



Hop Aphid, *Phorodon humuli* (Schrank), in Northeastern Hopyards

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Hop aphids are an economically damaging pest of hops. The cooler start to the 2013 growing season, followed by the wet conditions of this summer, have fostered ideal hop aphid habitat. Hop aphids are pear shaped and range from yellow to light green in color. These soft bodied insects are found on the underside of hop leaves. Immature individuals are wingless (Figure 1.) while adult females have wings (Figure 2). All



Figure 2. Adult winged female aphid (Photo courtesy of David Gent 2009)

hop aphid life stages are seen on hops. Hop aphids do not overwinter on hops but on an alternate host plant within the Prunus genus.

Hop aphids have piercing sucking mouthparts which are used to suck the phloem out of the plant. They secrete a sugary substance called “honey dew”. This substance when secreted

especially in hop cones, provides the perfect habitat for sooty mold fungi to grow. Plant productivity is reduced by aphid feeding on foliage yet the greater yield and quality problem that hop aphids cause is sooty mold. Aesthetic cone damage and decreased cone quality from sooty mold will diminish cone marketability. Often, hop aphid populations can be managed by an assemblage of natural enemy arthropods.

Aphid populations will be most successful on plant parts highest in nitrogen and in hopyards with higher levels of nitrogen (Gent et al. 2009). However, all hop plants need adequate amendments of nitrogen for growth (see [Fertility Guidelines for Hops in the Northeast](#)). The Pacific Northwest hop-growing region recommends an economic threshold of 8-10 hop aphid individuals per leaf. We do not yet have an economic threshold specific to the Northeastern region.

Management Tactics:

1. Scout your hopyard starting in early spring and continue through pre-harvest
2. Apply adequate but not excess nitrogen fertilizer
3. Control high aphid populations before or during early flower to avoid aphid inhabitation of the cones
4. Rotate sprays by chemical family to avoid aphid resistance

Natural Enemies of Hop Aphid:

Transverse lady beetle, (*Coccinella transversoguttata*)
 Convergent lady beetle, (*Hippodamia convergens*)
 Multicolored Asian lady beetle, (*Harmonia axyridis*)
 Seven-spot lady beetle, (*Coccinella septempunctata*)
 Green lacewing, (Family *Chrysopidae*)
 Brown lacewing, (Family *Hemerobiidae*)
 Minute pirate bug, (Family *Anthocoridae*)
 Big-eyed bug, (Family *Geocoridae*)
 Damsel bug, (Family *Nabidae*)

References:

Colin, A., Campbell, M., & Cone, W. (1994). Influence of Predators on Population Development of *Phorodon humuli* (Homoptera: Aphididae) on Hops. *Pest Management and Sampling* 23(6), 1391-1396.

Oregon State University, University of Idaho, U.S. Department of Agriculture, Washington State University, Gent, D., Barbour, J., James, D. (2009). *Field Guide for Integrated Pest Management in Hops* (Vol. 1).



Figure 1. Infestation of wingless hop aphids



Figure 3. Sooty mold in hop cone

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