Corn leaf aphids may damage corn

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Abstract
Ron Bellcock (Rod's Fertilizer, Galva, Iowa) reports finding cornfields with 20-25 percent of the tassels heavily covered with corn leaf aphids. In past years, I have seen fields with large populations that caused sufficient damage to make approximately 5 percent of the corn plants barren. Aphids do not interfere with pollination unless nearly all corn tassels are heavily covered with aphids and their honeydew secretions. Feeding by large colonies of aphids can reduce yields significantly. Aphid colonies can slowly kill the tassel and top few leaves of a corn plant. The plant responds by shunting nutrients to the feeding area and not to the developing ear, resulting in stunted ears or even barren plants.

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Aphids do not interfere with pollination unless nearly all corn tassels are heavily covered with aphids and their honeydew secretions. Feeding by large colonies of aphids can reduce yields significantly. Aphid colonies can slowly kill the tassel and top few leaves of a corn plant. The plant responds by shunting nutrients to the feeding area and not to the developing ear, resulting in stunted ears or even barren plants.

Corn tassel and upper leaves killed by corn leaf aphids.

Enlarge [1]

Corn leaf aphids on a corn tassel.

Enlarge [2]

Corn ears from plants with no aphids (left) or plants with moderate-to-heavy aphid populations (right).

Enlarge [3]
Assessing the potential for aphid damage involves determining how dense the aphid populations are on individual plants and how prevalent the infested plants are in the field. Estimated economic thresholds for treatment have been developed for corn leaf aphid based on yield prospects, anticipated corn market price, and intensity of infestation. Most damage from the aphids occurs just before and during pollination, and scouting is critical. You cannot easily treat aphids while they are protected in the whorl, even though they cause losses. Light infestations can develop into moderate or severe infestations within a week or two. Repeated scouting is needed as tassels emerge and shortly thereafter.

The decision to treat or not depends on considerable subjective assessment about the intensity of aphid infestations. Within the same field, you can have plants infested with different-sized populations of aphids. Space limitations do not allow a complete discussion of economic thresholds and management decisions for this pest. More information on corn leaf aphids is available here [4].

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