

## Assessing Flood Damaged Corn

It's late spring and corn has emerged. For much of the state, heavy rains have continued for several days, bringing flooding to low lying areas and causing ponding in fields. In this scenario, farmers are faced with the question of whether their corn will recover, or should they proceed with replanting.

Corn survival after flooding depends on the duration of the flood and the soil temperature. At cooler temperatures, corn may survive up to four days. While at temperatures of 70 degrees Fahrenheit or above, expected survival may be as little as 24 hours. Assessing the ability of the corn plant to recover from flooding damage is dependent on the health of its growing point. If the growing point is healthy, the plant should recover at the end of the season with little yield loss attributed to the flooding event.



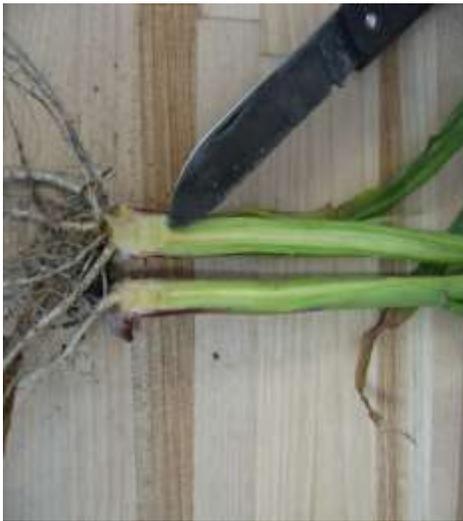
If the condition of the growing point indicates that the corn will not survive, replanting maybe necessary. There are several considerations



when deciding to replant: replanting costs can be substantial; fuel, time, seed costs, etc. The yield potential of the replanted crop is influenced by the planting date; later planting dates (mid-May on) reduce yield potential. Small areas may not be practical to replant. The length of the growing season remaining should also be considered and hybrids of appropriate maturity should be selected. Replanting should be avoided in wet conditions. This can lead to sidewall compaction of the seed furrow, causing poor seed to soil contact, reduced germination, poor stand, uneven emergence, and restricted root growth.

In addition, extra weed control efforts may be necessary in flooded areas. The growing point is located in the center of the stem and below the soil surface until the V5 stage (5-6 corn leaves with collars). At the V6 stage, corn is approximately 12-18 inches tall. After the V6 stage, stalk elongation begins and elevates the growing point above the soil surface.

### Healthy Growing Point



To assess damage to small corn plants, wait 2-3 days after the flood has receded and cut the cornstalk lengthwise to expose the growing point. Healthy growing points are firm and white or cream colored. Non-viable, (dead) growing points are dark, watery and soft.

Corn that was flooded and has survived may be yellow and stunted due to nitrogen (N)

deficiency. Symptoms of N deficiency may remain after flood water has receded because the soil remains saturated. Nitrogen may be lost either to denitrification or leaching in saturated soils. Use a pre-sidedress nitrogen test (PSNT), to determine N losses and sidedress following the recommendations of your nutrient management plan. Consider using a nitrogen stabilized product for late spring applications.

### For more information:

University of Maryland Extension:

<http://extension.umd.edu/>

eXtension <http://www.extension.org/>

Read more here:

[http://www.farmdocdaily.illinois.edu/2011/05/corn\\_replanting\\_decision\\_tool.html](http://www.farmdocdaily.illinois.edu/2011/05/corn_replanting_decision_tool.html)

*A "Corn Replanting Decision Tool" has been released as part of the FAST series of Microsoft Excel spreadsheets. Mathematical functions in this tool estimate yields from the original and replanted stands. Estimated yields, along with cost and crop insurance information, then are used to calculate net income from replanting. This tool is part of the Planting Decision Model, which can be accessed*

*from the FAST section of farmdoc.*

References: [www.pioneer.com](http://www.pioneer.com)

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