Western X Disease update

Claudia Nischwitz and Ryan Davis
Utah State University

Symptoms

- Foliage may show early fall colors (May or June)
- Pale, small fruit
- Trees die within 2-6 years
- No symptoms on trees of Mahaleb rootstock, trees suddenly collapse and die

Padil.gov.au

Causal agent, transmission and diagnosis

- Phytoplasma species
- Leafhopper (especially cherry (privet) and mountain leafhopper)
- Geminate leafhopper
- Molecular tools (PCR and DNA sequencing)
- Leaf samples need to be sent before they are dry; about a quart-size zip-loc bag
- Send samples to:

  Utah Plant Pest Diagnostic Lab (UPPDL)

  5305 Old Main Hill, Logan, UT 84322

by FedEx or UPS overnight

Survey 2019

- Surveyed peach, tart and sweet cherry orchards
- Collected leaves of potentially symptomatic trees
- Collected leafhoppers with inverted leaf blower

Results

- No Western X disease was found
- We found several species of leaf hopper. So far, none are vectors for Western X disease
- Survey will be repeated in 2020

Little cherry disease

- Three possible causes for the disease: Little cherry virus 1, Little cherry virus 2 and Western X disease
- Only Western X would be transmitted by leafhopper
- Both viruses transmitted by grafting
- Little cherry virus 1 –vector unknown
- Little cherry virus 2 - apple mealybug (Phenacoccus aceris) and grape mealybug (Pseudococcus maritimus)

Little cherry disease

- They have not been reported from Utah

http://treefruit.wsu.edu/crop-protection/opm/apple-mealybug/

Apple mealybug

https://content.ces.ncsu.edu/woolly-apple-aphid

Woolly apple aphid

Grape mealybug

Little cherry disease

- If you suspect Little cherry virus you can get more information at this website: http://treefruit.wsu.edu/crop-protection/disease-management/little-cherry-disease/