

# Aphids

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**Green apple aphid, rosy apple aphid, apple grain aphid, and wooly apple aphid** may be found in Minnesota apple orchards.

Most aphids have several generations (up to four) per year in the upper Midwest, as well as multiple hosts including apple, pear, other fruits, grains, and many nonagricultural plants.

Adult aphids can occur in wingless (apterous) or winged (alate) forms. Most orchard aphids are likely encountered in the wingless form. Winged adults are mainly produced for migration to other hosts, in response to crowding, or poor host quality.

## Green Apple Aphid (*Aphis pomi*)

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*Wingless adult GAA*



*Winged adult GAA*

■  
2.5 mm

**Wingless adult** green apple aphids (GAA) are light green with black cornicles, legs, and antennae tips. Body length is about 2.5 mm. **Winged adults** have a black head and thorax, and a yellow-green abdomen.

GAA overwinter as black oval-shaped eggs, similar to the overwintering eggs of rosy apple aphid (RAA). **Young nymphs** begin to appear in the orchard around the green tip stage. **Mature nymphs** are green, about 1.5 mm long. GAA prefer to feed on the underside of leaves.

## Rosy Apple Aphid (*Dysaphis plantaginea*)

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*RAA adults and nymphs*

**Wingless adult** rosy apple aphids (RAA) are rosy brown or pinkish, about 2 mm long, and have long cornicles. **Winged (migrant) adults** are brownish-green to black, also about 2 mm long.

■ 2 mm

RAA overwinter as black, shiny, oval-shaped **eggs** deposited near the base of twigs or around leaf scars. **Young nymphs** begin to appear in the orchard very early in the spring. Up to 3 or more generations can occur per year in Minnesota.

## Woolly Apple Aphid (*Eriosoma lanigerum*)

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Picture source: MSU



*WAA colony*

**Wingless adult** female woolly apple aphids (WAA) are dark brown to purple, and are enclosed in a white filamentous waxy secretion that looks like cotton fibers. Body length is about 2.5 mm. Males are lighter (olive-yellow) and smaller.

■ 2.5 mm

WAA typically occur in clusters around wounds on apple trunks and branches. They are also found on root knots and underground parts of the trunk. WAA overwinter as adults on roots and tree trunks. **Nymphs** are reddish-brown with a white waxy covering. **Young nymphs** are active in the orchard beginning in June. WAA feeding may result in gall formation on tree trunks and roots.

## Apple Grain Aphid (*Rhopalosiphum fitchii*)

**Adult** apple grain aphids (AGA) are yellowish-green with a dark line running down their backs and four or five cross lines of the same color. **Nymphs** are dark-green when newly hatched, changing to yellowish-green as they mature.

AGA do not feed on the fruit. They begin to migrate out of the orchard after petal fall, hence control is not necessary.

	RAA	GAA	AGA
<b>Color</b>	Rosy brown to reddish-pink	Light green	Yellow-green with a dark line on the back
<b>Shape</b>	Elongate, elliptical	Roundly egg-shaped	Roundly elliptical
<b>Antenna</b>	Longer than body length	Shorter than body length	Shorter than body length
<b>Cornicle</b>	Elongate, tapered	Elongate, tapered	Short, parallel-sided

### *Distinguishing between apple aphids (wingless forms)*



*Aphid feeding on leaf underside*

**Aphid feeding injury** can occur on leaves and fruit. Leaves will curl and sometimes discolor.

Aphid feeding on leaves around the fruit cluster can result in curled leaves, fruit stunting, and malformation. Large populations of aphids will produce honeydew which can collect on the fruit, providing a good environment for the growth of the sooty mold fungus. Sooty mold can affect fruit finish and may lead to russetting.



*Curled leaves*

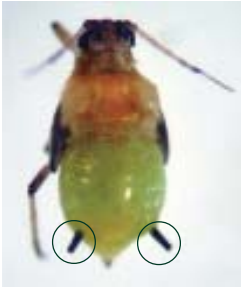


*Picture source: MSU*

*Russetting around an apple stem*



*TPB nymph  
(with no cornicles)*



*Aphid with cornicles  
(circled)*

Tarnished plant bug (TPB) young nymphs may be confused with aphids. Aphids move more slowly than TPB nymphs.

Aphids also have cornicles (or tail pipes) which extend from the rear of their abdomen (circled in the picture). Cornicles are absent in TPB.

Aphids are monitored by examining leaves or leaf clusters for infestation. Natural enemies usually help control aphids.