Agronomy Profile

Corn Growth Stages Part 2: Reproductive Stages

Overview

Understanding the plant growth process opens up opportunities to maximize yield potential. At each stage, corn has specific nutrient, environmental and management needs. Knowing developmental goals and stages can help you identify problems more quickly and proactively manage challenges in the field. This piece will explore some basics about the reproductive stages of corn growth.

What you should know[1]

- **R1 (silking):** At this stage, silks are growing an inch or more per day. Pollen grains contact the silks, fertilizing the ovule to create kernels. Stress at silking creates the greatest yield reduction.
- **R2 (blister):** Starch is starting accumulate in kernels, and the plant needs adequate moisture to produce its grain. Kernels are white and resemble a blister.
- **R3 (milk):** Kernels begin to turn yellow on the outside, but the inside remains milky. Growth at this stage is all from cell expansion and starch accumulation.
- **R4 (dough):** About 26 days after silking, the kernel gets doughier as moisture content decreases. Kernels at this stage have accumulated 50% of their dry weight. Nutrient deficiencies can affect kernel fill.
- **R5 (dent):** Kernels continue to dry and show a small dent, as well as a milk line that will advance toward the tip of the kernel as it matures. Stress at this stage can reduce kernel weight and dry matter accumulation.
- **R6 (physiological maturity):** At this stage, all kernels have achieved maximum dry weight. Silage is ready for harvest, but grain will need to dry longer. Field dry down will vary with environmental conditions.

[1]Ransom, J. 2013. "Corn Growth and Management Quick Guide." NDSU Extension Service.

Understanding the needs of corn throughout its reproductive growth stages helps maximize yield potential.

30-Second Summary

- Every stage of corn growth represents an opportunity to maximize yield potential.
- Understanding reproductive growth stages helps you manage your fields and monitor possible stressors that could impact kernel weight and final yield.

NOTES:

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