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Corn: Uneven Early-Season Growth Can Mean Uneven Tasseling

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Abstract

Uneven growth reports on Iowa corn proliferated during the early part of the 2009 growing season. As we transition into reproductive growth stages, expect to see variation within fields and hybrids as a result of various early-season stresses.

Keywords

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Corn: Uneven Early-Season Growth Can Mean Uneven Tasseling

By Roger Elmore and John Sawyer, Department of Agronomy

Uneven growth reports on Iowa corn proliferated during the early part of the 2009 growing season. As we transition into reproductive growth stages, expect to see variation within fields and hybrids as a result of various early-season stresses.

What occurred earlier this season?

Numerous potential reasons exist for uneven growth and development. Unfortunately, emergence issues and uneven growth do not disappear entirely during the growing season. Although the difference among plants may lessen, uneven tassel emergence will result because of these problems. A review of articles posted in the [ICM news](#) reflects the early 2009 season and the types of stress encountered by the crop.

Early thunderstorms brought [hail](#) and strong winds destroying leaf area and killing plants. Recent thunderstorms resulted in [green snap](#) and [root-lodged corn](#). [Twisted whorls](#) slowed development of some plants across the state. First generation [corn borer](#) activity was high, relative to the early 2000s, increasing variation within fields. Because of cooler than normal temperatures and associated slower corn growth, [post-emergence herbicide applications](#) negatively affected corn. Many observed [seedling damage from ammonia](#) - both fall and spring applied. Early season weather conditions resulted in [wide ranges in corn plant color](#) - from green to yellow-green to purple and some with stripes. [Black cutworm](#) activity and [seedling disease](#) incidence seemed above normal. [Armyworm](#) outbreaks occurred in corn following cover crops with heavy residue. Intense [weed competition](#) occurred in some fields before post-emergence herbicide applications. Some [replanting](#) occurred because of emergence variability. [Soil surface crusting](#) and sidewall compaction impeded plant emergence and growth in some fields. Shallow planting depth resulted in cases of [rootless corn](#). Wet soils at planting and associated poor root and vegetative growth contributed to many of these problems.

In an apparent rerun of 2008, low areas flooded and problems associated with this included [crazy top](#) and nitrogen deficiency symptoms. In addition to all of this, wet weather delayed post-emergence nitrogen applications resulting in attempts to apply nitrogen using various [foliar fertilization](#) methods.

In spite of all of these negative aspects of early corn growth, the [USDA](#) reported that as of July 6, 82 percent of Iowa's crop rated good to excellent in stark contrast to the 57 percent rating during the same week in 2008. Most signs indicate Iowa's corn crop looks good! Only four percent was rated poor or very poor - much better than the 13 percent of last year.

Summary

As the corn crop hastens toward tasseling, expect to see variation within and among some fields directly resulting from one or more of the early-season

stresses mentioned above. If severity of the stress factor was high resulting in significant variation in plant development, expect lower yield potential.

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