



Aphids

Pest Fact Sheet 19

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UNH Cooperative Extension Programs

	Community and Economic Development
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Introduction

Aphids, or plant lice, feed on most vegetable crops, many house plants and ornamentals grown in New Hampshire, as well as numerous weeds and wild plants. With their ability to reproduce quickly, aphids can become abundant rapidly. Aphids are of economic importance in three ways: 1) they suck sap from their hosts and inject a toxin causing plants to wilt, yellow, and often die; 2) some aphids transmit viruses that cause plant diseases; and 3) they excrete a sticky substance called "honeydew" upon which a black sooty mold can grow, which diminishes the aesthetic value of the plants.

Description

There are many species of aphids in New Hampshire. Many species are green, but they can be almost any color. Aphids are soft-bodied, about 1/16" to 1/8" in length. They have piercing-sucking mouthparts that are used to pierce plant tissue and remove sap. Aphids can be distinguished from other insects by the presence of (both) 1) piercing-sucking mouthparts and 2) two tube-like appendages (cornicles) near the posterior end of their abdomens. In some species, the cornicles are short, almost like buttons. Most species have both winged and wingless forms. Winged forms have two pairs of transparent wings, with many parallel or nearly parallel veins, and a thickened spot (stigma) 2/3 to 3/4 of the way to the wing tip.

The insects give birth to live young, but can produce eggs in the fall. Eggs are tiny, oval, black, and are attached to the underside of leaves, to stems, and within crevices of most host plants.

Life Cycle

Most aphids overwinter as eggs on perennial plants or in plant debris, but some also overwinter as adult females. In spring, nymphs emerge from the eggs and quickly develop into adults. These adults are wingless females called "stem-mothers" and have the ability to give birth to living young without mating. Within a two-week period, one



Adult green peach aphids. Credits: Jim Baker, North Carolina State University, Bugwood.org.



Wingless females called "stem-mothers" have the ability to give birth to living young without mating.



Immature greenhouse aphids. Credit: Jim Baker, North Carolina State University, Bugwood.org.

Did You Know?

Encouraging ladybugs can provide additional protection against aphids.

female can produce 50-100 active nymphs. Some of these females called "spring migrants" develop wings and fly to alternate hosts for summer where they begin new generations.

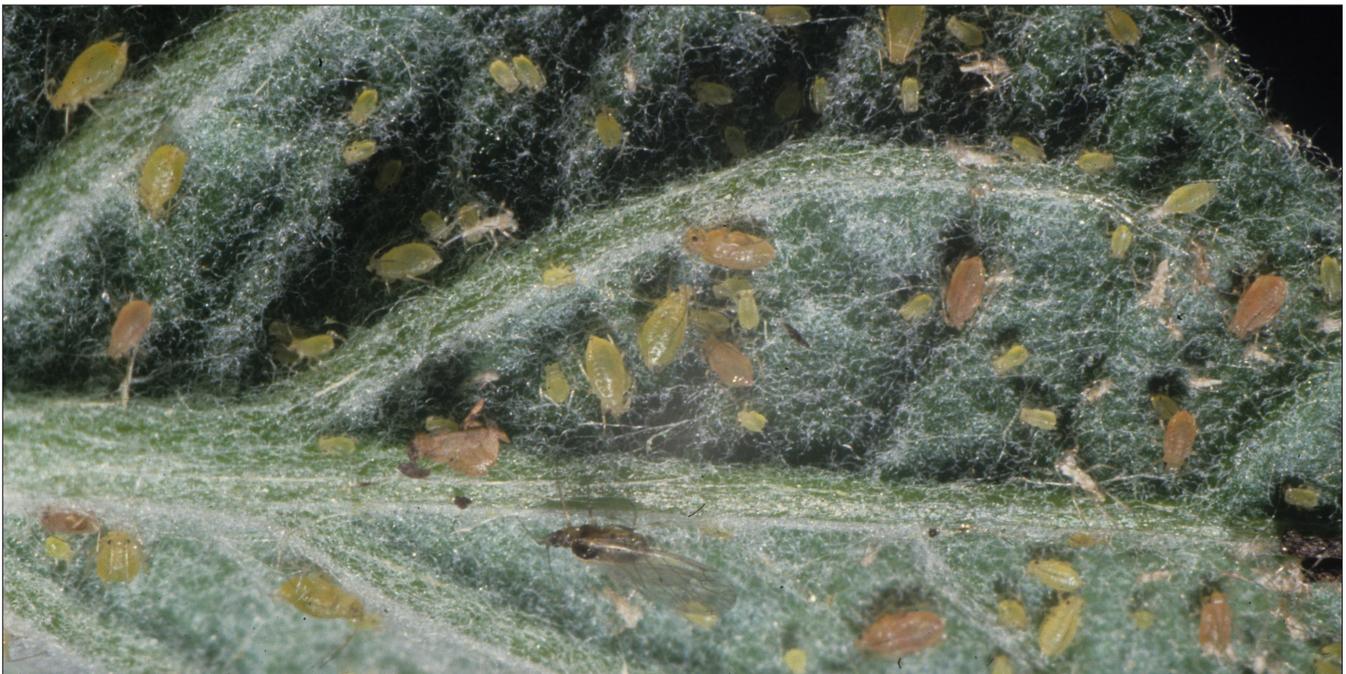
As the cold weather approaches, both males and females develop wings and return to perennial plants. The females once again produce live nymphs but these female nymphs, once reaching maturity, cannot reproduce unless mating occurs. Once mating occurs, females deposit eggs in an overwintering sites.

Management

IPM Strategies:

- **Monitoring** — Look for signs of aphid presence such as white cast skins on plant surfaces, honeydew, ant activity on plants, and winged adults on yellow sticky cards.
- **Sanitation** — Eliminate all weeds within and around the crops. Avoid planting susceptible cultivars.
- **Biological Control** — There are many naturally-occurring predators and parasites. Occasionally they can control the aphids if we do not kill the natural enemies with insecticides. In some situations, they cannot keep numbers low enough for commercial crop production. In enclosed spaces (greenhouses, high tunnels) there are commercially-available natural enemies, such as ladybird beetles, lacewings, parasitic wasps, and predaceous midges.
- **Chemical Control** — A number of insecticides are available for aphid control. Organic growers have insecticidal soaps and fungal insecticides. Neem and pyrethrins are not very effective. Make sure you select an insecticide that is registered for use on the crop you plan to use it on. Follow the label! All pesticides have the potential to damage sensitive crops. To be safe, apply to a few plants first.

Consult your county Agricultural Field Specialist for specific recommendations.



Green peach aphid infestation. Credits: Jim Baker, North Carolina State University, Bugwood.org.

Summary

Table 1 summarizes key information about aphids.

Table 1: Summary

Summary Table	
Damaging Stages	Nymphs and adults
Part of Plant Attacked	Leaves and stem tissues, flower parts
Overwintering Stage	Outdoors in New Hampshire as eggs (some as adults)
Time of Year When Damage Is Done	Entire growing season
Number of Pesticide Applications for Control	Variable, depends upon infestation and crops

Notes: Refer to the text for more thorough information on aphids.

Stop! Read the label on every pesticide container each time before using the material. Pesticides must be applied only as directed on the label to be in compliance with the law. All pesticides listed in this publication are contingent upon continued registration. Contact the Division of Pesticide Control at (603) 271-3550 to check registration status. Dispose of empty containers safely, according to New Hampshire regulations.

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