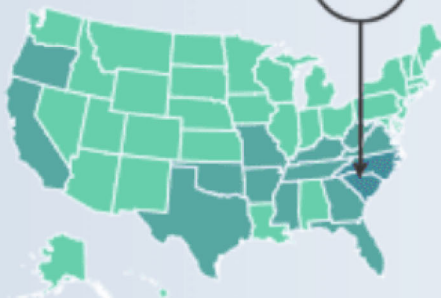
Symptoms appear when **two** or more viruses from the complex infect blackberries.

only 5 of 20



Affected fields can become unproductive in **5** years versus the normal **20** years.

First observed in the year 2000.



## Where has it been found?

The disease is widespread along the east coast and is present in California. Major production areas in the Pacific Northwest are not affected by the disease.

## What is blackberry yellow vein disease?

BYVD is a complex disease that emerged in the southeastern United States.

The disease is caused by a combination of viruses.



## Symptoms

Diseased plants develop yellowing along the main veins of the leaf.

Other symptoms include:

- Vein clearing.
- Ringspot.
- Leaf mottling.
- Oak-leaf pattern.
- Leaf blotching.

## Transmission

Viruses associated with the disease can be transmitted by:

- Pollen.
- Seed.
- Nematodes.
- Eriophyid mites.
- Whiteflies.
- Thrips.
- Mealybugs.
- Aphids.

## How is it treated?

The active control of all the different vectors is not economically feasible. The best approach is to:

Start with clean material, tested free for all the viruses associated with BYVD.



Plant in areas where the BYVD associated viruses have not been detected.

