







July 7<sup>th</sup>, 2025

# **NW IA Dealer Agronomy Update**

# Waterhemp in Soybeans: It's Time to Get Serious

Waterhemp control has become increasingly difficult due to its rapid growth and the development of resistance to many herbicides. Across NW lowa, we're seeing more escapes than in recent memory - even in fields with multiple modes of action and clean starts. The simple truth: we are losing ground, and there is no silver bullet on the horizon.

Many of our go-to post-emergence chemistries are now constrained by label restrictions tied to crop stage. With the window for effective and legal applications tightening, it's no surprise waterhemp is slipping through the cracks - and when it does, its explosive growth and prolonged emergence make it extremely hard to get ahead of.

### **Herbicide Label Restrictions**

Enlist One Up to R2

Liberty Up to R1 before bloom

Roundup Through R2

Cobra R6

Ultra Blazer 50 days PHI

#### A Return to Fundamentals

Growers must start thinking differently. We're in a fight that can't be won with chemistry alone. It's time to reintroduce cultural and mechanical tactics that once served us well:

- **Row Cultivation**: This practice may seem outdated, but it offers a proven tool to disrupt small escapes and help conserve herbicide programs. Modern cultivators are more precise and adaptable than ever before, making this a viable option in 30" rows.
- Bean Walking: It's labor-intensive, no question. But in fields where populations are scattered or chemistries have failed, it's one of the only remaining tools that guarantees removal before seed set. A single female waterhemp plant can produce up to 500,000 seeds - every escape matters.
- **Residuals Matter**: Layering residual herbicides both pre and post remains a cornerstone strategy. Products like Group 15s applied post can buy precious time and reduce the number of late season emergers.









### **Time to Rethink Weed Management**

This isn't just about clean fields anymore - it's about **preserving the herbicide tools we have left**. We need to be more disciplined in rotating modes of action, investing in layered programs, and thinking beyond the sprayer.

Waterhemp isn't going away. In fact, it's adapting faster than we are. It's time to manage like we used to — combining chemistry, cultivation, and good old-fashioned effort. Because going forward, it's going to take more than a jug in the tank to win the war on weeds.

# **Soybean Growth and Development**

As we move into July, soybean fields across the region are hitting critical reproductive stages - R1 (beginning bloom) and R2 (full bloom). These stages mark the transition from vegetative growth to the reproductive phase, setting the foundation for final yield. What we do now matters, as these next few weeks determine how many flowers are retained, how many pods are set, and ultimately how many bushels we'll harvest this fall.

### What's Happening Inside the Plant?

At R1, the first flowers appear on the upper nodes of the plant. By R2, nearly all plants are in full bloom, and nodal development continues. The plant is investing energy into building its reproductive architecture while still supporting vegetative growth. This dual demand increases the need for nutrient availability, root activity, and stress-free conditions.

Key developments at R1–R2:

- Nodulation and nitrogen fixation ramp up significantly, but soybeans still rely on soil nitrogen until
  nodules fully develop.
- **Nutrient uptake peaks** especially for Nitrogen (N), Phosphorus (P), Potassium (K), Sulfur (S), and micronutrients like Boron, Zinc, and Molybdenum.
- Photosynthesis efficiency is critical, as carbohydrates produced now support pod initiation and seed set later.

## **Management Factors to Focus on Now**

While herbicide applications are wrapping up, there's still time to fine-tune the crop's performance. Consider the following strategies to support plant health and reproductive success:

### 1. Tissue Testing & In-Season Nutrition

At R2, tissue sampling can help identify hidden deficiencies that could limit pod set or seed fill.









- Foliar applications of micronutrients (especially Boron and Manganese) can support flower retention and early pod development.
- Products like Potassium Acetate may supplement potassium in high-yield environments.

### 2. Fungicide Application Timing

- Early reproductive stages are ideal for applying preventive fungicides. This protects the plant during the
  critical R3-R5 window when diseases like Frogeye Leaf Spot and White Mold can significantly reduce
  yield.
- Adding a fungicide now can also increase photosynthetic efficiency and help retain more pods.

### 3. Pest Monitoring

- Scout for Japanese Beetles, Soybean Aphids, and Spider Mites, especially in dry areas.
- Thresholds for aphids start at 250 per plant with increasing populations don't wait until it's too late.

### **Think Long-Term: Season-Long Nutrient Access**

Soybeans need nearly 70% of their Nitrogen and Potassium after R3. Even though they fix Nitrogen, many high-yield growers supplement with late-season N or use biologicals that enhance nutrient uptake.

- **Don't let nutrients run out.** A clean, well-fed plant at R2 has better odds of retaining flowers and filling more pods.
- Carbon penalties from heavy corn residue can still be felt, reducing microbial activity and tying up N
  and S especially on no-till acres.

## **Yield-Boosting Tips**

- 1. **Protect the Canopy** Maximize light interception and minimize foliar disease.
- 2. **Control Stress** Whether from insects, heat, or nutrient deficiency, early stress reduces pod number.
- 3. **Support Nodulation** In fields with weak nodulation, supplemental N at R3–R4 can help.
- 4. **Don't Forget Potassium** It's critical for water regulation and seed fill, and often under-applied.
- 5. **Track Growth Progression** Use staging models to plan fungicide and foliar nutrient timing more precisely.

#### **Final Thoughts:**

The R1–R2 window is your launch pad for yield potential. Soybeans are a resilient crop, but they'll only build yield if we meet their nutritional and protection needs right now. Let's stay proactive, scout often, and manage deliberately as we guide these fields through their most impactful weeks.









# Mid-Season Hail and Wind Damage

The past 10 days saw localized hail and wind events in the NW lowa. Mid-late season hailstorms can be damaging to corn because:

- The growing point can be damaged
- Leaf area can be reduced through shredding and stripping
- Stalks and ears can be bruised by hail stones
- Wounds can open the plant up for fungal disease development
- The plant population can be reduced

The effect on yield potential is dependent on the severity of each of these factors. After V6 growth stage (6 exposed leaf collars), direct hits on the growing point, now above the soil surface, can damage or kill the growing point. Ear initiation begins in the growing point; therefore, direct hits by large hailstones can damage immature ears and ultimately result in lower yield potential.

#### **Yield Loss Estimation**

Estimating the potential yield loss from mid- to late-season hail damage can be challenging. Evaluations should not be made until 5 to 7 days after the storm to allow for new growth and any recovery. Replanting severely damaged fields this time of the year is generally not an option because the remaining growing season will be too short for a replanted crop to reach maturity. The USDA Federal Crop Insurance Corporation (FCIC) uses information based on the number of corn leaves with tips pointing toward the ground to determine growth stage. Plant defoliation results in the loss of photosynthetic leaf area. The severity of the loss depends on the amount of leaf area removed and the plant's growth stage. Shredded leaves can still photosynthesize; therefore, appearance can be misleading. The corn table shows the estimated loss of yield potential for 20, 40, 60, 80, and 100% defoliation based on the FCIC leaf count method. Note that the estimated yield loss increases by leaf stage until tasseling and then begins to decline after tasseling.





Most of the time with severe hail, the lost leaf area is accompanied by snapped off plants, bruised stalks and uneven regrowth that can directly affect pollination. These factors, plus the potential for increased stalk lodging and diseases late season, can increase the yield losses considerably as compared to the chart showing yield loss from leaf defoliation only.

Couple of shots of hail damage -one very severe and one with about 20-30% defoliation









Table 1. Estimated potential corn yield loss from plant defoliation. Corn growth stage based on 'indicator leaf' method, where a leaf is considered fully developed when the leaf tip points to the ground (not a fully developed collar).

Corn Growth Stage	Percent Leaf Area Destroyed				
Com Growth Stage	20	40	60	80	100
	Perce	ntage Potentia	l Yield Loss		
7 leaf	0	1	4	6	9
8 leaf	0	1	5	7	11
9 leaf	0	2	6	9	13
10 leaf	0	4	8	11	16
11 leaf	1	5	9	14	22
12 leaf	1	5	11	18	28
13 leaf	1	6	13	22	34
14 leaf	2	8	17	28	44
15 leaf	2	9	20	34	51
16 leaf	3	11	23	40	61
17 leaf	4	13	28	48	72
18 leaf	5	15	33	56	84
19-21 leaf	6	18	38	64	96
Tassel	7	21	42	68	100
Silked	7	20	39	65	97
Brown silk	6	18	36	60	90
Pre-blister	5	16	32	54	81
Blister	5	16	30	50	73
Early milk	4	14	28	45	66
Milk	3	12	24	41	59
Late milk	3	10	21	35	50
Soft dough	2	8	17	29	41
Early dent	1	5	13	23	32
Dent	0	4	10	17	23
Late dent	0	3	7	11	15
Nearly mature	0	0	3	6	8
Mature	0	0	0	0	0

Source: Corn loss adjustment standards handbook. 2019 and succeeding crop years. 2018. FCIC-25080. USDA Federal Crop Insurance Corporation.









Soybean	Plant Defoliation (%)									
Growth	20	30	40	50	60	70	80	90	100	
Stage	Estimated % Yield Loss									
V2-V6	Removal of main stem nodes, stem breakage, and stand loss contribute to seed yield loss in vegetative stages. Yield loss can occur when 60 to 80 percent of node removal occurs at the V2 stage and when 40 percent of node removal occurs at the V6 stage.									
R1-R2	2	3	5	6	7	9	12	16	23	
R3	3	4	6	8	11	14	18	24	33	
R4	5	7	9	12	16	22	30	39	56	
R5	7	10	13	17	23	31	43	58	75	

Source: Shapiro, C.A., Peterson, T.A., and Flowerday, A.D. 1985. G85-762 Soybean yield loss due to hail damage. University of Nebraska NebGuide G85-762-A; Conley, S. et al. 2009. Main-stem node removal effect on soybean seed yield and composition. Agronomy Journal. Vol. 101(1):120-123.

#### Recovery and Assessment of Hail-damaged soybean



The Preceon corn fared much better than the sign after high winds and hail hit this plot by Granville ②. Very little root lodging or greensnap seen in the short statured corn.

Overall, the corn has shown good recovery from the root lodging. Some fields and hybrids were caught at a tough stage without many brace roots established and growing extremely fast. Rapid vegetative growth during this time of the year before tasseling is the most susceptible stage for greensnap.

# **New Soybean Product Spotlight Asgrow AG22XF6**



AG22XF6 will be a new XtendFlex variety available in very good quantities in most areas for 2026.

- Medium plant Height with good standability
- Average IDC (5) see below as it did show less yellow flash than AG22XF5
- PRR gene stack of Rps1c and Rps3a
- White Mold 5
- SDS 3
- 5.6 Bu/A lift @ 85% win rate vs. AG22XF5 (N=27)













AG22XF6 Sac City TDR Site IDC

AG22XF5 Sac City TDR Site IDC

# **Growing Degree Units**

GDU accumulation continues to be running ahead for all the planting dates listed below. The table below shows the GDU accumulation from **April 11**<sup>th</sup> – **July 6**<sup>th</sup>, **April 23**<sup>rd</sup> – **July 6**<sup>th</sup> and **May 5**<sup>th</sup> – **Julu 6**<sup>th</sup> at different locations in Northwest and Central lowa. These GDUs can be found on the following website – plug in your location and planting dates for GDUs specific to you. MRCC.

	4/11/25	
	to	30 Year
Location	7/6/25	Average
Rock Rapids	1257	1165
Bancroft	1240	1127
Le Mars	1304	1216
Fort Dodge	1267	1193
Denison	1329	1217
Ames	1369	1200

	4/23/25	
	to	30 Year
Location	7/6/25	Average
Rock Rapids	1159	1098
Bancroft	1154	1065
Le Mars	1200	1142
Fort Dodge	1179	1123
Denison	1231	1144
Ames	1282	1129









	5/5/25	
	to	30 Year
Location	7/6/25	Average
Rock Rapids	1056	1006
Bancroft	1064	979
Le Mars	1101	1043
Fort Dodge	1082	1028
Denison	1126	1047
Ames	1168	1033

## **Additional Resources:**

The next DAACAT call will be held at 8:00 AM on Wednesday, July 9th Join the meeting now

Summer always has us thinking about the drought monitor <a href="https://droughtmonitor.unl.edu/">https://droughtmonitor.unl.edu/</a>

Track + submit progression of key diseases like Tar Spot and Southern Rust <a href="https://corn.ipmpipe.org/">https://corn.ipmpipe.org/</a>

Get alerts for insect migration and emergence with https://www.insectforecast.com/

Track GDUs https://mrcc.purdue.edu/tools/corngdd

Sign up to receive Bayer Crop Science Agronomic Updates



/// FieldView Support:

/// 888-924-7475 /// Knowledge Center /// YouTube /// Twitter

Disease risks, especially for Common Rust and Tar Spot, have continued to escalate with our frequent rains and high humidity. See the disease risk maps that are provided from a 3<sup>rd</sup> party exclusively for Bayer Crop Science.

Corn Disease Risk Maps Soybean Disease Risk Maps









### **Picture of the Week**



Brevant B14C59 Vorceed on the left, DEKALB DKC114-42 on the right. Roots dug from a field of 6 years continuous corn. On the Iowa State Node Injury Scale (NIS) B14C59 = 1.5 and DKC114-42 = 0.5

https://crops.extension.iastate.edu/post/assess-roots-now-evaluate-corn-rootworm-management-strategies