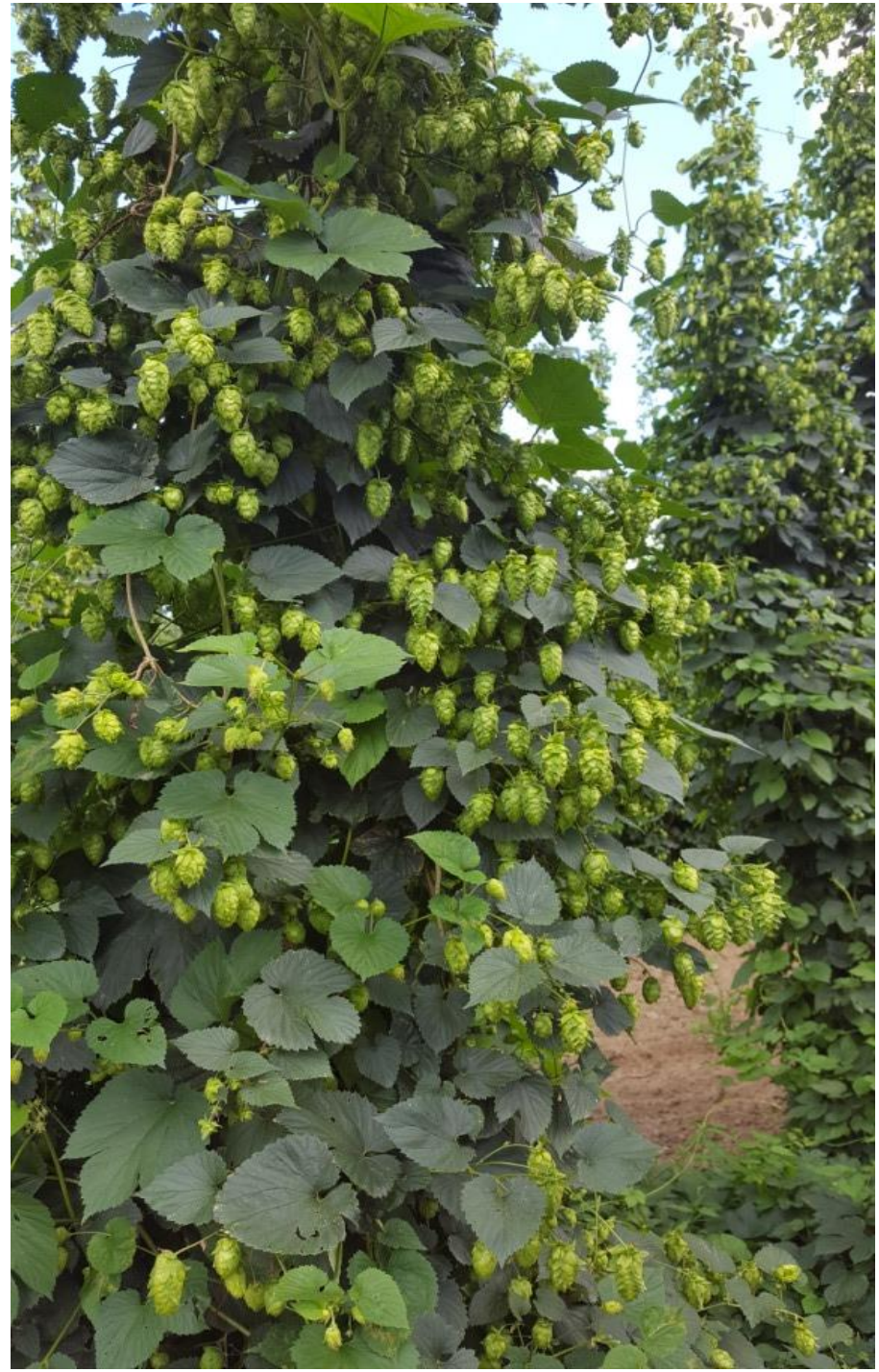
# Pests and diseases of Hops

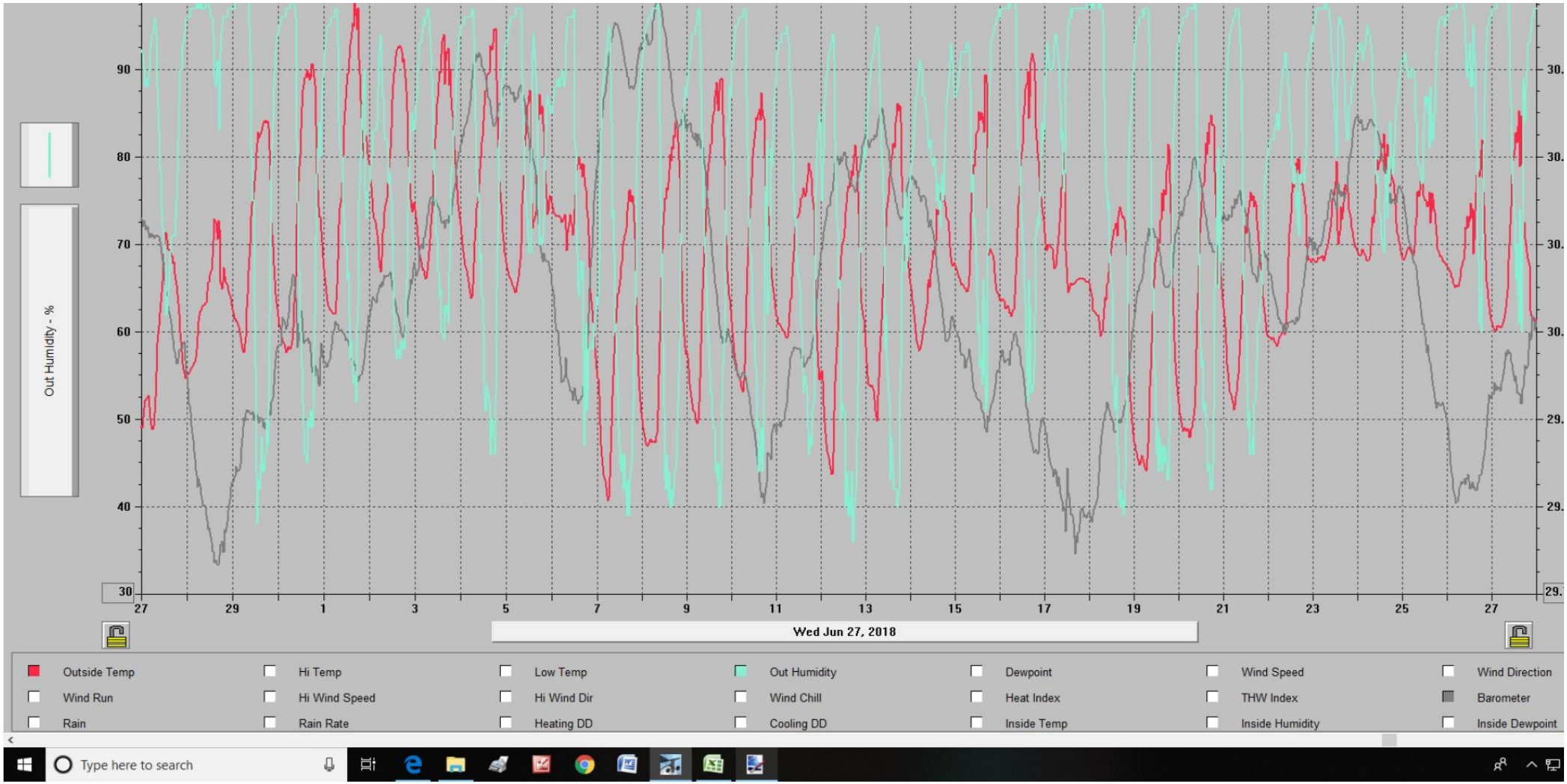
Or

Why the ^%$#^ Do I Get All These Things




CHECKED ON MY
CROPS TODAY
SO FAR SO GOOD!


Connecticut River
Connecticut River
Connecticut River
496 Pine Meadow Road
Whitney Trucking
Otter Run
Kidds Island


Out Humidity - %
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Wed Jun 27, 2018
Outside Temp
Hi Temp
Low Temp
Out Humidity
Dewpoint
Wind Speed
Wind Direction
Wind Run
Hi Wind Speed
Hi Wind Dir
Wind Chill
Heat Index
THW Index
Barometer
Rain
Rain Rate
Heating DD
Cooling DD
Inside Temp
Inside Humidity
Inside Dewpoint
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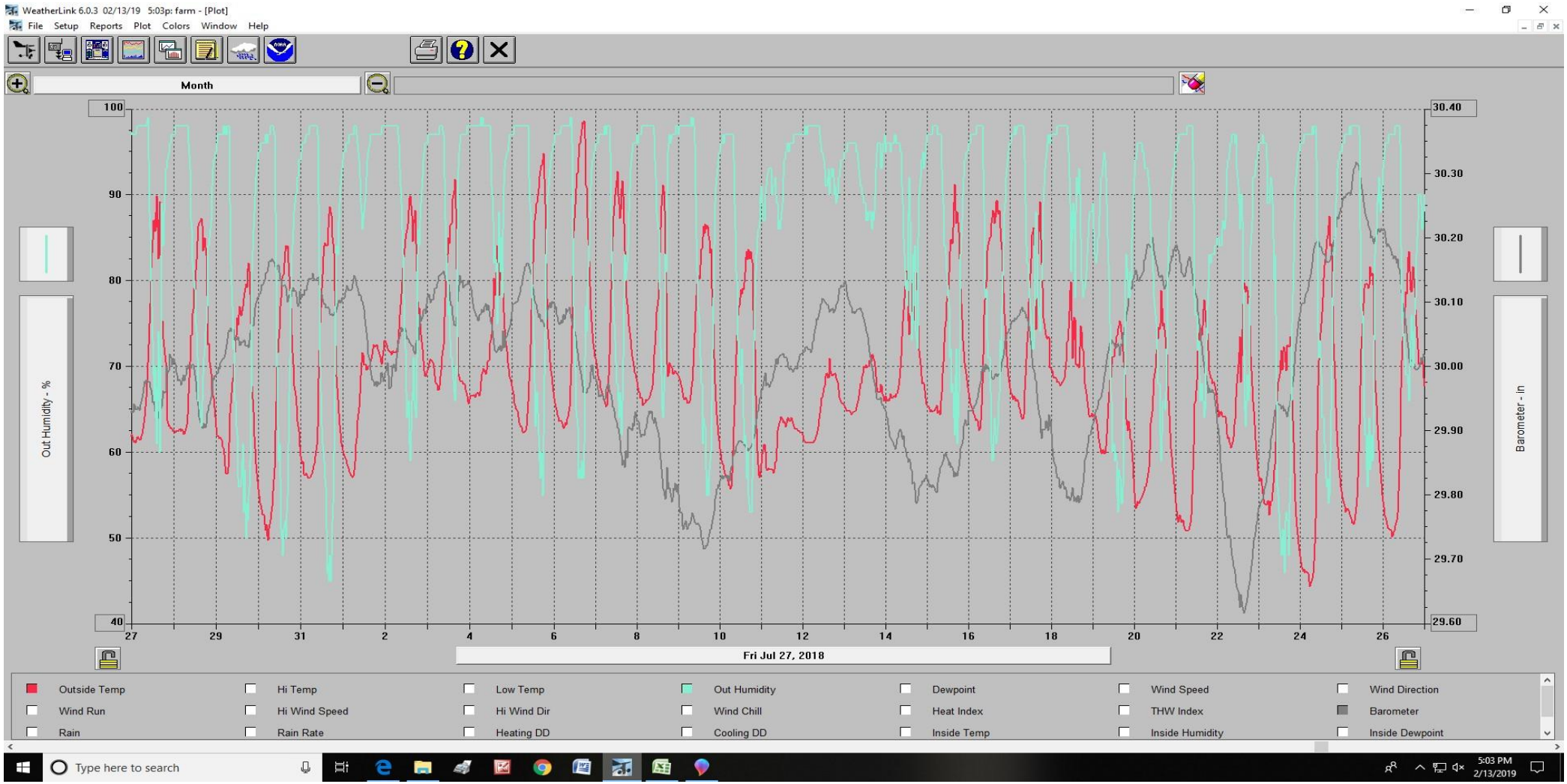
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File Setup Reports Plot Colors Window Help
Month
Out Humidity - %
Barometer - in
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Fri Jul 27, 2018
Outside Temp
Hi Temp
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Out Humidity
Dewpoint
Wind Speed
Wind Direction
Wind Run
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Heat Index
THW Index
Barometer
Rain
Rain Rate
Heating DD
Cooling DD
Inside Temp
Inside Humidity
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2/13/2019


B
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Pine Meadow Rd
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Pine Meadow Rd
Winter Storm Warning: Massachusetts
updated 42 mins ago · National Weather Service · More info
Imagery ©2019 Google, Map data ©2019 Google
United States
Terms
Send feedback
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2/12/2019

# Carlaviruses

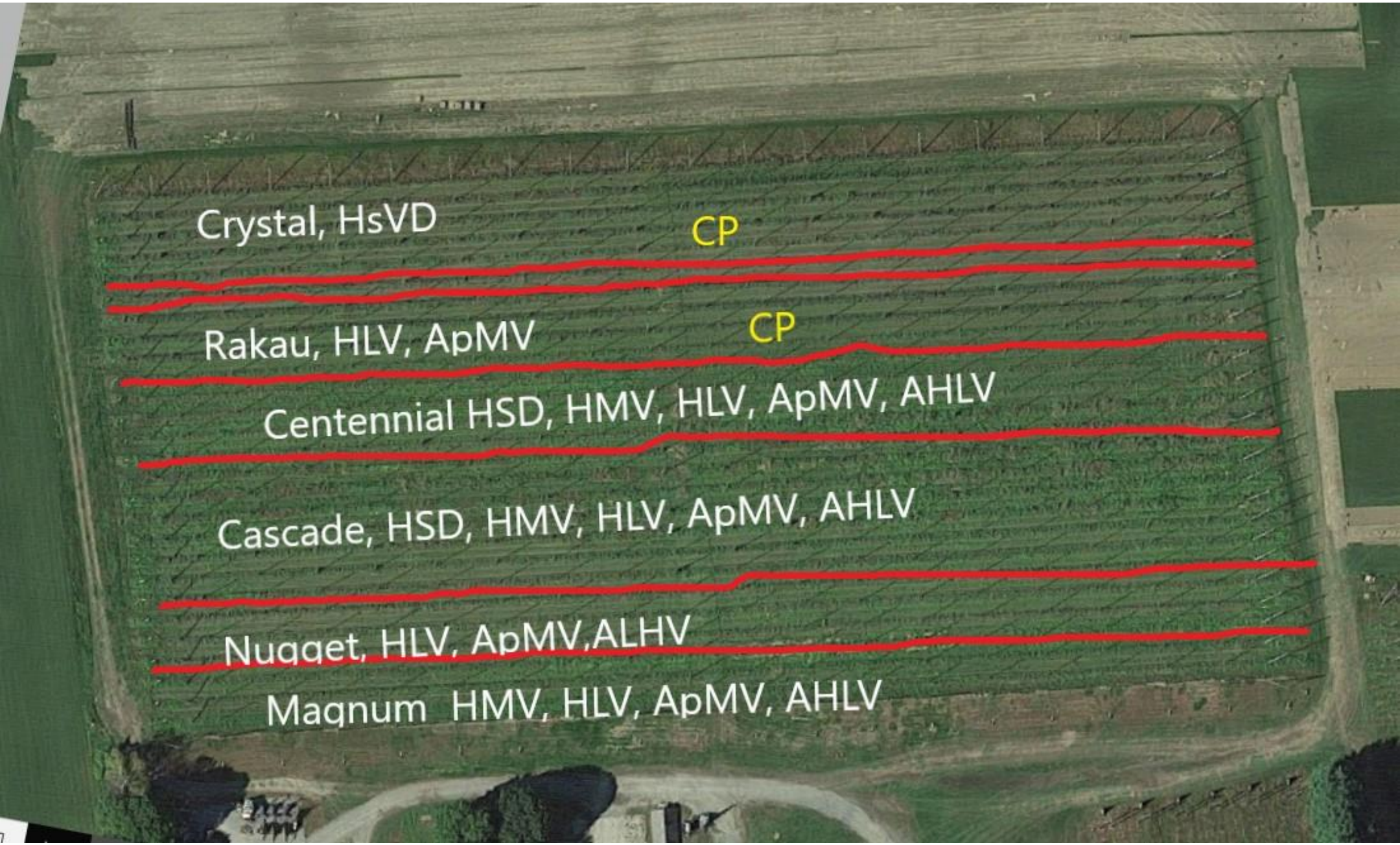
- Hop Latent Virus, American hop latent virus, & Hop Mosaic virus. HLV & AHLV called latent because they don't seem to do very much. May cause yield reduction of up to 15%. HMV can cause sever damage, reduce yield by 60%+, especially in Golding type hops

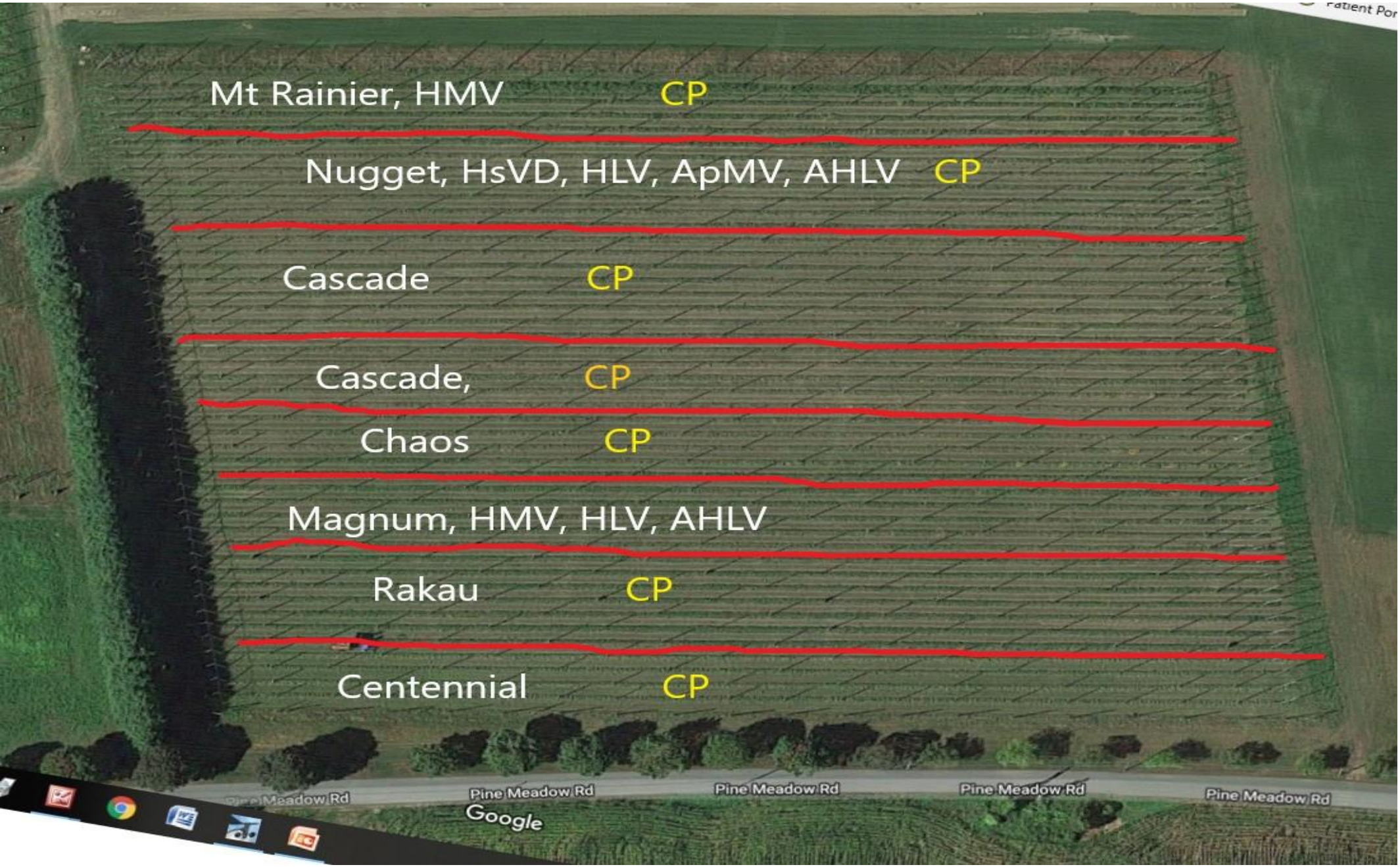
- Field Guide for integrated pest Management in Hops, Third Edition

# 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


Crystal, HsVD
CP
Rakau, HLV, ApMV
CP
Centennial HSD, HMV, HLV, ApMV, AHLV
Cascade, HSD, HMV, HLV, ApMV, AHLV
Nugget, HLV, ApMV,ALHV
Magnum HMV, HLV, ApMV, AHLV


Mt Rainier, HMV CP
Nugget, HsVD, HLV, ApMV, AHLV CP
Cascade CP
Cascade, CP
Chaos CP
Magnum, HMV, HLV, AHLV
Rakau CP
Centennial CP
Pine Meadow Rd
Pine Meadow Rd
Pine Meadow Rd
Pine Meadow Rd
Pine Meadow Rd
Google

Oregon State University

Extension Service - Botany and Plant Pathology
Oregon State University
1089 Cordley Hall, 2701 SW Campus Way
Corvallis, Oregon 97331

P 541-737-3472 | F 541-737-2412
http://plant-clinic.bpp.oregonstate.edu/

# Plant Clinic Diagnostic Service

**Date:** **November 9, 2018**

**Plant clinic number:** **2018-1695**

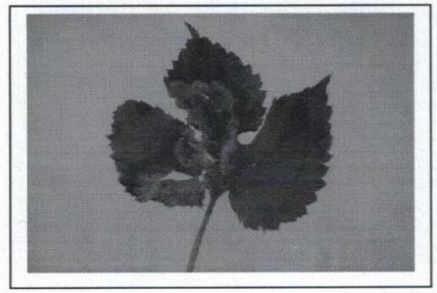
**Client:** Four Star Farms, Inc.
496 Pine Meadow Rd.
Northfield, MA 01360

**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

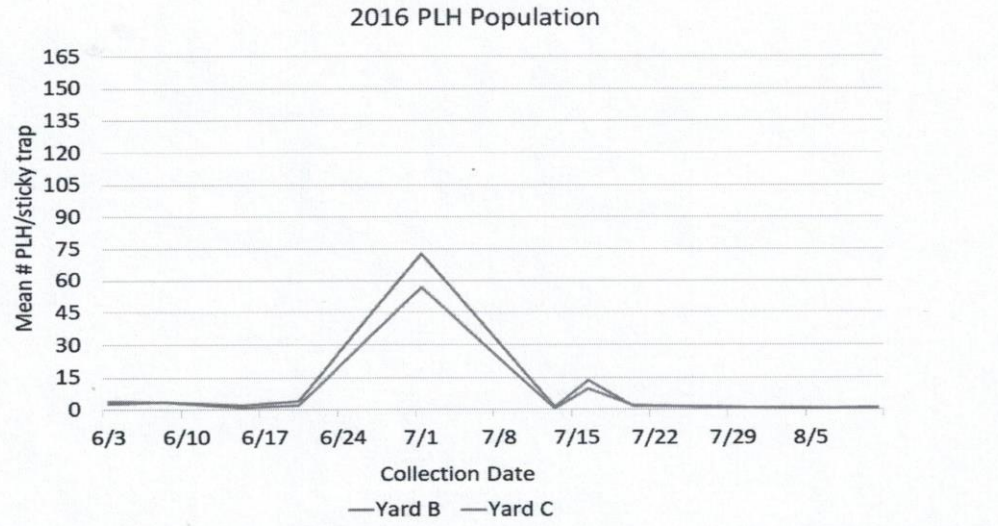



**Figure 1.** Mean number of potato leafhoppers (PLH) in hop yards B and C in 2016 by collection date. The mean number of PLH per sticky trap, regardless of location or hop variety was slightly higher in yard B.

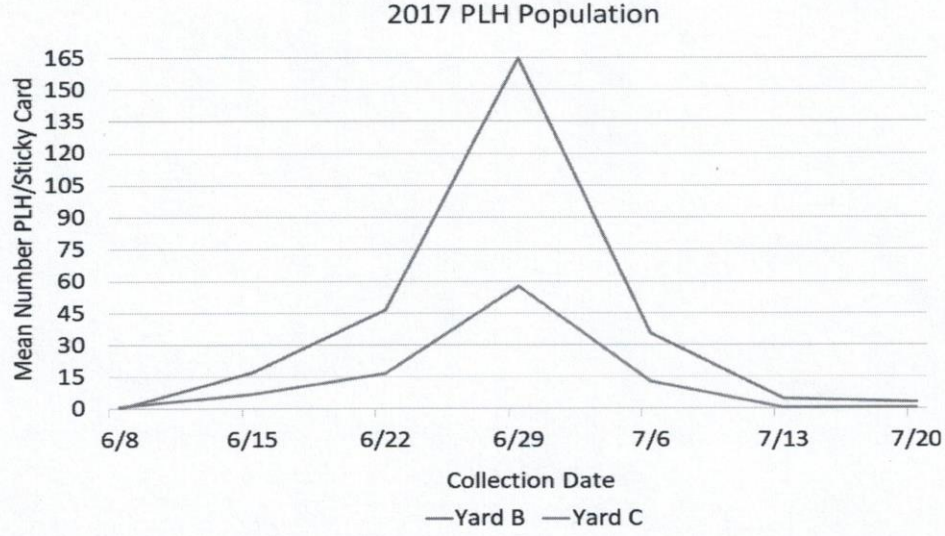



**Figure 2.** Mean number of potato leafhoppers (PLH) in hop yards B and C in 2017 by collection date. The mean number of PLD per sticky trap, regardless of location or hop variety was significantly higher in yard B ($P<0.05$).