North Dakota State University
CROP & PEST REPORT
NDSU EXTENSION

No 13 July 24, 2025

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2025 Field Days Locations & Dates

Langdon	July 24	Morning	
Oakes	Aug. 7	Morning	

The North Dakota State University Research Extension Centers' annual field days show N.D. Agricultural Experiment Station research in action. The events take place at the Research Extension Center sites across the state and feature speakers, presentations and tours covering a diverse array of topics. The field days are open to the public.

Entomology

RED SUNFLOWER SEED WEEVIL SCOUTING

Most sunflowers are in the bud growth stage (R1 to R2) and about 10-21 days away from early flowering, depending on planting dates, hybrid maturity and temperatures. Here's a quick review of scouting protocol and the revised 2025 threshold for red sunflower seed weevils (RSSW). No red sunflower seed weevils have been observed by the IPM Scouts or reported by farmers and crop consultants to date.

Identification: The adult RSSW is small, about ⅛ inch long, reddish-orange, and has a distinct snout.

Red sunflower seed weevil (Brandi Herauf, former IPM scout)

Scouting: Checking field margins early can help determine if RSSW are present. However, scouting whole fields is needed to decide if treatment is necessary. Begin scouting when yellow florets appear around the outer edge of the sunflower head (growth stage R5.1). RSSW females must consume pollen before laying eggs.

Walk a W-shaped pattern, starting at least 75–100 feet into the field. At five random sites, count adult weevils on five plants per site (25 plants total). Rub your hand across the sunflower face to dislodge adults and count them.

Continue scouting until the economic threshold is reached (see Tables 1 & 2) or until plants reach 70% pollen shed (R5.7). After R5.7, plants are no longer at risk for egg laying or significant damage, and larvae are protected inside seeds from insecticides.

Optimum Treatment Timing: The ideal treatment stage is when most plants are at 40% pollen shed, but it's recommended to treat when 3 out of 10 plants are just starting to shed pollen in a field. This gives flexibility in weather delays or scheduling issues with aerial applicators. Early sprays or high weevil pressure may require a second application. The Economic Threshold includes the cost of insecticide treatment and the cost of insecticide application per acre, plant population, some research factors and market prices. We are using $22 per cwt for oilseed sunflower.

$$\text{Threshold (weevils per head)} = \frac{\text{Cost of Insecticide Treatment}}{(\text{Market Price} \times 21.5) \times (0.000022 \times \text{Plant Population} + 0.18)}$$

To reduce the risk to pollinators, apply broad-spectrum insecticides on blooming sunflowers during early morning or late afternoon/evening hours, when bees—such as honey bees and native wild bees—are less active. Refer to the North Dakota Honey Bee map to locate honey bee hives and beekeepers in North Dakota: https://ole.ndda.nd.gov/apiary/map

Although most modern sunflower hybrids are self-pollinating, bees still benefit sunflowers by improving pollination efficiency and potentially increasing seed set and yield. Protecting pollinators helps maintain both crop productivity and ecosystem health.

📩 Send your scouting reports with RSSW counts per head and field location as you begin detecting RSSWs.

Table 1. Economic Threshold for Oilseed Sunflowers - Number of adult red sunflower seed weevil per head when the cost of control equals $18.00 per acre ($6.00 for insecticide and $12 for aerial application costs).

Market Price	Sunflower Plants per Acre (x 1,000)									
$ per lb	16	17	18	19	20	21	22	23	24	25
0.18	11.7	11.1	10.5	10.0	9.6	9.1	8.8	8.4	8.1	7.8
0.19	11.1	10.5	10.0	9.5	9.1	8.7	8.3	8.0	7.7	7.4
0.20	10.6	10.1	9.6	9.1	8.7	8.3	8.0	7.6	7.3	7.1
0.21	10.2	9.6	9.1	8.7	8.3	7.9	7.6	7.3	7.0	6.8
0.22	9.8	9.2	8.8	8.3	8.0	7.6	7.3	7.0	6.7	6.5
0.23	9.4	8.9	8.4	8.0	7.6	7.3	7.0	6.7	6.4	6.2
0.24	9.0	8.5	8.1	7.7	7.3	7.0	6.7	6.4	6.2	6.0

Table 2. Economic Threshold for Oilseed Sunflowers - Number of adult red sunflower seed weevil per head when the cost of control equals $20.00 per acre ($8.00 for insecticide and $12 for aerial application costs).

Market Price	Sunflower Plants per Acre (x 1,000)									
$ per lb	16	17	18	19	20	21	22	23	24	25
0.18	13.0	12.3	11.7	11.1	10.6	10.2	9.7	9.4	9.0	8.7
0.19	12.4	11.7	11.1	10.6	10.1	9.7	9.3	8.9	8.6	8.2
0.20	11.8	11.2	10.6	10.1	9.7	9.2	8.8	8.5	8.2	7.9
0.21	11.3	10.7	10.2	9.7	9.2	8.8	8.5	8.1	7.8	7.5
0.22	10.8	10.3	9.7	9.3	8.8	8.5	8.1	7.8	7.5	7.2
0.23	10.4	9.9	9.4	8.9	8.5	8.1	7.8	7.5	7.2	6.9
0.24	10.0	9.5	9.0	8.6	8.2	7.8	7.5	7.2	6.9	6.6

2025 RSSW Economic Threshold (average # weevils per head)

Oilseed sunflower at 22 cents per lb:

22,000 – 18,000 plants per acre

- $6 insecticide cost per acre + $12 aerial application costs – **>7-9 weevils per head**
- $8 insecticide cost per acre + $12 aerial application costs – **>8-10 weevils per head**

Confection sunflowers:

- **>1 weevil per head**

SUNFLOWER BUD MOTH

Larvae of the sunflower bud moth have been causing feeding injury to sunflower buds, heads and stalks in sunflowers located in Pembina County and Cavalier County.

Sunflower bud moth (Extension Entomology)

The adult is a small moth with just over half an inch wingspan. Its forewings are grayish-brown with two dark bands—one in the center and another near the tip. The larvae are cream-colored with a dark head and grow nearly half an inch long.

North Dakota has two generations of sunflower bud moths yearly. Adults begin to emerge from overwintering pupae in late May to mid-June. After mating, females lay their eggs on young sunflower terminals, the base of mature heads, or in leaf axils. Once the eggs hatch, the larvae tunnel into the plant, leaving a black ring of frass around the entry hole. They complete development inside the plant and pupate, positioning

themselves near exit holes for easy emergence. A second generation of adults appears in July and August, but the damage from this generation is not considered economically important.

Damage: In early-planted sunflowers, most damage occurs in the stalks or early buds, while late-planted sunflowers tend to have more larvae feeding inside the head. Larvae do not eat the seeds; they feed on soft tissue inside the head or stalk. The most noticeable damage occurs when larvae tunnel into unopened buds, leading to misshapen or poorly developed heads.

Scouting and Thresholds: No formal scouting procedures or economic thresholds have been developed, since the sunflower bud moth rarely causes economic damage.

Management: Chemical control is not recommended. Even in fields with high larval numbers, the damage does not affect yield significantly. For now, no specific management actions are necessary, though continued field monitoring can help detect any changes in pest status.

Sunflower bud moth tunneling into sunflower bud (Bill Connor, FMC)

Sunflower bud moth tunneling in sunflower stem (Nic Otto)

WATCH FOR ARMYWORMS IN WHEAT

In southern Richland County, Armyworm larvae were found in lodged wheat close to maturity (harvest in 10-14 days). Armyworms do not overwinter in North Dakota. Infestations result from moths migrating north from southern states in early June to July, especially after heavy southern outbreaks and favorable winds. Outbreaks are most likely under cool, wet conditions and abundant food. Natural enemies often help suppress populations.

Moths lay eggs in folded leaves or under leaf sheaths at night, favoring moist, shady spots, especially in lodged or damaged small grains or grasses. Eggs are white, bead-like, often in clusters and hatch in 8–10 days. Larvae feed for 3–4 weeks, progressing through 6 stages (instars). Larvae feed at night and hide during the day under debris, soil cracks, or vegetation. As larvae grow, they feed more heavily. Larvae migrate en masse (“armies”) if food runs out, destroying

crops and vegetation. Larvae burrow 2–3 inches into the soil to pupate. Moths emerge ~2 weeks later. Typically, one generation per year occurs in North Dakota.

Armyworm larvae have five pairs of prolegs. Their color varies from pale green to tan in the early growth stage to dark green to black in later stages. The head capsule is brown with netlike patterns. Full-grown larvae are smooth, striped and almost hairless. They grow to a length of 1½ to 2 inches. Several longitudinal stripes run along the body:

- Pale orange stripe with white border
- Brownish mottled stripe
- Another brownish mottled stripe above the legs

Host Crops: Primary: Small grains (wheat, barley, oats, rye)
Others: Corn, alfalfa, flax, clover, millet, beans, sugarbeets

For damage symptoms, look for the ragged leaf edges and defoliation. In severe infestations, grain heads will be clipped by mature larvae in wheat, barley and flax. Look for frass (droppings) at the base of the plant.

Armyworm larva feeding on wheat head (Patrick Beauzay, NDSU Extension Entomology)

Scouting Tips: Look in dense, grassy areas in field margins, lodged or hail/wind-damaged areas, beneath crop residue and around plant bases. Larvae hide in debris or cracks.

Armyworm larvae stripping wheat plants (Anitha Chirumamilla, LREC)

Early detection is key, since control is more effective and economical when larvae are small (¾ to 1¼ inch long). Avoid revenge spraying: Spraying after larvae complete feeding results in no yield benefit. Scout each field individually: Infestations are sporadic and vary widely.

Economic Threshold for Small Grains (wheat, barley, oats)
Preheading: 4 or more larvae per square foot
Heading (head clipping): 2 or more larvae per square foot

For more information and control recommendations in field crops, consult the *2025 North Dakota Field Crop Insect Management Guide E1143* and *The Armyworm and the Army Cutworm E830*.

Janet J. Knodel
Extension Entomologist

plant science

NDSU EXTENSION TO HOST DRY BEAN FIELD DAYS

NDSU Extension, in partnership with the Northarvest Bean Growers Association, will host *Dry Bean Field Days*. These events will take place at Forest River on August 12th, and Hatton on the 13th, offering an opportunity for growers, industry professionals, and researchers to come together and explore the latest research in dry bean production. The field days will showcase a team of NDSU experts presenting a wide range of dry bean topics:

- **Juan Osorno**, NDSU dry bean breeder, will walk attendees through new and upcoming dry bean varieties developed in North Dakota, highlighting the breeding pipeline and what growers can expect in the near future.
- **Maria Roberta De Oliveira**, graduate student, will demonstrate how drones are being used to collect high-quality field data more efficiently.
- **Ana Carcedo**, NDSU Extension broadleaf crops agronomist, will provide agronomic updates tailored to different market classes, focusing on best practices for maximizing yield.
- **Michael Wunsch**, NDSU research plant pathologist, will focus on one of the most challenging diseases in dry bean production—white mold. His session, *"How to Make the Most of Your Fungicides,"* will provide practical insights for effective disease management.

The program will conclude with a live Q&A session, offering attendees the chance to engage directly with the speakers. **Lunch will be provided.**

There is no cost to attend. Registration is appreciated but not required.
For more information and to register, visit Dry Beans Field Day – Forest River; Dry Beans Field Day - Hatton or contact Ana Carcedo at 701-831-5796 or via email at a.carcedo@ndsu.edu.

Ana Carcedo
Broadleaf Agronomist

soils

SOIL FERTILITY PLANNING FOR THE NEXT SEASON STARTS NOW

While the crops across North Dakota are still actively growing and pest management is in full swing, fertility management for the 2025 crops has come to an end, with in-season N applications and rescue treatments wrapping up as crops continue to grow and mature. With all of the deficiency symptoms noted across the state, now is a good time to think about what you saw on your acres and make plans to correct these issues prior to next year's crop. The first step to correct nutrient deficiency issues is to correctly diagnose the problem and determine how lacking the nutrient is—two questions which can be answered with well-planned soil testing.

Soil Surface	Soil Properties	Crops
0-6 inch	pH, P, K, OM, Cl, Ca, Mg, CEC, Zn, NH_4^+-N, Fe, Mn, Cu, EC, NO_3-N, SAR-Na	Alfalfa, clovers (analyze only 0-6 inch depth, nitrate analysis at deeper depths not necessary), annual legumes except soybean in IDC areas and dry bean
6-24 inch	EC, NO_3-N, Cl (in addition to 0-6 inch depth)	Wheat, barley, oats, durum, corn, soybean, dry bean, potato, canola, crambe, mustard, sunflower, grass hay, pasture, millet, canary seed, flax, safflower, buckwheat, sorghum, sudangrass, soybean in IDC areas (Separate 0-24 inch depth into a 0-6 inch and 6-24 inch depth.)
24-48 inch	NO_3-N, in addition to the 0-6 inch and 6-24 inch depths	Sugarbeet, malting barley, sunflower (Separate cores into 0-6 inch, 6-24 inch and 24-48 inch depths.)

Figure 1: Depth of sampling and nutrient analysis associated with each depth. Source: Soil Sampling as a Basis for Fertilizer Application (SF990)

Between the soil and plant samples I collected myself across North Dakota and analyses sent to me by farmers and agronomists, the top nutrient deficiencies I ran across this year were N, K, S, and Cl (among others, see the July 23rd, 2025 Crop and Pest Report). In any given year, some N deficiency is expected across the state because of losses or under-fertilization. Through the utilization of economic recommendations, yield-limiting deficiency can be minimized while maximizing profit. The K and Cl deficiencies often go hand-in-hand, resulting directly from the under-application of potash (0-0-60) fertilizer. While I have noted K deficiency across the state for several years (with fields testing 77 ppm K or less), this year has been a case study in Cl deficiency, with symptoms popping up in small-grain fields across the state. If Cl deficiencies were noted this year, or potash has not been applied for an extended period, analyzing a 0 to 2-foot soil sample for Cl and applying fertilizer to reach the 40 lb Cl/ac critical level is strongly recommended.

Since soil sampling is likely to begin in 4 to 6 weeks following small-grain harvest, decisions on which fields to sample and what analyses to run need to be made. With current crop prices leaving much to be desired, focusing on sampling procedures which will give the greatest economic returns should be priority number one.

Sampling Frequency/Timing

- Residual N levels should be determined every year when an N-demanding crop is grown. Since N is a soil-mobile nutrient, samples from previous crop years should be wholly disregarded for current-year planning.
- Sampling for P, K, OM, and micronutrients every few years is usually sufficient since levels do not fluctuate substantially on a yearly basis. Soil sampling once in every rotation, but not more than three years apart, is

generally recommended as a *minimum*, with greater sampling frequency allowing for more intensive fertility tracking and management.

- K levels will fluctuate with soil water content and time of year (pre- or post-freeze). While conditions will never be fully ideal, consistency with sample timing will help reduce some of the variability—whether you sample K in the spring or fall, it doesn't matter as long as you pick one timing and stay consistent.

Sample Approach

- In North Dakota, zone sampling is generally considered the most economical and efficient soil sampling approach. By developing zone soil sampling maps based on common field characteristics, you can get the most informative data from your soil samples and reduce variability caused by combining high and low testing areas of fields into one single sample.
- Grid sampling is also a popular approach; however, previous research shows a grid of one acre or less is necessary to reveal useful patterns, which is financially burdensome.

Sample Analysis

- Different states use differing soil analyses for the same nutrient (the Olsen, Bray, and Mehlich tests for P is a prime example) based on the analysis best suited for the state's soil and cropping system characteristics. For NDSU fertility recommendations to work correctly, the nutrient analysis they are calibrated to must be used (see Table 1 in ND Fertilizer Recommendation Tables). With some soils samples being sent to out of state labs for processing and "total nutrient" tests being touted by some, it is essential to use the procedure calibrated and correlated to the nutrient recommendations.
- Unless a micronutrient deficiency is suspected, regular sampling for most micronutrients is not a wise economic decision. Focusing on N, P, and K should be top priorities, with Zn for corn rotations and Cl in small grain rotations as good options. Analyzing soil samples for iron or S in North Dakota will rarely (if ever) be a good economic decision for routine sampling (Limitations of the Sulfate-sulfur Soil Test as a Predictor of Sulfur Response).

Happy sampling!

Brady Goettl
Extension Soil Specialist

AROUND THE STATE

SOUTH-CENTRAL/SOUTHEAST ND

Plan to attend some upcoming field days in the region. The Tri County Plot Tour near Wishek will take place July 29, 2025, with a free meal at 6:30 PM followed by a plot tour at 7:00 PM at the plot site located six miles west of Wishek on Highway 13. At this field day you will see variety trials, agronomic trials, and weed control trials. Please reserve your spot if you want to join in eating the meal, by contacting one of the Emmons, Logan, or McIntosh County Agents before Monday.

Plan to attend the Oakes Irrigation Research Site Annual Field Day August 7, 2025,from 9 AM to 11:30 AM. Plan to attend the Dazey Plot Tour July 31, 2025, at 10:30 AM. Plan to attend the Fingal Plot Tour August 14, 2025. Lastly plan to attend the annual Carrington Research Extension Center Row Crop Tour August 21, 2025, from 9 AM to 1:00 PM.

Crop growth continued a little slower over the past two weeks due to cooler temperatures and large quantities of rainfall in parts of the region. At this point in time, I believe crops are progressing fast enough to beat the frost. Lots of rain and hail occurred again the past two weeks, especially in southern Wells County. I've never seen soil divots from hail stones as seen in Photo 1. Lots of hail damage in Wells County occurred in multiple events, as seen by the destroyed wheat in Photo 2.

Photo 1: Soil divots from hail stones in Wells County!

Photo 2: Destroyed wheat crop in Wells County from the same hailstorm as photo 1.

Hard red spring wheat stage in the region ranges from watery-ripe kernels to nearly ripe in the southern part of region. The condition of all spring-seeded small grain crops is mostly good to excellent (at least 75% or more in each county) throughout the region. As seen in Photo 3, most durum and hard red spring wheat fields are free of any leaf diseases, although bacterial leaf streak has become more prevalent and is the most common leaf disease this season. Wheat stem maggot is present in nearly every spring wheat and barley field in the region as seen in Photos 4 and 5. Other disease issues showing up are root rots and fusarium head blight, as seen in Photo 6. Fusarium head blight is present in many fields at low levels but could be worse in the southern part of the region in susceptible varieties not sprayed.

Photo 3: Very little durum leaf diseases in this photo.

Photo 4: Bleached wheat heads indicating presence of wheat stem maggot.

Photo 5: A wheat stem maggot.

Photo 6: Fusarium head blight (scab) in a single durum spikelet.

Corn in the region varies from V12 (12-collars) to R2 (blister kernels) in Sargent and Richland Counties. Corn has started to tassel in a few fields in every county of the region. Average corn conditions in the counties range from about 55%

good to excellent, with Sargent County probably at 85% good to excellent. Currently, there are no pest issues in corn. The biggest problem for corn is excessive rainfall and hail.

Soybean stages in the region varies from V5 (fifth node with a trifoliate leaf) to R3 (small pods), with the average stage in the region likely at R2 (full flower). Photo 7 shows R3 (small pods on one of the four upper most nodes) soybeans and Photo 8 shows these plants are only about 12 inches tall. Soybeans remain the poorest crop in our region with fewer than 10% of soybean fields looking excellent in most counties, with Sargent County likely having 50% of soybeans excellent. IDC, saturated soils, and hail are the most severe soybean problems in the region. I did find some Septoria brown spot, as seen in Photo 9, in some soybean fields within the last two weeks, which makes sense with all of the rainfall, but we don't need to worry about this disease in most years.

Photo 7: R3 (small pods within one of the four upper most nodes) soybean in Sheridan County July 10th.

Photo 8: The height of the R3 soybean in the same Sheridan County field July 10th.

Photo 9: Septoria brown spot on soybean in Sheridan County July 10th.

Most canola has completed flowering, as seen in Photo 10, and some in the southern parts have started turning yellow. The canola crop condition has improved, and a long flowering period should equate to above average yields.

Dry beans range from V6 (six nodes of trifoliate leaves) to pin pods, with most just starting to flower. Photo 11 shows a V6 dry bean plant July 10, 2025. Dry bean crop condition is somewhat of a Jekyll and Hyde story in which they look really good or are really bad, due to too much rainfall and extended saturated soil conditions.

Photo 10: Canola field nearly done flowering in Sheridan County July 10th.

Sunflowers are at least in the R1 stage with some sunflowers near flowering in the western parts of the region. Most sunflowers currently are in good to excellent condition.

Photo 11: V6 dry bean in Wells County July 10th.

Weeds are going to be a problem this season in many crops as I'm starting to see kochia appear above the wheat and soybean canopies and wild oats in wheat fields. With many soybean fields still not at canopy closure, new weed flushes are likely to occur, unless a strong preemergence herbicide program was applied. Most crops, including soybean, are too advanced now to spray many postemergence herbicides. Glufosinate and Enlist One should not be applied any longer and some fields are beyond timing to even apply glyphosate.

Of the 27 NDAWN stations I've chosen this season across the region, the average maximum daily air temperature from July 8 through July 21, 2025, was 78 degrees Fahrenheit, 6 degrees Fahrenheit below the July 1 to 7 period. The average daily minimum air temperature for the past week at the 27 NDAWN stations was 55 degrees Fahrenheit, 5 degrees Fahrenheit below the July 1 to 7 period.

More rain occurred in the region over the past two weeks! Rainfall for the region at these 27 weather stations ranged from 0.35 inch near Gardner to 3.44 inches near Mayville, with some other areas receiving at least 5 inches of rainfall, with an average for the region and two week period of 1.5 inches!

Have a great week, stay safe, and attend some field days!

Jeff Stachler
NDSU Extension Cropping Systems Specialist at Carrington Research Extension Center

SOUTHWEST ND

The month of July has been marked by significant weather shifts, with temperatures going anywhere between mid-90's all the way to lower 40's. It has also been a fairly wet July, with rainfall accumulations ranging from 0.86 inches in Morton County to 3.86 inches in Bowman County. Most stations got between 1-2 inches this month, most of which

came down just in the last week. Once again, we see areas in Southwest North Dakota (i.e., Bowman, Hettinger, and Slope Counties) receiving double the normal precipitation for the current month, which has put some areas under excess soil moisture conditions, which is atypical for this time of the year. The much welcome moisture coupled with the mild temperatures and overcast skies might benefit small grains and canola crops by extending the grain filling period.

While the rain was welcome there were some unwelcome winds and hail that came with the storms. On July 20th, hail

Figure 1. The aftermath of a hailstorm 10 miles south of Belfield, ND on July 20th. Different levels of corn defoliation can be found in the area, from less than 25% defoliation (A) to completely wiped out (B). Photos: Victor Gomes, NDSU Extension Cropping Systems Specialist.

ranging from dime to golf ball size was reported 8 miles N of Belfield, with several reports of crop damage. Similarly, the Mott-Lefor area was also hit by hail, with reports of fields being up to 70% wiped out.

Figure 2. Wheat field destroyed by hail 10 miles south of Belfield, ND (A). Even the grass in the ditch was completely crushed and flattened by the hailstorm (B).

Crop development in the area:

- Small grains: most fields have started to turn color and can be found anywhere between the early milk stage and the soft dough stage. Despite the predominantly moist conditions, scab incidence remains low.
- Canola: fields haven't quite started to turn color yet and the crop will likely benefit from the lower temperatures over the course of last week and have an extended grain filling period. Most canola fields are at the ripening stage.
- Corn: corn fields are developing fast and, other than those fields hit by hailstorms, the corn crop is looking much better than last year, due to the timely available moisture. Development stages range from V8-V13, with some fields just starting to tassel.

- Soybeans: similar to corn, soybeans in Southwest North Dakota are looking a lot better than they did last year, and some of our research plots at R2 have already grown more than some of our soybeans at maturity in previous years. Development stages in the area vary from late vegetative stages, for the late planted soybean fields, to flowering and early pod formation, for the early planted ones.
- Sunflowers: also growing fast, although a little behind compared to last year, mostly due to low temperatures and overcast skies. Most fields are at the bud formation or bud elongation stages.

Last week, on July 16th and 17th, we had our Livestock and Agronomy Field Days, respectively. With all the decisions to make in agriculture be sure to take advantage of these events to make informed decisions.

Figure 2. Doug Landblom, Associate Research Extension Center Specialist speaking to attendees at the Livestock Field Day in Manning, ND on July 16th.

Victor Gomes
Extension Cropping Systems Specialist

weather

WEATHER FORECAST

The July 24 to July 30, 2025 Weather Summary and Outlook

The past week was both cool and wet for many parts of the state. Widespread rain was recorded with many locations getting 1 to 2 inches of rain, with localized higher totals (Figure 1). These next 7 days will trend drier with the precipiation likely being more scattered. With the drier weather will also come warmer temperatures.

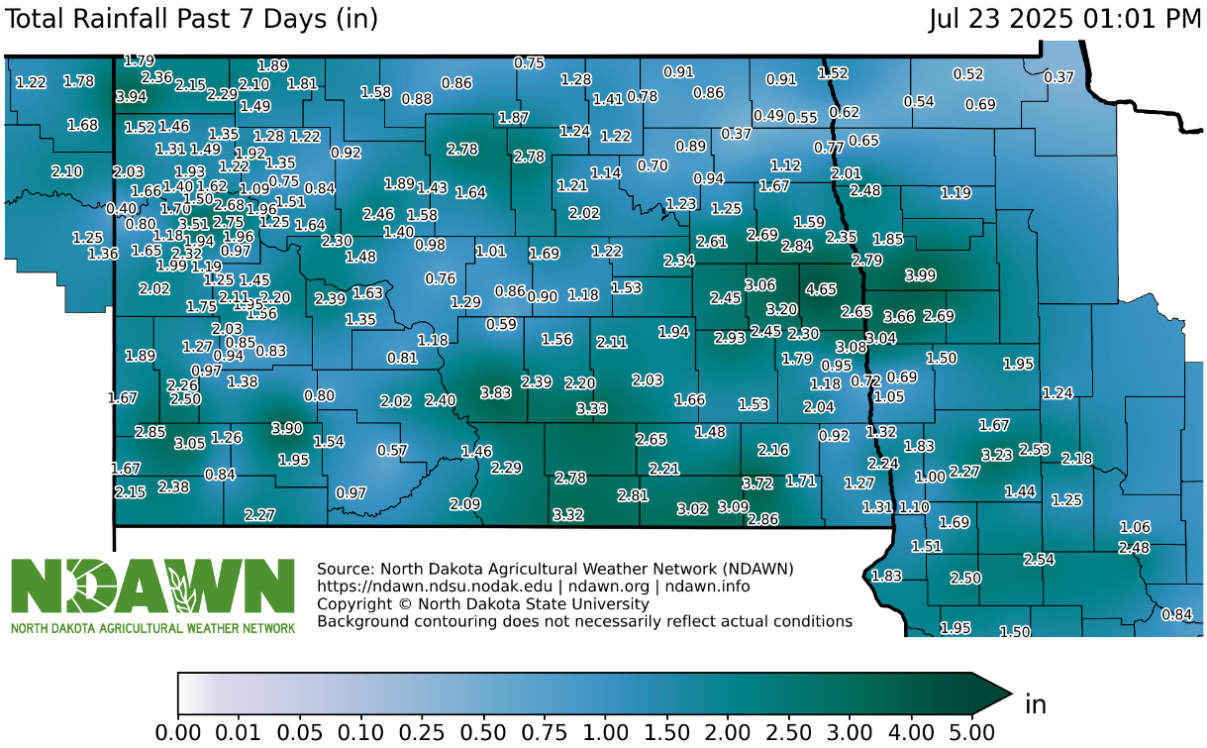

Figure 1. Total Rainfall for the Period of July 17 through July 23 at 1:00 PM.

The rain from the past week did help lessen the the percentage of North Dakota being drier than average this summer, but there are still more areas below than above average for rain since June 1 (Figure 2).

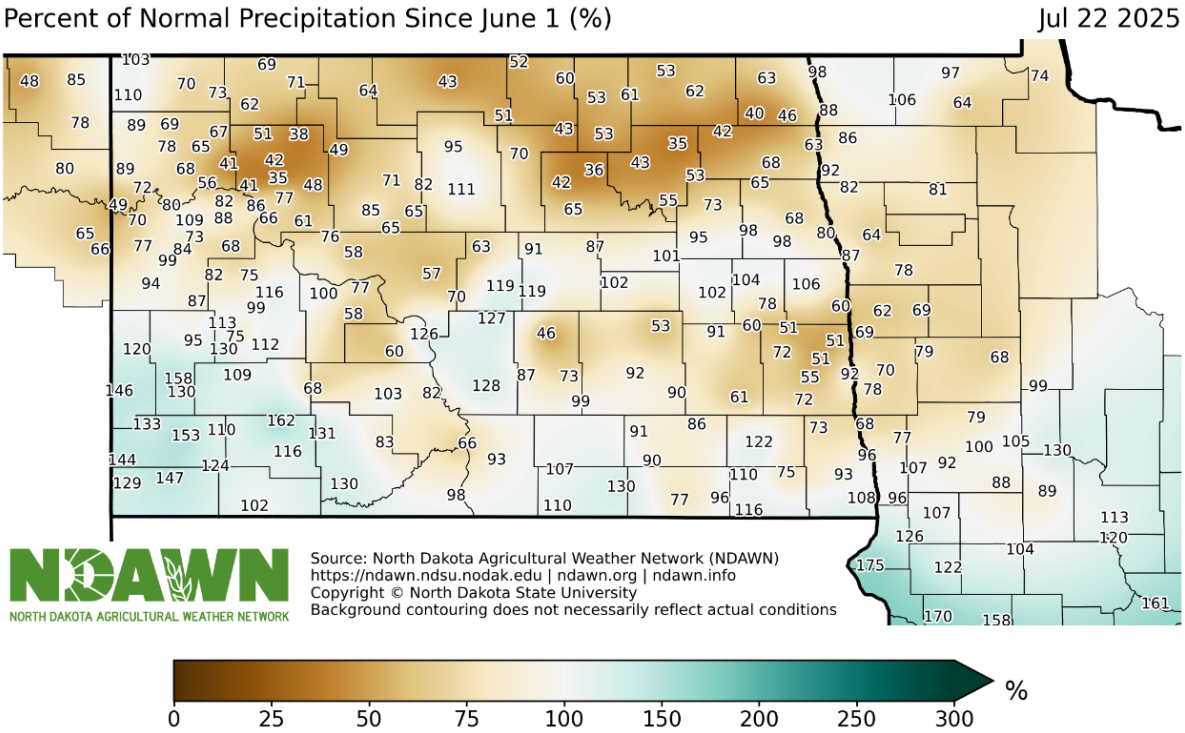

Figure 2. Percent of Normal Precipitation from June 1 through July 22, 2025

If you thought this past week didn't exactly feel like July, you would be correct. Temperatures averaged anywhere from 4° to 7° cooler than average (Figure 3). Moving forward, temperatures look to be above average much of the next two weeks. After what looks to be a very warm weekend, it may cool down a bit early next week, but then there are indications that temperatures will go above average as we begin August. In turn, we should be able to make up for some of the lost growing degree days from the past week.

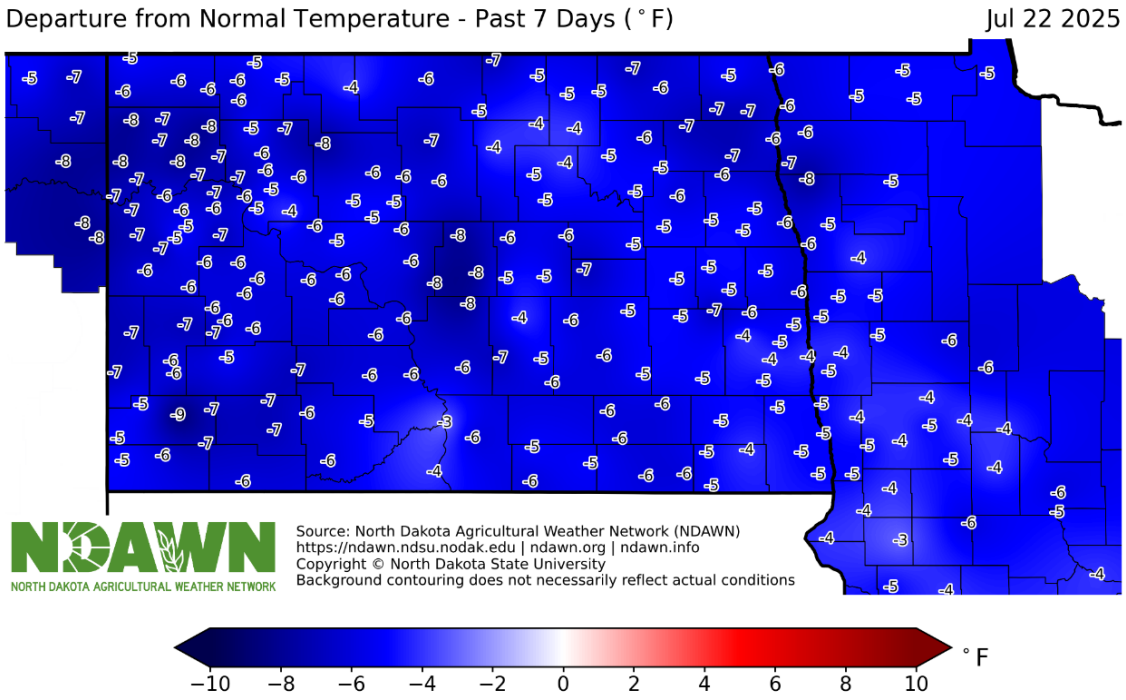

Figure 3. Departure from Average Air Temperature for Period of July 16 through July 22, 2025

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. With temperatures mostly above average in the next several days, that will mean more than average GDDs.

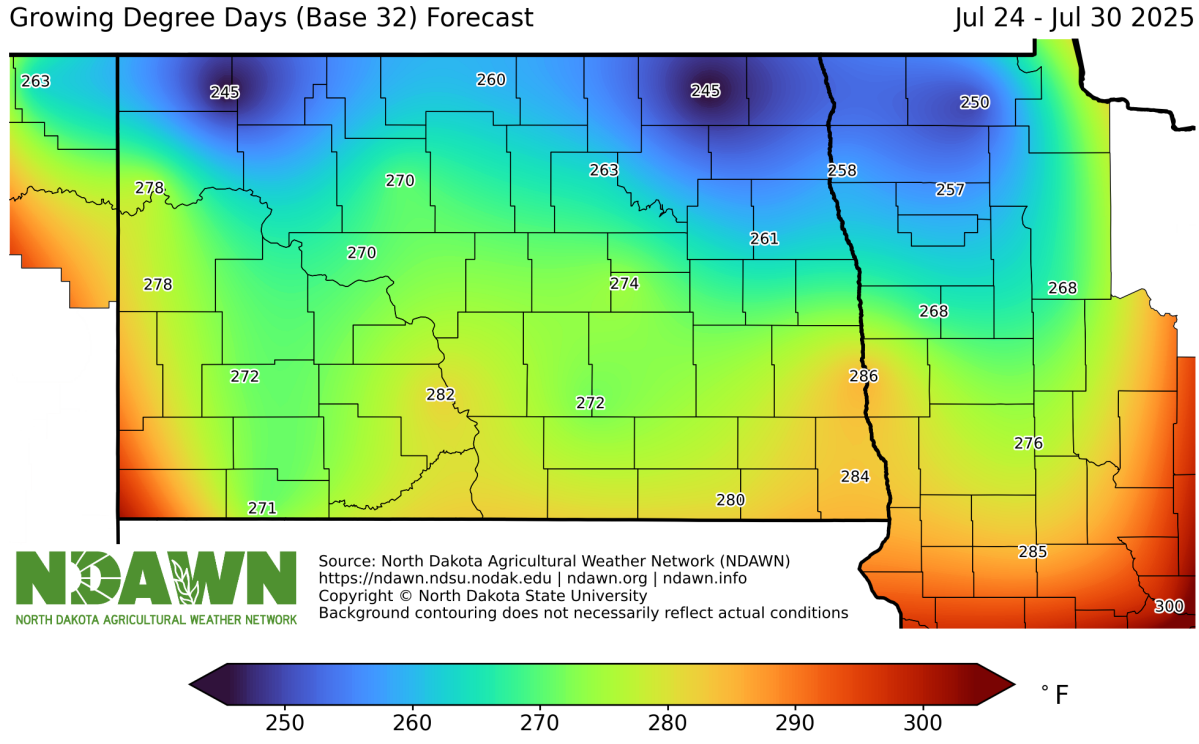

Figure 4. Estimated growing degree days base 32° for the Period of July 24 to July 30, 2025.

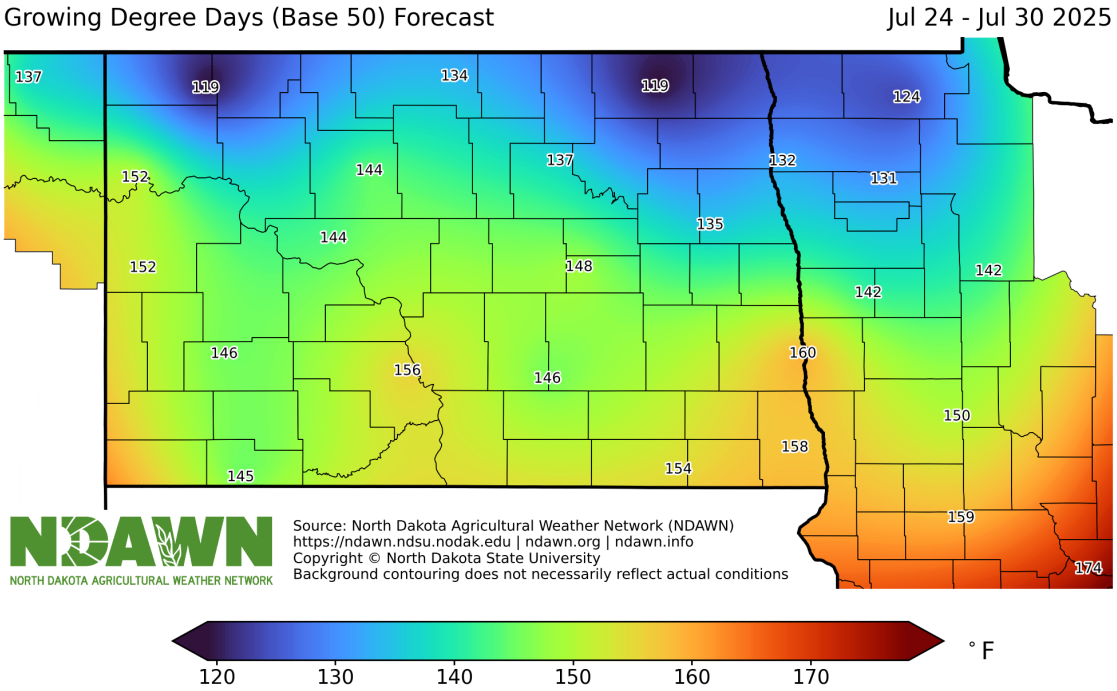

Figure 5. Estimated growing degree days base 50° for the Period of July 24 to July 30, 2025.

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

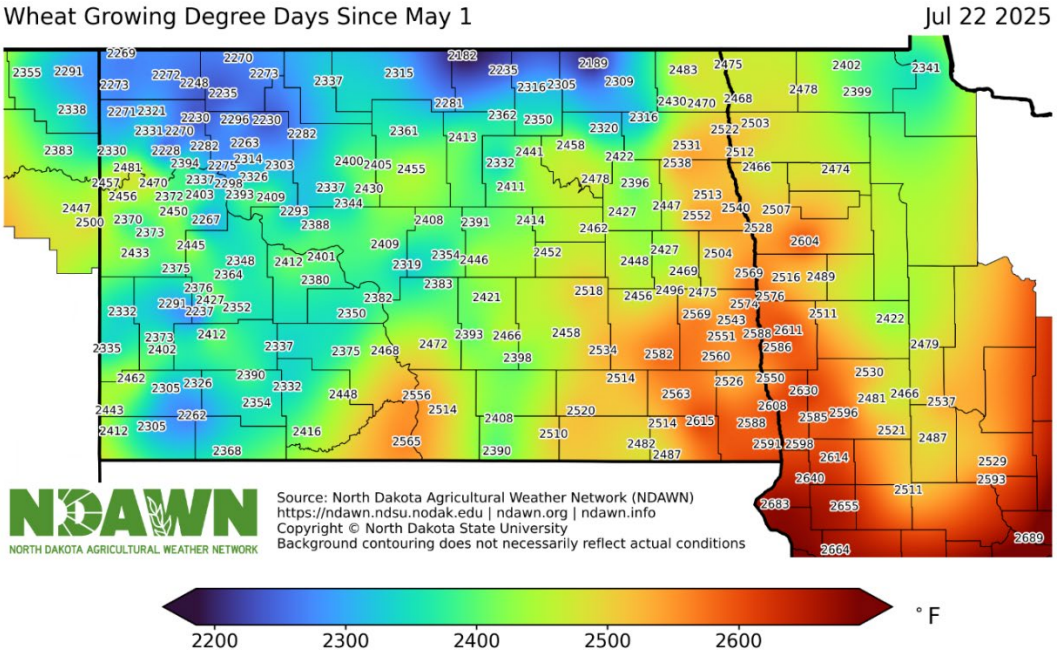

Figure 6. Wheat Growing Degree Days (Base 32°) for the Period of May 1 through July 22, 2025

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

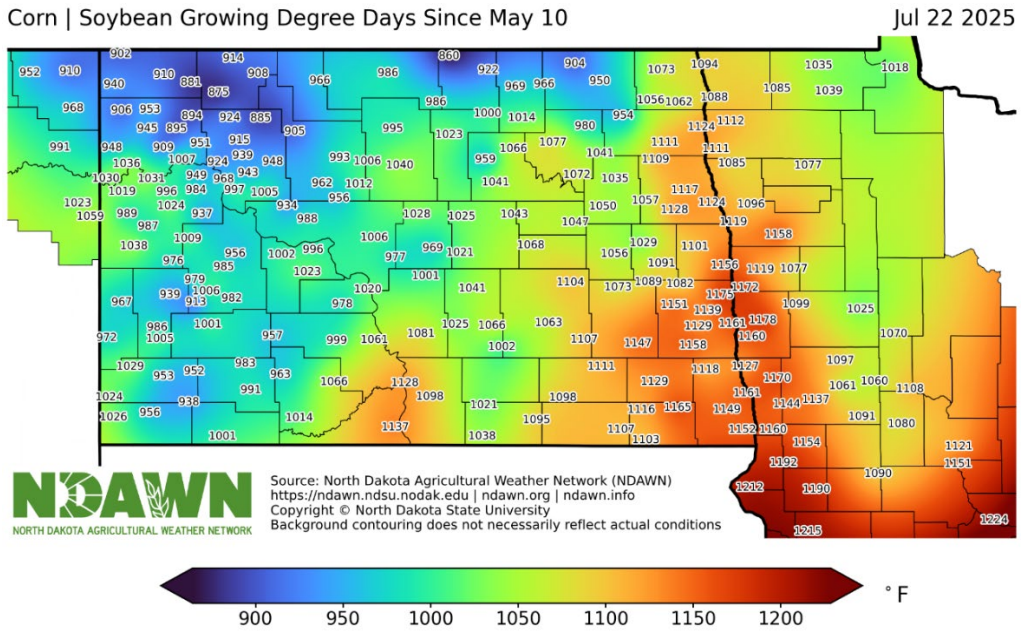

Figure 7. Corn Growing Degree Days (Base 50°) for the Period of May 10 through July 22, 2025

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