Corn Leaf Aphid

Rhopalosiphum maidis (Fitch)



Appearance and Life History

The corn leaf aphid sucks sap from plants and deposits a sticky substance called "honeydew," which can become moldy. Corn leaf aphids infest cultivated grasses, such as corn, as well as many grassy-type weeds.



Adults and nymphs Photo by J. Obermeyer



Adults and nymphs Photo by B. Christine

The corn leaf aphid is a blue-green or gray, softbodied, spherical insect about the size of a pinhead [1/16 inch (1.6 mm) in length]. Female corn leaf aphids give birth to living young, called nymphs. Nymphs resemble the adults, but are smaller and sexually immature.

Most corn leaf aphids are wingless. However, as populations increase, some develop delicate, filmy wings that enable them to fly to uninfested plants to start new colonies.

Corn leaf aphids do not generally appear until mid-June or early July. They migrate each year into the mid and upper Midwest from southern areas of the USA.

Damage

Heavily infested corn leaves may wilt, curl, and show yellow patches of discoloration. When tassels and silks are covered with honeydew, pollination may be disrupted. Excessive aphid feeding within the whorl prior to tassel emergence may cause incomplete kernel development and/or barren ears.

Sampling Method

Initiate sampling for corn leaf aphids approximately 3 weeks prior to tasseling.

Prior to Tasseling

- In 5 areas of a field, randomly select 4 nonconsecutive plants, 10 to 15 paces between each plant.
- Pull the whorl upward and out of the plant. Unroll each whorl, counting and recording the number of aphids found.
- Total the number of aphids found on the 20 whorls and determine the average number of aphids per plant.



Infested tassel stressed from aphid feeding Photo by J. Obermeyer

During Pollen Shed

- Examine 20 consecutive plants randomly selected in each of 5 areas of the field for aphids and honeydew on the tassels.
- Calculate the percentage of plants with aphids and honeydew.
- Determine the status of pollen shed and ear pollination.

Management Guidelines

Corn Insect Control Recommendations: E-series 219-W (PDF)

Prior to Tasseling – Many insecticide options are effective, but timing is key. Corn leaf aphid control is most effective 2 to 3 weeks prior to tasseling. It is rarely advisable after this period.

During Pollen Shed - If greater than 50% of the tassels are covered with aphids and their honeydew prior to 50% completion of pollination and the plants are under stress, treatment may be needed if the amount of pollen being shed is insufficient for good pollination. Remember, there is normally an overabundance of pollen produced in a field.



If aphid predators such as lady beetles (adults and larvae) and lacewing larvae, and/or parasitized aphids (mummified, grayish-brown and balloon like), or diseased aphids (yellow to brown and "fuzzy") are numerous, control is probably not warranted.



Syrphid fly larva among aphids Photo by J. Obermeyer



Diseased aphids Photo by J. Obermeyer



Lady beetle larva feeding on aphids Photo by J. Obermeyer



Parasitized aphid mummy Photo by J. Obermeyer