8-19-2002

Time to start scouting for corn stalk rot

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Abstract
In the late part of the growing season, it is time to pay attention to stalk quality. Some fields will be at high risk for stalk rot this year due to drought stress or wind damage that has already occurred. Watching these fields closely could prevent further losses due to lodging. Scouting should be done before black layer, approximately 40-50 days after pollination. While scouting for stalk rot, look for visible symptoms (such as stalk lesions) and test stalk firmness by pinching the lower internodes with thumb and forefinger. Healthy stalks are firm and cannot be compressed.

Keywords
Plant Pathology

Disciplines
Agricultural Science | Agriculture | Plant Pathology

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Scouting should be done before black layer, approximately 40-50 days after pollination. While scouting for stalk rot, look for visible symptoms (such as stalk lesions) and test stalk firmness by pinching the lower internodes with thumb and forefinger. Healthy stalks are firm and cannot be compressed. If a stalk can be compressed or feels soft, it is rotted and is a good candidate for lodging. Healthy stalks at this stage should still be green. If they have already begun to turn yellow or tan, they are maturing too quickly due to stalk rot or an environmental stress, such as drought. Check at least 100 plants per field, in different locations. Different hybrids and fields with different tillage, rotation, or fertilization histories should be scouted separately. If a field has more than 10-15% of the stalks rotted, significant lodging is likely.

Before black layer, it is difficult to distinguish among the different stalk rot fungi. The most common in Iowa are *Fusarium*, *Gibberella*, and *Colletotrichum* (anthracnose). Any stalk rot can result in wilting and death of the plants. Leaves turn a gray-green as they die, similar to frost damage, or there may be dead streaks in the leaves as they are scorched from lack of moisture. There may be dark external lesions at the lower nodes, and internally the stalk base will be dark brown and decayed. Later in the season, the stalk pith appears shredded and discoloration can become obvious in the pith and on the rind. Stalks infected with anthracnose eventually become very discolored, and they may be showing initial stalk lesions now.

Corn plants with stalk rot can show leaf scalding that resembles a leaf disease.

A combination of poor roots and stalk rot resulted in severe lodging in some fields in 2001.

Early stalk lesion caused by anthracnose.
High levels of stalk rot susceptibility are a result of plant stress. This year, the dry conditions in some parts of the state will predispose plants to stalk rot. Fields that were severely damaged by high winds last month also are more likely to develop stalk rot. Fields that had earlier problems with "crown rot" (rotting of the base of the plant prior to pollination) are likely to have stalk rot problems as the season winds down.

Future stalk rot problems can be avoided by selection of hybrids that have good stalk ratings and are resistant to foliar diseases, crop rotation, insect and weed control, adequate potassium fertilization, appropriate plant population and adapted hybrids, avoidance of root and stalk injury, good drainage, and proper irrigation (where applicable). Hybrids with good stalk strength ratings suffer less lodging. See Iowa State University Extension publication IPM 50, *Corn Stalk Rot in Iowa*, for more symptom descriptions and details on stalk rot prevention. Also, the Iowa State University 2001 Crop Performance Test results at [http://www.agron.iastate.edu/icia/YieldTesting3.html](http://www.agron.iastate.edu/icia/YieldTesting3.html) include lodging scores for many hybrids.

This article originally appeared on pages 169-170 of the IC-488(20) -- August 19, 2002 issue.

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