July 14th, 2025

NW IA Dealer Agronomy Update

Western Bean Cutworm (WBC)

The western bean cutworm can be a significant pest of corn in parts of our territory. The WBC larvae are known for feeding on the reproductive parts of corn plants, including pollen, silks, kernels, and cob tissue. This feeding behavior results in direct yield loss—estimated at 30 to 40 percent under *severe* infestations— as well as compromises grain quality by facilitating ear mold infections and mycotoxin contamination.

Life Cycle and Identification of Western Bean Cutworm in Corn

The western bean cutworm over winters in the soil and undergoes a complete metamorphosis, passing through five developmental stages: egg, larva, prepupa, pupa, and adult moth. Eggs are typically laid in flat masses on the upper surfaces of corn leaves, appearing white initially and darkening to purple or black just before hatching. The larvae are initially dark brown with faint markings and mature to about 1.5 inches in length, characterized by three dark stripes on the first segment behind the head on larger instars (see below, image source Cornell University CALS).

Adult moths are brown with a wingspan of approximately 1.5 inches and feature creamy white stripes on the forewings and a boomerang or comma shaped mark on lower wings. The life cycle culminates with the moths emerging from the soil in mid-July to early August, laying eggs shortly after. (image source Cornell University CALS)

Scouting Tips

- Inspect the upper third of corn plants for egg masses and larvae, focusing on the upper leaf surfaces.
- Check tassels for larvae before pollen shed, as they may feed on pollen and silk.
- Look for signs of feeding, such as clipped silks and frass (insect excrement) in the ear tip.
- Scout at least 10 consecutive plants at multiple locations within the field to ensure comprehensive coverage. Larvae can move from plant to plant, a 5ft radius from the original plant on average.
- Monitor for a minimum of 5-8% of plants with egg masses or small larvae to assess the need for control measures.
- Pheromone traps are available but action thresholds are inconsistent and more targeted at when to start scouting

Management of Western Bean Cutworm in Corn

Utilizing transgenic corn hybrids that express the Vip3A Bt protein, such as **Trecepta** or **VT4PRO**, can provide control of WBC. Minor feeding is expected even with trait as the larvae must eat plant material to ingest the protein. Effective management without the Vip3A protein relies on timely insecticide applications based on scouting results. Insecticides should be applied when scouting indicates that at least 5-8% of the plants have egg masses or small larvae. If most eggs have hatched and the crop is fully tasseled, treatment is recommended when the crop reaches 95% tassel emergence. Combining insecticide applications with integrated pest management strategies, including scouting and monitoring, will help mitigate the impact of this pest on corn yields.

Risk of Root Lodging and Greensnap from V10 to R2

The V10 to R2 period is the corn plant's most rapid growth phase and often aligns with the peak occurrence of severe thunderstorms. During these stages, corn can grow from approximately 4 feet to its mature height of 7 to 10 feet within just 17 to 21 days! Greensnap typically occurs at nodes that are still expanding and have not yet strengthened through lignin deposition. Additionally, the brittleness of the stalks is exacerbated if storms occur during the early morning when the plants are fully hydrated and turgor pressure is highest.

Assessing Injury

- Assess the condition of the root systems – soil conditions and pest pressure can influence genetic response to high winds
- Identify the specific nodes affected by breakage, as this will influence yield potential.
- Delaying injury assessment for at least four days post-damage can help determine recovery potential.

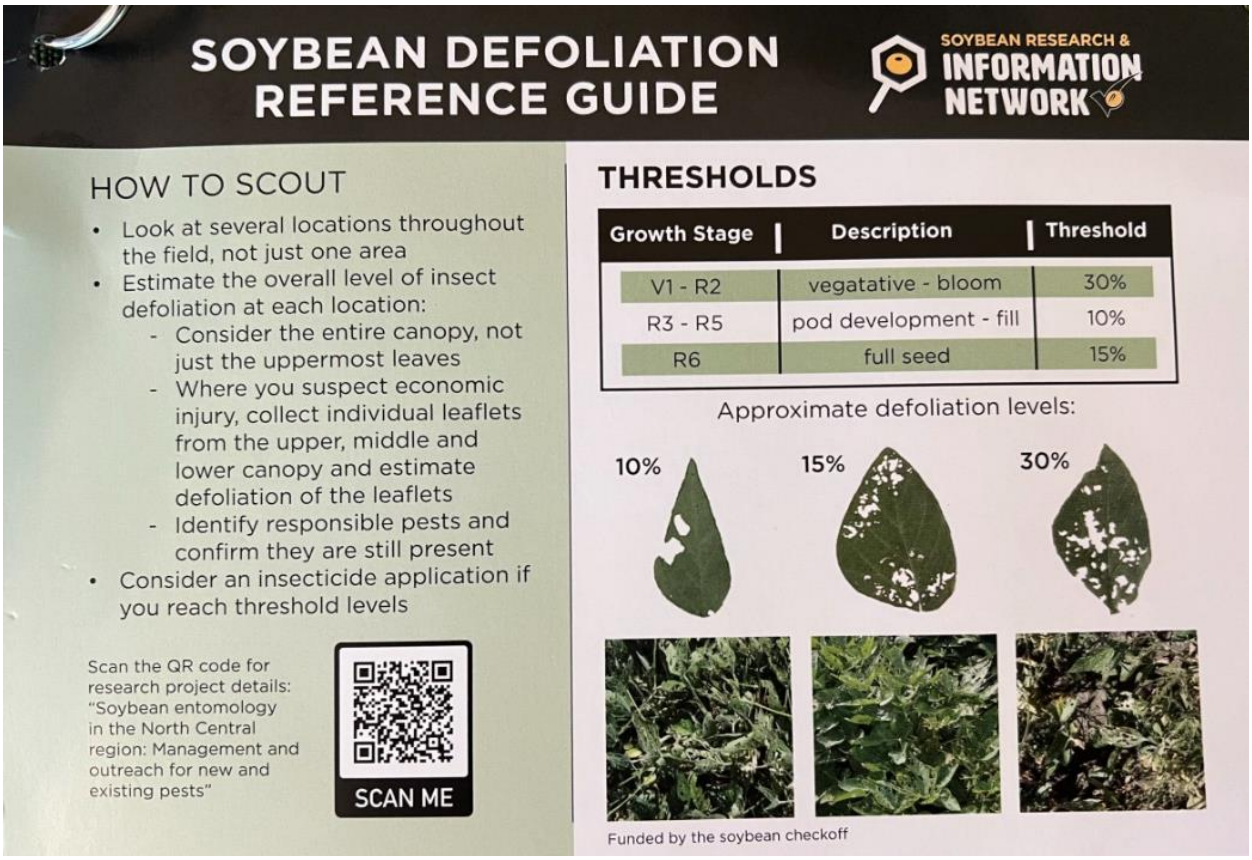
Levels of Yield Impact from Greensnap and Lodging

The impact of greensnap and lodging on corn yield varies significantly based on the extent of injury and the specific growth stage at which the damage occurs. Plants that snap above the ear may still produce an ear, but yield reductions can occur if they are shaded by adjacent plants. Research indicates that yield losses increase with the percentage of plants damaged and are more pronounced when injury occurs at later growth stages.

Additional Considerations

- Higher nitrogen rates and favorable growth conditions can increase susceptibility to greensnap.
- Crop insurance can provide financial protection against weather-related damages, so it's important to notify providers of any storm-related injuries.
- Remember - Neighboring fields may break at different levels or different nodes because product maturity, planting date, and other management factors can result in different nodes being vulnerable for a specific field when a wind event occurs
- Additional info - Effect of Greensnap Injury on Corn Yield Potential and Lodged Corn Impact on Yield

Soybean Defoliation Guidelines



SOYBEAN DEFOLIATION REFERENCE GUIDE

SOYBEAN RESEARCH & INFORMATION NETWORK

HOW TO SCOUT

- Look at several locations throughout the field, not just one area
- Estimate the overall level of insect defoliation at each location:
  - Consider the entire canopy, not just the uppermost leaves
  - Where you suspect economic injury, collect individual leaflets from the upper, middle and lower canopy and estimate defoliation of the leaflets
  - Identify responsible pests and confirm they are still present
- Consider an insecticide application if you reach threshold levels

Scan the QR code for research project details: "Soybean entomology in the North Central region: Management and outreach for new and existing pests"

SCAN ME

THRESHOLDS

Growth Stage	Description	Threshold
V1 - R2	vegatative - bloom	30%
R3 - R5	pod development - fill	10%
R6	full seed	15%

Approximate defoliation levels:

10% 15% 30%

Funded by the soybean checkoff

Handy guide from the Soybean Research and Information Network showing different thresholds for leaf feeding based on the growth stage.

Is That What I Think it is? Fungal Disease Look-a-likes in Corn

Bacterial Leaf Streak – Often confused with GLS, bacterial Leaf Streak is rarely a yield limiting disease. It enters the plant through hail or sandblasting and creates lesions with wavy margins and large yellow halos. Since it is a bacterial disease, it is not controlled by a fungicide application and there can be hybrid differences in severity.

Abiotic Lesions – ***Confused with many different diseases, abiotic lesions are caused by a non-biologic source. This can include damage from pesticides, fertilizers, equipment or the environment - especially wind. Abiotic lesions can vary in size and pattern but are uniform in the fact that they do not have any bright yellow halo of infection around the lesion. You can see the difference between these two images as the leaves are held up to the sun.***

Corn Blotch Leaf Miner ***– This can look like disease or sandblasting and can be found is almost every field. This is scraping and chewing done by the larvae of leaf miner flies.***

Disease Lesion Mimic (DLM) - Lesions imitate symptoms of various disease but are rarely a yield-limiting factor. Disease lesion mimics spots, stripes or lesions between corn leaf veins and can usually be seen affecting one isolated plant. Disease lesion mimic is a class of mutant genes that can result in lesion development without the presence of a disease.

Soybean Reproductive Stages

Full Bloom (R2)

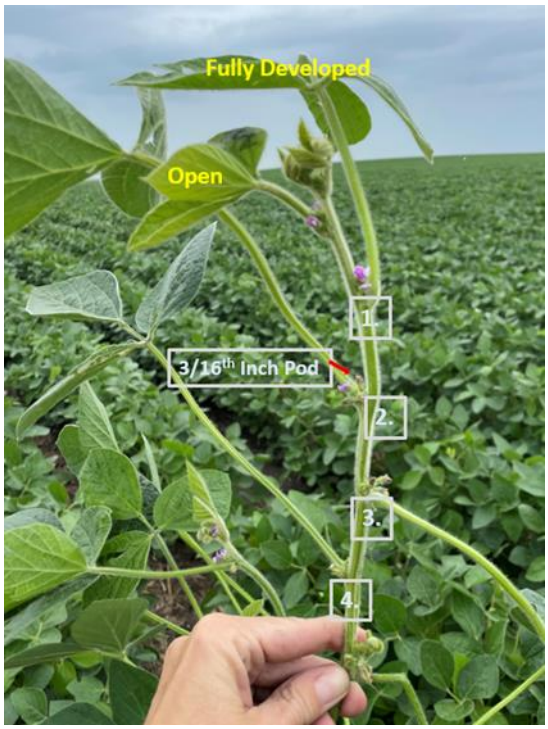
An open flower develops at one of the top two nodes of the main stem. The plant has accumulated about 25% of its total dry weight and nutrients and about 50% of its mature height. Nitrogen fixation by root nodules is increasing rapidly. Loss of up to 50% of plant leaves from hail, insects, or disease at this stage may reduce yield potential by 6%.

Beginning Pod (R3)

A pod on at least one of the upper four nodes with a fully developed leaf is 3/16-inch long or longer. Heat or moisture stress at this stage can reduce pod numbers, seed number per pod, or seed size, which may reduce yield potential. The ability for soybean plants to recover from temporary stress decreases from R1 to R5.5. Favorable growing conditions during this period may result in greater pod number and increased yield potential.

Full Pod (R4)

Pods are growing rapidly, and seeds are developing. At least one ¾-inch long pod has developed on at least one of the four upper-most nodes. Stress during this period (and through R6) can cause more reduction in yield potential than at any other growth stage. Timely rainfall may help reduce the potential for yield loss.



R3 Soybean Plant

New Product Spotlight alloy A19E36

A19E36 is a new alloy variety available in decent quantities in the Northern geographies for 2026.

Agronomics

- New Enlist variety to replace A19E33 – showing a 4 Bu/A advantage
- Medium-tall plant type with average standability (4)
- Very good IDC tolerance (4)
- SDS is excellent at a (3) - that along with RPS1c Phytophthora gene resistance and good Field Tolerance (4) make this variety a very good choice for poorly drained soils
- Average White Mold (5)
- Yield data showed very good performance especially in Iowa and South Dakota

Growing Degree Units

GDU accumulation slowed down this past week. The table below shows the GDU accumulation from **April 11th – July 13th, April 23rd – July 13th and May 5th – July 13th** at different locations in Northwest and Central Iowa. These GDUs can be found on the following website – plug in your location and planting dates for GDUs specific to you. MRCC.

Location	4/11/25 to 7/13/25	30 Year Average
Rock Rapids	1314	1303
Bancroft	1294	1257
Le Mars	1372	1365
Fort Dodge	1321	1327
Denison	1400	1352
Ames	1435	1349

Location	4/23/25 to 7/13/25	30 Year Average
Rock Rapids	1220	1239
Bancroft	1211	1196
Le Mars	1271	1292
Fort Dodge	1234	1257
Denison	1299	1280
Ames	1353	1276

Location	5/5/25 to 7/13/25	30 Year Average
Rock Rapids	1136	1155
Bancroft	1133	1118
Le Mars	1181	1200
Fort Dodge	1150	1173
Denison	1207	1195
Ames	1254	1188

Additional Resources:

Watch the last DAACAT call from Wednesday, July 9th https://youtu.be/UJo_ll_tQQg

Track + submit progression of key diseases like Tar Spot and Southern Rust https://corn.ipmpipe.org/

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 Common Rust and Tar Spot, have continued to escalate with our frequent rains and high humidity. See the disease risk maps that are provided by a 3rd party exclusively for Bayer Crop Science.

Corn Disease Risk Maps
Soybean Disease Risk Maps

Picture of the Week

Drone shot of a great looking field of DKC108-64RIB in Cherokee County

Follow Jim McDermott @jfmcde on Twitter