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Corn lodging 101

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Corn lodging 101

Abstract

Storm damage to corn this time of year causes producers to wonder how affected plants will respond. One outcome of storm damage may be corn lodging. Root lodging is when the root system is compromised by damage or when mechanical force disrupts the root-soil attachment. Stalk lodging results from trauma to the stem from wind or other damage. If the stalk is actually broken, as in greensnap, the plant is effectively useless for grain production. As long as the stalk isn't severed, plants that lodge in vegetative stages often have a remarkable ability to recover.

Keywords

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INTEGRATED CROP MANAGEMENT

Corn lodging 101

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One effect of midseason lodging is an increased risk for the development of some diseases. Common smut is one disease with increased incidence in corn because of storm damage. However, stress to corn plants can increase the incidence of late-season ear rot, stalk rot, and other opportunistic diseases. Severely lodged fields may not pollinate well.

Ears that grow in proximity to the soil may be prone to more ear molds, because soil is splashed onto the ears. Keep in mind, though, that ear rot pathogens are commonly airborne, so the risk to low-lying ears may not be greatly increased.

Stalk diseases are of particular concern in plants that lodge. Root and lower stalk damage is inevitable in lodged fields and such damage stresses the plant and provides points of entry for disease pathogens, resulting in greater incidence of stalk rots in fields. Premature death of the plants due to root damage and stalk rots can further reduce yields.

Little or nothing that can be done to prevent these disease problems on plants once they have lodged. But by monitoring the growth response of damaged plants, losses can be reduced by scheduling earlier harvests and monitoring for secondary disease development. Weed growth in response to the opening of the canopy should be monitored as well.

This information is based in part on a June 2002 ICM article by Gary Munkvold, former Iowa State University Extension Plant Pathologist.

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