

**EXTENSION** 

No 16

August 14, 2025

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#### CORN ROOTWORM TRAPPING

We are monitoring for adult corn rootworm beetles with yellow sticky traps (Scentry® Multigard or Pherocon AM® yellow sticky traps, non-baited) in southeastern North Dakota. Nine trapping sites were set up during the last week of July and will be monitored weekly for four weeks. Trap results will be posted in the NDSU Extension *Crop & Pest Report* and on the <a href="IPM">IPM</a> website.

Trap threshold: A capture rate of two or more adults per trap per day indicates a high rootworm population and high risk for corn damage for the next season. A management strategy will be needed for corn rootworm control in that field. Corn entomologists, Drs. Yang and Wang, of the University of Minnesota, suggest that the threshold for northern corn rootworms may be higher, four or more adults per trap per day, due to extended diapause injury. Research is still underway on rotated corn.

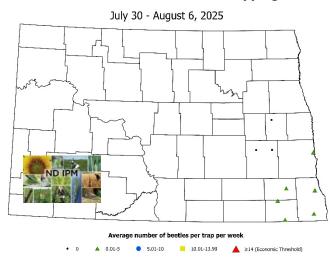
We captured a total of 48 northern corn rootworms from July 30 through August 6 (Table 1). No western corn rootworms were captured this past week, although some western corn rootworms are being observed this week. See the Corn rootworm IPM map on the next page. The North Dakota Corn Council funds this project.

If you have rootworm problems in corn following soybean, you may have an extended diapause of northern corn rootworm. If you have experienced this, please email <a href="mailto:janet.knodel@ndsu.edu">janet.knodel@ndsu.edu</a>.

Table 1. Average number of adult corn rootworms (both northern and western corn rootworms) per 4 yellow Scentry Multigard traps per week in ND field corn, 2025.								
Area	County	Nearest town	July 30 - Aug 6	August 7 - 13	August 14 - 20	August 21 - 27		Season grand total
SE	Barnes 1	Pillsbury	0.00					0
SE	Barnes 2	Rogers	0.00					0
SE	Cass 1	Argusville	0.43					12
SE	Ransom 1	Lisbon	0.04					1
SE	Richland 1	Colfax	0.43					12
SE	Richland 2	Hankinson	0.11					3
SE	Sargent 1	Havana	0.11					3
SE	Sargent 2	Gwinner	0.61					17
SE	Steele 1	Finley	0.00					0
CORN COUNCI	Î 🗸 🗆	Total corn rootworm = Percentage of NCR = Percentage of WCR =	48 100% 0%					48
Economic thresholds (ET) is 14 or more adults (regardless of species) per trap per week.								

\*Asterisk indicates that particular corn field is at or above ET

# **Northern Corn Rootworm Trapping**





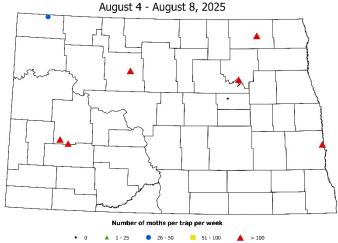
#### SUNFLOWER INSECT TRAP UPDATE

Due to the hot temperatures last week, sunflower growth stages advanced from R3 (late bud) through R5 (early flowering).

Banded sunflower moths were captured at all trap sites in North Dakota. The average trap catches were 137 (July 21-25), 135 (July 28-August 1) and 196 (August 4-9) moths per trap per week. The top three trapping sites were Dunn County, two (360 and 301 moths per trap per week), and Ward County (207 moths per trap per week).

Arthuri sunflower moths (a similar species to the banded sunflower moth) were also captured at all of the trap sites in North Dakota. The average trap catches were 14 (July 21-25), 32 (July 28-August 1) and 25 (August 4-9) moths per trap per week.

# Banded Sunflower Moth Trapping Network Cochylis hospes







Sunflower moth larva (J.P. Michaud, Kansas State Univ.)

Sunflower moths were captured in Dunn and Divide counties, with only 1 to 2 moths per trap per week. An insecticide application is warranted when trap captures reach or exceed 28 moths per trap per week. All other trap sites had zero sunflower moths. While collecting red sunflower seed weevils for insecticide bioassays in Mercer and Dunn counties, early-instar larvae of sunflower moths were observed feeding on the pollen on the face of the sunflower. See the <a href="Crop & Pest Report #15">Crop & Pest Report #15</a>, August 7, 2025, for information on identification, scouting and thresholds for sunflower moth.

#### LYGUS BUG IN CONFECTION SUNFLOWERS

Lygus bugs (tarnished plant bugs) are being observed in fields and are pests of seed production in many crops, like alfalfa, canola, sugarbeet and confection sunflower. The Lygus bug causes damage to the developing kernel, known as **kernel brown spot**.

Using their piercing-sucking mouthparts, they inject saliva containing toxic enzymes that break down plant tissue, making it digestible. This feeding injury kills seed tissue at the site, resulting in the brown to black spot seen on the kernels. The dark spot tastes bitter, making the seed unmarketable for the confection sunflower industry.

Sunflowers are susceptible to lygus injury from late bud through seed hardening (end of flowering). Each lygus bug (adult) damages 30 to 35 seeds per head. Lygus control can be combined with treatments for other sunflower insect pests, such as seed weevils or banded sunflower moth.

#### **Treatment Guidelines**

Confection Sunflowers: Economic losses can occur at just **one adult lygus per 9 heads (threshold).** Apply insecticide at 10% bloom (onset of pollen shed) and again 7 days later to protect heads throughout flowering.

Oilseed Sunflowers: Current research indicates **minimal risk** from Lygus bug feeding.

For more information on control recommendations in field crops, consult the 2025 North Dakota Field Crop Insect Management Guide E1143.



Lygus bug adult (top photo) and nymph (lower photo). (Scott Bauer, USDA, Bugwood.org)

#### HELP LOCATE CORN BORER INFESTATIONS

Corn borer infestations in North Dakota are appearing in late July and August due to the late emergence of the dominant single-generation type.

We are looking for sites with high infestations to collect larvae. If you see larvae in **broken tassels, lodged corn, or ear tips**, contact Dr. Janet Knodel (**janet.knodel@ndsu.edu**) with your name, contact info, and location.

We are cooperating with Dr. Yang at the University of Minnesota.

We appreciate your help. Thank you.



European corn borer larva in ear tip (V. Calles Torrez)

Janet J. Knodel Extension Entomologist

# plant pathology

# RECOGNIZING THE DIFFERENCES BETWEEN SUDDEN DEATH SYNDROME (SDS) AND BROWN STEM ROT (BSR)

Sudden death syndrome, caused by *Fusarium virguliforme*, is a soilborne disease that infects soybean roots early in the season, often shortly after planting. The pathogen thrives in cool, wet soils during early growth stages and colonizes the root system, producing toxins that move upward in the plant. These toxins cause foliar symptoms that typically appear after flowering (R3–R5 stages), especially under wet conditions. The pathogen overwinters in infested crop residue and the soil, and survival structures can persist for several years. Yield loss from SDS is often driven by a root rot phase as well as premature defoliation of the plants prior to full grain fill.



Figure 1. Interveinal chlorosis symptoms due to SDS in soybeans during 2024 growing season.

Brown stem rot, caused by *Cadophora gregata*, is also a soilborne disease that infects soybeans through the roots. The pathogen survives in soybean residue for several years and is favored by cooler temperatures and moderate soil moisture. Infections typically begin early in the season, but foliar symptoms appear later, often during reproductive stages. Brown stem rot has two types, one of which can cause foliar symptoms, while the other does not. During infection, the fungus is restricted to the vascular tissues and pith, producing the characteristic internal stem browning that gives the disease its name.

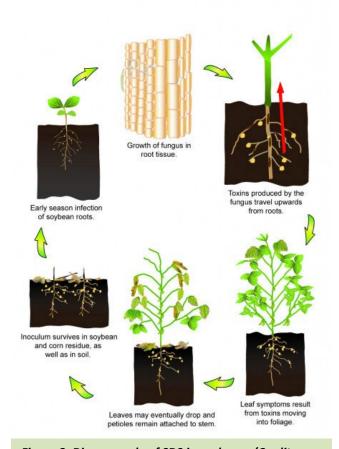


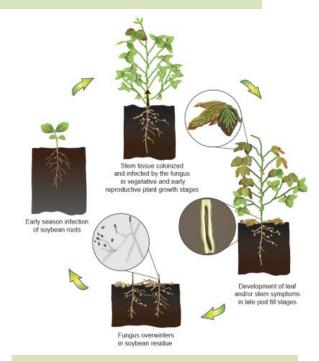
Figure 2. Disease cycle of SDS in soybeans (Credit: Crop Protection Network)



Figure 3. Foliar and stem symptoms of brown stem rot in soybean. (Credit: Crop Protection Network)

While SDS and BSR can look similar in the field, both causing yellowing and browning between the leaf veins (interveinal chlorosis and necrosis), there are key differences in diagnostics:

- Leaf Symptoms: SDS causes interveinal chlorosis
  where leaf tissue between veins turns yellow, later
  becoming brown and necrotic, but veins remain green.
  Severely affected leaflets often fall off, leaving the
  petioles attached. BSR also produces interveinal
  chlorosis and necrosis, but leaflet drop is less
  common, and entire leaves may remain attached
  while withered.
- Stem and Root Clues: In SDS, the pith (center of the stem) remains healthy and white, while the outer vascular tissue may show some discoloration near the base. In BSR, splitting the stem reveals a brown discoloration of the pith, especially at and above the soil line. This is the most reliable field diagnostic for BSR. Often, this browning will be most apparent around a stem node.



**Figure 4.** Disease cycle of brown stem rot in soybean. (Credit: Crop Protection Network

• **Root Health:** SDS-infected plants often have roots that are discolored, with reduced nodulation and signs of root rot. BSR roots are often less severely decayed but can still be discolored in some situations.

When foliar symptoms are present, cutting stems open to examine pith color and inspecting root condition can help determine whether SDS or BSR is the culprit. For confirmation, laboratory diagnosis may be needed, especially early in symptom development. Please submit your samples to the NDSU Plant Diagnostic Laboratory for suspected cases. At this point in the growing season, management options for both SDS and BSR are limited, as infections occurred much earlier in the season. No in-season foliar fungicides are effective against either disease, since both pathogens are soilborne and infect through the roots. The primary focus now should be on accurate diagnosis to inform future management decisions. For SDS, seed selection with strong resistance ratings and the use of effective seed treatments (such as fluopyram or pydiflumetofen) can reduce early root infections. For BSR, variety selection with high resistance is the most reliable tool, along with crop rotation to non-host crops such as corn or small grains to reduce inoculum. For both diseases, managing soybean residue, avoiding continuous soybean, and addressing soil compaction or drainage issues can help reduce disease pressure in subsequent years. Scouting now helps identify problem fields so that these preventative strategies can be targeted next season.

Wade Webster

Extension Plant Pathology, Soybeans

#### CORN DISEASE UPDATE FROM THE FIELD

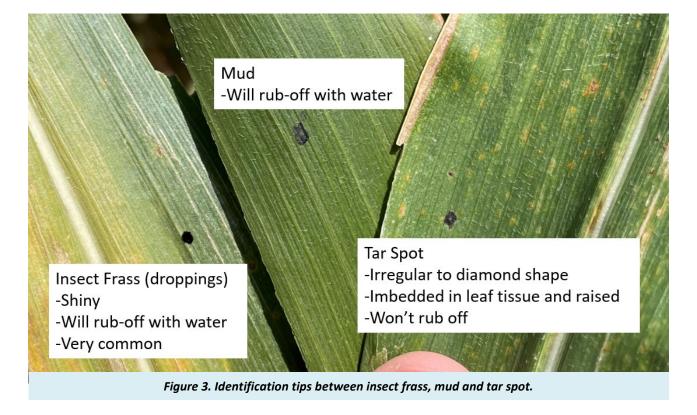
I had a chance to visit a handful of corn fields in southeast North Dakota over the past 10 days to take corn disease observations. The incidence of foliar diseases of corn was very low in all the fields I visited. I found one lesion (yes – a single lesion) of northern corn leaf blight (Figure 1), a few pustules of common corn rust (Figure 2), and common corn smut. I <u>did not find any tar spot</u>, although it has been confirmed in central MN. As reminder, both insect frass (droppings) and mud can mimic a tar spot lesion (Figure 3). For help with tar spot identification, please work with your local county Extension agent.



Figure 1. Northern corn leaf blight. Note cigar shaped lesion.



Figure 2. Common corn rust pustule. Note brick-red, dusty spores.



At the Oakes field day, there were noticeable levels of bacterial leaf streak (Figure 4). Bacterial leaf streak incidence will be greater during years of frequent thunderstorms and/or under irrigation. Even though we may see elevated levels of bacterial leaf streak this year, it is largely considered a cosmetic (non-yield limiting) disease in ND.



Figure 4. Bacterial leaf streak of corn. Lesions will often have water-soaking, be yellow to brown, and run parallel to leaf veins.

The general growth stage of the corn fields I visited was around VT/R1, which is a time that some growers may consider the use of a fungicide. Given the very low occurrence of fungal diseases at this point in the growing season, the yield response from a foliar fungicide will be modest. My program has conducted foliar fungicide trials on corn from 2014 to 2024 to evaluate the yield protection from a single VT/R1 application under very low levels of fungal disease pressure (Figure 5). We found that approximately 50% of the time there is a positive yield response with an average yield response of 2.3 bushels. When grouping premix fungicides by the number of modes of action (MOA), the yield response ranged from 0.1 (single MOA) to 3.2 bushels (three MOA). Until we experience higher levels of fungal leaf diseases in corn, yield responses from a single VT/R1 fungicide application will generally be low.

# Summarized Corn Trials 2014-2024 Yield Response – VT/R1 Fungicide

Fungicide Treatment	Average Bushel/Acre Response	Positive Response Observed
All Fungicides Tested	2.3	55%
Single MOA	0.1	44%
Two MOA	3.2	58%
Three MOA	2.0	55%

Figure 5. Summarized data from field studies conducted between 2014 to 2024 evaluating the yield response from a single VT/R1 application. Data has been summarized across all fungicides tested, and grouped for products based on the number of modes of action (MOA).

Andrew Friskop
Extension Plant Pathology, Cereal Crops



NDSU

#### **SMALL GRAIN AND CORN CROP UPDATE**

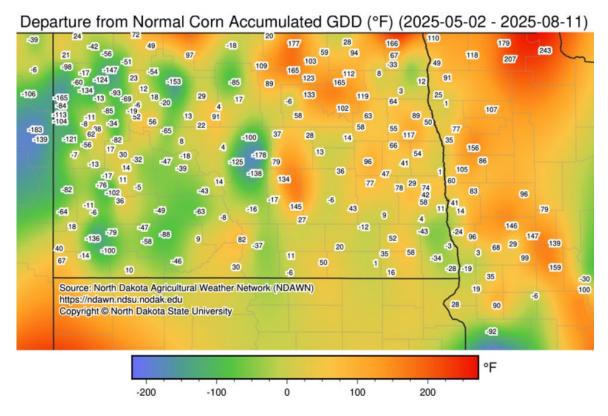
The start of the 2025 small grain harvest has been bumpy for most farmers in the state. Over the last 10 days, small grains have become ready for harvest but frequent rain showers and some heavier storms have interfered with getting the crop out of the field. The Hettinger REC harvested their winter wheat, winter rye, and barley trials last week and the Dickinson REC was able to harvest barley. In the central and eastern parts of the states, some growers have been able to get a few fields or partial fields harvested between rains, but most are waiting for the crop and soils to dry enough for combining. The rain is a concern for small grain quality, but so are the high dew points many areas have been experiencing over the past week. It is too early to know if low falling numbers or sprout damage will be an issue with this year's crop, but drier weather is needed from here on out to support a high-quality wheat crop.

I visited NDSU corn plots near Colfax, Wyndmere, and Gwinner on August 12<sup>th</sup> and, overall, the corn crop in the southeast corner of the state looks good to excellent. There is standing water in many fields due to recent heavy rains, but where the crop has not struggled with water-logged soils, it is doing very well. Fields we checked are in the late

blister (R2) to early milk (R3) stages. Kernels are filling out nicely along the length of the cob, evidence of plenty of water available to the crop. The photo below was taken on 8/12 of an ear taken from a field near Gwinner.



I have started to hear folks wondering about if the corn crop is going to make it to maturity before frost. I think it is too soon to tell and we will need to see what kind of temperatures August brings. Checking the NDAWN corn GDD calculator <a href="https://ndawn.ndsu.nodak.edu/corn-growing-">https://ndawn.ndsu.nodak.edu/corn-growing-</a> degree-days.html with a start date of 05/01/2025 through 08/12, GDD accumulation is highly variable across the state. The Red River Valley is generally running pretty close to average with a small cool pocket in Richland and southern Cass Counties. A surprising spot is cooler-thannormal temperatures in Sheridan and Burleigh Counties, only a short distance away from a hot spot in Kidder County. The southwest and northwest corners of the state are generally running cooler-than-normal with a pronounced cold pocket in western McKenzie and Williams Counties. While these conditions may have some corn growers worried, I remember last year and how we accumulated a lot of GDD's in September and October and got the crop off in fairly short order. While that kind of warm and dry fall would be welcome again this year, I won't venture to guess what is going to happen at this point. I think we still have a good chance of making it to black layer, but it is too soon to tell how dry down in the field is going to go.



Clair Keene



#### ROPE WICK APPLICATORS FOR CONTROLLING WEEDS ABOVE THE CROP CANOPY

Roundup herbicide was first sold as a nonselective herbicide in 1974. Years later I recall a promotion where Monsanto Company mailed a rope wick applicator kit with the purchase of Roundup herbicide. The idea was PVC tubing for holding herbicide and soft, synthetic braided rope for drawing the herbicide from the tubing to the plant. By using a wiping action, the rope acted much like a wick in an oil lamp to draw herbicide from the tubing and transfer it to the target plant (use the link to a University of Missouri Extension technical bulletin



for pictures and more detailed information: <u>Rope Wick Applicators</u> Roundup applied through the rope wick applicator was commonly used technique for controlling volunteer corn or velvetleaf in soybean.

Recently I became aware of rope wick applicators marketed by Bowman Manufacturing, Newport, AR. The rope wick applicator is intended for use to control escape weeds extending above the crop canopy (image).

For proper use, label of the product would need to have instructions for application through the rope wick applicator. Further, target crop would also need to be listed on the label. Labels, including special local needs labels (SLN) or Section 18 Emergency Exemption require data demonstrating selective control and the appropriate supplemental labeling.

Tom Peters
Extension Sugarbeet Agronomist
NDSU & U of MN



#### **AROUND THE STATE**

#### **FIELD DAY**

### Carrington Research Extension Center Hosts Annual Row Crop Tour August 21

Plan to attend the annual Carrington Research Extension Center Row Crop Tour August 21, 2025 from 9:00 a.m. to 1:00 p.m. (a new start time compared to the past!) sharing information about corn, soybean, dry bean, and sunflower. Registration and social time begins at 8:30 AM in the main meeting room with the tour wagons leaving the building at 9:00 AM.

Farmers, Agriculturalists, and Extension personnel are invited to attend this row crop tour.

Presentations will be delivered on dry bean, sunflower, corn, and soybean. Speakers include Sam Markell, Michael Wunsch, Ana Carcedo, Brady Goettl, Maria Roberta De Oliveira, Robert Sinner, Rupak Karn, Szilvia Yuja, Ezra Aberle, and Jeff Stachler. Topics include white mold management in dry bean, dry bean varieties, sunflower rust and other sunflower diseases, soybean varieties and management, weeds, fertility, corn in the rotation, and spray drones.

Lunch will be provided for free after the program sponsored by North Dakota Corn Utilization Council, Northarvest Bean Growers Association, National Sunflower Association, and the North Dakota Soybean Council.

Three hours of continuing education units (CEU's) will be available for Certified Crop Advisers. Hope to see many of you at this great tour.

Jeff Stachler

NDSU Extension Cropping Systems Specialist Carrington Research Extension Center

#### **NORTHEAST ND**

Rainfall continued into this week, with NDAWN-reported averages ranging from 0.59 inches to as much as 3.25 inches over the past seven days. This continued precipitation has interfered with small grain harvest and desiccation activities. Due to saturated field conditions, many farmers have resorted to hiring spray planes, as ground applications are currently not feasible.

Lodging has been reported in several fields, and the persistent wet conditions combined with high humidity have raised concerns about sprouting and elevated DON levels in small grains. A few producers were able to harvest barley during short breaks in the rain.

Field peas, which appeared to be nearing maturity last week, have experienced delayed ripening due to continued rainfall. The added moisture has prolonged pod development, keeping the plants green longer than expected.

Canola is currently at the R5.2 growth stage, with seeds in the lower pods still green. Some early-planted fields are beginning to turn color, signaling the start of ripening.

Soybeans, sunflowers and corn are benefiting from the recent moisture. Soybeans are currently at the R2 to R3 stages, while sunflowers are in full bloom. Although soybean aphids are still present in many fields, their populations appear to be declining. This reduction is likely due to the combination of rainfall washing them off the plants and a strong presence of natural predators, including lady beetles, green lacewings, and syrphid flies.

Corn has completed silking and is progressing well, showing good condition in many areas.



Spring wheat field in Cavalier County. Photo: Anitha Chirumamilla, LREC



Scab affected wheat heads. Photos: Anitha Chirumamilla, LREC







Anitha Chirumamilla
Extension Cropping Systems Specialist
Langdon Research Extension Center

# SOUTH-CENTRAL/SOUTHEAST ND

Interested in flax and hemp fiber crops? Attend the Carrington REC Fiber Roundtable August 20, 2025 from 1:00 to 4:00p.m. Don't forget to attend the annual Carrington Research Extension Center Row Crop Tour August 21, 2025.

Another week of large quantities of rain as seen in photo 1 in LaMoure County for most of the region, reducing crop quality again in low-lying areas, but it was a little warmer for the week.

Hard red spring wheat harvest is speeding up a bit across the region. As of this Monday, Richland County, Emmons, Griggs, and Foster Counties had harvested 15 to 20%, 10%, 5% and 1%, respectively of hard red spring wheat. Emmons reported about 30% of barley harvested as of Monday. Great small grain harvest



Photo 1: Large pond of water in LaMoure County due to excessive rainfall.

conditions occurred Tuesday across the region. Yield reports from across the region have been from 70 to upper 100

bushels per acre with moisture around 15% and protein mostly a little below and above 14%, but I have heard of much lower proteins second hand. There are still some hard red spring wheat fields just starting to turn color in the region. There will be some disease and quality issues in this wheat crop in some fields, unfortunately. Photo 2 shows bacterial leaf streak reaching the head early enough to cause reduced kernel size as shown in photo 3. A large percentage of areas of most wheat fields are weed free, however not all parts or fields are weed free this season. Photo 4 shows green foxtail showing up in a hard red spring wheat field and horseweed (marestail) and absinth wormwood (photo 5) in different field.



Photo 2: Bacterial leaf streak on the wheat head in Foster County.



Photo 3: Reduced kernel size due to the bacterial leaf streak affecting the head before end of grain fill.



Photo 5: Lots of horseweed and absinth wormwood in a wheat field in Eddy County.



Photo 4: Lots of green foxtail coming up over the wheat canopy in Griggs County.

Corn in the region varies from V15 (15-collars) in just a few fields up to R4 (dough stage) in the southern tier of counties in the region. Over 95% of corn fields are at the R1 (silking) to R2 (blister stage). I have not heard of any reports of poor corn pollination yet in our region. Corn condition improved again in most counties of our region, unless excess water was present. The most prevalent disease so far in the region having little impact on the crop is bacterial leaf streak as seen in photo 6 in Griggs County. Will corn reach maturity this season prior to a freeze (28 degrees Fahrenheit)? Based upon the four corners of the region, Skogmo to Mooreton and Mayville to Linton and Carrington in the center, if corn was planted May 24th, Skogmo GDD's are -139 from normal and +59 from 2024 (new station so no history before 2024), Mooreton GDD's are -95 from normal, -24 from 2024 and -147 from the 5-year average, Mayville GDD's are -25 from normal, +5 from 2024, and -141 for the 5-year average, Linton GDD's are -77 from normal, +61 from 2024, and -91 for the 5-year average, and Carrington GDD's are -54 from normal, +73 from 2024, and -105 for the 5-year average. Based upon the U2U Corn GDD Tool from University of Nebraska (Corn GDD Tool), May 24<sup>th</sup> planted corn will likely reach black layer on September 29th, 1 day before the average freeze at Skogmo for 85-day hybrids, October 1st, 7 days ahead of the average freeze at Mooreton for 95-day hybrids, October 22<sup>nd</sup>,



Photo 6: Bacterial leaf streak in corn in Griggs County.

14 days after the average freeze at Mayville for 85-day hybrids, September 28<sup>th</sup>, 6 days ahead of the average freeze at Linton for 85-day hybrids and October 2<sup>nd</sup>, 4 days ahead of the average freeze at Carrington for 85-day hybrids. At this point in time, all black layer dates are before the average first freeze for these locations, however it may freeze the average first freeze dates. We must have a hot August and September and a late freeze like last year for corn to reach maturity again. However, the forecast has almost no hot days in August and September and it is forecasted to get to 31 degrees Fahrenheit in Carrington on September 26<sup>th</sup>.

Soybean growth stage in the region ranges from R2 (full flower) to R5 (beginning seed) with an average stage for the region of about R3 (small pods). Soybean condition improved again this week for most of the region with the exception of those areas receiving large quantities of rainfall for the week. The most common foliar soybean diseases in the region so far are bacterial leaf blight and Septoria brown spot (photo 7). However, frogeye leaf spot is showing up in Richland to Cass Counties and down to the Oakes area. I saw one leaflet of a plant having 50% of the leaflet with frogeye leaf spot lesions, but for the most part it is not very frequent across any fields yet. Other diseases showing up now is late season phytophthora and white mold. A field in Emmons County has some soybeans showing growth regulator injury (photo 8).



Photo 7: Septoria brown spot on soybean leaves in Emmons County. (photo by NDSU Extension Agent Emmons County – Nancy Deis)



Photo 8: Significant growth regulator damage to soybean in Emmons County. (photo by Nancy Deis)

Most canola is turning color. The canola crop condition still looks really good across most of the region as seen in photo 9 from Emmons County.



Photo 9: Great looking canola in Emmons County. (photo by Nancy Deis)

Dry bean stage is from pin pods to large seeds forming in pods with most having full-sized pods on plants. Dry bean condition improved for many in the region except those fields receiving too much rain. Photo 10 shows an excellent dry bean field in LaMoure County. Bacterial foliar diseases are present in dry bean at the moment (photo 11). It's looking like white mold will be a serious problem in dry beans this year in some fields in the region according to photo 12.



Photo 10: An excellent dry bean field in LaMoure County.



Photo 11: Bacterial disease foliar symptoms of dry bean in LaMoure County.

Have a great and safe week with harvesting and attend some field days!

Of the 27 NDAWN stations I've chosen this season across region, the range in rainfall for the region in the past week was 0.39 inch near Zeeland to 7.64 inches near Wirch with an average rainfall for the week in the region of 1.9 inches!



Photo 12: White mold showing up in dry bean in LaMoure County.

Jeff Stachler

NDSU Extension Cropping Systems Specialist Carrington Research Extension Center

## **SOUTHWEST ND**

Over the past week, precipitation has eased across southwest North Dakota. While some rain fell, amounts were generally modest, ranging from 0.07 inches in western Bowman County to 2.17 inches in northern Dunn County. According to the National Weather Service, the last 60 days in Dickinson have been the wettest since 1957.

While we never complain about rain in this region, the frequent showers have delayed winter wheat, barley, and field pea harvest. Concerns about grain quality have surfaced, with a few reports of sprouting in wheat and barley. Producers with access to grain dryers have been harvesting at higher moisture levels (~16%) to minimize quality losses.

Frequent rains have also challenged hay harvest. Some fields were baled at moisture levels above 20% due to limited harvest windows. Hay baled at this moisture can develop mold, which reduces protein and carbohydrate content, lowers palatability, and may be toxic—especially to horses.

Preliminary harvest reports include average winter wheat yields in Mercer County and 50–60 bu/ac wheat in Adams County. At the Research Extension Center, our barley variety trials averaged 120 bu/ac, compared to 85 bu/ac last year.

Pest observations include increased populations of European corn borer and red sunflower seed weevil in Mercer County, and reports of millet fields heavily damaged by worms in Bowman County.



Crop development varies across the area: corn ranges from silking to early dough stage; soybeans are between pod elongation and pod fill; canola is ripening; and most sunflower fields are in bloom.

> **Victor Gomes Extension Cropping Systems Specialist**



#### WEATHER FORECAST

# The August 14 to August 20, 2025 Weather Summary and Outlook

Typical of North Dakota's weather, rainfall amounts once again varied greatly in the past week (Figure 1). From just a few hundredths to over 3 inches of rain fell across the state in the past 7 days. I have had numerous conversations about the wide variablity of rain amounts this summer. All completely normal, but because the past few summers have overall been dry, the more frequent rains this summer have reminded us once again how much rain does vary over short distances.

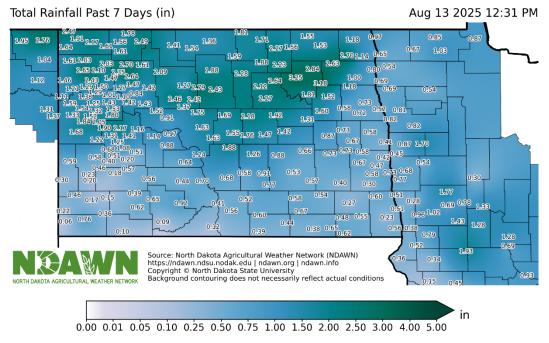


Figure 1. Total Rainfall for the Period of August 7 through August 13 at 12:30 PM.

Northeastern North Dakota continues to be the main area that has recorded below average precipiation since June 1 (Figure 2). This week should bring more thunderstorms chances, with some thunderstorms probably severe, especially in the next 48 hours (through Saturday morning).

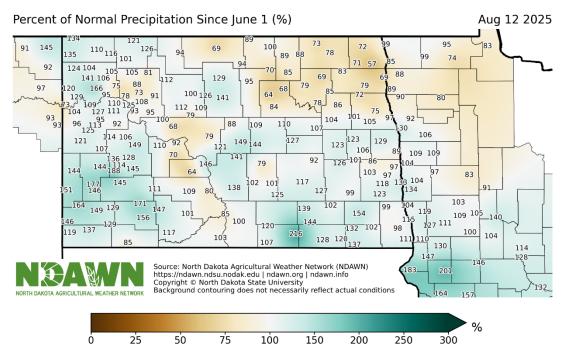


Figure 2. Percent of Normal Precipitation from June 1 through August 12, 2025

The past week was a mix of below and above average temperatures with central and western North Dakota overall recording below average temperatures (Figure 3). These next 7 days look to be near or a bit below average with the usual mix of warmer and cooler days. It does not appear at this time that any long-term period of above average temperatures will move into the northern plains in the next couple of weeks.

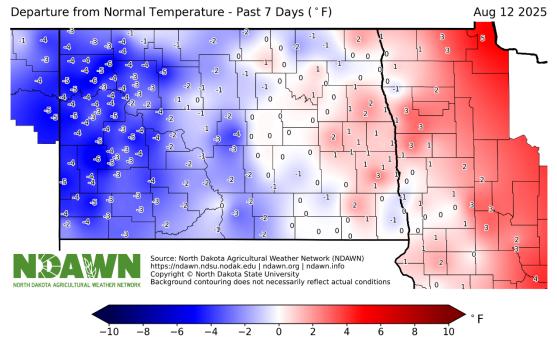


Figure 3. Departure from Average Air Temperature for Period of August 6 through August 12, 2025

Figures 4 and 5 show forecasted growing degree days (GDDs) for base 32°F (wheat and small grains) and base 50°F (corn and soybeans) during this forecast period.

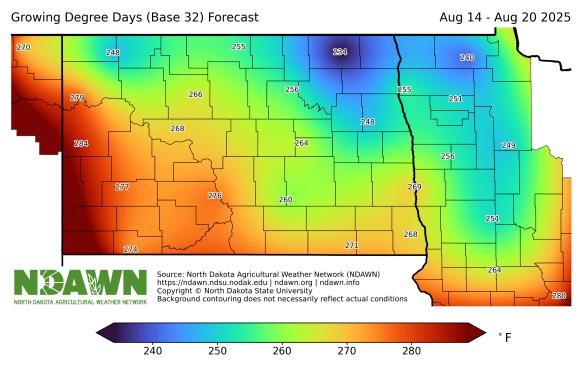


Figure 4. Estimated growing degree days base 32° for the Period of August 14 to August 20, 2025.

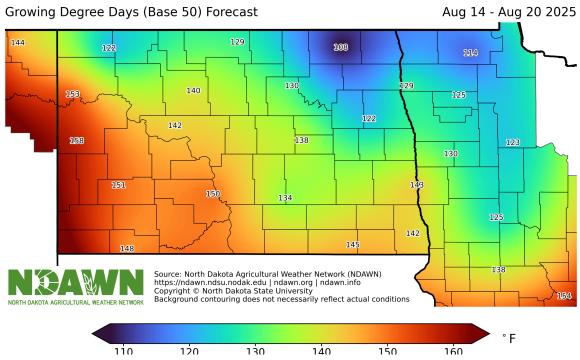


Figure 5. Estimated growing degree days base 50° for the Period of August 14 to August 20, 2025.

Using May 1 as a planting date, the accumulated growing degree days for wheat (base temperature 32°) is given in Figure 6. You can calculate wheat growing degree days based on your exact planting date(s) here: https://ndawn.ndsu.nodak.edu/wheat-growing-degree-days.html

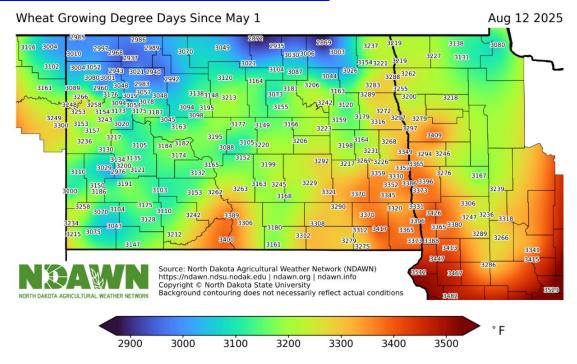


Figure 6. Wheat Growing Degree Days (Base 32°) for the Period of May 1 through August 12, 2025

temperatures, as well as give you GDDs based on the planting date(s) you set. That tool can be found here:

Using May 10 as a planting date, the accumulated growing degree days for corn (base temperature 50°) is given in Figure 7. You can calculate corn growing degree days based on your exact planting date(s) here: <a href="https://ndawn.ndsu.nodak.edu/corn-growing-degree-days.html">https://ndawn.ndsu.nodak.edu/corn-growing-degree-days.html</a>. Soybeans also use base 50° like corn, but NDAWN has a special tool for soybeans that, based on your planting date and cultivar, can estimate maturity dates based on average

https://ndawn.ndsu.nodak.edu/soybean-growing-degree-days.html

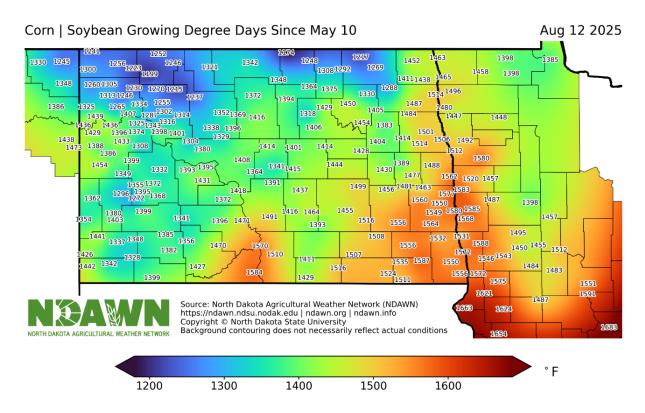


Figure 7. Corn Growing Degree Days (Base 50°) for the Period of May 10 through August 12, 2025

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