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What's next for Stewart's disease?

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What's next for Stewart's disease?

Abstract

Seedling infection by Stewart's disease (greater than 30 percent) has been reported in some southern Iowa fields planted to field corn. The disease also was reported by Iowa State University field specialists-crops in field corn in central and northern Iowa. Stewart's disease is spread by overwintering flea beetle adults as they feed on corn seedlings. Overwintering flea beetle populations have declined, so questions are focused on what happens next. This article gives some questions and answers about Stewart's disease as the growing season progresses.

Keywords

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Disciplines

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INTEGRATED CROP MANAGEMENT

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Leaf symptom of Stewart's disease.

[Enlarge](#) [1]

Will Stewart's disease develop beyond the seedling stage?

This disease has two phases. In the first phase or seedling phase, infected plants rapidly wilt from systematic infections. Some infected plants may survive but they are stunted. The second phase is foliar blight. This phase is more common and usually develops after corn tasseling; it is spread by subsequent generations of flea beetles. Economically, the foliar blight phase is not as damaging as the seedling phase.

Will late infection cause wilting?

It is rare that infections beyond the seedling stage develop systemically and cause plants to wilt. After the seedling stage, foliar blight symptoms are typical. Lesions start from flea beetle feeding scars. These lesions extend along the veins as gray or yellow streaks. If the corn is susceptible, infected leaves may eventually die.

What yield losses can foliar blight cause?

For field corn, I am not aware of any literature that addresses foliar blight damage by this disease, probably because it rarely causes damage in field corn. Defoliation by Stewart's disease, however, can weaken plants and increase the likelihood of stalk rot. In inbred lines and sweet corn, foliar blight can cause significant yield losses.

What to do next?

The best time for controlling this disease is when the overwintering flea beetle [2] population is spreading the disease. However, this time has passed. No data are available to establish economic thresholds for Stewart's disease damage in the foliar phase on field corn. Because most damage occurs at the seedling stage, the worst may be over.

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<http://www.ipm.iastate.edu/ipm/icm//ipm/icm/2000/6-26-2000/nextstew.html>

Links:

[1] <http://www.ent.iastate.edu/imagegal/plantpath/corn/stewardsdis/stewilt2b.html>

[2] <http://www.ent.iastate.edu/imagegal/coleoptera/fleabeetle/0212.97fleabeetle.html>

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