

**Aphids** (Order: Homoptera, Family: Aphididae)

**Potato** (*Macrosiphum euphorbiae* (Thomas))

**Green peach** (*Myzus persicae* (Sulzer))

While several species of aphids can occur on fruiting vegetables, the most frequent species of concern on these crops is the green peach aphid, and potato aphids can occur in the spring in southern Georgia.

**Description:**

*Adult:* Green peach aphid: Winged (alate) adults have a black head and thorax and a yellowish-green abdomen with a large dark patch in the middle of the abdomen as viewed from above. They measure about 2 mm in length. A key characteristic that separates GPA from other species of aphids found on vegetables are rounded projections at the base of the antennae (tubercles) that point toward the midline of the head. These projections are found on all stages. Wingless adults are yellowish, greenish, or reddish. The cornicles are long and colored similar to the body. Potato aphid: The adults vary in appearance, occurring in a green or pink form. The wingless adult is 3-4 mm long, and the typical form in Georgia in the spring is the pink form. The base of the antennae is smooth, unlike the green peach aphid.

*Immature stages:* Nymphs are very similar to wingless adults in shape and color, but are smaller. Unlike most aphids, green peach aphids do not tend to form large colonies, but will generally be more evenly distributed across leaves. The pink form of the potato aphid is common in the spring in Georgia.

**Biology:**

*Life cycle:* In northern climates, the life cycle of the GPA is very complex with winter hosts and summer hosts. In vegetable crops in Georgia, winged adults invade fields and can do so throughout the production seasons. Both winged and wingless adults give birth to live young without mating (parthenogenic reproduction) on vegetable crops. Under favorable conditions, the aphids develop through 4 or 5 instars in about 1 week and give birth to offspring shortly thereafter, with generation time as short as 10 to 12 days. Females are reported to produce 1.6 to 3.75 nymphs per day over a 15 to 20 day reproductive cycle. The potato aphid life cycle is similar.

*Seasonal distribution:* Green peach aphids can invade fruiting vegetables throughout the spring and fall production season, but typically are more of a problem in cooler parts of the fall season. In the spring, potato aphids disperse off of winter crops such as kale and spinach to solanaceous crops.



Pink form of potato aphid (image from The University of Florida).



Green peach aphid nymphs, adults, and parasitized mummies (golden brown globes).



Coccinellid larva feeding on the green form of potato aphid on pepper.

**Damage to Crop:**

Green peach aphids can build large populations on a variety of crops. On young plants they can cause wilting and stunting. At harvest they can represent a contaminant both through their direct presence and through production of honeydew which gives rise to sooty mold. In many crops, their greatest threat is transmission of viral diseases. This species transmits over 100 plant viruses, with both persistent and non-persistent transmission. Both adults and nymphs can transmit viruses, but winged adults are of greatest importance because of their mobility.

**Management:**

Green peach aphids are generally controlled with application of insecticides; however, insecticide resistance has been widely documented in this species. The red phase of this pest is reported to generally be more difficult to control. Potato aphids are often controlled by the natural occurrence of predators such as coccinellid larvae.