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Stalk Health Concerns in Corn

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As I fearmongered about earlier in the month (Nielsen, 2004), late-season stalk health has become a concern in some Indiana fields. Late-season stresses of various sorts increase the risk of stalk rots and weaker stalks by virtue of their negative effects on late-season photosynthetic capacity.

A loss of photosynthetic capacity during the midst of grain fill encourages plants to remobilize stored carbohydrates from stalk tissue to the developing grain. Carbohydrate remobilization literally weakens the structural integrity of the stalks and also increases the risk of subsequent stalk rot development.

> *NOTE: Even if significant stalk rot does not develop in such stressed plants, loss of structural integrity itself can greatly increase the risk of stalk breakage.*

If growers have not yet done so, they should inspect fields for compromised stalk strength or the development of severe stalk rots. Stalk breakage itself is obviously easy to spot when scouting a field. However, compromised stalks may stand unnoticed until that October storm front passes through and brings them to their proverbial knees. The simplest techniques for identifying suspect stalk quality involve either pushing on stalks to see whether they will collapse or bending down and pinching the lower stalk internodes to see whether they collapse easily between your fingers.

Fields and/or hybrids at high risk of stalk breakage should be harvested as early as possible to minimize the risk of significant mechanical harvest losses. Recognize that hybrids can vary greatly for late-season stalk quality even if grown in the same field due to inherent differences for late-season plant health or resistance against carbohydrate remobilization when stressed during grain fill.

Related References

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Don't forget, this and other timely information about corn can be viewed at the Chat 'n Chew Café on the Web at http://www.kingcorn.org/cafe. For other information about corn, take a look at the Corn Growers' Guidebook on the Web at http://www.kingcorn.org.