

The “Ugly Stage” in Corn: What’s Really Going On?

Some folks who think they know everything about corn might call this the “ugly stage”—that period between V2 and V5 when plants can look yellowish, uneven, or downright scraggly. But as a true corn person knows, this is when the crop is prepping for its most crucial period—a time that sets the foundation for future yield.

Here’s what’s happening in the plant and why it matters:

- **Root Development**

From V2 to V5, corn plants transition from relying on the seed’s energy reserves to establishing a robust nodal root system. These roots become the main source for water and nutrient uptake. Good soil conditions now are essential for supporting this rapid root expansion.

- **Leaf and Node Expansion**

During this phase, corn adds roughly one new leaf every 3–4 days. The growing point, initially protected below ground at V2, emerges above the soil line by V5. This marks a major shift in the plant’s exposure to stress and signals the start of faster growth.

- **Nutrient Uptake and Photosynthesis**

As the nodal roots take over, the plant’s nutrient and water demands ramp up significantly. This is also when early nutrient deficiencies—like nitrogen or sulfur—can become visible. Vigorous photosynthesis during this phase fuels rapid vegetative growth, so maintaining clean fields and maximizing light interception is crucial.

- **Early Ear Development**

By V5, the number of kernel rows is already determined, even though you can’t see it yet. Stressful conditions now—such as cold soils, compaction, or nutrient shortages—can limit kernel rows and ultimately reduce yield potential.



V2 root on left, V5 root on right.

The V2 to V5 window is the launchpad for your final yield. Pay attention to soil health, plant nutrition, and pest protection now to set your corn crop up for success!

Sources:

- Abendroth, L. J., Elmore, R. W., Boyer, M. J., & Marlay, S. K. (2011). *Corn Growth and Development (PMR 1009)*. Iowa State University Extension.
- Nielsen, R. L. (2020). *Corn Growth Stages and Growing Point Development*. Purdue University Extension.
- Rees, J., Elmore, R., & Streich, A. (2020). *Corn Growth Stages: Early Season Considerations*. University of Nebraska-Lincoln Extension.
- Abendroth et al. (2011); Nielsen (2020).



Soybean Herbicide Strategies for Early June: Managing Weeds and Staying Safe

As early June arrives across the Midwest, soybean fields are in their critical weed control window—right around the V1–V3 stage. This period is key to preventing yield loss from weed competition.

Key Herbicide Considerations:

- **Layered Residuals:**
Pre-emergence herbicides like acetochlor or metolachlor help keep early weed flushes in check. Following up with a post-emergence application that includes a residual active ingredient can help extend weed control deeper into the growing season.
- **Post-Emergence Applications:**
Choose post-emergence products based on your system—Enlist, Xtend, LibertyLink, or conventional. Target small, actively growing weeds (ideally under 4 inches tall) for maximum control. Including multiple modes of action in your herbicide program can help delay the development of herbicide resistance.
- **Waterhemp and Palmer Amaranth:**
These tough weeds are best managed with a full-rate residual plus a timely post-emergence program. Rotate herbicide groups to stay ahead of resistance.

Timing and Weather:

- Warm, humid conditions in early June help herbicides perform best.
- Avoid spraying during temperature inversions (calm, cool mornings) to minimize drift.
- Be aware of sensitive crops and follow label guidance when using products like dicamba or 2,4-D choline.

Field Safety Tips:

- **Wear the Right PPE:** Gloves, goggles, long sleeves—and respirators when specified—are essential.
- **Follow the Label:** Proper mixing order and tank cleanout steps are critical for safe and effective applications.
- **Equipment Care:** Calibrate sprayers and inspect nozzles for uniform coverage and minimal drift risk.
- **Clean Up Thoroughly:** Wash work clothes separately and rinse equipment to avoid contamination.

Key Takeaway:

Early June is your window to lock in weed control and protect your soybean yield potential. Scout, manage, and always put safety first—your crop and your team depend on it.

Sources:

- Iowa State University Extension. *Critical Weed-Free Period in Soybeans*.
- University of Nebraska-Lincoln Extension. *Weed Management in Soybeans*.