



#203

Maine Potato IPM Program

GREEN PEACH APHID

Myzus persicae (Sulzer)

POTATO APHID

Macrosiphum euphorbiae (Thomas)

DESCRIPTION

GREEN PEACH APHID (GPA)

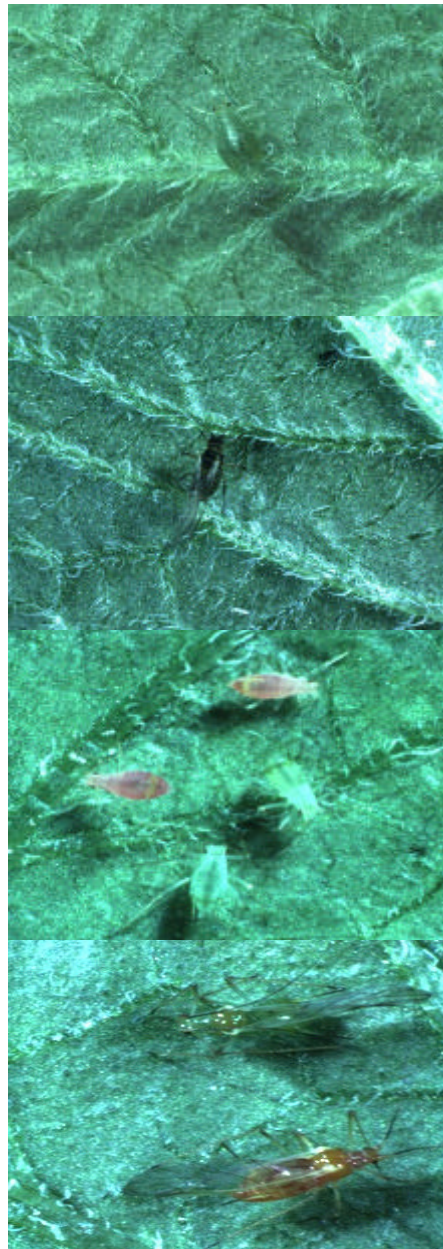
The body of the wingless green peach aphid (GPA) is basically egg-shaped with a small projection called a cauda at the tip of the abdomen (Figure 1). The GPA is usually light green in coloration but occasionally may be pink or peach. Above and on either side of the cauda are two projections called cornicles, which are slightly swollen on the apical half and have darkened tips. Each of the antennae has an inward-pointing projection (tubercle) at its base.

The abdomen of the winged GPA is green, or occasionally pink, with a central darkened patch. The thorax is green with a dark green to black dorsal plate (Figure 2).

LIFE CYCLE

In late spring the GPA migrates from its primary or overwintering host to one of its summer or secondary hosts – potato plants. Once on the potato, the female continues to produce live females without mating with a male aphid. During the summer months, the aphid population continues to build. In late summer winged adults, both male and female, are produced. The winged aphids fly from plant to plant, probing each with their beaks.

The constant probing is an efficient way for the aphid to transfer viruses from infected plants to healthy, susceptible plants. The GPA is the major vector of leafroll virus in potatoes in Maine, and it may also transmit other viruses that cause potato mosaic.



In the fall, winged males and females leave the summer host and fly to an overwintering host. This host is usually some member of the peach family. In Maine the usual overwintering host is the Canada Plum, *Prunus nigra* Aiton. The GPA may also reproduce on greenhouse plants year-round. Once the aphids have found a suitable overwintering host, the winged females produce sexual females, which will mate with the winged males and lay small, black eggs on the host.

In spring the eggs hatch into an aphid known as a stem mother. This stem mother then starts producing live females. Two or three generations will occur on the overwintering host before the winged forms are produced, which then migrate to the potato plants.

DESCRIPTION

POTATO APHID (PA)

The body of the wingless potato aphid (PA) (Figure 3) is somewhat elongated and wedge-shaped, with the cauda much more pronounced than is the case with the GPA. The length of the cauda is about one-third as long as the cornicles, but both extend about the same distance past the tip of the abdomen. Coloration is from green to yellow, with a pink form also very prevalent. The cornicles are about one-third the length of the body and are curved slightly outward.

The body of the winged PA is pink or green to yellow in coloration (Figure 4). The antennae have outward-projection tubercles. The cornicles are quite long (Figure 5).

LIFE CYCLE

The PA is the largest of the potato-infesting aphids, reaching a length of nearly an eighth of an inch. Its life cycle is basically the same as that of the GPA.

In late spring winged aphids migrate from the overwintering host to potatoes. Several generations occur on the potato before the sexual, winged males and females are produced in late summer. These winged forms fly from plant to plant, probing the leaves with their beaks. While probing, the PA, like the GPA, may occasionally transmit the viruses that cause leafroll and mosaic.

The sexual, winged males and females search out an overwintering host, usually in the rose family. In

Maine the usual overwintering host is the Swamp Rose, *Rosa palustris*. Once the suitable host is found, the small, black, overwintering eggs are laid. In the spring the stem mothers hatch to start the cycle all over again.

MONITORING TECHNIQUES

Non-winged aphid populations are monitored by field scouting.

Winged aphids are attracted to yellow. For this reason, the trap used is a yellow pan 9" x 13" or larger, filled about three-quarter full of water (Figure 5). The aphids fly to the pans, land in the water and drown. The numbers and species from both methods can be recorded. Once the aphid populations are known, control measures based on winged formation may be taken if necessary. Also, the time to kill the potato vines to stop virus spread can be determined.

CONTROL

If a sizeable area of potatoes is to be planted, an application of a systemic insecticide at planting may be used to help keep large aphid populations from developing early in the season. Later, a lay-by systemic pesticide application or a foliar application may be needed. For the latest insecticide recommendations, contact your county Cooperative Extension office.

Insecticides may also be used on potato plantings in small gardens. If virus disease is not a problem, establishment of predators such as lady beetles, lace-

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If you require additional information, please contact Potato IPM Program, UMCE, P.O. Box 727, Presque Isle, ME 04769 or Pest Management Office, 491 College Ave., Orono, ME 04469-1295.

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