Agronomy Profile

Flooding

Overview

Flooding affects fields differently based on a variety of factors. Young corn (before V6 stage) is most susceptible to flooding damage and typically can survive flooded conditions only up to four days. If the air temperature exceeds 75°F, flooded corn plants are unlikely to survive longer than 24 hours.

What you should know

- When flooding occurs, less oxygen is available in the soil. Without oxygen, plants can't uptake nutrients and water.
- Excess moisture during early vegetative stages can slow corn root development. If a dry summer follows flooding, plants are unlikely to survive, because root systems aren't developed enough to access soil moisture.
- Flooded corn plants are unlikely to survive longer than 24 hours if the air is above 75°F. Warmer temperatures decrease the amount of oxygen in the soil. Cooler temperatures keep oxygen available and can prolong the life of the plant up to four days.

Action steps

1. **Monitor for diseases:** Corn that survives flooding is at higher risk of diseases such as pythium, corn smut and crazy top. Scout flood-affected fields closely, as they may need to be harvested early and at higher moisture levels to reduce yield losses.
2. **Apply nitrogen**: Nitrogen (N) loss can result from prolonged ponding or saturated fields. N-deficient areas should be side-dressed with supplemental N as soon as possible.
3. **Scout fields:** Closely monitor corn that has been fully submerged to assess plant survival. Split and examine the lower stem. It should be white to cream-colored. Darkening or softening of the tissue often precedes plant death. If corn has not yet emerged, continued leaf growth 3-5 days after water drains is a good sign of survival.

Young corn can typically survive flooded conditions for up to four days.

30-Second Summary

- Corn fields can survive up to four days of flood conditions, depending on various factors.
- Scout fields regularly for disease, nitrogen loss and overall plant health following flooding.
- Apply supplemental nitrogen if needed.
- In cases of extreme damage, talk to an agronomist about replanting.

NOTES:

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