



Potato leafhopper, *Empoasca fabae* (Harris), in Northeastern Hopyards

Lily Calderwood, UVM Extension Ph.D. Candidate

Visit us on the web at www.uvm.edu/extension/cropsoil/hops

Severe injury to hop plants from potato leafhopper feeding has been observed in Vermont. Potato leafhoppers have an appetite for more than 200 broad leaf plants. This native leafhopper can arrive to northern Vermont anytime between late spring and mid June depending on weather. Adults overwinter in southern states. Spring wind currents carry the 1/8th inch long, green, wedge shaped leafhoppers north.

Adults are winged while nymphs do not have wings (Figure 1). Adults land in hopyards to feed and lay eggs in hop leaf and stem tissue. Please be aware that the yellow spots on the underside of hop leaves are not insects. They are lupulin glands of the hop leaf. Potato leafhopper movement is a signature side-to-side scuttle. Depending on spring arrival time and temperature potato leafhoppers will have 2 or 3 generations per season at northern latitudes.



Figure 1. Potato leafhopper nymphs

Potato leafhopper damage is necrosis of the leaf where the outer edges and tip of the leaf turn

yellow and then brown, forming a distinctive “V”. This damage is

called “hopperburn” (Figure 2). This pest feeds with piercing-

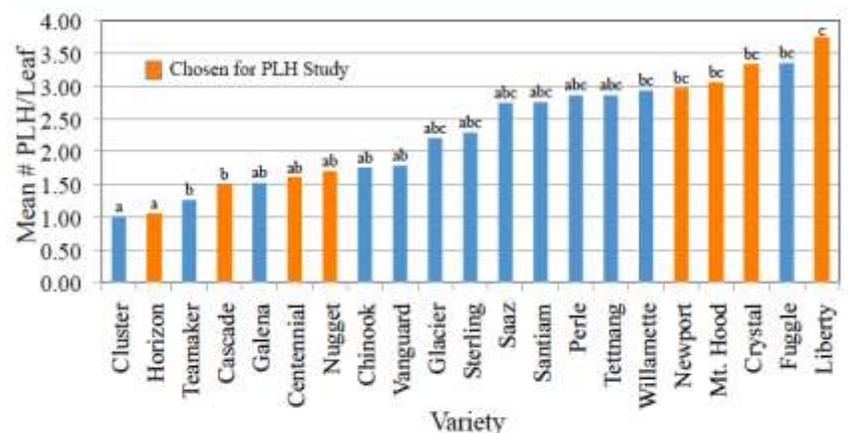
sucking mouthparts on leaf tissue and stem phloem. The first sign is yellowing of the leaf at the tip followed by necrosis and leaf curling. These symptoms are the result of the plant shutting down photosynthesis in the leaf as a response to leafhopper feeding. Potato leafhoppers move rapidly from side-to-side movement is their signature.

Potato leafhopper populations have not been severe in 2014 yet 2012 and 2013 exhibited very high populations in hops. The NW Crops and Soil Team is researching hop varietal susceptibility in first year hops. Under an EPA grant we hope to establish an economic threshold specific to hops and understand which varieties are more or less susceptible to PLH damage.



Figure 2. Potato leafhopper damage called “hopperburn”

Hop variety trial 2012 and 2013 mean # potato leafhoppers (PLH)/leaf



Varieties that share a letter were not significantly different from each other (p = .05).