

Pest Alert: Cannabis or bhang aphid

Phorodon cannabis



Oregon
Department
of Agriculture

Introduction

A new pest species for cannabis has been detected. *Phorodon cannabis*, known as the cannabis aphid, bhang aphid, or hemp aphid, feeds on cannabis. It is only known from two locations in Oregon (Portland and Estacada) at this time, but it is very likely that it is established and unrecognized at other facilities. The pest is established in much of Europe and Asia, North Africa, and it is known from Colorado in North America. It appears to be a recent arrival in Oregon, and it is in the interest of all growers of cannabis to slow its spread.

Pest Status

Cannabis aphid can stress plants, resulting in wilting and yellowing, and it can cause significant plant damage in some situations. The pest is a potential vector of viruses and other plant pathogens. There is some evidence that it may react differently to control programs compared to other aphid species. If you have this aphid, we recommend that you do not distribute infested plants.

Identification

Aphids have six legs, long antennae, a long sucking mouthpart, a bulbous soft body, and most notably, the species typically found on cannabis have two fairly long cornicles (see *Other Common Pest Aphids*). Typically, you will see wingless forms on plants, but aphids do produce winged forms.

Cannabis aphid varies from yellow to light green and usually has three green stripes that run the length of its body (Figure 1). The stripes can be difficult to see.

Look for two finger or horn-like extensions at the base of the antennae (Figure 2). If present, the pest is either cannabis or hop aphid. These structures should be visible with a 10x hand lens and good light.

Differentiating cannabis aphid from hop aphid (*Phorodon humuli*) is difficult. The hairs on the head, thorax, and basal antennal segments of cannabis aphid are swollen at the tip (Figure 3) while hop aphid's are not. A microscope is required to see this character.

Hop aphid is established in Oregon but has not been observed on cannabis. Unlike cannabis aphid, hop aphid overwinters on *Prunus* (plums, cherries, peaches, etc.) and returns to summer hosts such as hops in the spring.



Figure 1. Hop aphid is very similar to cannabis aphid. Green stripes are often faint and difficult to see.

Image by Claude Pilon 2012, bugguide.net/node/view/637027/bgpage

Field Identification

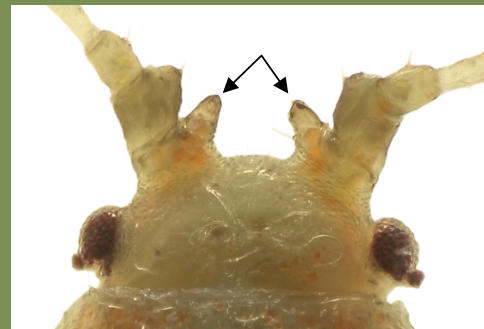


Figure 2. Horn-like extensions

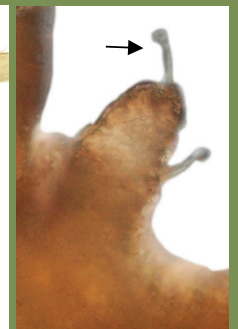


Figure 3. Hairs with swollen tips

Look for:

- Yellow to green aphids, sometimes with 3 green stripes
- Horn-like projections at the base of antennae
- Bulb tipped setae on the head, thorax, and base of antennae (microscope required)



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Control

Aphid control can be difficult due to their reproductive rate and ability to develop resistance. Some basic measures to consider for all aphids include: ensuring that you are starting with clean stock; ant control; and nutrient moderation.

Ant control: Aphids can be moved and protected by ants. Eliminate ants in greenhouses and prevent them from having contact with plants. This may be difficult in a field situation, but in greenhouses or other enclosed grow spaces, boric acid and sugar-based baits can be very effective. The feet of benches can be placed in cups of water or oil to prevent ants from climbing the legs.

Nutrient moderation: Aphids and other pests such as spider mites do especially well on plants that have excessive nitrogen fertilization. When fighting an infestation, it is best to reduce nitrogen fertilization to the minimum amount needed.

Chemical control: Hop and cannabis aphids are closely related, therefore control measures for hop aphid may be effective. The Pacific Northwest Insect Management Handbook recommends the following for the treatment of hop aphid. These products should be available for use on cannabis. Azadirachtin for early life stages, *Beauveria bassiana* and *Chromobacterium subtsugae* strain PRAA4-1 can be used at low population levels. Potassium salts of fatty acids are also an option. Always follow the label directions and check the *Guidelist for Pesticides and Cannabis* before using any pesticide product at <https://oda.direct/CannabisPesticides>.

Biocontrol: Control for established populations may also be accomplished through the use of predators. Effective and commonly available species are green lacewing, *Chrysoperla carnea*, aphid predator midge, *Aphidoletes aphidimyza*, and some ladybugs (larvae), such as *Hippodamia convergens*.

There are many other options available for aphid control. However, effective control methods are not known for Oregon. As knowledge is accumulated, we hope to update this document.

According to McPartland *et al* (2000) green lacewing should be applied as follows:

Infestation intensity per leaf (not leaflet)	# of lacewing larvae to place in trouble areas every week	# of lacewing larvae to place in surrounding areas every week
<10 aphids	25 per sq. meter	10 per sq. meter
11-50 aphids	50 per sq. meter	25 per sq. meter

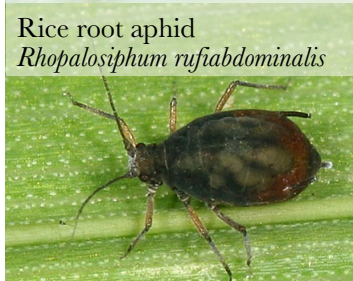
Other common pest aphids on cannabis



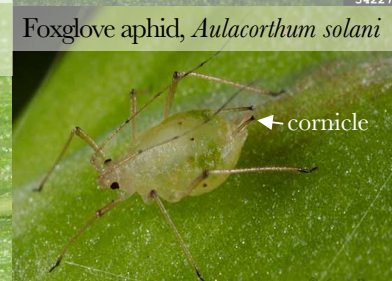
Black bean aphid, *Aphis fabae*



Green peach aphid, *Myzus persicae*



Rice root aphid
Rhopalosiphum rufiabdominalis



Foxglove aphid, *Aulacorthum solani*

Note reddish abdomen.

Rice root image by Tom Murray
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Foxglove aphid image by Claude Pilon
bugguide.net/node/view/484216
Green peach image by David Cappaert
Bugwood.org

References

- Hollingsworth, C.S., editor. 2017. Pacific Northwest Insect Management Handbook [online]. Corvallis, OR: Oregon State University. <http://pnwhandbooks.org/insect> (accessed 20 December 2017).
- McPartland, J. M., R.C. Clarke, and D. P. Watson. 2000. Hemp Diseases and Pests Management and Biocontrol. CAB International, United Kingdom. 251pp.

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