Pests and diseases of Hops

Or

Why the ^%$#^ Do I Get All These Things
CHECKED ON MY CROPS TODAY

SO FAR SO GOOD!
Carlaviruses

• Hop Latent Virus, American hop latent virus, & Hop Mosaic virus. HLV & AHLV called latent because they don’t seem to do very much. May cause yield reduction of up to 15%. HMV can cause severe damage, reduce yield by 60%+, especially in Golding type hops

• Field Guide for integrated pest Management in Hops, Third Edition
Other viruses

• Hop Stunt Viroid – found in US in 2004, seems to be spread by Mechanical (pruning, stripping, crowning, etc) means & propagation. May take 3-5 yrs to show. Side arms are smaller & hop cones are smaller. Very serious problem

• Apple Mosaic Virus – Most important virus disease in hops. Severe reduction in yield & Alpha acids, difficulty in propagation

• Field Guide for integrated pest Management in Hops, Third Edition
Plant Clinic Diagnostic Service

Date: November 9, 2018

Plant clinic number: 2018-1695

Client: Four Star Farms, Inc.
496 Pine Meadow Rd.
Northfield, MA 01360

Submitter: Eugene LeToile, Four Star Farms

Host: Hop, ‘Rakau’

DIAGNOSIS:

Symptoms: Canker and leaf spots

Organism recovered: Phomopsis

Notes:

This is an update to my previous message and to my e-mail message of this morning.

We sequenced a gene region (ITS) of the fungus we had recovered from both a leaf spot and from a lesion on the bine. It appears to be the same fungus on both tissues (a species of Phomopsis), but we did not get a good match with any fungi currently in two different public gene banks (one in the US, and one in Europe). I think this is because the fungus has not been described before, or it has not been significant enough to sequence. It may be a new disease. We will have to do some substantial investigation to find out more, including trying to infect hop plants with the fungi, seeing if the symptoms are the same, and then describing the fungus. This process usually takes months.

However, the basic biology of the disease is the same. The fungus produces thousands of spores in infected tissue. The spores are moved to new tissue in water splash (from rain or irrigation water), by wind, or by activity in the hop yard that involves brushing up against the plants. Most species of Phomopsis that cause disease are not known to be systemic in plants, but they can cause dieback if they infect the main stem, or the base of the vine, in this case. Disease management would consist of removal of infected tissue as it occurs (and removing it from the yard), and preventive sprays to protect uninfected plants if the disease does show up again. There are numerous fungicides registered for use on hop in your state. A broad-spectrum product like Cueva or Pristine would be effective. Be sure to read the labels carefully.

Regards,
Melodie Putnam
Diagnostician and Director,
Oregon State University Plant Clinic

Agricultural Sciences & Natural Resources, Family and Community Health, 4-H Youth, Forestry & Natural Resources, Extension Sea Grant, and Open Campus programs. Oregon State University, United States Department of Agriculture, and Oregon counties cooperating. The Extension Service offers its programs and materials equally to all people.
Figure 1. Mean number of potato leafhoppers (PLH) in hop yards B and C in 2016 by collection date. The mean number of PLH per sticky trap, regardless of location or hop variety was slightly higher in yard B.

Figure 2. Mean number of potato leafhoppers (PLH) in hop yards B and C in 2017 by collection date. The mean number of PLD per sticky trap, regardless of location or hop variety was significantly higher in yard B (P<0.05).