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RENK • SEED

Weather Recap and When Upcoming Shifts Might Happen

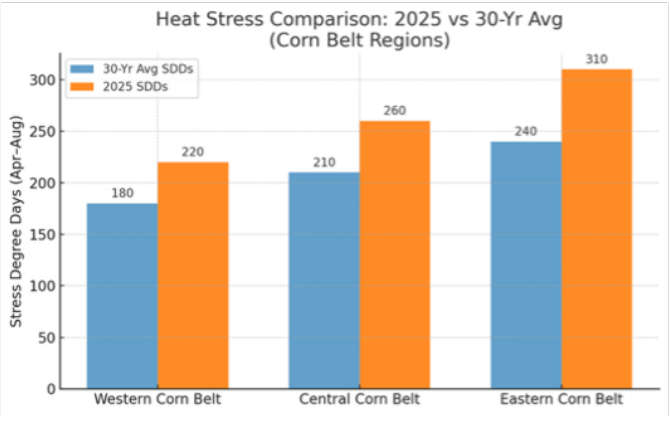
The 2025 growing season has been shaped by persistent warmth across the Corn Belt, with overnight minimum temperatures playing a major role in crop stress. As we shift into late August and look toward fall, the weather story is becoming more complex: **heat stress has peaked, but a pattern change may bring some relief in the coming weeks.**

Overnight Heat: A Hidden Yield Limiter - Data comparing summer 2010 (one of the hottest for overnight lows) with 2025 shows striking similarities in the **Eastern Corn Belt.** Parts of Illinois, Indiana, and Ohio have registered some of the warmest overnight temperatures on record, rivaling 2010. This matters because corn needs cool nights to efficiently convert sugars into kernel weight. Hot nights increase respiration losses, cutting into yield potential even when daytime conditions seem manageable.

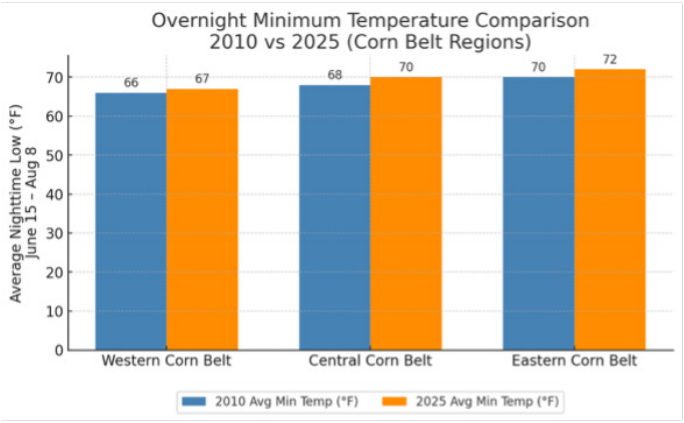
High Heat Stress Days Accumulated - Looking at Stress Degree Days (SDDs, >86°F), much of the central and southern Corn Belt has built up heavy totals through early August. Missouri, southern Illinois, and parts of Iowa have been hit hardest, stacking up more heat stress than the Dakotas and Upper Midwest. These areas are most at risk for tip-back and kernel abortion.

Signs of a Pattern Shift - The good news: medium-range forecasts suggest **cooler high temperatures arriving in the next 5–10 days.** This shift could reduce further stress on corn finishing grain fill. While overnight lows are still running above average, less extreme daytime heat should ease crop water use and slow stress accumulation. For soybeans, the cooler trend could support extended pod fill and help stabilize yield potential.

Bottom Line: The Corn Belt has endured significant heat stress this summer, especially from hot nights in the east. Fortunately, a cooler stretch in late August may provide some relief, but the broader pattern still favors a **warm, regionally drier fall.** Growers should prepare for efficient harvest conditions while keeping an eye on soil moisture reserves and late-season disease progression.



Stress Degree Days (SDDs >86°F) from April–August are running well above the 30-year average in all regions of the Corn Belt. The Eastern Corn Belt shows the largest increase, adding significant late-season pressure on kernel fill.



Average nighttime lows (June 15 – August 8) are hotter in 2025 than even the extreme 2010 season. Warm nights increase plant respiration, reducing sugar conversion into kernel weight,

Sources:

- NOAA Climate Prediction Center (CPC) – Seasonal Temperature & Precipitation Outlooks
- Rattalino Edreira, J.I. et al. (2011). *Heat stress during grain filling reduces kernel number and weight in maize.* Agronomy Journal.

White Mold Beginning to Show in Northern Soybean Fields

White mold (Sclerotinia stem rot) is starting to appear across the northern Corn Belt, with first infections being reported in Minnesota, Wisconsin, the Dakotas, and northern Iowa. The timing lines up with full flower to early pod set (R1–R3), the most vulnerable stage for soybean infection.

Weather has been the driver. Cooler nights, extended leaf wetness, and heavy canopies are creating the perfect environment for apothecia development and spore release. Fields with a history of white mold, higher populations, or narrower rows are seeing symptoms first.

Management outlook:

- Fungicides are most effective when applied at R1–R2. Many fields are now moving beyond that optimal window, so rescue applications will have limited impact.
- The best use of scouting now is to track where infections occur, as this helps inform **future management**: selecting tolerant varieties, adjusting row spacing or population to improve airflow, and considering rotation or biological options to reduce inoculum.

As we head deeper into August, the focus should shift from treatment to recording pressure and planning for future years.

References:

- Crop Protection Network – *Integrated Management of White Mold in Soybeans*
- Iowa State University Extension – *Managing White Mold in Soybean*