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Getting to Know the Aphids in Corn

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Getting to Know the Aphids in Corn

Abstract

There have been reports of aphids feeding on lower corn leaves this week. In July, I wrote an ICM article about corn leaf aphid thresholds prior to tasseling; however, there is still some concern about economic loss in August. People have noticed aphids moving down the plant and forming colonies on the stalk. Many are wondering if they are corn leaf aphids or something else? There are at least two different species that can be found in corn this time of year, but the identification may not be critical to management.

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Getting to Know the Aphids in Corn

By Erin Hodgson, Department of Entomology

There have been reports of aphids feeding on lower corn leaves this week. In July, I wrote an ICM article about [corn leaf aphid thresholds](#) prior to tasseling; however, there is still some concern about economic loss in August. People have noticed aphids moving down the plant and forming colonies on the stalk. Many are wondering if they are corn leaf aphids or something else?

There are at least two different species that can be found in corn this time of year, but the identification may not be critical to management.

General Description. In general, aphids are soft-bodied and pear-shaped insects with walking legs. Usually they are wingless, but migratory, winged forms can be generated throughout the summer. The main diagnostic feature of aphids is a pair of cornicles that resemble tailpipes, towards the end of the abdomen. All aphids have a piercing-sucking stylet and feed on plant phloem.

Damage. Aphids excrete a sugar-rich honeydew that can promote a sooty mold which can reduce photosynthesis. Some aphids are capable of vectoring plant diseases. Those species that vector disease are considered more economically important because low aphid densities can reduce quality and yield. Heavily infested plants will be discolored and stunted, and have curled and mottled leaves.

Corn leaf aphid. This species prefers sorghum, but will also feed on corn, barley, millet and many different grasses. These aphids are more rectangular, or box-shaped, compared to other aphids. They are dark olive-green or blue-green in color, and sometimes cover themselves in a protective wax. The antennae are dark and short, and the cornicles are short, dark and surrounded by a dark patch. Adults range from 0.9-2.44 mm in length. Corn leaf aphids cannot overwinter in Iowa, but migrate on jet streams here every year.



Corn leaf aphids have pear-shaped bodies that are more typical of aphids.

Bird cherry-oat aphid. This species prefers wheat, barley, oats, rye, and triticale, and is less commonly found forming colonies in corn. Their body shape is pear-shaped and is more typical of aphids. They can be variable in color, ranging from yellow-green, olive-green or black. Often they have a rusty colored patch around the cornicles. The antennae and cornicles are dark and average length. Adults range from 1.2-2.4 mm in length. Bird cherry-oat aphids have the potential to overwinter on chokecherry in Iowa.



Bird cherry-oat aphids are yellow-green or dark green in color and have round bodies.

Management. Scouting for either aphid species should start before tasseling - probably too late for that this year. Corn leaf aphids generally start colonies deep within the whorl. Stop at five locations and examine twenty plants. Examine the ear, leaves and stalk. Use a hand lens and look for an orange patch between the cornicles to distinguish the species. Take note of beneficial insects (e.g., ladybeetles and lacewings) and/or parasitized mummies; consider not treating aphids if more than 20 percent are parasitized.

Spraying corn for aphids deep in the whorl is not effective. Treating for aphids

after tasseling is usually not a cost-effective management decision because aphid populations will decline naturally. A well-timed spray while aphids are outside the whorl or on the tassel is recommended when they exceed thresholds. Corn plants can be particularly sensitive to aphid feeding if they are drought-stressed. If 50 percent of the plants have more than 100 aphids per plant, tassels are coated in honeydew and plants are under drought stress, treatment may be justified. There are several [products registered in Iowa for corn leaf aphid \(Table 1\)](#). Follow label directions and pay attention to spray guidelines.

Erin Hodgson is an assistant professor of entomology with extension and research responsibilities. She can be contacted by email at ewh@iastate.edu or phone (515) 294-2847.

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