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Corn stalk rots taking a bite

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Corn stalk rots taking a bite

Abstract

During the past 2 weeks, the appearance of many cornfields has begun to deteriorate, and many plants are now dead. I have inspected several fields in western and southern Iowa and found that stalk rots are common in fields with prematurely dead plants. With early planting this year, we expect the crop to be ahead of the normal maturity schedule, but it's clear that many plants are dying prematurely, in response to a combination of dry late-season conditions and stalk rots.

Keywords

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Disciplines

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INTEGRATED CROP MANAGEMENT

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Anthracnose symptoms on stalk rind.

[Enlarge](#) [1]

As usual, in fields affected by stalk rot, it is possible to find a variety of stalk rot pathogens. But this year, **anthracnose** clearly appears to be the most common stalk rot disease. Anthracnose is caused by the fungus *Colletotrichum graminicola*. This fungus can attack corn plants at different stages, causing leaf blight and crown rot of seedlings, and leaf blight, stalk rot, and top dieback of adult plants. The stalk rot can be identified by the appearance of shiny black blotches or streaks on the stalk rind, and sometimes by the appearance of gray mycelium (mold) in the deteriorated stalk pith.



Internal stalk symptoms of anthracnose.

[Enlarge](#) [2]

Anthracnose top-dieback

This is a phase of the anthracnose disease that is less common than the typical stalk rot that occurs at the stalk base. With top dieback, the plant dies from the top down, with the upper leaves turning yellow or reddish purple, and then drying out. When these leaves are removed or fall off, typical black anthracnose lesions can often be seen on the outside of the upper stalk. If the stalk is split, the pith appears rotted in the upper internodes. The fungus infects through the whorl earlier in the season and remains dormant in the stalks until late in the season, or it infects through leaf sheaths. Late-season stress triggers the development of the symptoms. Not all top dieback is caused by anthracnose.

Anthracnose and other stalk rots

Some plants are dying because the base of their stalk is rotted by *C. graminicola*, *Gibberella*, or *Fusarium*. When the stalk base is rotted, the whole plant wilts and dies suddenly. To see the symptoms, you may need to split the stalk all the way to the base, below the soil line. In this case, the fungi have entered through the roots or through injuries caused by insects or hail. The onset of these stalk rots is also stress related. Moisture stress is the most common contributor, but leaf damage due to hail, rust, gray leaf spot, or Stewart's disease also may be involved.

Obviously there is nothing that can be done now to prevent premature death. However, plants with stalk rot are very vulnerable to lodging and it's clear that the combine should be ready to go a little early this year to prevent additional losses. Stalk rot prevention depends on hybrid selection, crop rotation, insect control, and avoidance of stresses due to fertility and moisture as much as possible. For more details, see Corn Stalk Rot in Iowa, ISU Extension publication IPM 50. This detailed bulletin also contains control recommendations. It is available from the Extension Distribution Office, Printing and Publications Building, Iowa State University, Ames, IA 50011, (515) 294-5247, pubdist@exnet.iastate.edu [3]. Single copies of this are free.

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[2] <http://www.ent.iastate.edu/imagegal/plantpath/corn/anthracnose/0796.84intanthrac.html>

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