

No. 10 June 11, 2026

2026 NDSU FIELD DAYS

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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.

2026 Field Days Locations & Dates

Location	Date	Time
<u>Central Grasslands</u>	July 7	10 a.m. - 3 p.m. CDT
<u>Hettinger</u>	July 8	5-8 p.m. MDT
<u>Dickinson</u>	July 9	4:30-9 p.m. MDT
<u>Williston</u>	July 10	9 a.m. - Noon CDT
<u>Agronomy Seed Farm</u>	July 13	5-7:30 p.m. CDT
<u>Carrington</u>	July 14	9 a.m. - 3 p.m. CDT
<u>North Central</u>	July 15	9 a.m. - Noon CDT
<u>Langdon</u>	July 16	8:15 a.m. - 12:30 p.m. CDT
<u>Nesson (WREC)</u>	Aug. 5	9 a.m. - 1 p.m. CDT
<u>Oakes (CREC)</u>	Aug. 6	9 a.m. - 1 p.m. CDT



IPM CROP SURVEY IN ND AND MN

The IPM scouts and insect trappers were trained on June 2 and 3. Scouts and insect trappers will monitor wheat, barley, soybean and sunflower for insect pests and diseases. Insect trapping is an essential part of the IPM Crop Survey where scouts monitor for banded sunflower moth, wheat midge, armyworm and other insect pests.

We are pleased to introduce the 2026 NDSU and UMN IPM scouts and insect trappers:

- **Shelby Dietz**, central and south-central counties, working out of Carrington REC with Jeff Stachler
- **Emma Aberle**, southwest and west central counties, working out of Dickinson REC with Victor Gomes and Chris Augustin
- **Aidan Pederson and Chris Asmundson**, north central counties, working out of NCREC in Minot with Shana Forster
- **Scott Roseth and Samantha Turnquist**, northwest counties, working out of Williston REC with Tyler Tjelde
- **Emma Gullicks and Tommy Crompton**, southeast and east central counties, working out of the NDSU campus, Fargo, with Janet Knodel, Patrick Beauzay, Andrew Friskop, Wade Webster and Sam Markell
- **McKenna Schneider and Kartheek Chapara**, northeast counties, working out of Langdon REC with Anitha Chirumamilla and Scott Knoke (Benson County Extension Office)



Tommy Crompton inspects sunflowers for insect pests and diseases (J. Knodel, NDSU)

The IPM scouts working for the University of Minnesota Extension are:

- **Mya Frauendienst** working out of the Morris area with Anthony Hanson, Regional Educator, IPM / Extension
- **Stephen McFadzen and Brodie Wurtzel** working out of the Crookston area with Angie Peltier, Regional Educator, Crops / Extension

In North Dakota, we also collaborate with the North Dakota Department of Agriculture on surveys for exotic pests (insects, diseases, nematodes), and negative results support the export of field crops, especially wheat, outside North Dakota, saving farmers time and money.

This work is partly funded by the Crop Protection and Pest Management Program [grant no. 2024-70006-43752] from the USDA National Institute of Food and Agriculture, and the North Dakota Department of Agriculture.

[Janet J. Knodel](#)

Extension Entomologist,

[Andrew Friskop](#), [Wade Webster](#), [Sam Markell](#)

Extension Plant Pathologists

[Anitha Chirumamilla](#)

NDSU Extension Cropping Systems Specialist
Langdon Research Extension Center

[Shana Forster](#)

Director NCREC
NCREC, Minot

[Anthony Hanson](#)

Extension Educator, IPM
Regional Office Morris, UMN

[Patrick Beauzay](#)

IPM Coordinator and Research Specialist

[Victor Gomes](#) & [Chris Augustin](#)

Ext. Cropping Systems Specialist (left name)
Director DREC (right name)
NDSU Dickinson Research Extension Center

[Jeff Stachler](#)

NDSU Extension Cropping Systems Specialist
Carrington Research Extension Center

[Tyler Tjelde](#)

Director WREC
Williston Research Extension Center

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INSECT PEST UPDATES

- ✓ **Aster leafhopper** migrants were observed in a wheat field near Mayville in the Red River Valley last week. However, there were low densities of aster leafhopper in the field. Main **hosts attacked in North Dakota include wheat, barley, canola, flax and sunflower.**



Aster leafhopper adult. (J. Knodel, NDSU)

Continue scouting with a 15-inch sweep net to detect early flights of aster leafhopper into North Dakota and potentially high populations. This insect feeds by sucking juices from host plants, but its feeding does not damage the plants. **More importantly, aster leafhoppers vector the Aster yellows phytoplasma during feeding. The risk of phytoplasma infection is higher when large numbers of infected leafhoppers are blown in early and crops are at early growth stages, such as the four-leaf stage of canola. However, aster leafhoppers are a more serious pest on late-seeded crops.** Damage symptoms include red or purple tinge to plants, and bladder-shaped pods, taller plants than the rest of the canopy, and misshapen seeds in canola.

No economic threshold has been established for most crops. In canola, high risk for aster yellows disease is indicated when large numbers of aster leafhoppers are collected during sweep net sampling (126 leafhoppers/20 sweeps). In contrast, an average of fewer than 10 leafhoppers per 20 sweeps suggests a low risk for aster yellows disease.

Aster leafhoppers can also produce significantly more infection in wet conditions than under dry soil conditions. There is no simple field test to determine if leafhoppers are infected with aster yellows.

See the past [issue #8 of the NDSU Extension Crop & Pest Report](#) on aster leafhoppers for more information.

- ✓ **Diamondback moths, another migratory insect pest, were observed in canola near Langdon in northeast North Dakota and in Roseau, Minnesota, last week.** Diamondback moths move to canola, rapeseed and other mustard hosts in late spring, and then the 2nd generation begins in early summer. The first eggs are laid on the lower leaves. The small, greenish larvae make tiny, irregular holes in the leaves. Moths of later generations lay eggs higher on the plant. These hatching larvae feed first on leaves, then on buds, flowers and developing seedpods. Foliar damage by diamondback moth larvae looks bad, but significant yield losses are not common. Damage would be much worse under drought or heat stress.

Threshold: Treat when larval counts reach **25-30 per square foot, especially during the flower and/or pod stages.**



- ✓ **Canola flea beetles** are common in canola fields, and producers should continue monitoring canola in the most susceptible stages, seedling through the 4-6 leaf stage. Canola at Langdon REC is having difficulty emerging due to crusted soil from recent heavy rains, causing poor plant stands. As a result, this stressed, slow-growing canola is being severely damaged by flea beetles under hot, windy conditions. We also suspect that the seed treatment was partially washed off the seeds before plants were actively growing,

resulting in poor uptake of the insecticide toxin against flea beetles. **Recent ratings of canola insecticide seed treatments in insecticide trials at Langdon REC found 30-70% defoliation, above the economic threshold of 25% defoliation for a rescue foliar insecticide application.** The latest NDSU research has shown that premixing cyantraniliprole or flupyradifurone with the standard neonicotinoid seed treatment improves control compared with neonicotinoid alone; however, control can wane rapidly after 10 to 14 days under heavy flea beetle pressure due to re-infestation.

See the past [issues #8](#) and [#9](#) of the **NDSU Extension Crop & Pest Report** on canola flea beetles for more information.



Stressed canola seedlings being consumed by flea beetles under hot, windy conditions and crusted soils at Langdon REC (J. Knodel, NDSU)

ALFALFA WEEVIL DD UPDATE

The accumulated degree days (ADD) for alfalfa weevil activity increased by 150-200 ADD from the previous week. Northeastern North Dakota is now at 512-625 ADD (3rd-4th instar larvae, potential for heavy feeding activity). Western North Dakota ranges from 600 to 836 ADD (4th instar larvae to pupation). See the NDAWN insect degree-day map below. Overall, alfalfa weevil larval populations are generally lower in 2026 than in 2025. This is the last update.

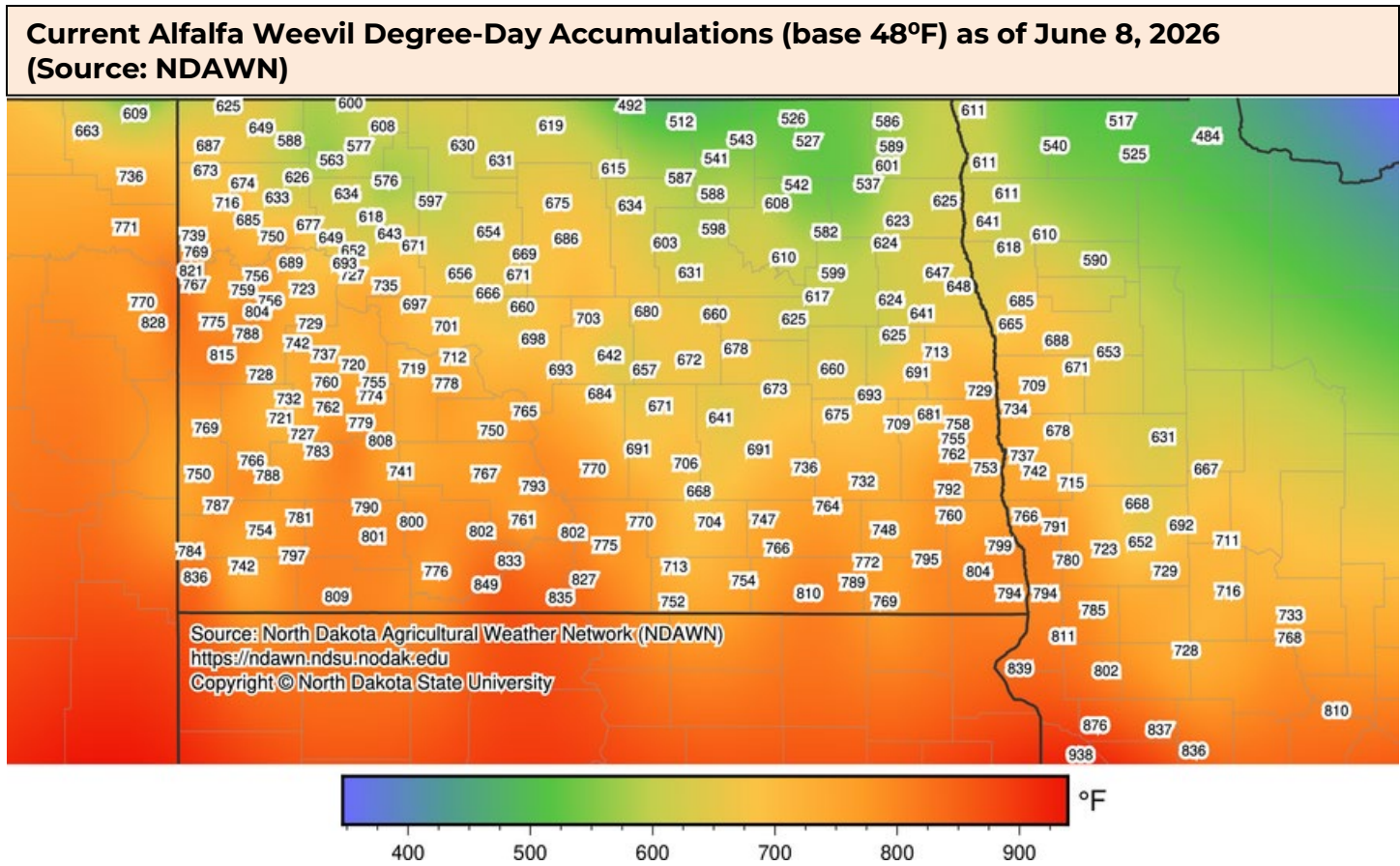


Alfalfa weevil larvae (Frank Peairs, Colorado State University, Bugwood.org)

Continue to scout regularly, at least weekly, through the first cutting. See [Crop & Pest Report #7](#) for scouting and the economic threshold table.

Insecticides registered for control of alfalfa weevil on forage are listed in the [North Dakota Field Crop Insect Management Guide E-T143](#).

For more information, see the NDSU Extension [Integrated Pest Management of Alfalfa Weevil in North Dakota \(E1676, Revised March 2026\)](#).



[Janet J. Knodel](#)
 Extension Entomologist

[Patrick Beauzay](#)
 Research Specialist & IPM Coordinator

SUGARBEET ROOT MAGGOT FLY ACTIVITY: ERUPTIONS LAST WEEK, PEAKING THIS WEEK

In most years, latitude plays a major role in the timing of sugarbeet root maggot (SBRM; Fig. 1) peak fly activity throughout the region, with peaks usually occurring in the southern Red River Valley (RRV) between two and four days earlier than those in the central and northern RRV, respectively. That is the case this year, but what is exceptionally unusual is the amazing turnaround from a somewhat cool spring that had shifted over time to unseasonably hot weather, with temperatures exceeding 90°F on several days in late-May and several additional days in which highs were in the 80s. Initially, SBRM degree-day (DD) accumulations were off to a slow start, running about five calendar days behind historical averages in early May, but the long stretch of unseasonably hot weather accelerated development of overwintered SBRM

populations. As a result, activity peaks will likely end up being about three days ahead of historical averages throughout the growing area.

The hot weather also resulted in early surges in SBRM fly activity at several locations last week. Although those surges may have appeared to be exceptionally early activity peaks, the true peaks began occurring last Sunday and into the middle part of this week. Heavy numbers of flies are continuing to enter sugarbeet fields, especially in the northern Valley, and sticky-stake trapping results have demonstrated that; however, the windy weather on Tuesday, followed by an extensive storm front having moved through the area that night, followed by continued windy conditions and then slightly cooler weather, could reduce the intensity of trap counts during the next few days. That could also reduce the sharpness of the true fly activity peaks in some areas; however, even if traps show moderate to low activity, flies will likely still be present for several more days with females continuing to lay eggs in beet fields.



Fig 1. SBRM Adult on seedling
(Photo: M. Boetel, NDSU)

Table 1 presents the final forecast for SBRM fly activity at four representative locations from the southern to the northern Red River Valley. The observations and forecasts presented suggest that SBRM fly activity peaked or will do so in most areas between June 6 and 10; however, the aforementioned weather forecast indicates that temperatures will moderate and even cool down somewhat over the next few days. This suggests the distinct possibility of fly activity continuing during the early part of next week.

Table 1. Degree-day (DD) based predictions for timing of high SBRM fly activity periods and peak fly activity in the Red River Valley			
Location	Total DD (as of June 6)	High Fly Activity Period	Maximum Likelihood Peak Fly Date*
Sabin/Glyndon, MN	664	June 6-7 (+80°F, dry, and low winds)	June 7
Ada, MN/Hillsboro, ND	644	June 7-8 (+80°F, dry, and low winds)	June 7
Grand Forks, ND	599	June 9-10 (+80°F, dry, and low winds)	June 9
St. Thomas, ND	558	June 10-11 (+80°F, dry, and low winds)	June 10

*Maximum likelihood for peak fly activity is based on extended weather forecasts for wind speed, air temperature, and precipitation.

Peak fly in current-year beets usually coincides with the first rain-free, calm/low-wind day to reach 80°F after 650 DD are accumulated.

Fly count monitoring network. As has been the case for several years, NDSU is partnering with American Crystal Sugar Company to monitor SBRM fly activity in about 100 producers' sugarbeet fields throughout the insect's range in both North Dakota and Minnesota. Current hotspots

include Buxton, Crystal, Grafton, Merrifield, Park River, Reynolds, and St. Thomas, ND, and Ada, Borup, Crookston, Lockhart, and Sabin, MN. Moderately high activity has also been observed in fields near Auburn, Cavalier, Forest River, Oakwood, Thompson, and Veseleyville, ND, as well as Angus, East Grand Forks, Fisher, Hadler, Stephen, and Warren, MN. Other areas could also develop relatively high infestations in the next couple of days. As such, growers in SBRM risk areas should be ready to apply additive postemergence insecticide applications if fly activity in their areas increases to at least 45 flies per sticky stake or 0.5 flies per plant within a field. Fly counts from the NDSU trapping network can be viewed online at: <https://www.ndsu.edu/snrs/sugarbeet-entomology>.

Postemergence SBRM Control. Growers experiencing moderately high to severe SBRM fly activity, or those in high-risk areas for damaging SBRM infestations should apply a postemergence insecticide as soon as possible for additive protection, especially if an insecticidal seed treatment or a low to moderate rate of a granular insecticide was used at planting. Replanted fields also may need additional postemergence insecticide protection. The best control option at this time is a sprayable liquid insecticide application, which can either be applied by ground-based equipment or aircraft. Postemergence liquid insecticides perform best if applied close to (within 2-3 days of peak fly; either on, before or after peak). Treated fields should be monitored closely after a postemergence application to determine if fly activity resurges. Some fields could require retreatment if subsequent infestations reach or exceed 0.5 flies per plant. For more guidance on postemergence control strategies, consult the “Insect Control” section of this year’s [Sugarbeet Production Guide](#). Always remember to READ, UNDERSTAND, and FOLLOW the label of your insecticide product – it’s the law.

Plot tour announcement. Be sure to attend this year’s Root Maggot Control Plot Tour near St. Thomas, ND on Thursday, July 16 to see the latest on tools and strategies to manage this major economic pest. The start time and directions to the plots will be released at a later date, pending final arrangements.

[Mark Boetel](#)

Research & Extension Entomologist



FEATURED MATCHUP: NDSU PLANT PATHOLOGISTS VS. TAN SPOT OF WHEAT

Players to Watch:

- Tan Spot (***Pyrenophora tritici-repentis***)

Scouting Report:

- Can be observed as early as the 3-4 leaf stage in wheat-on-wheat, no-till production systems
- Begins in lower canopy, and mature lesions will release spores to infect upper leaves (moves up the canopy if left unmanaged)

Opponent's Game Plan:

- Disrupt photosynthesis in wheat leaves and can reduce yield
- Lesions will begin as small brown to black pin-head lesions and grow into oval shaped lesions with a tan center and yellow halo (Figure A)

Opponent's Strengths:

- Cool (60F to 82F) temperatures and prolonged leaf wetness (rain and dews)
- Survives ~2 years on wheat residue left on the soil surface (Figure B)

Opponent's Weaknesses:

- Crop rotation (reduces tan spot by 70%)
- Residue Management
- Genetic resistance
- Fungicides

Trick Play to Watch:

- Can be confused with abiotic (non-living) leaf spots.
- The tan spot pathogen can survive on grassy weed hosts such as smooth brome and quackgrass.



Figures A-B. (A) Flag leaf with immature (brown to black pin-head lesion) and mature (oval shaped with tan center and yellow halo) tan spot lesions (B) Fruiting bodies (pseudothecia) of the tan spot pathogen on wheat residue.

[Andrew Friskop](#)

Extension Plant Pathology, Cereal Crops

[Sam Markell](#)

Extension Plant Pathologist, Broad-leaf Crops

[Eric Branch](#)

Extension Plant Pathology, Sugarbeets

[Wade Webster](#)

Extension Plant Pathology, Soybeans



CARRINGTON REC HOSTS CROP MANAGEMENT FIELD SCHOOL JUNE 24

The NDSU Carrington Research Extension Center will hold a Crop Management Field School on Wednesday, June 24. Registration is open at www.tinyurl.com/payCREC.

The morning features two sessions on weed management, including weed identification in the Carrington Research Extension Center's curated Weed Arboretum, and our annual review of herbicide groups, examining crop and weed injury symptoms in a site-of-action demonstration plot.

Afternoon sessions include a detailed review of crop growth stages for several crops, vital to accurate crop management and timely pesticide applications. Another session identifies nutrient deficiencies with a keen eye to economics.

Field School instructors include Carrington REC Cropping Systems Specialist Jeff Stachler, NDSU Extension Barnes County Agriculture and Natural Resources Management Agent Alicia Harstad, NDSU Extension Broadleaf Crops Agronomist Ana Carcedo, and NDSU Extension Soil Science Specialist Brady Goettl.

Five continuing education credits are available for Certified Crop Advisers.

Registration is open and more information (including a link to registration and payment, and a copy of the agenda brochure) is available at www.ndsu.ag/cmfs26.

To allow for discussion and specific questions, class size is limited to 50 participants on a first-registered basis. Registration fees include several reference materials and weed identification guides, one meal, and refreshments.

A promotional poster for the Crop Management Field School. The background is a photograph of a field with people walking. The text is overlaid on the image. At the top left, it says "NDSU" and "CARRINGTON RESEARCH EXTENSION CENTER". The main title "Crop Management" is in large, bold, yellow letters, with "Field School" in white letters on a dark green rounded rectangle below it. The date "June 24" is in white on a yellow background. Below that, the time "8:30 a.m. - 2:45 p.m. CDT" and location "NDSU Carrington Research Extension Center" are listed. A registration fee of "\$100" and a deadline of "Registration Deadline June 22" are also included. At the bottom, a yellow banner says "Register: ndsu.ag/CMFS26" and a white box says "Crop Management Field School registration is open at www.ndsu.ag/cmfs26".

NDSU | CARRINGTON RESEARCH EXTENSION CENTER

Crop Management

Field School

June 24
8:30 a.m. - 2:45 p.m. CDT
NDSU Carrington Research Extension Center

\$100 Registration Deadline June 22

Register: ndsu.ag/CMFS26

Crop Management Field School registration is open at www.ndsu.ag/cmfs26.

[Linda Schuster](#)
Carrington REC Administrative Assistant

SMALL GRAINS AND CORN UPDATE

After the very hot and very windy conditions over the weekend, it is getting dry in southeast ND. Soil at the NDSU Agronomy Seed Farm in Casselton is beginning to crack, see photo at left. Winter wheat varieties at Casselton are in the boot to early heading. ND Noreen hard red winter wheat had not quite started heading on Monday, June 8th while Barrett, a 2026 release from Montana State, had awns poking out of the flag leaf and a few heads just starting to emerge, see photos below. Corn in the area is anywhere from emerging to V5 with most fields V2-V4.



ND Noreen winter wheat 6/8/26.



MT Barrett winter wheat 6/8/26.

There were some isolated, severe thunderstorms overnight June 9 into 10 in eastern ND but Fargo missed most of the rain. Most NDAWN stations recorded $\frac{1}{4}$ inch or less. If you experienced hail on a corn field this week, the first thing to ascertain is what growth stage plants were in when the hail hit. Corn that is V5 or less will recover from hail damage because the growing point was below the soil surface. If there is enough moisture available, the plant will continue to produce new leaves from the growing point and outgrow the damage. Unfortunately, if the corn was V6 or later, the growing point was above the soil surface and was likely damaged. If this is the case, a

grower will be faced with a re-plant decision or switching to a different crop. **It is NOT RECOMMENDED to re-plant corn in most of North Dakota after June 10th.** The only exceptions would be in an area comfortable growing 95 day corn switching to corn cut for silage or an area comfortable with 95-100 day corn switching to a 75-80 day hybrid to take to grain. The likelihood of getting a full-season corn to maturity (aka black layer) before we get a killing frost is very, very low. The safest option at this point is planting a warm-season annual forage like sorghum sudan grass or a short-season millet and cutting it for forage or grazing cattle. I encourage growers without cattle or haying equipment to look around for cattleman seeking forage as pasture conditions in the western part of the state are poor and ranchers are already thinking hard about having enough forage available to get them through the grazing season. This could be a win-win for would-be corn growers and ranchers short on forage: an economically viable option for the grain grower that can suppress weeds and protect soil while the rancher gains a relatively close source of badly needed feed.

[Clair Keene](#)

Extension Agronomist Small Grains and Corn



SOIL EROSION: WHERE WE GO FROM HERE

Over the past few weeks, there has been a lot of discussion on the wind erosion occurring across the state (and rightfully so). Without a doubt, any soil loss leads to far-reaching implications from decreased productivity in eroded fields, to dangerous zero visibility conditions for motorists. With these terrible losses also came the pointing of fingers from all directions: blaming dry conditions, the removal of tree rows, and modern farming practices. While all of these things may have had a



Photos showing the aftermath of wind erosion in North-East North Dakota (left) and near-zero visibility conditions during the recent dust storm (right). (Photo credit: A. Kalil)

hand in causing those disastrous days, we now need to give thought to how to manage these damaged fields and most importantly make plans to protect our fields from further erosion in future years. The following are a collection of questions I have received the past several weeks relating to soil erosion and where we go from here.

Q1: What were some of the approaches used historically to reduce wind erosion?

Going back to 1935, what is now the NRCS was created and tasked with the control and prevention of soil erosion in the United States. In our region, and the rest of the dust-bowl plains, they were predominately concerned with stopping wind erosion. The most notable practice they used on the landscape was planting trees and windbreaks, with the purpose of slowing the windspeed at the soil surface, an effect also achieved by planting grass strips, or strip cropping. Given the lack of widespread herbicide use, no-till was not a viable option “back in the day,” but reduced or conservation tillage certainly was—keeping as much residue on the surface as possible and create ridges (a chisel plowed field with ridges, furrows, and residue will erode significantly less than a moldboard field, for example). Additionally, it was recognized some land was simply not fit for farming annual crops and was planted to hay.

Q2: Was the loss due to wind erosion preventable or with the drought is some soil loss due to erosion inevitable?

This is a yes/and or no/but type answer! Is wind erosion preventable, absolutely yes, but even when everything is done “right” some erosion may occur if the cards are stacked against us. If conditions were not so dry this spring, the erosion would have been significantly reduced, but remember, we live in a dry climate, this should be expected! A point which needs to be reiterated after the significant erosion we saw this spring is the absolute necessity of stacking practices. While no-till works great for erosion prevention when high-residue crops are grown, its effectiveness is significantly reduced following low-residue crops. (How many no-till soybean fields blew this spring? Too many, but still less than the smooth tilled fields!). As soybeans and other low-residue crops continue to move into rotations with more intensity, strip cropping, planting into standing stubble (I am a big proponent of stripper headers) or the reinstallation/revitalization of shelterbelts will become increasingly necessary.

Q3: What practices would you recommend that protect soil from wind erosion?

Of course, no-till is the first line of defense against soil erosion by keeping the soil covered and retain moisture. In addition to no-till, conscious decisions need to be made about residue management and crop rotations (including cover crops where feasible). Before planting a low-residue crop, ensure there is previous crop residue to carry it through. Also consider practices which will keep crop residue attached to the soil—park those chopping heads and high-speed discs, they only create confetti to blow in the wind. Another easy to implement practice is strip cropping. By alternating high and low residue crops in varying width swaths depending on soil type, erosion can be reduced substantially. Check out the resource [Methods for Controlling Wind Erosion](#) for more great information on wind erosion control practices.

Q4: What practices would you recommend for growers trying to help fields recover from wind erosion?

There are two angles we need to look at when considering how to address the eroded field: conservation and agronomy. From a conservation (stabilizing what soil is left) standpoint, the goal is to get something growing in the field as quickly as possible, the higher biomass-producing the better (I know, easier said than done). One unfortunate thing which needs to be considered is to what extent did some areas erode. Are there areas where all the topsoil is gone? These areas may not be fit for economical crop production and may best be seeded to a perennial grass or enrolled into a conservation program (if available). From an agronomic perspective, we need to consider what fertility was lost. Soil sampling will be necessary to evaluate nutrient levels and replace what has been lost, predominately P and K. Lastly, what do we do with the soil in the ditch or drifted in the field? If a soil-applied or residual herbicide was applied prior to the erosion event, one needs to be cognizant of the concentration of this herbicide in the sediment. Spreading the eroded soil back in the field which is contaminated with herbicide may lead to crop damage. Also consider weather conditions before spreading the sediment back out. Is it still dry and windy? The sediment will just blow again. Are heavy rains forecasted? The sediment is powder, crusting can be expected. In an ideal world, the sediment (without potential for herbicide contamination) should be thinly spread back on the eroded areas and planted to hold it in place and remediate the areas as quickly as possible.

Q5: What would you recommend growers do next growing season for affected fields?

In addition to what I mentioned in question 4 and using stacked soil conservation practices, next year will be a good time to quantify and address the variability which developed as a result of the erosion and possible soil return from the ditches. If zone sampling and management was being used, these zones will need to be reevaluated and new soil samples collected. Using the updated samples, variable rate spreading can be used to address some of the variability of nutrients. Another point to consider is S fertility. S is highly tied to organic matter and if organic matter has been stripped with the lost topsoil, there will be an increased likelihood of S deficiency. Consider applying a base rate sulfate-S to prevent deficiency.

“A prosperous and enduring agriculture depends on an adequate supply of productive land, properly used and so protected from erosion that it will remain permanently productive” (Hugh Bennett, 1959)

[Brady Goettl](#)
Extension Soil Specialist



GROWTH STAGE CUTOFF IN SMALL GRAINS AND CORN

The heat of the last three weeks has pushed crop growth along at a rapid pace. This has led many fields of small grains and corn to rapidly approach, or exceed, growth stages cutoffs for many popular herbicides. Here is an annual reminder of cutoffs for many popular herbicides. Figure 1 (also found on page 16 of the 2026 Weed Guide) lists many popular products and their window of application based on small grain growth stage.

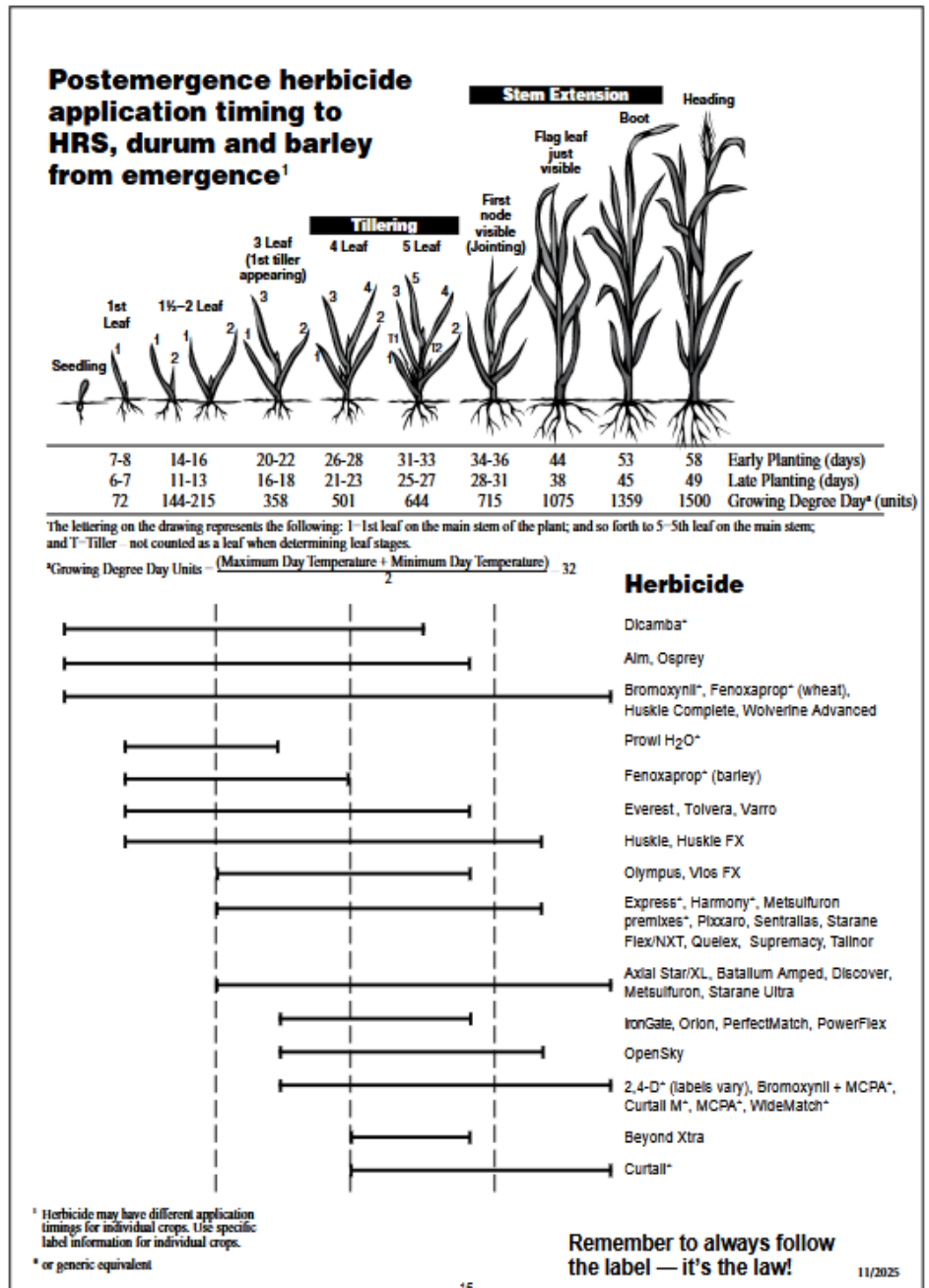


Figure 1 Caption: Postemergence herbicide application timing for small grains.

Figure 2 (also found on page 31 of the 2026 Weed Guide) lists many popular products and their window of application based on corn growth stage. It is important to note that several products have a cutoff based on height, rather than growth stage. These products have an asterisk after their name in Figure 2, and the growth stage listed is an approximate growth stage corn typically reaches that height. For example, atrazine should be applied before corn exceeds 12 inches in height, which is often around the V6 growth stage. Always be sure to check the label for exact details, as this chart is meant as a quick reference guide.

Herbicide Application Timing to Corn

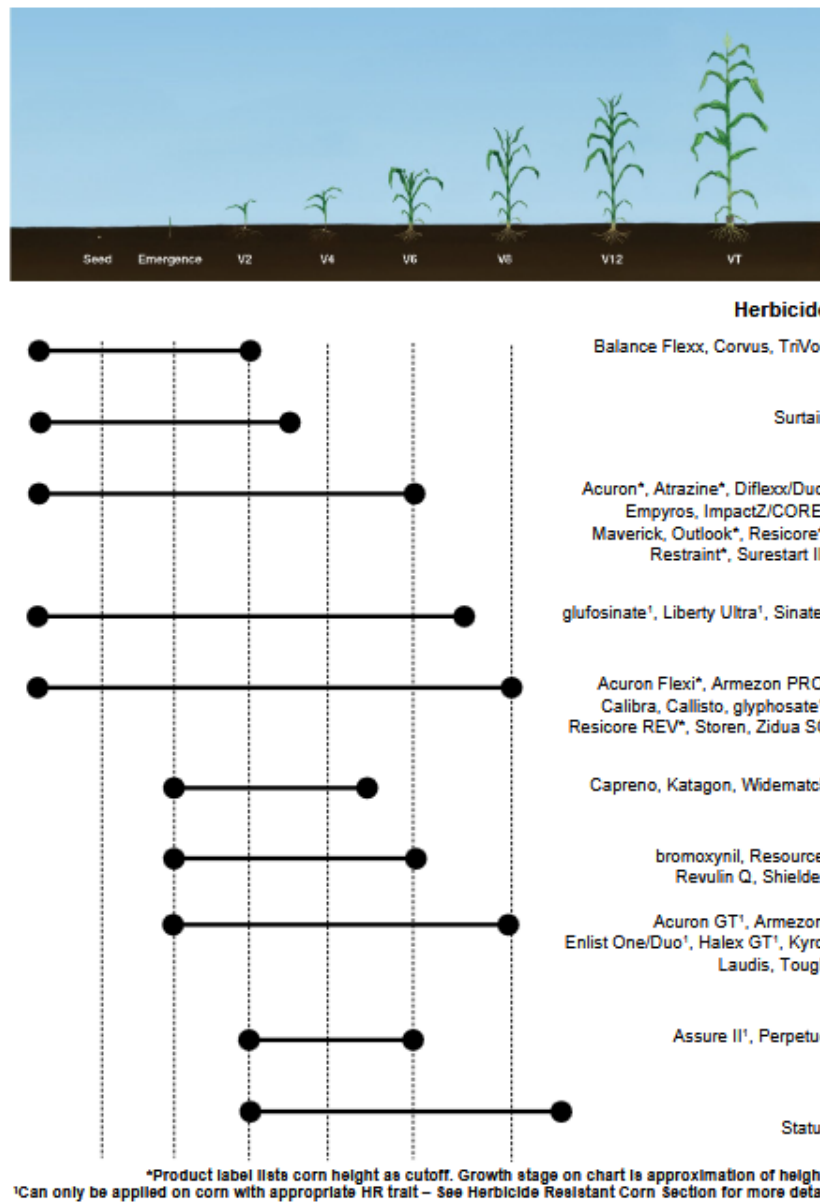


Figure 2 Caption: Postemergence herbicide application timing for corn.

JUNE WEED ODDS AND ENDS

Soil Movement

Questions remain about the amount of real estate that changed hands during the May 14/15 wind events. From a Weed Science perspective, there are two things worth discussing: herbicide and weed seed movement.

It is always difficult to quantify how much herbicide moves with blowing soil. However, my canned answer is that if you can physically track the loss or acquisition of soil from/to a neighbor: very good chance it will show up with herbicide. We will usually get a case or two per year of this issue. Example is a corn field with a Group 27 herbicide applied to soil, and soil moves onto neighboring sensitive crop (sugarbeet, others). Whenever rainfall occurs, we can see injury that seems erratic, but based on deposition pattern of soil. I bring this up in anticipation of seemingly random cases of injury this summer. One of the potential “what-ifs” we go through during an injury claim, could be traced back to these wind events. When a large amount of real estate was acquired, there is the potential to acquire unwanted herbicide as well.

The second case is acquiring some new weeds. Similar to the herbicide scenario, you typically need to acquire a large amount of neighboring real estate to acquire new weeds. In 2021, we tracked movement of several small-seed broadleaf weeds (common lambsquarters, waterhemp, etc) into grass ditches as they filled up with dirt. These seed will not become airborne in the dust that filled the sky on May 14, but if dirt is piling up in a new field, so can weed seed. In strong wind events like we experienced last month, it’s not just the tumbleweeds that migrate.

Herbicide Injury

Every year questions pop up about herbicide injury from labelled applications. This year, Group 15 injury is the early leader for most questions/acres. Most questions have been related to corn thus far. In particular, the tank-mix of dicamba + acetochlor has been a popular option due to effectiveness and affordability. This combination is usually safe applied pre-emergence, but can cause injury if applied to spiked or early postemergence corn. With many fields going from planted to spike within 4 to 5 days, some fields had this application at the wrong time despite best intentions. Main injury symptom is “buggy-whipping”, which we typically associate with Group 15 herbicides in cool, wet weather. However, dicamba + Group 15 seems hot this year. Application at spiking leads to worst case for injury, however we’ve observed injury applied day of planting in our trials, and injury in planned early postemergence applications (V1-V3 corn).

Fall Applied Pyroxasulfone

We have talked about late fall applications of pyroxasulfone (Zidua, Anthem, others) for several years now for control of kochia and wild oats in the spring. One common question last fall was: what can we expect for control on waterhemp? I’ll be the first to admit I was skeptical about how long pyroxasulfone would persist into the summer if applied late October/early November. When questions arise, a curious mind puts out a trial.

We applied Zidua SC on November 1 last year at our waterhemp site in Fargo. We applied both 3.25 fl oz, and 4 fl oz (the rate we typically recommend when targeting wild oats). These rates were

applied with and without a planned sequential application in the spring at soybean planting (6.5 fl oz maximum rate per calendar year; so either 3.25 in the fall, followed by 3.25 in the spring, or 4 in the fall followed by 2.5 in the spring). Early results have been favorable to the fall applications. Fall applied pyroxasulfone was providing between 95-100% control in the first week of June (2 weeks after soybean planting), whereas spring applied was more in the 70% range. This site received 0.48" of precipitation the day of spring application.

We will follow and report on this trial this year and repeat the trial in the coming years. It is worth noting that this site has had a dry spring to date, with about 1" of precipitation since May 1. But based on early ratings, fall applied pyroxasulfone has performed better than applications at planting. We'll report full results late summer to plan for fall of 2026. Spring weather this year has been an unfortunate reminder that we can have limited days to spray in the spring, and if these fall applications can provide benefit into June, then this can be a way to spread out the workload for waterhemp control across seasons.

[Joe Ikley](#)

Associate Professor/Extension Weed Specialist



AROUND THE STATE

NORTHEAST ND

The NE region received an abundance of rainfall last week, but fortunately the water has moved through quickly and fields appear to be drying out. Low-lying areas will likely become drowned-out spots, as signs of stress are already becoming apparent following the weekend's heat. Some hail was reported in isolated spots within the region, but no significant damage has been observed.

Crop staging:

- Corn: V2; stands good to excellent
- Soybeans: VC; stands very good
- Small grains: 2-3 leaf to tillering; good to excellent stands
- Canola: Being planted or at cotyledon stage; fair to good stands due to crusting issues
- Field Peas: 2-3 nodes; very good to excellent stands

Most producers are wrapping up seeding, and many have already finished. Some had planned to return to reseed wet areas; however, with the latest rainfall, those plans will likely be postponed or

abandoned. Some farmers have begun spraying emerged wheat. Fields that initially had uneven stands are starting to even out thanks to the recent moisture and warm temperatures.

Canola flea beetle feeding activity to be a concern across the region. A few sunny, warm days increased flea beetle activity, resulting in additional feeding damage to emerging seedlings. Recently planted fields are also experiencing crusting issues, and excessive moisture has likely reduced the effectiveness of some seed treatments.

Leafy spurge populations are becoming increasingly noticeable along roadsides and in ditches throughout the region. Many plants are currently in the flowering stage, making infestations easier to identify and highlighting the need for timely management to help limit further spread.

continues



Waterlogged fields in Pembina County. Photo: Alissa Sharp, ANR Extension Agent, Pembina County



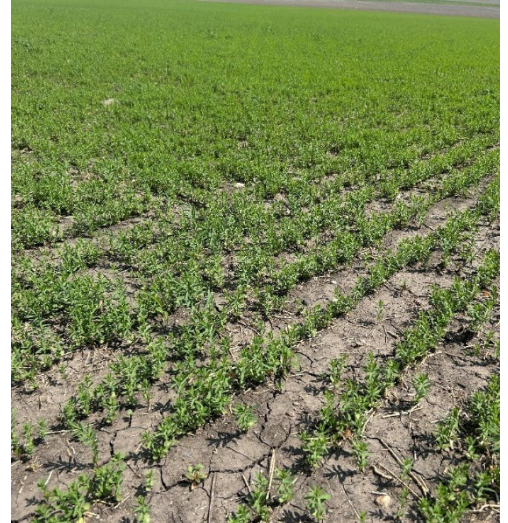
Corn at 2 leaf stage. Photo: Lindsay Overmyer, ANR Extension Agent, Ramsey County



Soybeans at VC stage. Photo: Lindsay Overmyer, ANR Extension Agent, Ramsey County



Wheat at tillering stage in Grand Forks County. Photo: McKenna Schneider, LREC IPM Scout



Flax at the Langdon Research Center. Photo: Anitha Chirumamilla, LREC



Flea beetle damage on canola seedlings. Photo: Anitha Chirumamilla, LREC



Leafy spurge in ditches. Photo: Anitha Chirumamilla, LREC

[Anitha Chirumamilla](#)

Extension Cropping Systems Specialist
Langdon Research Extension Center

SOUTH-CENTRAL/SOUTHEAST ND

Happy Thursday. The hot weather and wind continued this past week making it difficult to apply herbicides and causing recently prepared seedbeds to dry out quickly in some areas. Planting of several crops, especially dry bean and sunflower is still continuing across the region, but we are very close to completing planting for the region this season and likely will have little or no prevent plant acres this year.

The average daily high temperature for June 2 through June 8, 2026 at 47 NDAWN stations across the region ranged from 79 degrees Fahrenheit (F) at Newdorf, Streeter, Tappen, and Wishek to 88 degrees F at Gardener with an average of 82.7 degrees, only 1.3 degrees F below last week and still way above normal. Based upon Cooperstown historical weather data, the average daily high temperature for the week should be 74.3 degrees F, which is 8.4 degrees F above the normal for this period and the 10th warmest period on record with the record being 92.6 degrees F in 1988.

The average daily low temperature for the past week at 47 NDAWN stations across the region ranged from 54 degrees F at Pickardville to 62 degrees F at Fingal, Milnor, Mooreton, Sonora, and Wahpeton with an average of 58.9 degrees F, only 1.1 degrees F below last week and still above average. Based upon Cooperstown historical weather data, the average daily low temperature for this period should be 48.9 degrees F, which is a whopping 10 degrees above the normal for this period and the third highest average low temperature for this period in Cooperstown.

The continued above average temperatures, especially the daytime low temperatures have pushed corn growing degree days (GDD's) through the roof as seen in Table 1. Notice the huge increase in GDD's from last week and compared to 2025. We are way ahead of schedule for this time of year.

Table 1. Accumulated and departure from normal GDD's for seven NDAWN stations across the region.

	Denhoff	Linton	McHenry	Jamestown	Edgeley	Mayville	Mooreton
Accumulation from 5-13 to 6-8, 2026	354	370	381	374	393	421	436
Departure from last week	+ 127	+ 131	+ 137	+ 138	+ 146	+ 150	+ 160
Departure from normal	+ 68	+ 41	+ 117	+ 99	+ 116	+ 145	+ 133
Departure from 2025	+ 156	+ 90	+ 147	+ 147	+ 159	+ 147	+ 172
Departure from the 5-year average	+ 58	+ 40	+ 77	+ 65	+ 63	+ 85	+ 83

Two major changes occurred this past week, the rapid growth of crops and weeds, if moisture was present and the awakening of insect activity. Figure 1 shows a V5 (five-leaf collar) stage corn in Griggs County on June 9th which was only V3 (third-leaf collar) stage on June 2nd. On June 9th bean leaf beetles (Figure 2) were found at least as far north as the SE part of Stutsman County which is at least three weeks earlier than last year in Stutsman County and was also found in NW

LaMoure, Eastern McIntosh and parts of Emmons Counties. Blister beetles were found on alfalfa in Emmons County (Figure 3) on June 9th as well.



Figure 1: V5 (fifth-leaf collar) corn in Griggs County 6-9-26.



Figure 2: Bean leaf beetle (BLB) and soybean injury/defoliation caused by the BLB in eastern side of McIntosh County 6-9-26 with photo from Shelby Dietz, the regional NDSU IPM Scout.



Figure 3: Blister beetles found on alfalfa in Emmons County with photo by Nancy Deis, the NDSU Extension ANR Agent in Emmons County.

Most of the region received good rainfall for the week. The total rainfall for last week ranged from 0.08 inch at Casselton, Finley, and Hillsboro to 2.59 inches at Mooreton with an average across the 47 NDAWN stations in the region of 0.8 inch, 0.2 inch above last week and based upon Cooperstown historical data is 0.12 inch below normal for the period. With the high temperature and wind, and sunny conditions evaporative-transpiration was very high last week and in the areas of the region which includes much of the NW part of Sheridan County, a diagonal area starting in SW Stutsman County and going northeast through Foster, Griggs, Steele, Nelson and into Grand Forks Counties and about the eastern 2/3 of Cass County are the driest in the region with crops wilting in the heat and sun and causing hard red spring wheat to reach the early boot stage (Figure 4) and be only about 16 inches tall with lower leaves turning yellow. The dry weather in addition to preparing a wet seedbed and the field having saline spots is causing non-uniform corn emergence in Griggs County (Figure 5).



Figure 4: Very short HRSW at the early boot stage planted in early April in Griggs County on 6-9-26.

Figure 6 shows non-uniform soybean emergence in Emmons County due to soil conditions at and after planting and excessive crop residue. This trend can also be seen in Emmons County in canola, HRSW, and barley fields. I saw a really poor soybean stand across an entire soybean field in Griggs County this past Sunday.

Hard red spring wheat across the region is from 1 leaf to boot stage (Early April planted) and looks good across most of the region, but the wheat doesn't look uniform or in the best of shape in the driest parts of the region. Most HRSW is in late tiller to early jointing stage.

Corn may be the best-looking crop across the region except for the dry areas of the region mentioned above. Corn stage is from just planted to up to V5 (5th-leaf collar) or V6 (6th leaf collar) depending upon when it was planted. Most corn in the region is between V2 and V4 stage.



Figure 5: Non-uniform emergence of corn in Griggs County due to preparation of wet soils for planting and saline areas of the field.

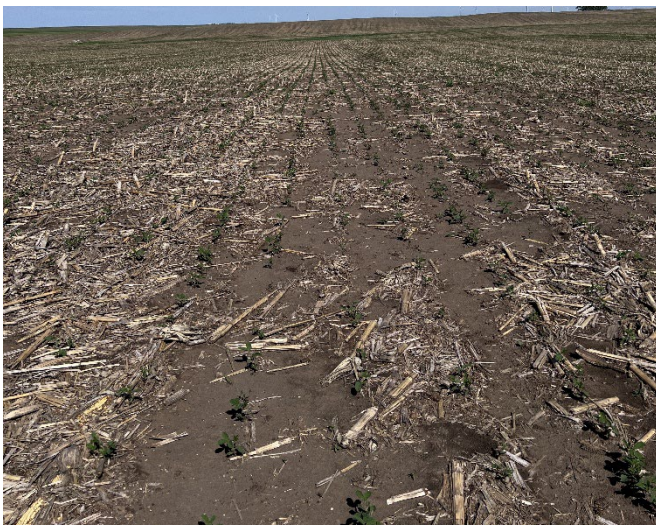


Figure 6: Non-uniform emergence of soybean in Emmons County due to seed bed preparation and excessive 2025 corn residue with photo from Nancy Deis.

Soybean stands are more variable across the region compared to corn, especially in the dry and wet areas of the region causing poor seedbed preparation. Soybean stage is from planted to V3 (third trifoliolate) with most at the VC (unifoliolate laying horizontal to V1 (first trifoliolate) stage in the region.

Dry bean and sunflower are really only beginning to emerge, so it is difficult to know how they are looking at this point in time.

Have a great and safe week!

[Jeff Stachler](#)

Extension Cropping Systems Specialist

SOUTHWEST ND

After a weekend of very active weather, most of Western ND received some precipitation over the last 7 days. Precipitation totals range from 0.23 inches in Oliver County to 2.85 inches in McKenzie County. Overall, most Southwest ND Counties are below the normal precipitation for the month of June, although it is important to emphasize that June is by far our wettest month, so there will be plenty of time to catch up.

Reports from Extension agents across western North Dakota indicate that last weekend's severe weather brought more benefits than setbacks for most crop fields. While the storm system brought damaging winds exceeding 90 mph in some locations, reports of crop injury were minimal. Many counties, including McKenzie, Adams, Bottineau, McHenry, Oliver, and Bowman, reported little to no crop damage, with agents noting that the rainfall was welcomed.

The most significant impacts were reported in McLean, Mercer, and parts of Williams counties, where intense straight-line winds caused damage to buildings, grain bins, trees, and power infrastructure. Some crops experienced wind whipping from blowing debris, although widespread hail damage was not reported. Despite these localized losses, the moisture received was viewed positively for crop and pasture development. Additionally, crops are still early enough in their development stages that yield penalties from this event will likely be negligible.



Figure 1. Shelf cloud over McLean County. Photo: Sarah Bedgar, NDSU ANR Extension Agent.



Figure 2. Damaged silos in Mercer County. Photo: Craig Askim, NDSU ANR Extension Agent.

Regarding crop progress, small grains are finishing up the tillering stage with some fields entering the green-up and jointing stages. Canola is progressing through bolting. Corn is between 4 and 6 leaves stage, depending on when it was planted. Soybeans are between VC and VI-V2. Sunflowers are between just emerged to 2 leaves, depending on when it was planted.

[Victor Gomes](#)

Extension Cropping Systems Specialist
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WEATHER FORECAST

The June 11 to June 17, 2026 Weather Summary and Outlook

Severe weather impacted North Dakota both on Sunday and Tuesday Night. Severe weather can and often does bring significant rain to the state. There were some pockets of higher rain totals, especially in the northwestern part of the state, yet, overall, considering how widespread the thunderstorms were, rain totals were mostly around or less than one-half inch in many areas. The fast movement of many of the storms seemed to keep rain totals lower than would otherwise be expected (Figure 1).

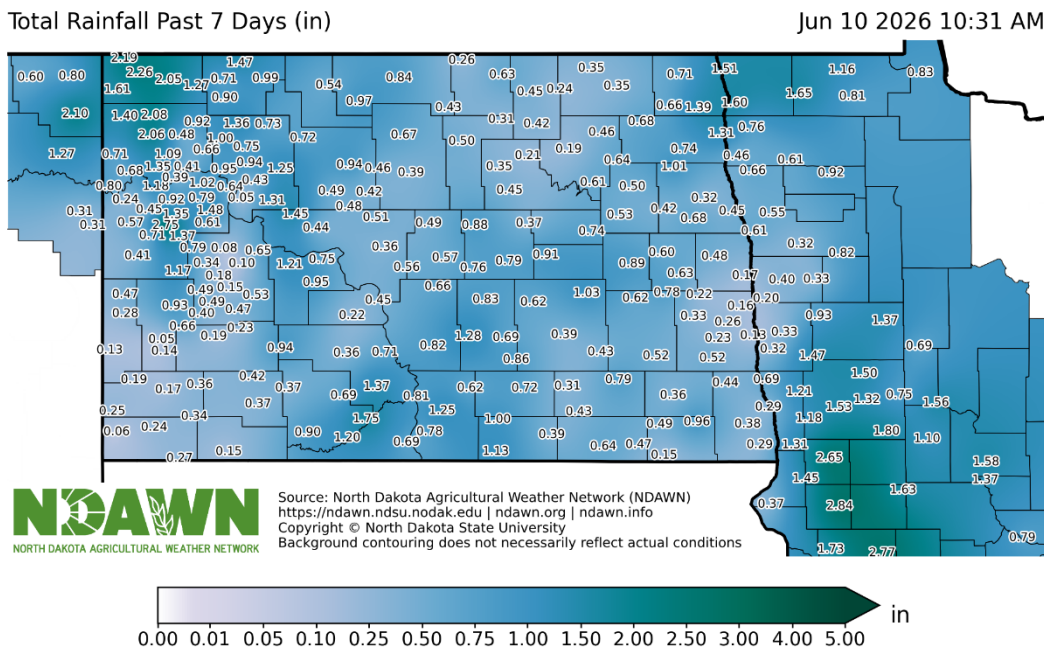


Figure 1. Total Rain at NDAWN stations from June 4 through 10:30 AM on June 10, 2026

With the recent rainfall, about 50% of North Dakota is near or above average for rain in the past 30 days and the other 50% is below average (Figure 2). It appears that very little rain will fall during this forecast period as a cool and dry pattern moves into the region.

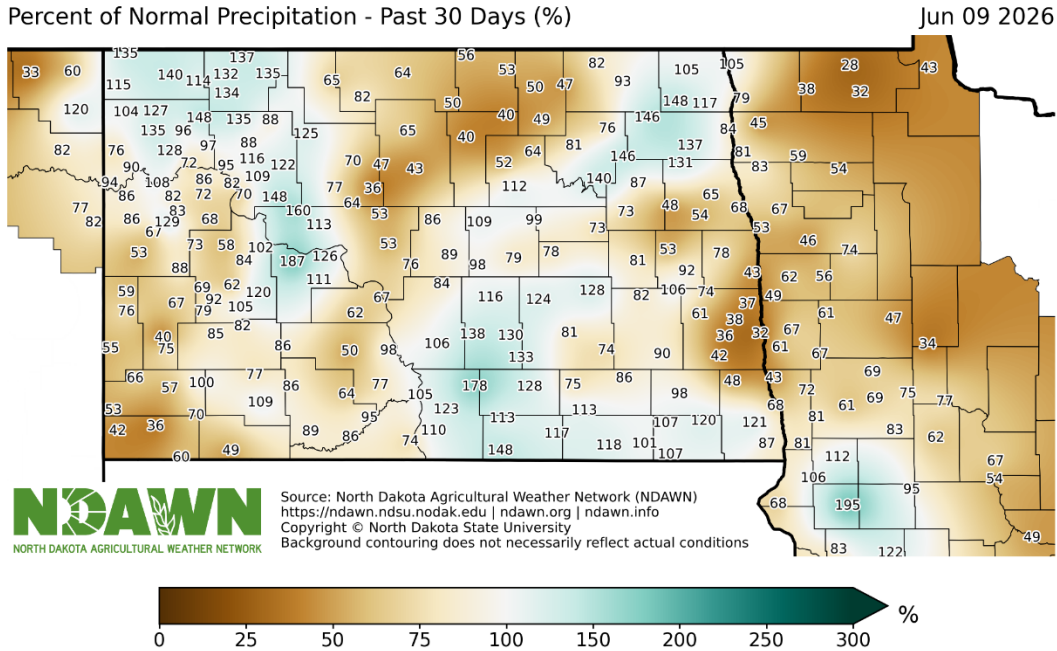


Figure 2. Departure from Average Rainfall for the 30-Day Period Ending June 9, 2026

It was another very warm week across the state. Temperatures averaged 5 to 10 degrees above normal (Figure 3). These next 7 days will bring significantly cooler temperatures across the region. With these cooler than normal temperatures it will mean significantly fewer growing degree days than we recorded in recent weeks.

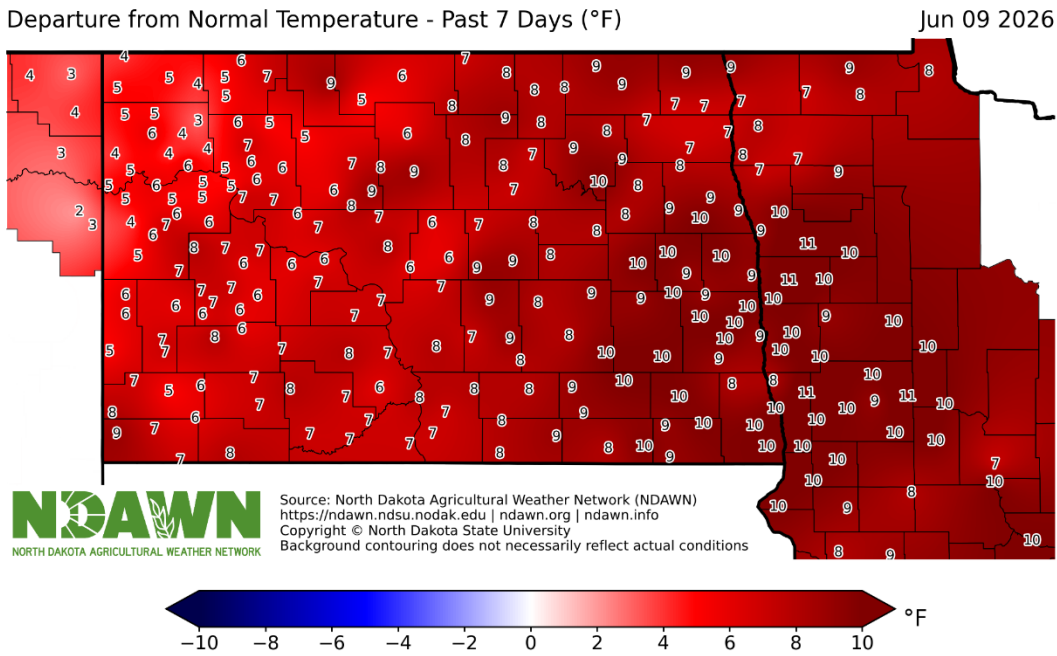


Figure 3. Departure from Average Temperatures for the 7-Day Period Ending June 9, 2026

Figures 4 and 5 show the forecasted growing degree days (GDDs) for base 32° (wheat) and base 50°F (corn and soybeans) during this forecast period. With below average temperatures expected,

most areas will record between 30% to 50% fewer growing degree days this week from what was recorded in the past couple of weeks.

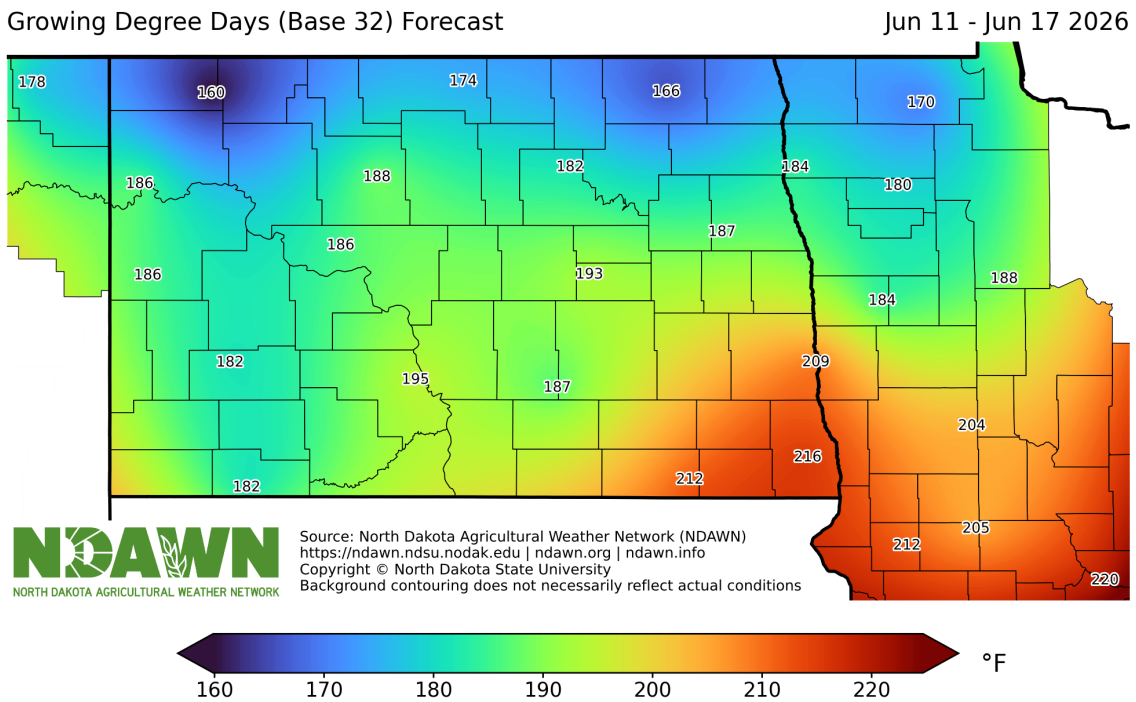


Figure 4. Estimated Growing Degree Days Base 32° for the Period of June 11 to June 17, 2026

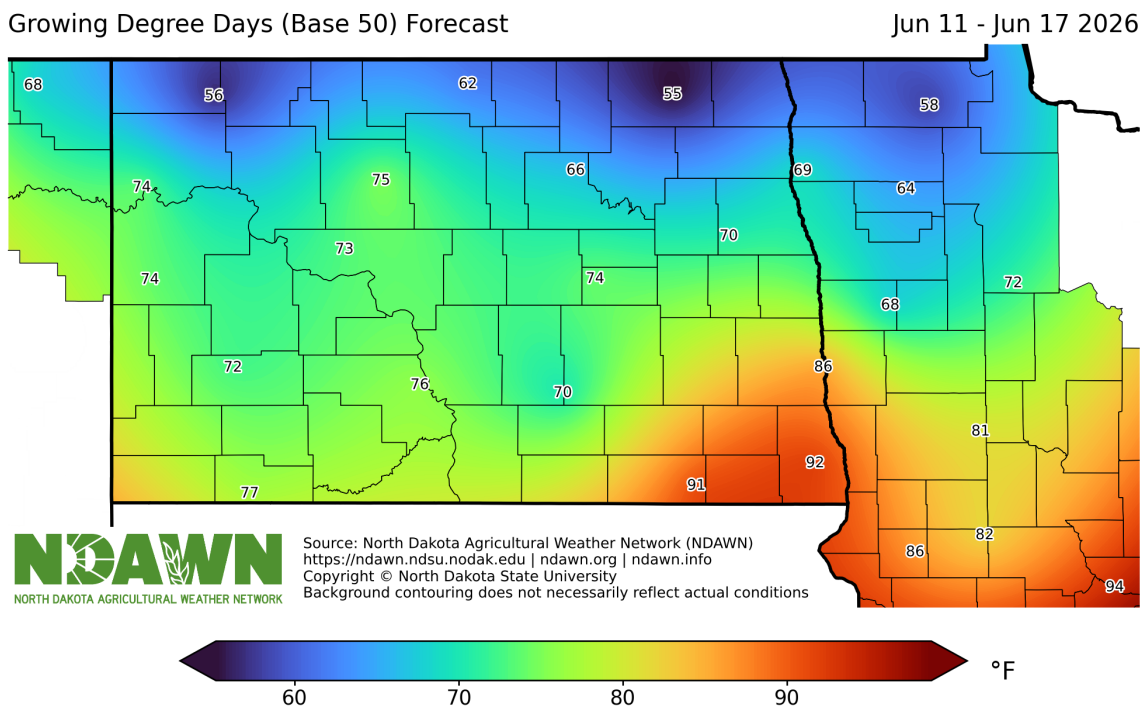


Figure 5. Estimated Growing Degree Days Base 50° for the Period of June 11 to June 17, 2026

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>

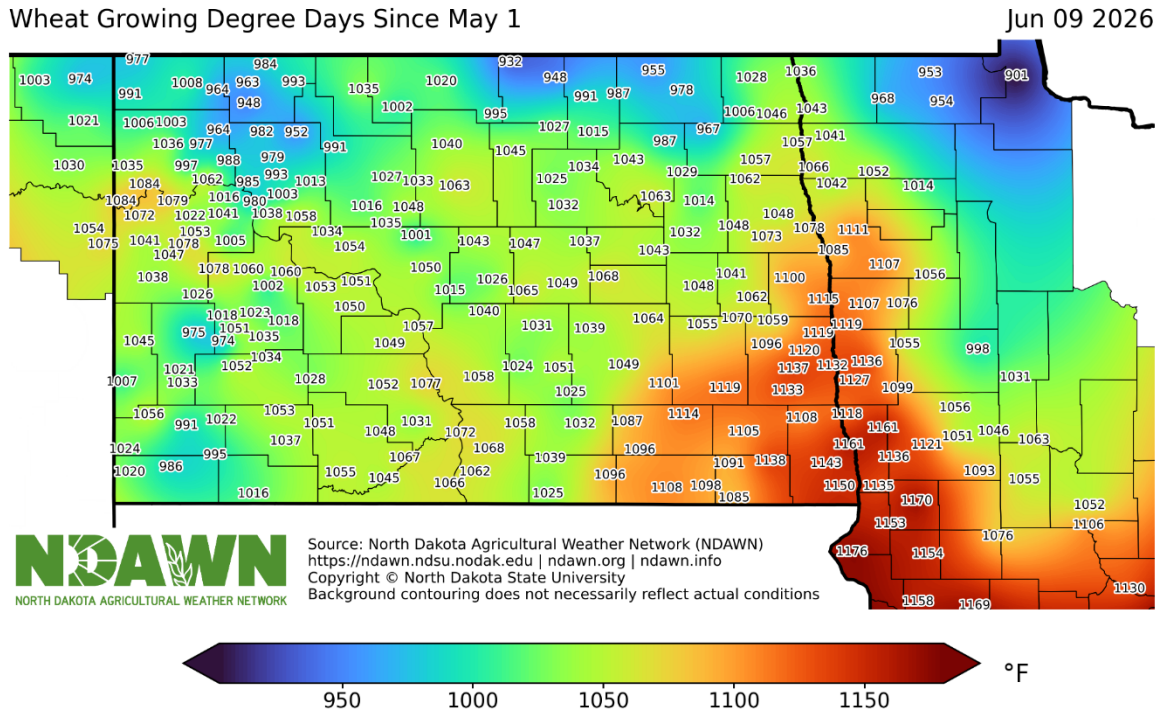


Figure 6. Wheat Growing Degree Days (Base 32°) for the Period of May 1 through June 9, 2026

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>.

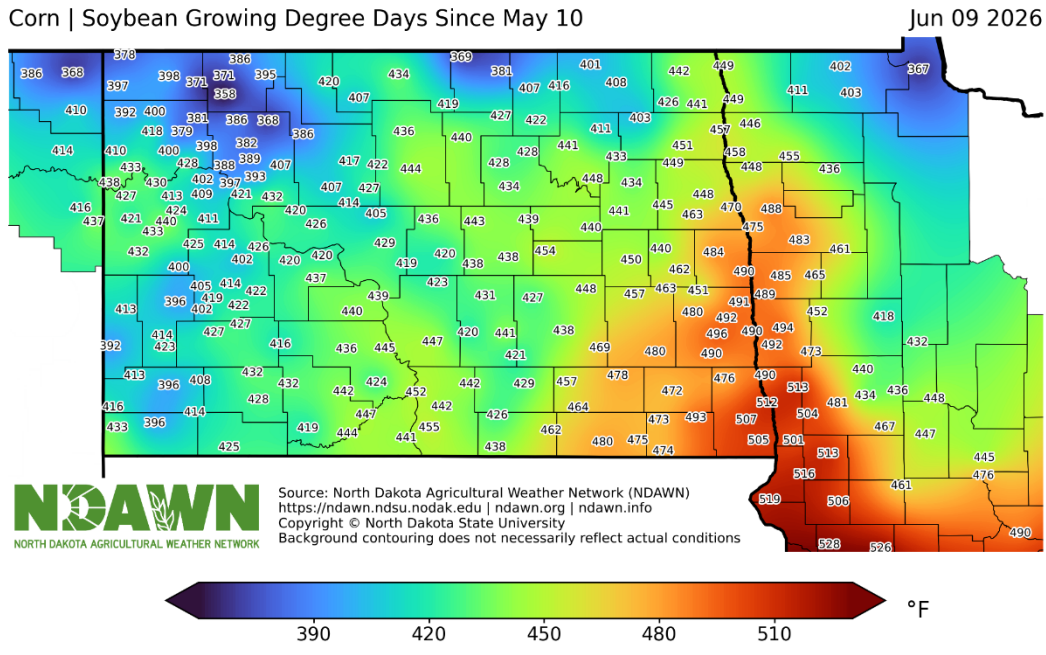


Figure 7. Corn Growing Degree Days (Base 50°) for the Period of May 10 through June 9, 2026

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NDSU Crop and Pest Report

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