North Dakota State University
CROP & PEST REPORT

No. 8 June 12, 2025

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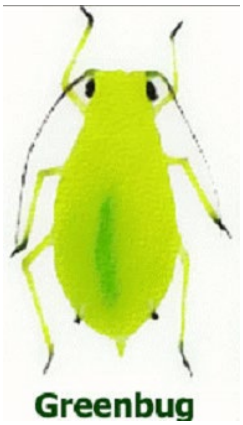
entomology

INSECT UPDATES FROM IPM SCOUTS

The following insect pests were observed by the IPM Scouts this past week in North Dakota.


Greenbug

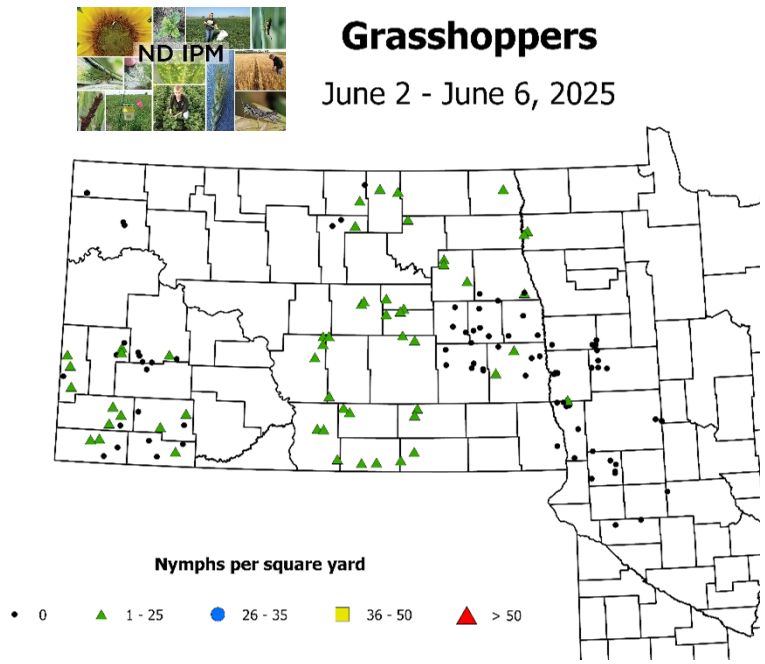
Wheat & Barley: Cereal aphids, mainly greenbugs, were found in wheat and barley. These aphids migrate into North Dakota on the winds, and this is an early arrival of cereal aphids. See the map and scouting article on the next page.

Soybean: Soybean aphids were observed in one field in LaMoure County at non-economic levels—time to think about gearing up for soybean aphid scouting.

Grasshoppers were common in all crops scouted - wheat, barley and soybeans in most surveyed areas of the state. Peak hatch occurs about mid- to late June in North Dakota. Cool, wet weather increases disease occurrence, grasshopper mortality and delays the development of grasshoppers, reducing the overall population. So, the forecast is for lower populations this year.


Grasshopper nymph (P. Beauzay, NDSU)

Scout for nymphs (young grasshoppers without wings) in field margins. **Economic thresholds for nymph stage grasshoppers are 50-75 nymphs per square yard in the field edge and 30-45 nymphs per square yard in the field interior.** When population densities are high and hard to count, pest managers can use four 180-degree sweeps with a 15-inch sweep net, equivalent to the number of grasshoppers per square yard (adult or nymph).



SCOUT FOR CEREAL APHIDS

Cereal aphids were reported in wheat and barley fields in south central and southwest North Dakota and western Minnesota.

Thorough field scouting is required to track aphid population growth. Field scouting should begin at stem elongation and continue up to the early dough stage of wheat. Scout closely for cereal aphids by examining both sides of leaves. Walk a 'W' pattern and sample 5 sites per field and inspect 10 stems per site for a total of 50 plants.

The most significant risk of yield loss from aphid feeding is from the vegetative through the heading stages. Economic loss can occur through the early dough stage. Beyond early dough, yield loss is unlikely to occur.

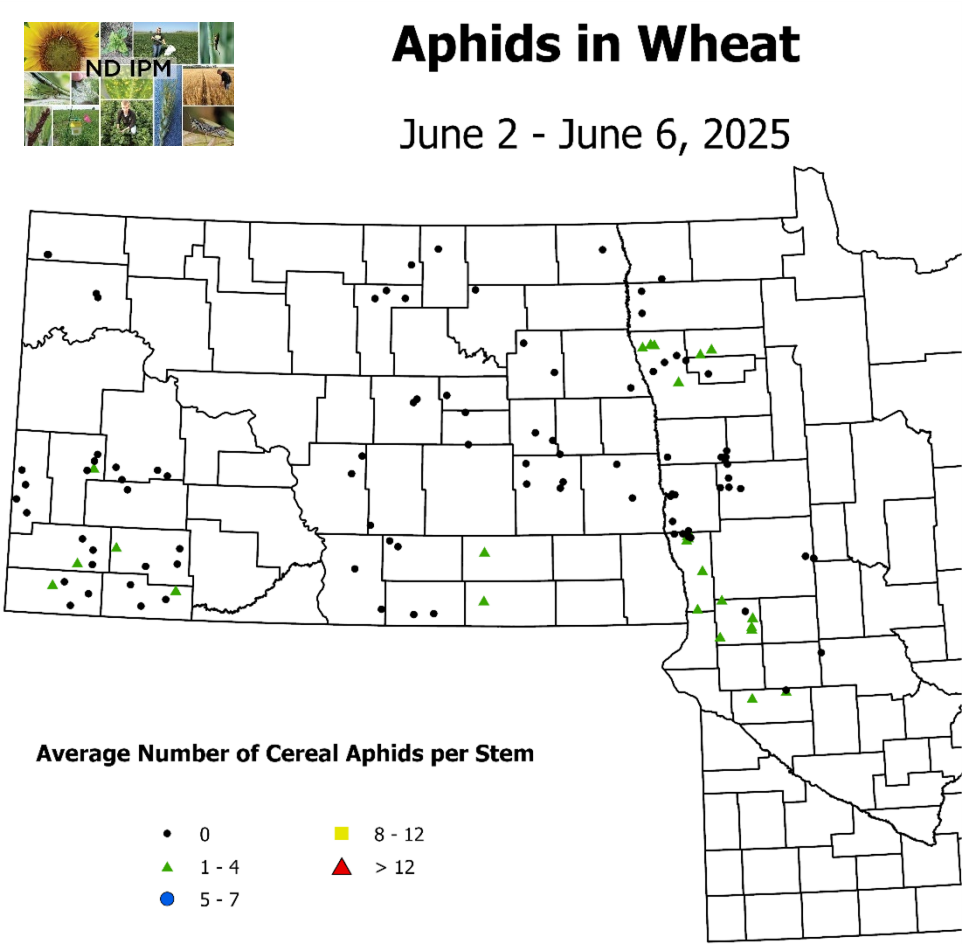
To protect small grains from yield loss due to aphid feeding, we recommend the following thresholds at various grain growth stages:

- For vegetative through head emergence - 4 aphids per stem
- From complete heading through the end of anthesis - 4-7 aphids per stem
- From the end of anthesis through medium milk - 8-12 aphids per stem
- From medium milk through early dough -> 12 aphids per stem

Current levels of cereal aphids require close monitoring and a potential foliar insecticide treatment if populations are near an average of 4 aphids per stem.

Greenbug on wheat. Note the white spots from aphid feeding injury on the leaf. (P. Beauzay, NDSU)

For insecticides registered for cereal aphid management in North Dakota, please consult the ***2025 North Dakota Field Crop Insect Management Guide E1143-25***.



Janet J. Knodel
Extension Entomologist

plant science

HOW UNEVEN EMERGENCE AFFECTS SOYBEAN YIELD: WHAT RECENT RESEARCH TELLS US

Early season weather has posed some challenges across parts of the state, and soybean emergence is showing it. For those who were able to plant early, heavy rains shortly after planting led to soil crusting in several fields. Crusting can physically block seedlings from emerging and often results in uneven stands, swollen hypocotyls, and even damaged or missing plants (Figure 1). As we walk these fields and assess stands, a common question arises: "How will this uneven emergence affect my soybean yield?"

Let’s dig into what we know!

A thorough study from Argentina (Masino et al., 2018) looked at the effects of uneven soybean emergence—both spatial (irregular plant spacing) and temporal (plants emerging at different times). Their approach was rigorous: replicated small plots, multiple planting dates, two different maturity groups, and even hand-planting seeds to create controlled emergence delays.

Here's what they found:

- Non-uniform timing of emergence caused a yield loss of around 8%, even when only some plants were delayed by a few days.
- Non-uniform spacing led to a smaller yield loss of about 6%, and in some cases (with later maturity group varieties), there was no yield penalty at all.
- Soybeans with shorter maturity groups were more affected by emergence variability than longer ones. *Why?* Because longer-maturity varieties tend to branch more, helping fill in gaps.
- Higher plant populations did not compensate for delayed emergence.

Follow-up research (Ebone et al., 2020) showed that plants emerging earlier had larger leaf area, faster growth, and ultimately more pods and seeds. Late-emerging plants just couldn't keep up—even when they grew larger, their reproductive efficiency was reduced. That means fewer seeds per unit of plant biomass, hurting overall yield. The key lies in soybean plasticity—its ability to adapt to its environment. While plants can sometimes compensate for extra space by branching, they have a harder time catching up if they emerge late.

Figure 1. Soybean emergence affected by crusting. Pictures taken near Thompson, ND.

Recent work (Pereyra et al., 2022) found that spatial uniformity really matters in low- to medium-yield environments and in lower plant densities. In these scenarios, poor spacing results in weaker establishment and reduced ability to compensate for gaps; especially under stress. Optimizing spacing early helps avoid those limitations later in the season.

Take-home Message:
Yes, soybeans are more forgiving than some crops; but that doesn't mean spacing and emergence timing don't matter.

Ana Carcedo
Broadleaf Agronomist

soils

WHEAT TURNING YELLOW? WHAT SHOULD I DO?

In western North Dakota, this spring has been marked by extremes. Most small grain growers applied fertilizer into dust early in the spring and then received up to 7 inches of rain in May in some areas. These conditions lead to challenges with plant nutrient management, especially those nutrients that are mobile in soil.
Scouting some fields last week, I came across a few fields that looked like the picture below, with plants pale green to yellow in color:

Figure 1. Patches of nutrient deficiency in a wheat field in Stark County. Photo by Victor Gomes.

The symptoms of nutrient deficiency are predominantly found in lower areas of the field, where water tends to pond and is more prone to leaching from heavy rains. Yellowing of wheat in the spring usually has two main culprits: nitrogen and sulfur. Knowing how to distinguish and identify the deficiency symptoms caused by each of these nutrients is crucial to help growers determine an action plan.

Nitrogen deficiency: With rapid crop growth in the spring, there is a proportional increase in N demand by the crop. Nitrogen deficiency will be greater when temperatures are lower and N mineralization from the soil organic matter is slower. Other factors that can lead to N deficiency in wheat include:

- Insufficient fertilizer rates: with the dry early spring, many wheat growers opted for a lower N rate pre-plant to avoid N losses due to denitrification. Those that fall applied N also saw lower N availability in the spring, given the low soil moisture throughout fall, winter and early spring.
- Application problems: There were also reports of growers that injected anhydrous ammonia into the soil having issues closing the application slot because of how dry the soil was early in the spring.
- Leaching from heavy rains and denitrification from saturated soils: In May, some counties receive as much as 274% of normal precipitation for the month. This excess moisture could lead to N losses via leaching or via denitrification, in saturated soils.
- Presence of great amounts of residue: Crops such as corn and sunflower can leave a heavy amount of residue behind, which immobilize nitrogen.

The key to identifying nitrogen deficiency in wheat is to look at where the deficiency is occurring. Nitrogen deficiency causes yellowing of the older/lower leaves, leading to leaf death, starting at the leaf tip and progressing inward (Figure 2).

Figure 2. Nitrogen deficiency on wheat. The lower/older leaves appear chlorotic (yellow). Photo by Victor Gomes.

Sulfur deficiency: Much like nitrogen, sulfur uptake increases when the crop is actively growing. Sandy soils and soils with low organic matter content (less than 3%) tend to be more susceptible to sulfur deficiencies. Low temperatures in spring can also reduce the rate of sulfur release from organic matter.

The symptoms of sulfur deficiency can be often mistaken for those of nitrogen deficiency, however, with sulfur deficiency the whole plant turns pale, with the younger/upper leaves appearing chlorotic first, since sulfur is not mobile within the plant (Figure 3).

Call to action: In case you spotted deficiency symptoms in your field, the decision of whether or not to do a side-dress fertilizer application will depend not only on economic factors but also on the plant's growth stage.

For **nitrogen**, the ideal timing for a side-dress application is between tillering (Feekes 2-3) and the green-up stages (Feekes 4-5), when the plants are actively growing and nitrogen uptake is greater, but before jointing. An N application will enhance tillering and maximize yield potential. Applying nitrogen too early, especially under dry conditions, may result in losses due to volatilization before the crop can effectively use it. Applying nitrogen too late (i.e., at or after the jointing stage) will have low efficiency since the phase of rapid N uptake has already passed.

For **sulfur**, the ideal timing for sulfur as sulfate can be done up to the green-up stages (Feekes 4-5), following the same timing as nitrogen. When selecting a fertilizer source for rescue treatments, elemental S should not be used, rather sulfate fertilizer should be used for in-season applications (examples: ammonium sulfate, calcium sulfate, or potassium sulfate). This is due to the time it takes for elemental sulfur to be converted into sulfate, the plant-available form. When performing rescue applications, you need the fastest availability to benefit the crops this year. Seeing plant deficiency symptoms, but your soil samples did not indicate a need is not uncommon, since sulfur soil testing is not reliable. The sulfur application rate can be challenging to determine based on soil test, but for wheat, 10 lbs of S as sulfate per acre is a good minimum to apply. You can also apply this in your spring fertilizer application.

Figure 3. Sulfur deficiency on wheat. The whole plant appears pale and yellowing might occur in the younger/upper leaves. Photo by D. Franzen.

For more information on wheat fertilization: Fertilizing Hard Red Spring Wheat and Durum and Fertilizing Winter Wheat

Victor Gomes
Extension Cropping Systems Specialist

Chandler Gruener
Extension Soil Health Specialist

Brady Goettl
Extension Soil Science Specialist

CONTROLLING WATERHEMP ESCAPES IN SUGARBEET

Most sugarbeet growers identifying waterhemp as their most important weed control challenge have applied one, two, maybe three in-season soil residual herbicide applications. There will be waterhemp escapes, especially in fields where there was incomplete activation of preemergence herbicide. Sugarbeet growers have a limited number of options for controlling glyphosate resistant waterhemp postemergence. The following paragraphs will consider three options.

The EPA has approved the Ultra Blazer Section 18 Emergency Exemption. Effective dates for Ultra Blazer use are May 26, 2025 through August 1, 2025. We recommend Ultra Blazer application at 16 fl oz per acre with non-ionic surfactant when sugarbeets are greater than 6-leaf stage and when waterhemp are less than 4-inch. Use sufficient water volume to get good coverage over waterhemp. Verify your weed escapes are PPO inhibitor sensitive before making an application.

Inter-row cultivation has been a reliable method to control escape weeds including waterhemp. Cultivators use either a sweep or 3-tine style configuration. Both shovel configurations are effective although bigger weeds tend to work around the tine style shovels. Speed is depending on soil conditions and sugarbeet and target weed species size. Be careful of soil movement into the sugarbeet whorl that may increase *Rhizoctonia solani* outbreaks in fields.

Some growers have found success using the WeedZapper to control escape weeds. Weeds must be taller than the sugarbeets for control. We have found that two passes spaced 7-days apart is more effective for waterhemp control than a single application. Second, use electricity when weeds are turgid since moisture tends to increase movement of electricity through the stem. Finally, electricity tends to work better with weeds with a main stem (waterhemp) as compared to highly branched weeds (kochia).

Tom Peters
Extension Sugarbeet Agronomist
NDSU & U of MN

around the state

AROUND THE STATE

NORTHEAST ND

Field Conditions and Crop Progress Update

Planting season is wrapping up across the region, with only a few acres of dry beans and canola remaining. Farmers have now shifted focus to weed and pest management, applying herbicides, fungicides, and insecticides as needed.

Overall, crop conditions are promising, with improved and more uniform emergence reported across most fields. Rain showers last Saturday were scattered and variable, ranging from as little as 0.03" in some areas to over 0.25" in others. Fields that received higher rainfall amounts are benefitting from the timely moisture.

Small Grains:

Growth stages in small grains range from early tillering to near jointing in more advanced fields. Weed control operations are well underway, targeting both broadleaf and grassy weeds. Reports from Pierce and Nelson Counties indicate the presence of cereal aphids, with small colonies observed in wheat fields. With temperatures ranging between 70–80°F, conditions are favorable for rapid aphid population growth. Farmers are advised to scout fields regularly and monitor for threshold levels.

Cereal aphids on a wheat leaf. Photo: McKenna Schneider, IPM Scout, LREC

IDC in a soybean field. Photo: Isaac Cuchna, ANR Extension Agent, Grand Forks County

Compaction in a soybean field with seeds showing on the surface in Benson County. Photo: Scott Knoke, ANR Extension Agent, Benson County

Soybeans, Canola, and Sunflowers:
These crops are mostly at the emergence to 1–2 leaf stages. Some soybean fields are experiencing emergence issues due to soil crusting and compaction. Iron Deficiency Chlorosis (IDC) symptoms have been reported in Grand Forks County. Flea beetle activity in canola has been lower, likely due to recent cool and cloudy weather.

Corn:
Corn is progressing slowly, currently in the 2–4 leaf stage. Growth has been hampered by cool temperatures, overcast skies, and intermittent smoke drift from Canadian wildfires.

Peas:
Field peas are looking good in the Northeast region, with uniform emergence and vigorous growth.

Field peas in Cavalier County. Photo: Lahni Stachler, ANR Extension Agent, Cavalier County.

Soybean seedling struggling to emerge through heavy corn residue. Photo: Scott Knoke, ANR Extension Agent, Benson County.

Sugarbeets:
Sugarbeets are nearing the 2–4 leaf stage. Farmers are actively spraying for sugarbeet root maggot pressure while continuing with routine weed control.

Weeds:
Weed emergence is becoming more visible across the region. Resistant foxtail in small grains remains a top concern for many growers. Other problematic weeds observed include foxtail barley, kochia, Powell amaranth, and leafy spurge.

Grasshoppers:
Grasshopper egg hatches are happening and nymphs are starting to emerge in the ditches and field edges.

Powell Amaranth seedlings. Photo: Lahni Stachler, ANR Extension Agent, Cavalier County

Foxtail barley in a soybean field. Photo: Isaac Cuchna, ANR Extension Agent, Grand Forks County.

Large patches of leafy spurge observed in a grassy area next to a field. Photo: Isaac Cuchna, ANR Extension Agent, Grand Forks County.

Anitha Chirumamilla
Extension Cropping Systems Specialist
Langdon Research Extension Center

SOUTH-CENTRAL/SOUTHEAST ND

Agronomists, Extension personnel, and farmers please mark your calendars for the annual Crop Management Field School June 27, 2025 at the Carrington Research Extension Center! Registration starts at 8:30 AM and the program ends at 2:45 PM. Registration deadline is June 23, 2025 with maximum participants of 50 people, so register soon. You may register at the following link: ***www.tinyurl.com/payCREC*** **.**

Some warmer days this past week have allowed corn and soybean crop conditions to improve, but many are still struggling across the region although better crops exist in the region from Griggs County and to the east compared to those counties west of Griggs County.

Winter rye is being cut for hay or silage in the southern part of the region. Winter rye is in the poorest condition in the west central part of the region.

Most crops have been planted now throughout the region with a few counties still planting some soybean, dry bean, and sunflower. Only about 25% of the dry bean and sunflower crops have emerged in the region.

The maximum stage of hard red spring wheat from Griggs County and to the south is at flag leaf collar emergence **(photo 1** by NDSU Extension Emmons County ANR Agent, Nancy Deis) to the boot stage in Sargent County. All spring-seeded small grain crops are mostly in good to excellent condition throughout the region as seen in **photo 2** in Emmons County (photo by Nancy Deis). The average stage of most hard red spring wheat in the region is probably at the jointing stage, but some is still at one to two-leaf stage. Some hard red spring wheat fields are still showing nitrogen and sulfur deficiencies **(photo 3)** where the previous crop residue is thick and usually wheat stubble. Currently, I have not seen any leaf diseases in hard red spring wheat.

Photo 1: Hard red spring wheat at flag leaf collar visible stage. (Photo credit: by NDSU Extension Emmons County ANR Agent, Nancy Deis)

Photo 2: An excellent hard red spring wheat field in Emmons County at the flag leaf collar visible stage (Photo credit: Nancy Deis)

Photo 3: Hard red spring wheat in Foster County showing nitrogen and sulfur deficiency in a no-tillage field with lots of wheat residue (photo by Jeff Stachler)

Corn in the region varies from emerging to V6 (6 collars) in Sargent and likely Richland Counties. The average corn stage for corn emerged prior to May 15th is at the V5 (5 collars) stage as seen in **photo 4**. **Photo 5** shows a good field of corn in Foster County at the V4 stage of growth. Corn emerged or planted just prior to May 15th is looking much better, but some fields are still struggling to emerge through a thick crust as seen in **Photo 6**.

Photo 4: V5 corn in Emmons County. (Photo by Nancy Deis)

Photo 5: A good field of V4 corn in Foster County (Photo by Jeff Stachler).

Photo 6: A corn plant struggling to emerge through a thick and hard crust (Photo by Jeff Stachler).

Soybean growth stage in the region varies from planted to second trifoliate in some fields and likely up to three trifoliate stage (V3) in Richland and Sargent Counties. The majority of soybeans are at the unifoliate stage (VC). Most soybeans planted prior to May 15th in the west of Griggs County are still struggling to emerge as seen in **photo 7** in Emmons County. Soybean condition has improved in the past week across the region. Bean leaf beetles **(photo 8)** were found near economic threshold in Emmons County last Wednesday. **Photo 9** (taken by Shelby Dietz, the field scout in the central to south-central region of the state) shows significant bean leaf beetle damage.

Photo 7: A soybean plant struggling to emerge in Emmons County (photo by Jeff Stachler).

Photo 8: Bean leaf beetles in Emmons County (photo by Nancy Deis)

Photo 9: Bean leaf beetle damage to soybean in Emmons County (photo by Shelby Dietz, central and south-central ND IPM Scout).

Canola conditions in the region vary from poor to good.

The biggest weed story of the week in the region was the observation of spotted water hemlock (**photo 10**) in two creeks in Emmons County covering at least 200 acres of area. Spotted water hemlock has a biennial or short-lived perennial life cycle and is a member of the carrot family. Photo 10 shows how the leaves are compound with each leaflet having prominently toothed margins. One resource stated it only takes 3.5 ounces of green leaves, stems, immature seed heads, or tubers to kill a large beef animal. Humans eating this plant can be killed as well. Just touching the plant will not harm you, unless sap from a broken leaf or other plant part gets on bare skin in sunlight which may cause skin rashes on some people. It is best not to touch the plant, unless you are wearing gloves and handle it carefully. Spotted water hemlock is one of the most poisonous plants for mammals.

Photo 10: A spotted water hemlock plant in Emmons County (photo by Jeff Stachler)

With herbicide applications beginning soon in soybeans across the region, glufosinate will be applied to many fields this season to control weeds. Applying glufosinate using best practices should maximize weed control, particularly with kochia this season. Please consider following all of the 13 glufosinate application practices below to maximize weed control when applying glufosinate:

1. Apply glufosinate during humid and sunny conditions.
2. Apply glufosinate when Delta T values are between 3.6 and 14 degrees F (Consult page 133 in the 2025 North Dakota Weed Control Guide). Be aware Delta T values change during the day as temperatures increase.
3. Apply glufosinate at a spray volume of 20 gallons per acre.
4. Apply glufosinate spray mixture using medium to coarse spray droplets.
5. Please add spray grade ammonium sulfate at 3 pounds per acre to glufosinate and don't use an AMS replacement adjuvant unless the glufosinate manufacturer approves of its use.
6. Apply glufosinate to 2 to 3-inch kochia and/or 3-inch waterhemp plants.
7. Apply glufosinate at the highest single application rate and don't exceed the seasonal maximum rate.
8. Reduce sprayer travel speeds to below 10 miles per hour for maximum spray coverage.
9. Maintain a properly calibrated sprayer and maintain proper boom height for the nozzles being used at all times.
10. Not all glufosinate products provide the same level of weed control.
11. Do not apply glufosinate at night, please read the glufosinate label for proper application time.
12. Dust and/or soil particles on the leaf surface can create a barrier not allowing the glufosinate to enter the leaf.
13. If a second glufosinate application is necessary apply the second application close to 14 days after the previous application.

Of the 27 NDAWN stations chosen this season for this region, the average maximum daily air temperature from June 3 to June 9, 2025 ranged from 67 degrees Fahrenheit near Hurdsfield to 74 degrees Fahrenheit near Gardner with an average for the region this past week of 71 degrees Fahrenheit, 5 degrees Fahrenheit below last week. Based upon Cooperstown historical weather data, the average daily high air temperature for the week was 4 degrees Fahrenheit below normal. The average daily minimum air temperature for the past week at the 27 NDAWN stations across the region ranged from 44 degrees Fahrenheit near Pickardville to 50 degrees Fahrenheit near Fingal, Mooreton, Sonora, and Wahpeton with the daily average minimum air temperature for the region for the week being 48 degrees Fahrenheit, 1 degree Fahrenheit cooler than last week. Based upon Cooperstown historical weather data, the average daily low air temperature for last week was 3 degrees Fahrenheit below the normal.

The daily average 4-inch bare soil temperature for these stations in the region ranged from 56 degrees Fahrenheit near Robinson to 67 degrees near Livona with an average for the region of 61 degrees Fahrenheit.

Rainfall for these stations across the region for last week ranged from 0.07 inch near McHenry to 0.52 inch near McKenzie with an average for the week of 0.26 inch, way below the weekly daily average. As of June 3rd, the Skogmo NDAWN station again had the lowest four-inch depth of soil moisture now at 5% with the greatest station being Mooreton at 36%. The average four-inch soil moisture at these stations over the region was 19%, another decrease of 2% compared to last week at 21%. As of June 3rd, the Pickardville NDAWN station had the lowest 39-inch depth of soil moisture content at 7% with the Cooperstown and Leonard NDAWN stations having the greatest at 51% with an average for the region of 29%, the same as last week. The southeast and western parts of the region are getting dry again. Hard red spring wheat was showing lack of water south of Cooperstown on June 10th in the afternoon.

Another windy week. Winds across the region this past week ranged from 5.1 miles per hour near Oakes to 10.9 miles per hour near McHenry, with the average daily wind speed for the week in the region of 8.9 mph compared to 6.7 mph the week before.

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

SOUTHWEST ND

Over the last two weeks, most of southwest North Dakota received some precipitation, with amounts ranging from 0.04 inches in Grant County to 0.65 inches in Dunn County. Although not high in volume, this precipitation has greatly benefited the region and significantly improved drought conditions compared to the previous week (Figure 1). As of the most recent report (June 3, 2025), just over 36% of the state was under some level of drought, down from nearly 60% the previous week. A decrease in drought intensity has also been observed throughout southwest North Dakota.

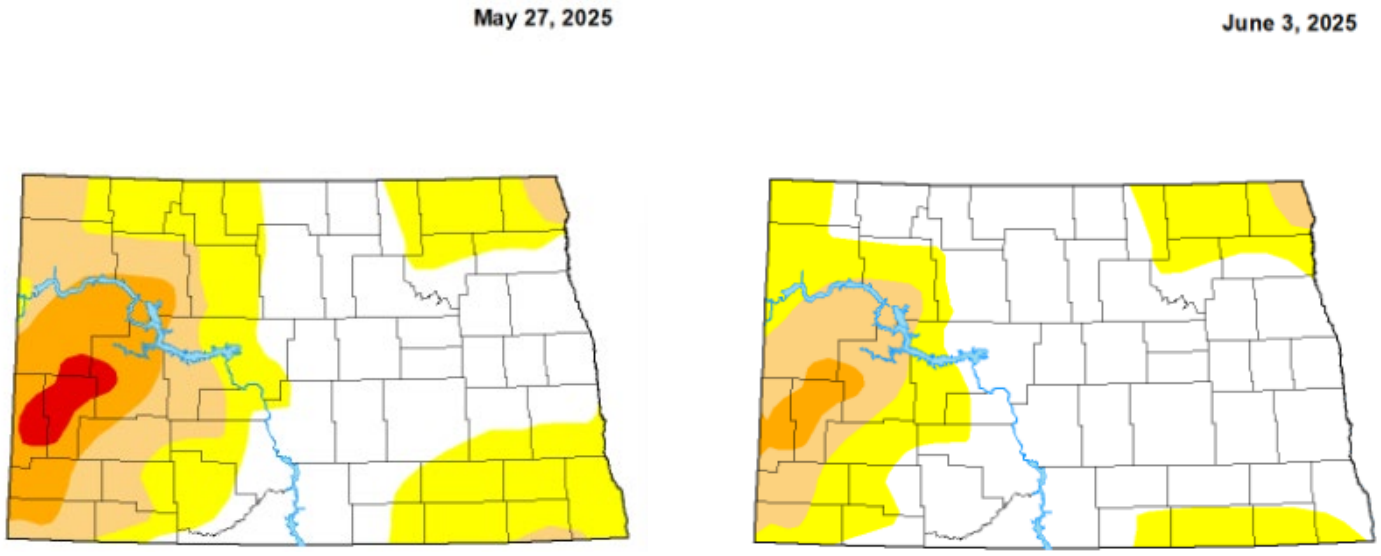


Figure 1. Drought monitor maps. Note the reduction in both drought area and intensity across the southwest corner.

With improved soil moisture and the arrival of warmer temperatures, crop growth is progressing rapidly across the region. Small grain crop stages range from just emerging to jointing, with some fields already entering the booting stage. Some wheat fields that I visited appear pale to yellow, showing signs of nutrient deficiency, while others exhibit poor emergence (Figures 2 and 3). For further guidance on assessing and addressing nutrient deficiency in wheat fields, please refer to my article in the Soils section of this edition of the CPR.

Figure 2. Wheat field showing signs of nitrogen deficiency in Dunn County. Photo: Victor Gomes.

Figure 3. Poor emergence in a HRSW field in Dunn County. Photo: Victor Gomes.

There have also been reports of plant damage caused by pheasants feeding on wheat seeds and seedlings, near Beach in Golden Valley County and Mott in Hettinger County (Figure 4). One field reportedly suffered an estimated 10% stand loss, with some patches missing up to 10 feet of row at a time. Pheasant feeding on row crops is not new to this area—in 2008, a similar issue caused losses across hundreds of acres of corn, canola, and wheat. Mild winters with limited snow cover, such as we experienced this past season, often lead to increased pheasant populations. Bird repellent seed treatments like Avipel or Flock Buster have been used previously, but their effectiveness has been inconsistent. As a rule of thumb, replanting should only be considered when stand loss reaches 30–40% for small grains. We'll continue monitoring the situation.

Figure 4. Holes in the field where pheasants pecked out seeds or seedlings. Photo: Josh Hammond, FarmAssist.

Most canola fields I visited showed poor emergence and significant variability in growth stages (Figure 5). These issues are likely due to low soil moisture at planting, followed by heavy rainfall (over 5 inches in 5 days in some areas) and low temperatures. Now, with warmer weather, canola flea beetle activity has increased in the region as well (Figure 6). Given the thin stands and uneven growth stages, frequent scouting will be necessary to assess defoliation and determine whether thresholds for insecticide treatment are reached. Keep in mind that canola seedlings are most vulnerable up until the 6–8 leaf stage. If defoliation reaches 20–25%, a foliar insecticide may be needed. If your canola is beyond this stage, the plant likely has enough leaf area to tolerate flea beetle feeding without significant yield loss.

Figure 5. Canola fields with poor stand establishment in Dunn County. Photo: Victor Gomes

Corn in southwest North Dakota is currently between just emerging to the four-leaf stage. A few fields were affected by frost a couple of weeks ago (Figure 7). It's important to note that young corn plants are quite resilient. Although leaf damage may appear severe, the growing point at that stage was still below ground and likely unharmed. If the growing point remains white or creamy and new leaves begin to emerge, significant yield loss is unlikely.

Figure 6. Canola flea beetle feeding on a canola plant in Stark County. Photo: Victor Gomes

Figure 7. Frost damage in corn in Hettinger County. Photo: Victor Gomes.

Most growers in the area are finishing up sunflower and soybean planting, with some fields already emerging. The primary focus of field operations in recent weeks has shifted to post-emergence herbicide applications.

Victor Gomes
Extension Cropping Systems Specialist
NDSU Dickinson Research and Extension Center

weather

WEATHER FORECAST

The June 12 to June 18, 2025 Weather Summary and Outlook

Rainfall for the first 10 days of June were generally under one-half inch, with several locations recording under one-tenth of an inch, especially in northwestern North Dakota (Figure 1).

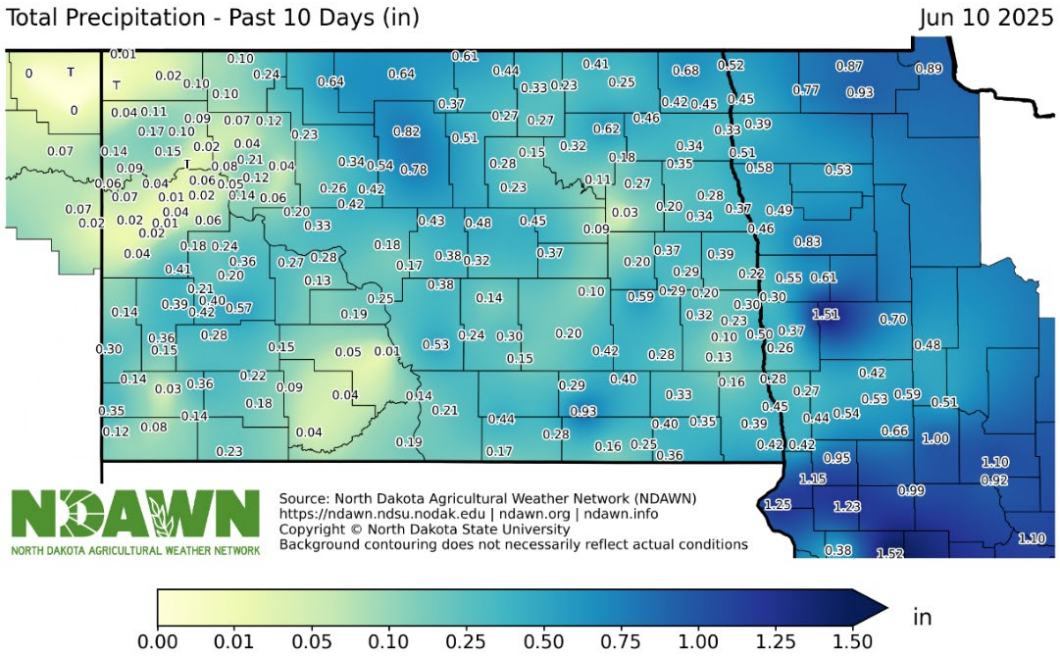


Figure 1. Total Rainfall for the Period of June 1 through June 10, 2025.

June is the wettest month of the year by a significant margin. Eastern North Dakota averages around 1 inch per week, whereas western North Dakota averages about three-quarters of an inch per week. In turn, the first 10 days of June were well below average for precipitation (Figure 2).

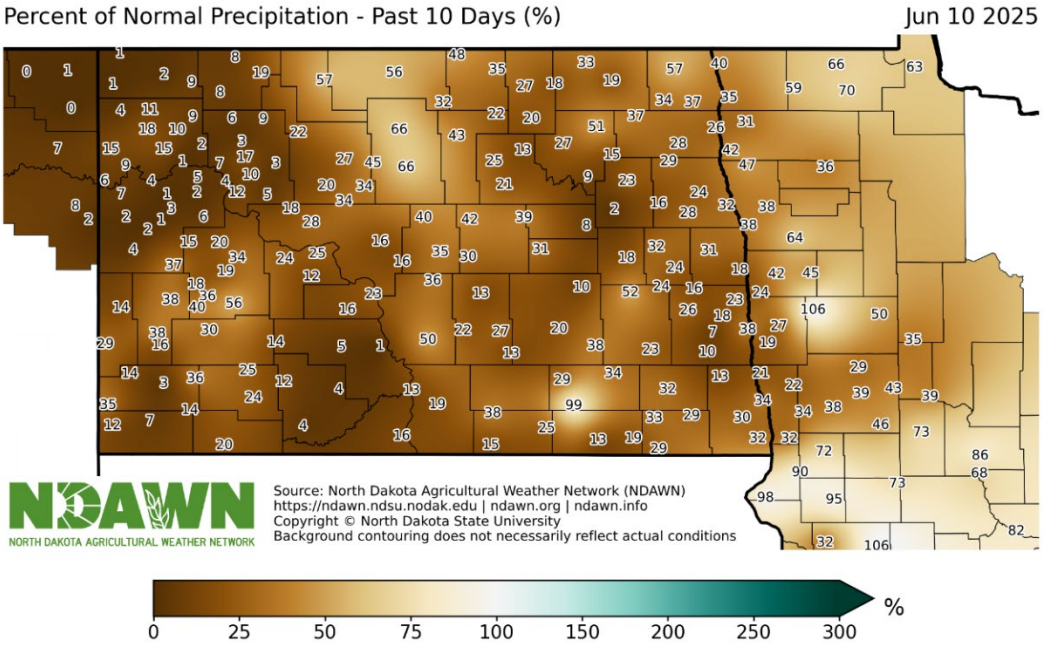


Figure 2. Percent of Normal Precipitation for the Period of June 1 through June 10, 2025.

Temperatures have improved since the cold weather in the middle of May, yet, most days are still near or below average. The very chilly temperatures from this past Sunday and Monday were a significant factor in making the first 10 days of June below average for temperatures (Figure 3). Cooler temperatures of course, mean fewer growing degree days.

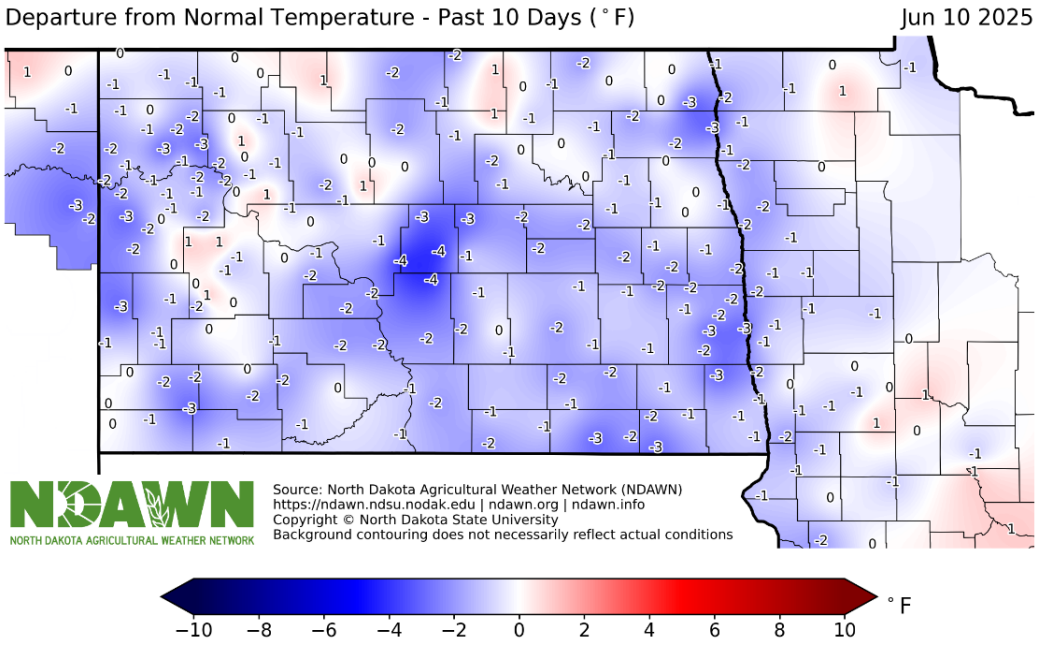


Figure 3. Departure from Average Air Temperature for the Period of June 1 through June 10, 2025

Figures 4 and 5 show forecasted growing degree days (GDDs) for base 32°F (wheat and small grains) and 50°F (corn and soybeans) during this forecast period. The temperatures in the next 7 days are expected to be fairly close to average for the time of year.

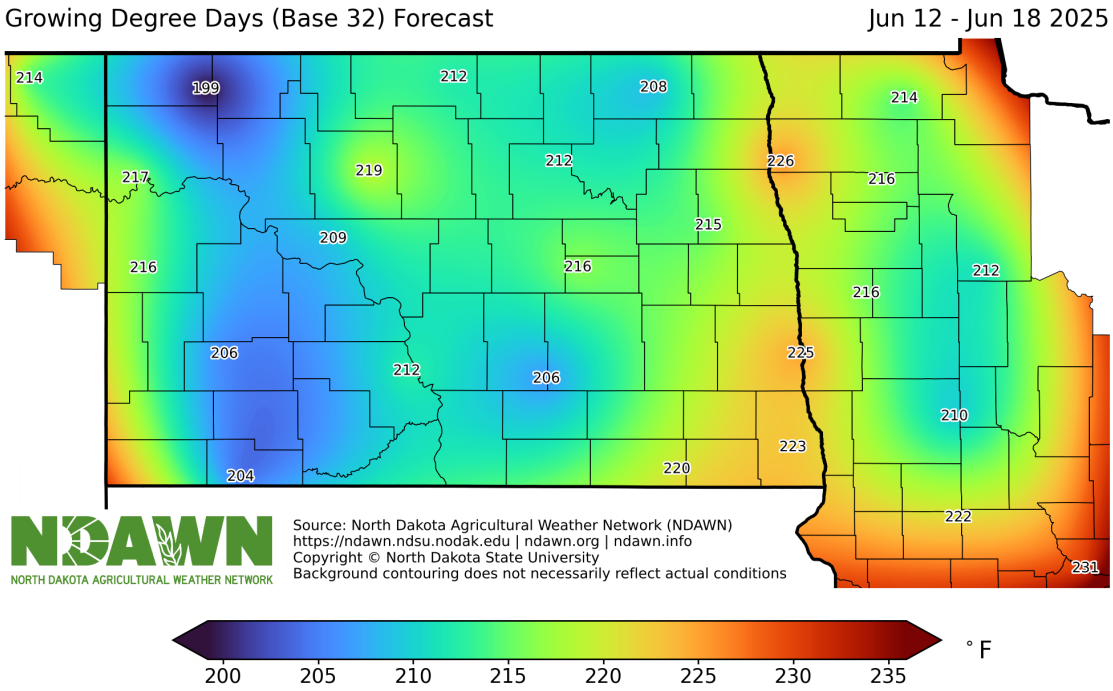


Figure 4. Estimated growing degree days base 32° for the Period of June 12 to June 18, 2025.

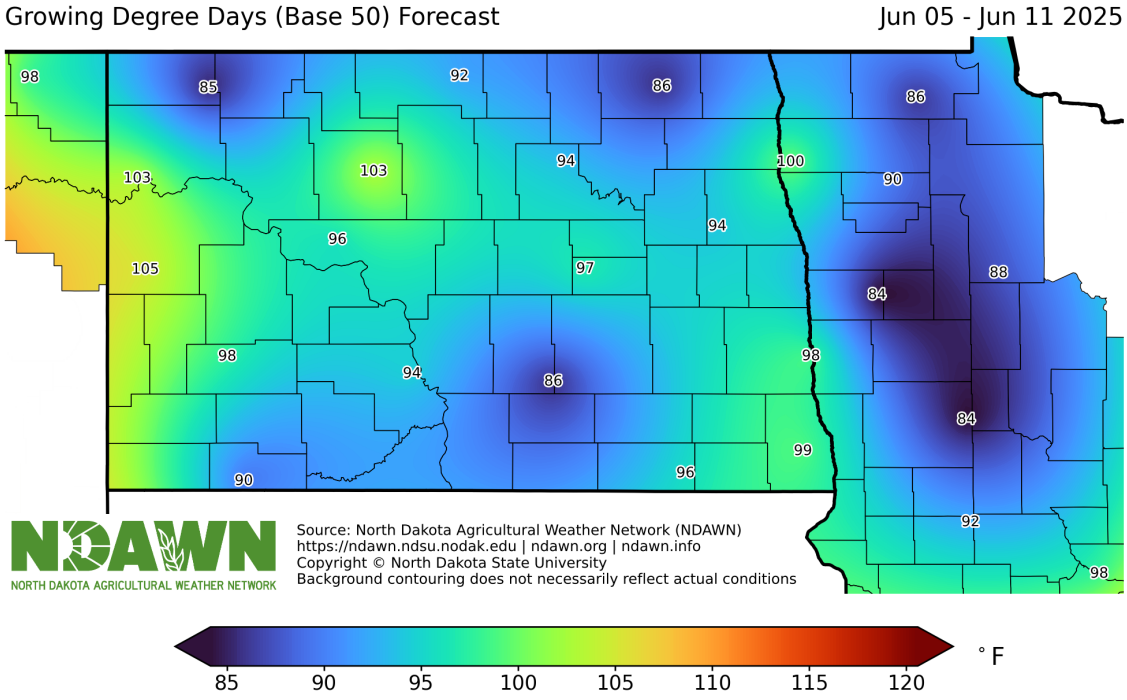


Figure 5. Estimated growing degree days base 50° for the Period of June 12 to June 18, 2025.

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

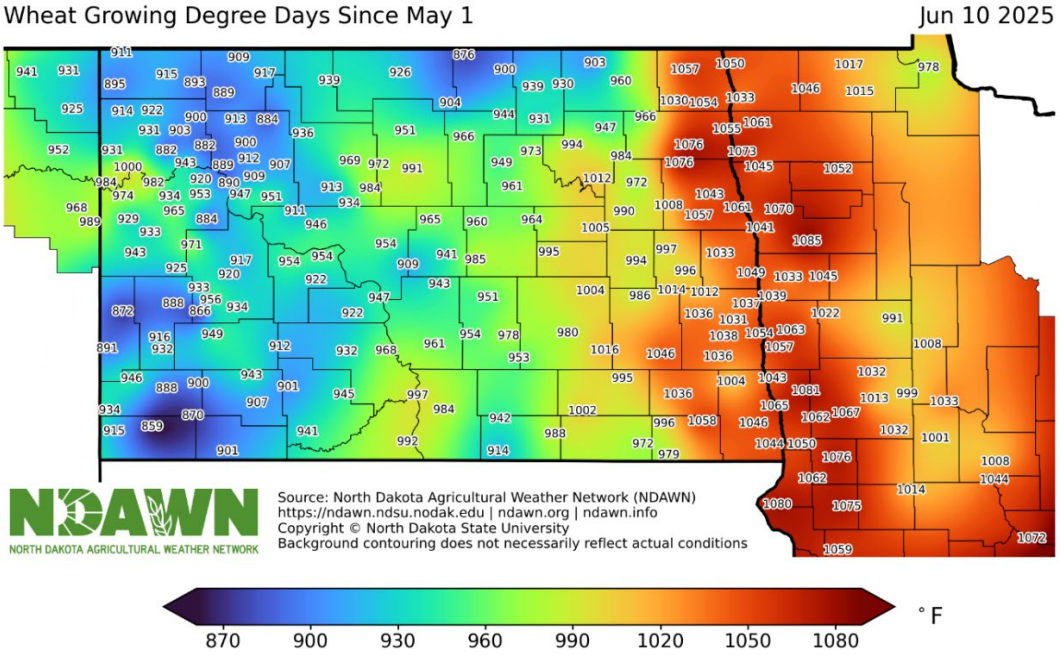


Figure 6. Wheat Growing Degree Days (Base 32°) for the Period of May 1 through June 10, 2025

Using May 10 as a planting date, the accumulated growing degree days for corn (base temperature 50°) is given in Figure 6. 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.

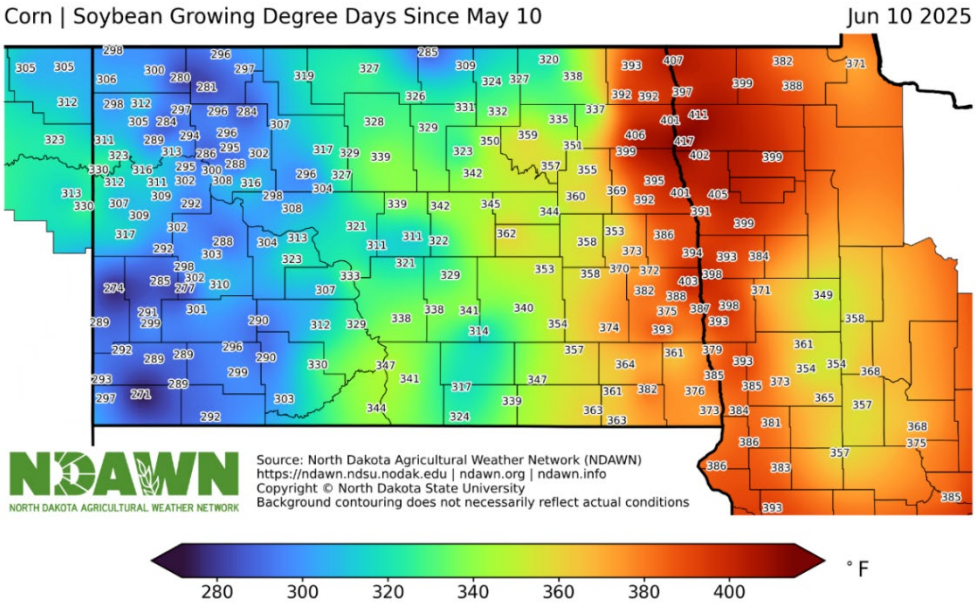


Figure 6. Corn Growing Degree Days (Base 50°) for the Period of May 10 through June 10, 2025

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 temperatures, as well as give you GDDs based on the planting date(s) you set. That tool can be found here: https://ndawn.ndsu.nodak.edu/soybean-growing-degree-days.html

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This publication is partly supported by the National Institute of Food and Agriculture, Crop Protection and Pest Management - Extension Implementation Program, award number 2024-70006-43752.