Pest Profile

(wingless root aphid)
Photo credit: Jim Kalisch, University of Nebraska-Lincoln

Common Name: Sugarbeet Root Aphid

Scientific Name: *Pemphigus populivenae*

Order and Family: Hemiptera, Aphidae

Size and Appearance:

	Length (mm)	Appearance
Egg		• are laid in the bark and other crevices of the primary host trees
Larva/Nymph	< 2.0 mm	• develop inside galls that form on the midribs of the leaves • similar to wingless adults
Adult	2.0 mm	• winged aphids have black heads and thorax, and the remainder of their body is green • wingless aphids are typically pale yellow, very broad, and oval shaped

Type of feeder (Chewing, sucking, etc.): Piercing-sucking

Host plant/s: The primary hosts are narrow-leaved cottonwood, black cottonwood, and balsam poplar, on which many individuals choose to overwinter. Secondary hosts include the roots of sugar beets, lambsquarter, pigweed, foxtail, dock, and some other species, which the aphids will feed and reproduce on for the majority of the growing season.

Description of Damage (larvae and adults):
On their primary host, they commonly cause gall formation along the midrib of the leaves. These galls can be very large and damage the aesthetics of these trees. Overall, the main issue with these pests is the damage it causes to sugar beet crops.

Symptoms on individual beet plants may include severe wilting. In crops of sugar beets, these aphids may greatly reduce yield by weight, and can reduce harvested sucrose by 50%. On secondary hosts, sugar beet aphids will only feed on the roots and not any shoot tissue. They generally feed on secondary roots but will feed on the taproot. This feeding can also prevent the plant from being able to take up water and nutrients.

References:

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