North Dakota State University
CROP & PEST REPORT
NDSU EXTENSION

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2026 NDSU FIELD DAYS

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.

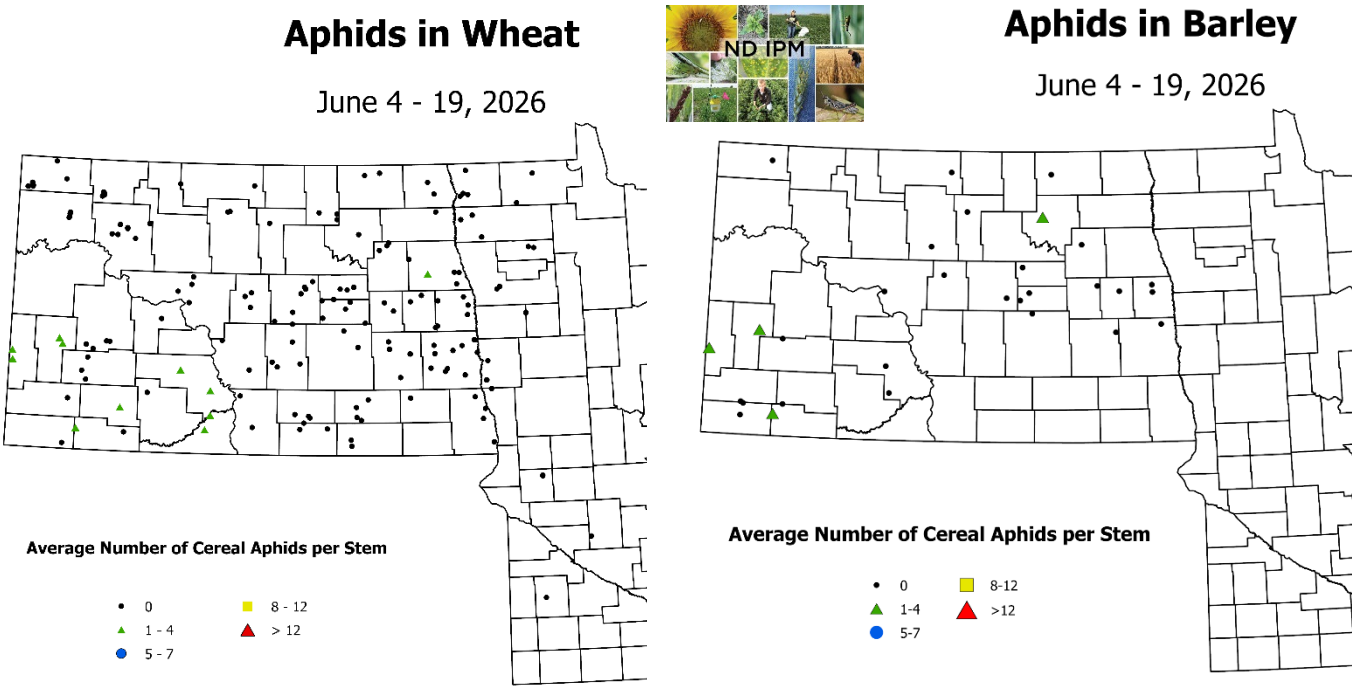
2026 Field Days Locations & Dates

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

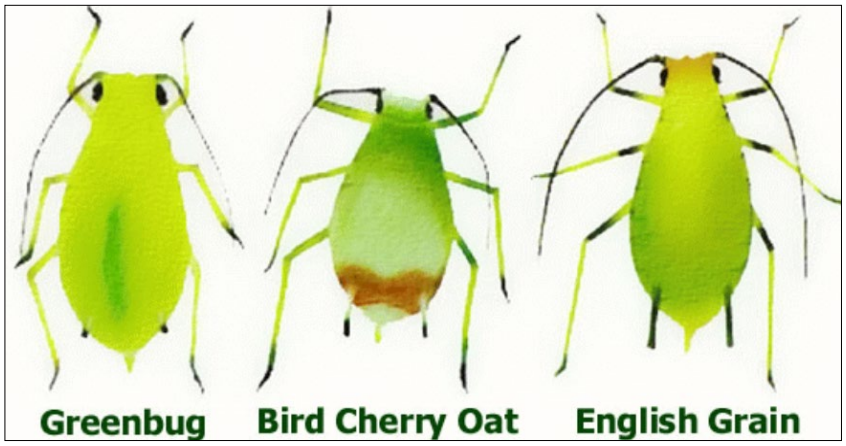
entomology

CEREAL APHIDS IN NORTH DAKOTA

Cereal aphids are being observed by IPM scouts in North Dakota wheat and barley fields, mainly in the southwest region. Current aphid populations are very low (see IPM maps) and have been detected in only about 7% of the fields scouted. The small grain crop is compensating by growing fast with the recent moisture and cool temperatures.



We have three main species of aphids that cause problems in North Dakota small grains: greenbug, English grain aphid and bird cherry-oat aphid. These aphids do not overwinter in North Dakota; they migrate into the region from the South. The greenbug is the most injurious because it injects a toxin with its saliva during feeding. The English grain aphid is the most common aphid seen in small grains and feeds on wheat heads. The bird cherry oat aphid feeds primarily on leaves in the lower part of the small grain plant. These aphids can vector barley



yellow dwarf virus. When aphid populations are high, the disease can spread through small grain fields. The later-planted fields are more attractive to aphid infestations and often attract aphids that are moving from more mature fields.

Research showed that the greatest risk of yield loss from aphid feeding occurs during the vegetative through heading stages. However, yield loss can occur through the early dough stage. Beyond early dough, yield loss is unlikely. High aphid numbers also generate copious amounts of honeydew, which leads to sooty mold growth and, in turn, reduces photosynthesis (the ability of a plant to make food).

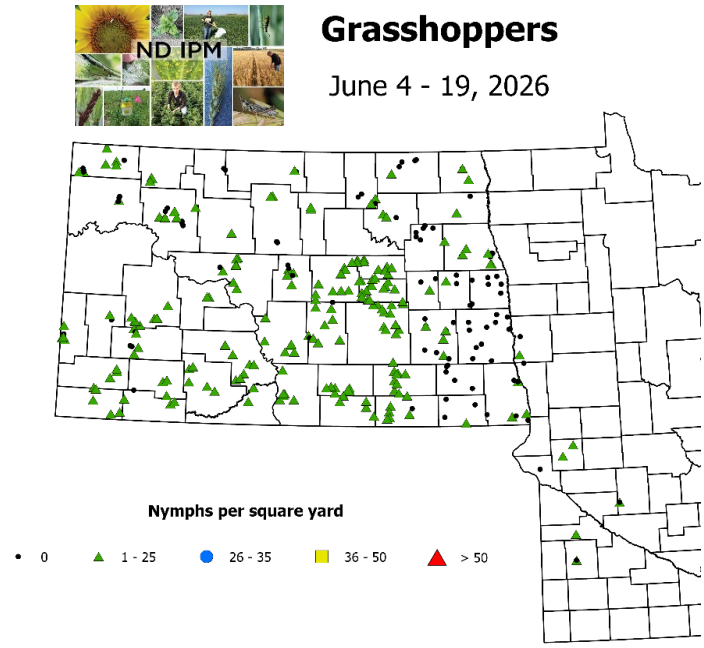
Field scouting should begin at stem elongation and continue up to the early dough stage of wheat. Walk a W-pattern and visually inspect 10 stems per stop, 5 stops per field, for a total of 50 stems. Count the number of cereal aphids regardless of species and calculate an average number of aphids per stem for the field. Aphid populations at or above the **economic thresholds** (listed below) may result in crop damage, reducing yield.

- **For vegetative through head emergence – average of 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**

GRASSHOPPER UPDATE

Grasshopper nymphs (young grasshoppers) were observed in about 61% of the fields scouted and present at low densities (average of 0.2 to 11 nymphs per square yard). Grasshopper nymphs were observed in wheat, barley, soybean and sunflower fields. At this point, their numbers are too low for any crop damage; however, scouting should continue at least weekly.

IPM scout sweeping for grasshoppers.



Grasshopper Nymph Action Threshold	
Field margin	50-75 nymphs per square yard
Field interior	30-45 nymphs per square yard

Four 180-degree sweeps with a 15-inch sweep net = 1 sq. yard

Continued thunderstorm activity increases the risk of disease epizootics and reduces grasshopper populations.

IPM INSECT TRAP REPORT

Here are some reports from last week's IPM trapping (June 15-19, 2026).

True Armyworm: The IPM Crop Survey has 10 armyworm trap locations in North Dakota. Counts have been low so far; however, when the next generation of moths emerges and more migrants arrive from southern states, populations could increase. ***Scouting is critical during the stem elongation through the heading-kernel development stages.*** For our June 15-19 trapping period, armyworm counts ranged from 1 to 38 per trap per week in wheat. The high trap catch, 38 moths per trap per week, was located in Richland County.

County	Crop Stage *Zadoks*	Armyworm Trap Count *#moth/trap/week*
Barnes	32	7
Billings	24	16
Cass	52	4
Dunn	26	21
Dunn	25	25
Foster	53	10
Nelson	31	1
Pembina	32	5
Richland	59	38
Wells	31	2

For more information, see NDSU Extension: The Armyworm and the Army Cutworm (E830, revised).

First trap catches were detected for the following insect pests, indicating the start of their emergence:

Wheat midge was detected at low numbers in two counties: Richland County (3 midge per trap per week) and Cass County (7 midge per trap per week), southeast North Dakota, this past week. Historically, populations of wheat midge in southeast North Dakota have been too low to cause significant damage to the wheat crop.

Wheat midge pheromone trap.

Banded sunflower moth in sticky trap bottom.

Banded sunflower moth (1 moth per trap per week) and **Arthur's sunflower moth** (3 moths per trap per week) were detected at one site this past week in Dunn County, southwest North Dakota. So, moth emergence is beginning in sunflowers in North Dakota. It's too early for field scouting, which should start at the late bud stage (R3 - distinct bud elongated ¾ inch above the nearest leaf, yellow ray petals not visible), usually during mid-July. The current sunflower crop is at stages V1-V12.

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plant pathology

PREPARING FOR WHITE MOLD

Most of our broadleaf crops will begin blooming in the next few weeks, making them potentially susceptible to white mold. This article focuses on fundamental information about the white mold disease cycle, factors that influence disease risk, and forecasting models and risk maps designed to help determine when a fungicide application may be necessary and profitable.

Disease Cycle

White mold on broadleaf crops is all caused by the same fungal pathogen, ***Sclerotinia sclerotiorum. Sclerotinia*** survives for many years in the soil as sclerotia; hard, black structures (figure 1). When there is ample soil moisture, sclerotia will germinate, produce apothecia (little mushrooms) and release ascospores (Figure 2). Once spores are released, they need to land on a nutritional source to begin the infection process; usually, the flower petals (this is why bloom is SO important for management). Once the flower petals become colonized, the pathogen easily penetrates healthy green tissue (Figure 3) and produces the characteristic light tan / white lesion (it looks like dry bone). Eventually, a 'white mold' may be visible, plants may shred, and new black sclerotia are produced (figure 4).

Figure 1. Hard black sclerotia produced inside of canola stem.

Figure 2. Apothecia, which release the ascospores that cause white mold, growing from sclerotia in the soil.

Figure 3. White mold infection beginning on a sunflower floret, which then landed on the leaf and spread into health green tissue.

Figure 4. White mold infection in canola; note tan lesions, white fluffy growth and shredding.

Factors influencing white mold

1. **Bloom.** Broadleaf plants are susceptible to white mold only once they begin blooming (sunflowers are an exception).
2. **Wet soil before bloom.** Generally, 1-2 inches of rain falling in a 1-2 week period before plants enter bloom is the ***minimum*** needed for sclerotia to germinate, produce apothecia, and release ascospores.
3. **Moderate temperatures.** Sclerotinia infection and development are best when daytime highs are cooler; 60's- low 80's.
4. **Canopy wetness.** Prolonged canopy wetness is important for infection. Rain, fog, and long heavy dews during bloom are all favorable for disease.
5. **Canopy density and closure.** Canopy closure traps water on the plants for longer periods of time, increasing disease risk.
6. **Field history**. White mold can survive for multiple years as sclerotia in the soil. If you had a white mold epidemic the last time you grew broadleaf crops, you are likely at a higher risk.
7. **Crop rotation**. Short/no crop rotation among broadleaf crops increases risk
8. **Genetics**. Some varieties/hybrids in some crops are more (or less) susceptible to white mold.

Forecasting models and fungicides.

Fungicide applications ***may*** be efficacious and economically viable when the crops are at risk for disease (sunflowers are an exception). Improved forecasting models aid the decision-making process.

The Canola Risk Map and Risk Calculator

The color-coded ***Risk Map (https://www.ag.ndsu.edu/sclerotinia/riskmap.html)*** is designed to estimate risk of white mold development: low (green), moderate (yellow) and high (red). As of June 22, most of the state is in high risk (only applies to canola in bloom) (Figure 5). Maps will be refreshed on a daily basis beginning next week and can be observed by clicking on the "Risk Map" button. Clicking on any NDAWN station on the map will show the estimated percentage of risk of disease development for that station. This information will help growers make a more informed spraying decision.

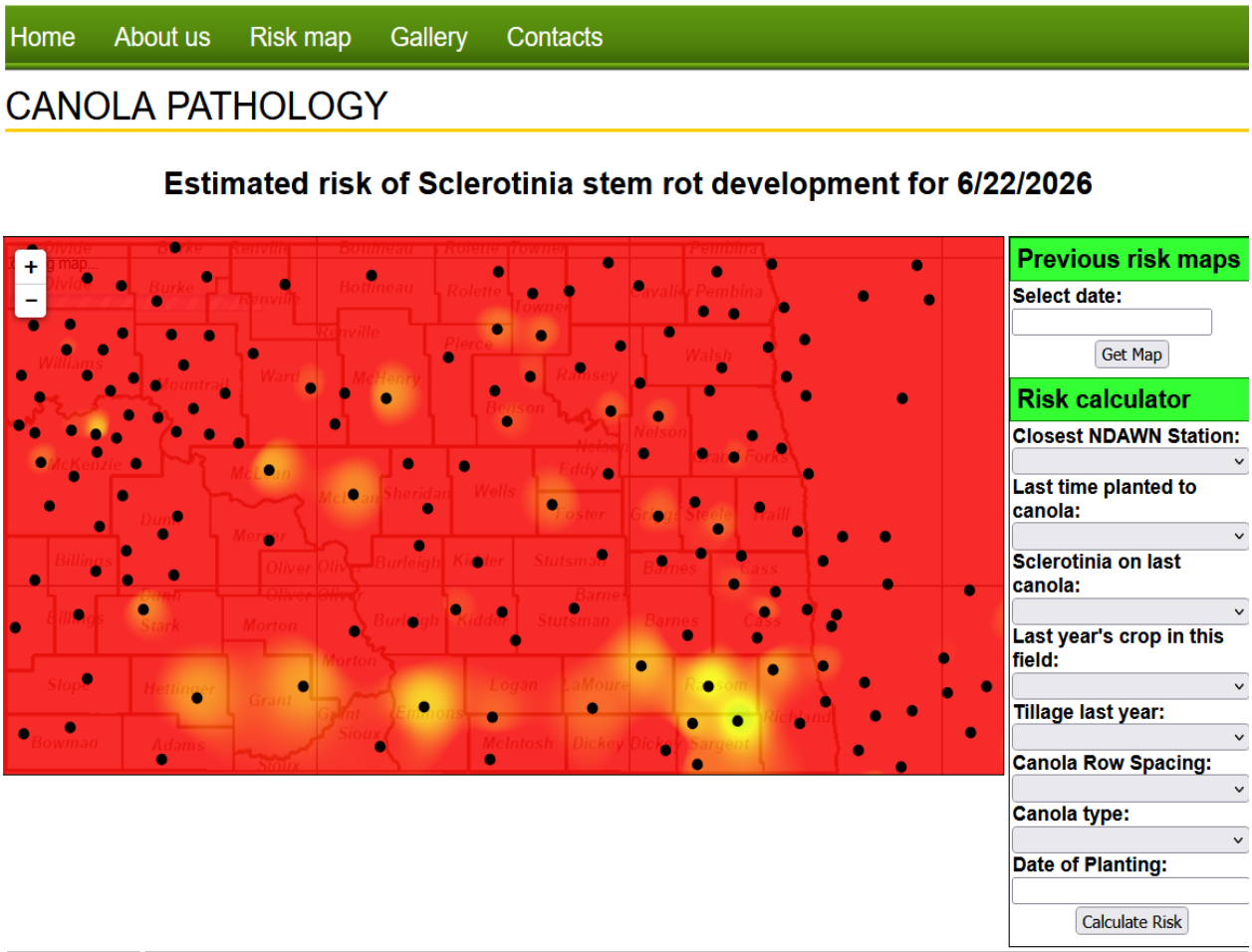

Figure 5. Sclerotina risk map (canola), June 22, 2026

The ***Risk Calculator*** (https://www.ag.ndsu.edu/sclerotinia/sclerotinia/getinf.php) is an improved, interactive tool that gives more precise risk for a specific field by allowing growers to enter important information about their field (such as crop rotation and disease history) into the forecasting model. Select the closest NDAWN station, enter information, and get a customized risk level. Notably, it is important to remember that rainfall is highly variable, and NDAWN stations may have higher/lower levels of rainfall than specific fields.

Remember, timing is everything. Risk is only applicable once the fields are in bloom. If you make a decision to apply a fungicide, applications are generally recommended at or soon after 20% bloom (Figure 6).

Figure 6. Canola at 20% bloom, (reproduced from NDSU Extension Publication PP-1410)

The Soybean White Mold Risk Map

The soybean white mold risk map is quite similar to the map designed for canola white mold. While the pathogen is the same, there are different environmental conditions between the cropping systems that can create different risk levels. In these maps, the high risks are indicated in red (above 35% risk), medium risk is indicated in yellow, and low risk is indicated in blue. These maps are now live on the NDAWN.info webpage under the Agriculture and the Ag Tools tabs. https://ndawn.info/agriculture_whitemold.html. This tool utilizes each NDAWN weather station, similar to the canola risk map. These white mold risk maps will be updated daily and help to provide an estimated time in which to make fungicide applications if all the conditions are met.

These conditions include the presence of flower tissues and canopy closure. If both of these conditions are met and you have had a history of white mold, then you should start to look at these maps to determine if you may begin to think about a fungicide application. As of June 23rd, much of the state is under medium risk, with small pockets through central and western ND showing some high risk. However, the Red River Valley is relatively low risk on Tuesday. I will be posting these maps weekly throughout the flowering periods, so stay tuned for risks in your area. One common question that we often get is the applicability of these maps for dry beans. While we have not yet validated our risk prediction models in dry beans, our general recommendation is that the soybean white mold risk map can work for dry beans, but the risk level needed for a fungicide application may be lower, as dry beans are more susceptible than soybeans. So, in this case, if you're a dry bean grower in an area that is in medium risk, a fungicide application may be warranted.

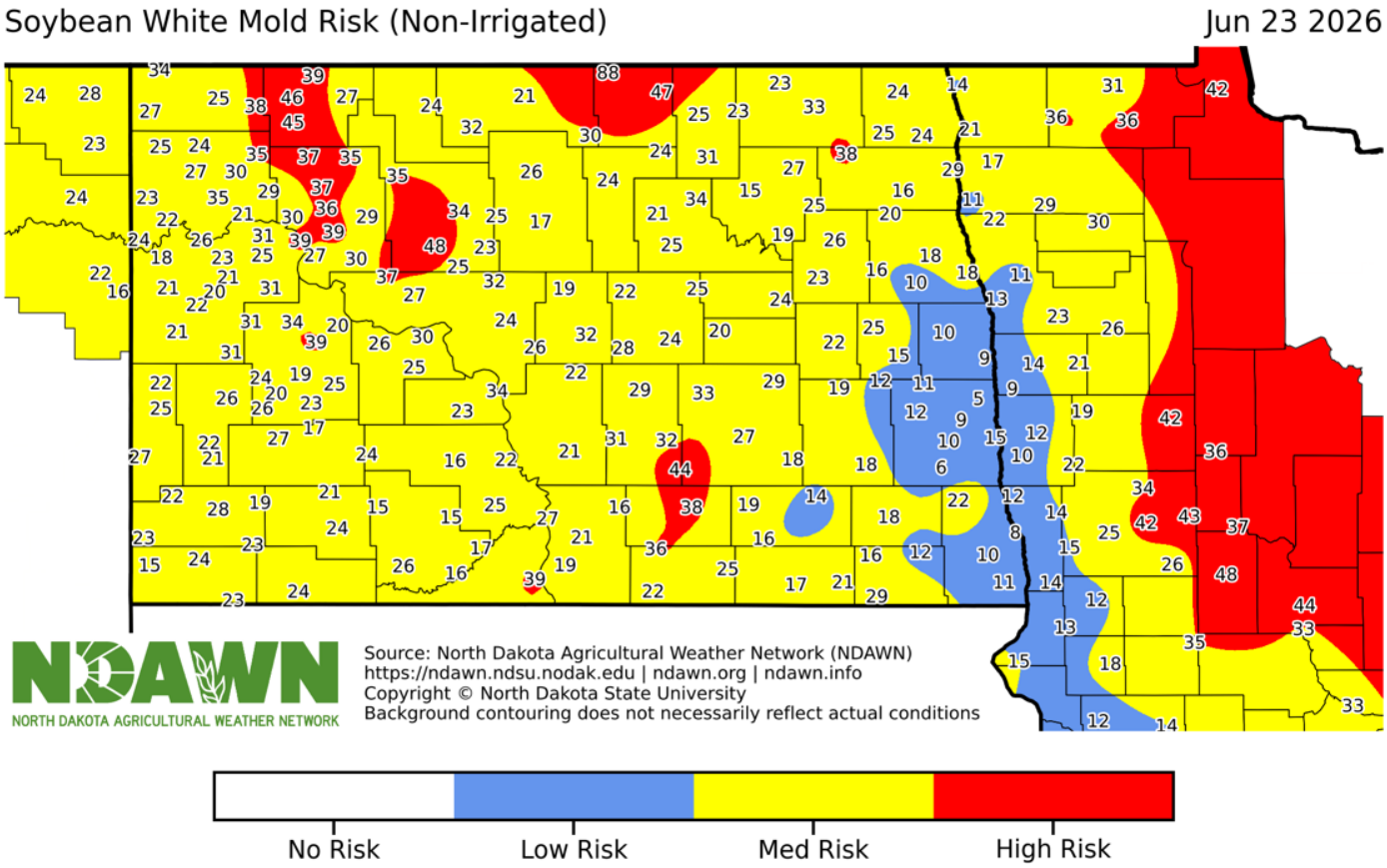

Figure 7. Soybean white mold risk map, June 23, 2026.

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FEATURED MATCHUP: NDSU PLANT PATHOLOGISTS VS. FUSARIUM HEAD BLIGHT OF SMALL GRAINS

Players to Watch:

- Fusarium Head Blight (***Fusarium graminearum***)

Scouting Report:

- Symptoms start developing 10 to 14 days after early flowering in wheat or complete full-head emergence in barley

Opponent's Game Plan:

- Premature bleaching of wheat and durum spikes, and browning of barley kernels (Figure 1).
- Disrupts kernel development (yield loss), leading to lightweight and lifeless kernels.
- Pathogen produces mycotoxin (deoxynivalenol; DON) commonly referred to as vomitoxin (VOM).

Opponent's Strengths:

- Warm (75F to 85F) temperatures, consecutive days of high humidity, and frequent rain prior to and during the heading and flowering growth stages of small grains
- Survives on small grain and corn residue

Opponent's Weaknesses:

- Crop rotation (do not put small grains after corn)
- Residue management
- Genetic resistance (most important tool)
- Fungicides (selection and timing important)

Trick Play to Watch:

- Late infections may not impact yield, but will increase DON/VOM
- None of the management tools are silver bullets

Figure 1. From top to boom: Fusarium head blight on spring wheat, durum and two-row barley.

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FUSARIUM HEAD BLIGHT RISK AND FUNGICIDE INFORMATION

Growers, agronomists, Extension agents and IPM scouts have reported that some of the small grains are starting to head in the state. With this information, we are entering the leading edge of the Fusarium Head Blight (FHB; scab) risk season, and with the wide range of growth stages in the state, I am expecting FHB risk questions to last until the middle of July. This article will provide information on tools to assess FHB risk, current fungicide recommendations, and research results from US Wheat and Barley Scab Initiative (USWBSI) Trials conducted across the state on hard red spring wheat, durum and barley.

Assessing FHB Risk

There are two models that can be used to assess FHB risk for wheat and durum. These are the NDSU Small Grain Disease Forecasting Model (https://www.ag.ndsu.edu/cropdisease and the USWBSI Fusarium Risk Tool (https://www.wheatscab.psu.edu/ that is also available within the Crop Risk Tool on the Crop Protection Network website (https://connect.doit.wisc.edu/cpn-risk-tool/ . When using the models, use the FHB ratings in the hard red spring wheat selection guide (https://www.ndsu.edu/agriculture/sites/default/files/2025-11/as574_25_0.pdf) and the durum selection guide (https://www.ndsu.edu/agriculture/sites/default/files/2025-11/a1067_25.pdf) to determine susceptibility of a variety. Very susceptible varieties have FHB ratings of 7 or higher, susceptible varieties are rated a 6, moderately susceptible varieties are rated a 5, and moderately resistant varieties are 4 and lower. As of June 23, FHB risk is low for moderately susceptible (Figure 1) and moderately resistant varieties in ND. For susceptible varieties, the greatest FHB risk currently exists in a pocket in NW and NE ND (Figure 2). With recent widespread rain events, future rain events, and a general increase in relative humidity, I am expecting scab risk in the next 7 to 10 days to likely increase for several areas of the state. As we all know, weather can change quickly, so continue to monitor your local weather conditions and use the models to help guide fungicide decisions.

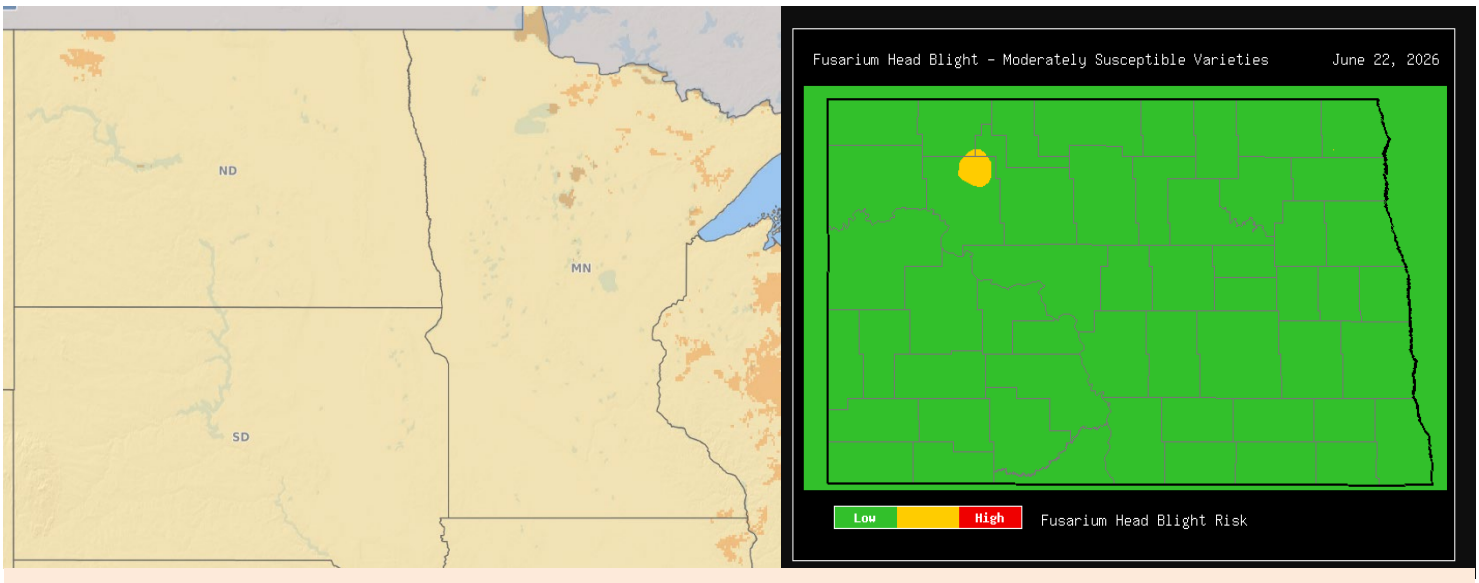

Figure 1. Fusarium head blight risk for moderately susceptible varieties using the USWBSI Fusarium Risk tool (left) and NDSU Small Grain Disease Tool (right).

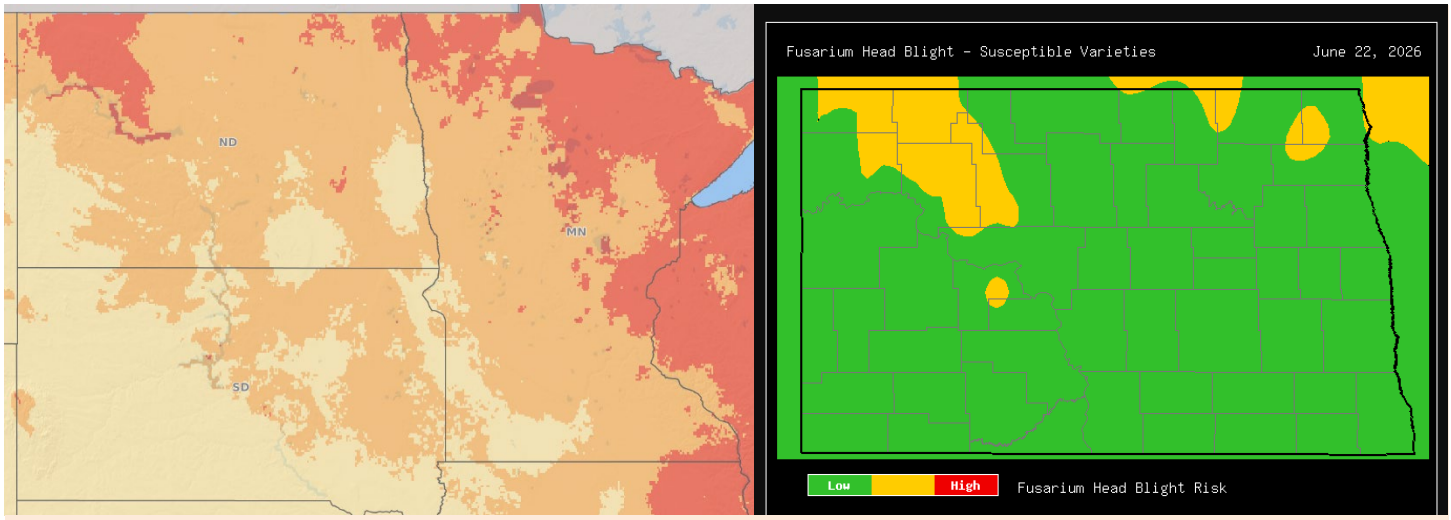

Figure 2. Fusarium head blight risk for susceptible varieties using the USWBSI Fusarium Risk tool (left) and NDSU Small Grain Disease Tool (right).

Fungicide Efficacy and Timing

There are several components that go into a fungicide decision for FHB. The first question often asked is the yield potential and general FHB risk with the variety planted in a field. Use previous experience and conversations with agricultural professionals (Extension agents, crop consultants, agronomists, neighbors, etc.) to help determine the best course of action. If you decide to apply a fungicide, fungicide selection is very important. There are 'Good' fungicides and one "Fair" fungicide for scab management. Good fungicides will provide 45-60% suppression and include Miravis Ace, Proline, Prosaro, Prosaro Pro, and Sphaerex. Tebuconazole is a fair fungicide and will provide about 20% suppression. The third question revolves around fungicide timing. Our best time to apply a fungicide for FHB in spring wheat and durum begins at early-flowering and extends for 7 days (Figure 3). In barley, the best window of opportunity begins at complete full-head emergence and extends for 7 days (Figure 4).

Figure 3. Growth stages of hard red spring wheat: Half to ¾ head on far left and 5 to 7 days after early-flowering on far right.

Figure 4. Growth stages of barley: Awns poking on far left and 5 to 7 days after complete full-head emergence on far right.

Collaborative Fungicide Research for FHB

Collaborators from NDSU main campus and the Research Extension Centers conduct fungicide research on FHB across eight locations in North Dakota. This work is funded by the USWBSI, and the data is used to support FHB fungicide recommendations for small grains in North Dakota (and beyond). Figures 5-7 provide the latest summaries of these research efforts in North Dakota. In the past four growing seasons, emphasis was placed on testing fungicides either singularly or sequentially (spraying twice). Give the data a look and reach out when you have questions!

2022-2025 Fusarium Head Blight Fungicide Trials
Hard Red Spring Wheat

Treatment	Timing	Rate (oz/A)	FHB Index	DON (ppm)	Yield (bu/A)	Test Weight (lbs/bu)
Nontreated Control	-	-	10.7 a	3.7 a	67 c	55 c
Prosaro®	Fks 10.51	6.5 oz/A	3.3 b	2.0 b	74 b	57 c
Prosaro Pro®	Fks 10.51	10.3 oz/A	2.2 bc	1.8 bc	75 b	58 b
Sphaerex®	Fks 10.51	7.3 oz/A	1.8 bc	1.7 bc	74 b	57 c
Sphaerex®	3 to 7 days after Fks 10.51	7.3 oz/A	2.3 bc	1.3 cd	81 a	58 ab
Miravis Ace®	Fks 10.51	13.7 oz/A	1.4 bc	1.7 bc	79 a	58 ab
Miravis Ace® fb Sphaerex®	Fks 10.51 fb 3-7 days later	13.7 oz/A fb 7.3 oz/A	0.6 c	0.8 de	81 a	59 a
Miravis Ace® fb Prosaro Pro®	Fks 10.51 fb 3-7 days later	13.7 oz/A fb 10.3 oz/A	0.9 c	0.6 e	80 a	58 ab
Miravis Ace® fb tebuconazole	Fks 10.51 fb 3-7 days later	13.7 oz/A fb 4 oz/A	1.2 c	1.5 bc	81 a	58 ab

NDSU EXTENSION NDSU NORTH DAKOTA AGRICULTURAL EXPERIMENT STATION

Combined across 9 experiments with moderate to high FHB

Figure 5. Summarized data from field research evaluating fungicides and fungicide timing on FHB in hard red spring wheat. Treatments include both single application and sequential application (spraying twice; fb = followed by) of different fungicides.

2022-2025 Fusarium Head Blight Fungicide Trials
Durum

Treatment	Timing	Rate (oz/A)	FHB Index	DON (ppm)	Yield (bu/A)	Test Weight (lbs/bu)
Nontreated Control	-	-	8.8 a	13.4 a	62 d	54 d
Prosaro®	Fks 10.51	6.5 oz/A	3.0 bc	11.4 ab	78 bc	56 c
Prosaro Pro®	Fks 10.51	10.3 oz/A	2.8 bc	10.2 b	77 bc	56 c
Sphaerex®	Fks 10.51	7.3 oz/A	3.0 bc	10.1 bc	78 bc	56 c
Sphaerex®	3 to 7 days after Fks 10.51	7.3 oz/A	4.2 b	9.5 bc	74 c	56 c
Miravis Ace®	Fks 10.51	13.7 oz/A	2.7 bc	8.1 cd	81 ab	57 bc
Miravis Ace® fb Sphaerex®	Fks 10.51 fb 3-7 days later	13.7 oz/A fb 7.3 oz/A	2.0 c	6.1 de	84 a	58 a
Miravis Ace® fb Prosaro Pro®	Fks 10.51 fb 3-7 days later	13.7 oz/A fb 10.3 oz/A	2.0 c	5.7 e	83 a	58 a
Miravis Ace® fb tebuconazole	Fks 10.51 fb 3-7 days later	13.7 oz/A fb 4 oz/A	2.7 bc	7.0 de	80 ab	57 bc

NDSU EXTENSION NDSU NORTH DAKOTA AGRICULTURAL EXPERIMENT STATION

Combined across 8 experiments with moderate to high FHB

Figure 6. Summarized data from field research evaluating fungicides and fungicide timing on FHB in durum. Treatments include both single application and sequential application (spraying twice; fb = followed by) of different fungicides

2022-2025 Fusarium Head Blight Fungicide Trials
Barley

Treatment	Timing	Rate (oz/A)	FHB Index	DON (ppm)	Yield (bu/A)	Test Weight (lbs/bu)
Nontreated Control	-	-	2.7 a	2.4 a	122	47
Prosaro®	Fks 10.5	6.5 oz/A	1.6 b	1.7 ab	124	47
Prosaro Pro®	Fks 10.5	10.3 oz/A	1.2 cd	1.1 bc	124	47
Sphaerex®	Fks 10.5	7.3 oz/A	1.4 bc	1.0 bc	123	47
Sphaerex®	3 to 7 days after Fks 10.5	7.3 oz/A	1.1 cd	0.8 c	121	47
Miravis Ace®	Fks 10.5	13.7 oz/A	1.0 d	1.1 bc	128	47
Miravis Ace® fb Sphaerex®	Fks 10.5 fb 3-7 days later	13.7 oz/A fb 7.3 oz/A	0.9 d	0.5 c	122	47
Miravis Ace® fb Prosaro Pro®	Fks 10.5 fb 3-7 days later	13.7 oz/A fb 10.3 oz/A	1.0 cd	0.4 c	125	47
Miravis Ace® fb tebuconazole	Fks 10.5 fb 3-7 days later	13.7 oz/A fb 4 oz/A	0.9 d	0.9 bc	124	47

NDSU EXTENSION

NDSU NORTH DAKOTA AGRICULTURAL EXPERIMENT STATION

Combined across 6 experiments with moderate to high FHB

Figure 7. Summarized data from field research evaluating fungicides and fungicide timing on FHB in barley. Treatments include both single application and sequential application (spraying twice; fb = followed by) of different fungicides.

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farm health and wellness

MANAGING RESPONSES TO STRESS IN AGRICULTURE

Managing stress while farming or ranching takes thoughtful effort. One key strategy for dealing with stress involves managing our responses to the stressful experiences that occur in life. Many things cannot be controlled, such as weather patterns, but we can take steps to control how we respond to them. Consider the following strategies that can be helpful in controlling your responses to stressful situations in agriculture.

Controlling Responses to Stress

Stress can be minimized as we focus on how we are feeling and take thoughtful steps to manage how we respond to stressful conditions. Think about how you might control some responses in your farm or ranch work efforts. Some ideas follow:

- Focus on relaxing your body and mind. Whether you are walking, driving or doing another activity, take time to slow down and relax.
- Tune in to your body. Notice any early signs of stress and let them go.
- Take care of your body. Exercise regularly and eat well-balanced meals. Limit your intake of stimulants such as coffee, sodas and tea.
- Avoid smoking cigarettes, using alcohol or other drugs, or using tranquilizers or sleeping pills.
- Take three deep breaths – slowly, easily. Let go of unnecessary stress.
- Take a stress break regularly. Climb down from your tractor and stretch or do a favorite exercise.
- Think positive thoughts: "I can and will succeed."
- Stop to reflect for 10 minutes. Close your eyes and take a short mental vacation to a place you really enjoy. See the sights; hear the sounds; smell the smells. Enjoy. Then go back to work feeling refreshed.
- Look for the humor in things that you do.
- Find someone with whom you can talk about your worries and frustrations.
- Seek help when you need it. There are times when all of us can benefit from professional help or support.
- Unwind before bedtime. Do stretching exercises, listen to soothing music, and be thankful for any blessings received today.

Access Helpful Resources

To learn more about available resources to assist in managing stress in agriculture, read the NDSU Extension publication FS284, "Stress Management for Farmers and Ranchers" – link: FS284 Stress Management for Farmers and Ranchers

If you or someone you know is in need of mental health support, call or text the **9-8-8 Suicide and Crisis Lifeline**, or chat at https://988lifeline.org.

Contact your NDSU Extension county office or search the Web for ***NDSU Extension farm stress*** for more resources on wellness in agriculture.

This logo from NDSU Extension reminds each of us to "check the signal" and think about how we are functioning mentally and physically. And—let's talk about it!

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forestry

EMERALD ASH BORER AND JAPANESE BEETLE TRAPPING AND MONITORING UPDATE

Annually, the North Dakota Department of Agriculture (NDDA) places and monitors traps for emerald ash borer (EAB) and Japanese beetle (JB), two non-native species that have found their way into North Dakota in recent years – JB in 2013 and EAB in 2024. JB now has small pockets of established populations within Grand Forks, Fargo, and Bismarck/Mandan, while EAB is only found in LaMoure and Cass counties.

Across the state, approximately 250 EAB traps and 600 JB traps have been placed to help monitor these insects. Based on degree day maps, both insects are or will emerge in the coming days. Traps for EAB will be removed sometime in August, while JB remains until October.

Emerald ash borer trap.

Japanese beetle trap.

For more information about these pests or other plant pest surveys conducted by NDDA, you can visit the NDDA website links noted here: https://www.ndda.nd.gov/eab or https://www.ndda.nd.gov/divisions/plant-industries/pest-survey.

Charles Elhard
Plant Protection Officer
North Dakota Department of Agriculture

around the state

AROUND THE STATE

NORTHEAST ND

Precipitation across the NE region ranged from 0.51 to 1.26 inches over the past seven days. While some of the drier areas welcomed the moisture, much of the region did not need additional rainfall. Standing water is evident in low-lying areas and headlands in several fields.

Small grains range from the tillering stage to early boot, with most fields' rows closed and looking excellent. Cereal aphids are showing up in Barley in low numbers. Canola is primarily in the rosette stage, with some fields beginning to bolt. Flea beetle pressure has largely subsided. Cool temperatures and abundant moisture continue to favor small grain and canola development.

Soybeans, however, continue to struggle. Growth has been slow, particularly in fields with heavy residue from previous crops such as corn and canola. Widespread iron deficiency chlorosis (IDC) symptoms are present, and many soybean fields remain small and vulnerable. Dry beans are also at an early growth stage, with many plants only around 3 inches tall, leaving both dry beans and soybeans susceptible to wind damage.

Corn and sunflowers are generally at the 2- to 4-leaf stage and could benefit from warmer temperatures and increased sunshine. Field peas are progressing well, ranging from 3 to 4 nodes to flowering, with many fields now blooming and looking very good.

Producers took advantage of a few calm, dry days to complete post-emergence herbicide applications before the recent rains. However, many acres remain behind on herbicide spraying. First-cut alfalfa harvest is underway in some areas, with yields and quality reported as good.

Standing water in a field near Grafton
Photo: Bailey Schroeder, ANR Extension Agent, Walsh County

Corn at 3 leaf stage with thick mats of Lambsquarters seedlings
Photo: Anitha Chirumamilla, LREC

Farmer spraying herbicide
Photo: Anitha Chirumamilla, LREC

Soybean field with IDC in Cavalier County
Photos: Anitha Chirumamilla, LREC

Sunflowers at V4 stage in Cavalier County
Photo: Anitha Chirumamilla, LREC

Canola at rosette stage
Photo: Anitha Chirumamilla, LREC

Anitha Chirumamilla
Extension Cropping Systems Specialist
Langdon Research Extension Center

SOUTH-CENTRAL/SOUTHEAST ND

The biggest story for the week is that it was colder than last week. Crop growth of small crops are at a standstill while the more advanced crops and cool season crops continue to progress. The average daily high temperature for June 16 through June 22, 2026 at 47 NDAWN stations across the region ranged from 68 degrees Fahrenheit (F) at Streeter to 75 degrees F at Leonard with an average of 71.7 degrees, 3.1 degrees F below last week and still below normal for this past week. Based upon historical records for Cooperstown, the average daily high temperature for last week was 5.3 degrees below the normal. The average daily low temperature for the past week at 47 NDAWN stations across the region ranged from 46 degrees F at Brampton and Pickardville to 52 degrees F at Hurdsfield, Wirch, and Ypsilanti, a whopping 11.3 degrees F below last week. Based upon Cooperstown historical records, the daily average low air temperature for the week was 4 degrees F below the normal weekly average daily low air temperature for last week.

Thankfully the wind speeds decreased this past week drastically, allowing for more herbicide applications to be made. The range in wind speeds last week at the 47 NDAWN stations ranged from 4.6 mile per hour (mph) at Oakes to 9.3 mph at Wing with an average of 6.5 mph, a

reduction of 4 mph from last week. The number of rain events during the week also declined, and less rain was received across the region last week, allowing for more spraying to be completed. The range in rainfall events for the week ranged from 2 to 5 (Skogmo) days, with an average of 3.2 days this week, 0.4 days less than last week. The range in rainfall the past week was 0.08 inch at Cooperstown and Courtney to 1.1 inches at Skogmo with an average of 0.38 inch, 0.16 inch below last week.

The “Twisted Whorl Syndrome” is still present in corn as seen in Figure 1. However, much of it has moved on to the “Yellow Flash” stage, as seen in Figure 2 in a wide area of the field, to individual plants in Figure 3. The “Twisted Whorl Syndrome” appears mostly at the V5 (5 visible collars) to V6 growth stage, with the “Yellow Flash stage showing up at the V7 to V8 or greater stage, depending upon temperatures. With the cold temperatures last week, the “Twisted Whorl Syndrome” stage is sticking around longer than normal.

Figure 1: “Twisted Whorl Syndrome” stage in Griggs County on 6-23-26

Figure 2: The “Yellow Flash” stage of the “Twisted Whorl Syndrome” in Griggs County on 6-23-26

Figure 3: A close up of the “Yellow Flash” stage in Griggs County on 6-23-25

Corn growing degree days (GDD's) slowed down some more this past week, as seen in Table 1.

The last row shows the change in departure from the 5-year average compared to last week's GDD's. At least based upon these 7 NDAWN Stations, Denhoff saw the greatest loss in GDD's last week. Thankfully, we are still ahead of last year's GDD's at the moment. Mooreton has accumulated the greatest number of GDD's at 643, but had the greatest loss in GDD's last week as seen in the last row of the table. Denhoff has accumulated the fewest GDD's so far this season at 495 and lost the fewest days compared to last week.

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 6-22, 2026	495	537	537	533	574	609	643
Departure from last week	+ 70	+ 80	+ 73	+ 75	+ 82	+ 85	+ 86
Departure from normal	- 8	+ 28	+ 67	+ 49	+ 78	+ 113	+ 102
Departure from 2025	+ 112	+ 185	+ 93	+ 88	+ 114	+ 124	+ 145
Departure from the 5-year average	- 11	- 15	+ 7	- 9	- 9	+ 21	+ 24
Departure this past week in the 5-year average	- 37	- 40	- 44	- 43	- 46	- 45	- 52

Some fields of soybean were just planted this past week in some areas.

Iron Deficiency Chlorosis (IDC) is prevalent in most soybean fields now and slowing soybean growth along with the cold weather. IDC is at the top of the list of being one of worst years as best I can tell, and the plants will continue to suffer with these cold temperatures.

Corn in the southern tier of counties and the western tier of counties in the region has some pretty nice corn stands and is fairly green. Most corn in the region has a deeper dark green than last week due to the greater amount of sunshine last week, and the corn overall across the region is looking pretty good, but there are fields, as seen in Figure 4 from Griggs County, where corn development within a field is highly variable due to seedbed conditions at planting and soil salinity levels. Nutrient deficiencies are quite common in the region, particularly sulfur deficiencies this season. Corn in the region is from V1 (1 visible collar) to up to V9 in Griggs County, as seen in Figure 5. Most corn in the region is from V4 to V6.

Figure 4: Non-uniform corn due to wet conditions at planting and high soil salinity levels in Griggs County on 6-23-26.

Figure 5: V9 (9 visible collars) stage corn in Griggs County on 6-23-26

Hard red spring wheat (HRSW) and barley look pretty good across most of the region, however there are pockets within the region where stands and growth stages are highly variable within a field and among fields due to the soil conditions at planting, lack of rainfall after planting and soil salinity/sodicity. HRSW within the region currently ranges from tillering to completely flowered, with most wheat at the early flag leaf emergence, early boot stage. I see no leaf diseases or insect issues at the moment to warrant fungicide and insecticide applications, however watch the Fusarium Head Blight (Scab) model to know the potential for Fusarium Head Blight and know the susceptibility of your wheat varieties to know if a fungicide application is necessary to control Fusarium Head Blight and DON levels. At the moment, the forecast looks like it will be necessary to apply fungicides for the most susceptible wheat varieties, such as WestBread 9590, which is one of the most susceptible HRSW varieties to Fusarium Head Blight.

Soybean is the toughest looking crop at this time in the region for the second year in a row! Small soybeans barely grew this past week. Soybean stands and stages within and among fields are highly variable, but there are some good-looking soybeans as well in the region, but mostly in areas in which soybean was planted into a properly prepared seedbed having and having enough moisture for good germination and emergence followed by timely rainfall. These conditions were not present in all fields across most of the region. Soybeans are still being planted to soybean plants up to the V4 (fourth trifoliate) stage in the region, as seen in Figure 6, with most soybeans at the V2 to V3 growth stage.

Canola in the western part of the region continues looking great having the most uniform stands, however as you move east, the canola stands become more variable with more variable stages within the same field. Much of the canola in this region in the flowering stage is rather short with plants having few branches. The canola growth stage is from late rosette stage to beginning pod fill with most in the late bolting stage to beginning to flower.

Dry bean and sunflower are looking pretty good across the region yet with dry bean being at the unifoliate up to the 2 trifoliate stage.

Sunflowers have been planted and range from not yet emerged to up to the V9 (9 fully expanded leaves) growth stage with most at the V3 to V5 stage.

Figure 6: V4 stage soybean in Griggs County on 6-23-26. A very healthy plant compared to most.

Jeff Stachler
Extension Cropping Systems Specialist

weather

WEATHER FORECAST
The June 25 to July 1, 2026 Weather Summary and Outlook

It was another week with several days of hit-and-miss thunderstorms. Almost everyone recorded some rainfall (Figure 1), yet, typical of North Dakota's climate, the amounts varied greatly. This week will once again be similar, but unlike this past week, we may have to deal with severe weather, especially this weekend.

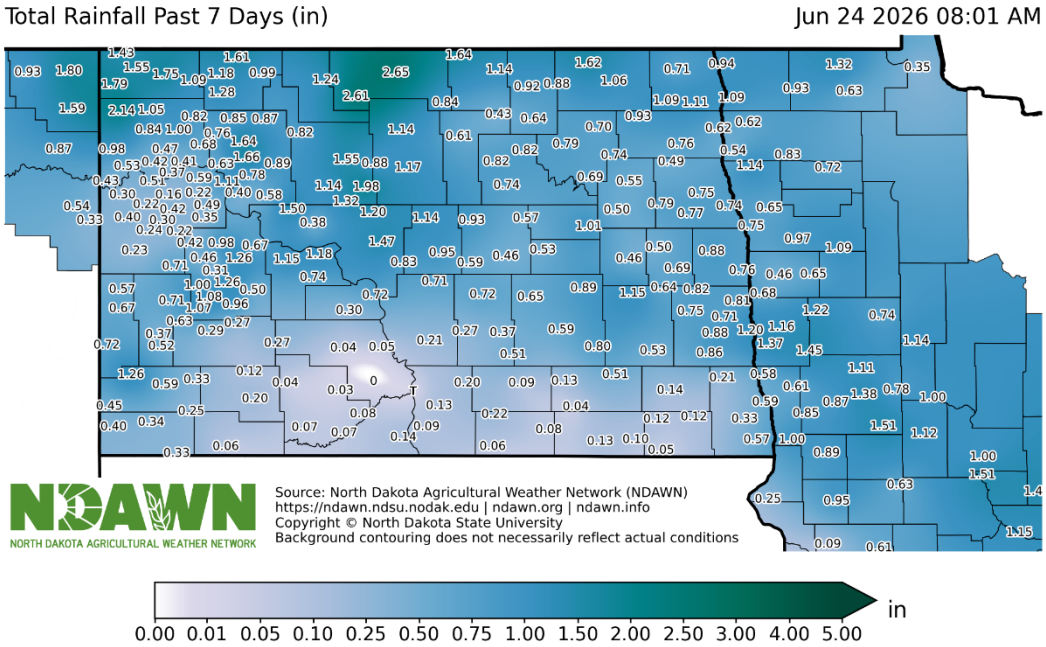

Figure 1. Total Rain at NDAWN stations from June 18 through 8:00 AM on June 24, 2026

There continue to be exceptions each week, but most areas are not recording large amounts of rain with each event. In turn, a high percentage of North Dakota has recorded below average rainfall so far this month (Figure 2). That may change for at least some areas with the severe weather and localized heavier rain possibilities during this forecast period.

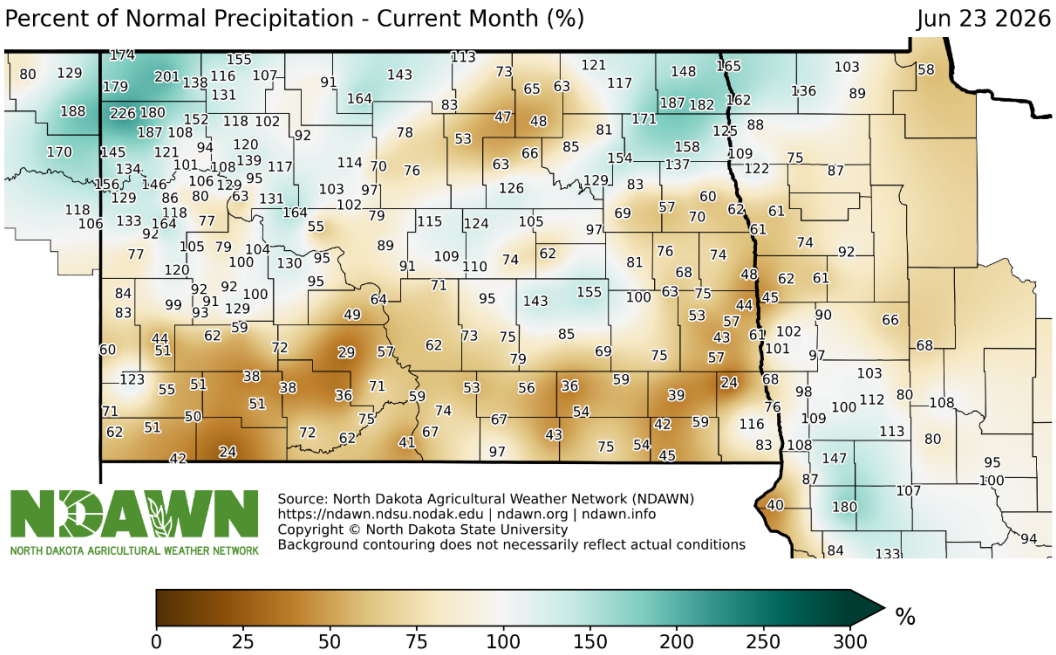

Figure 2. Departure from Average Rainfall from June 1 through June 23, 2026

As expected, it was another week with well below average temperatures. Most NDAWN stations were 4 to 7 degrees below the current 30-year average (Figure 3). These next seven days look to be overall below average in western North Dakota and near average in the east. As we move into early July, current indications are for above-average temperatures around Independence Day.

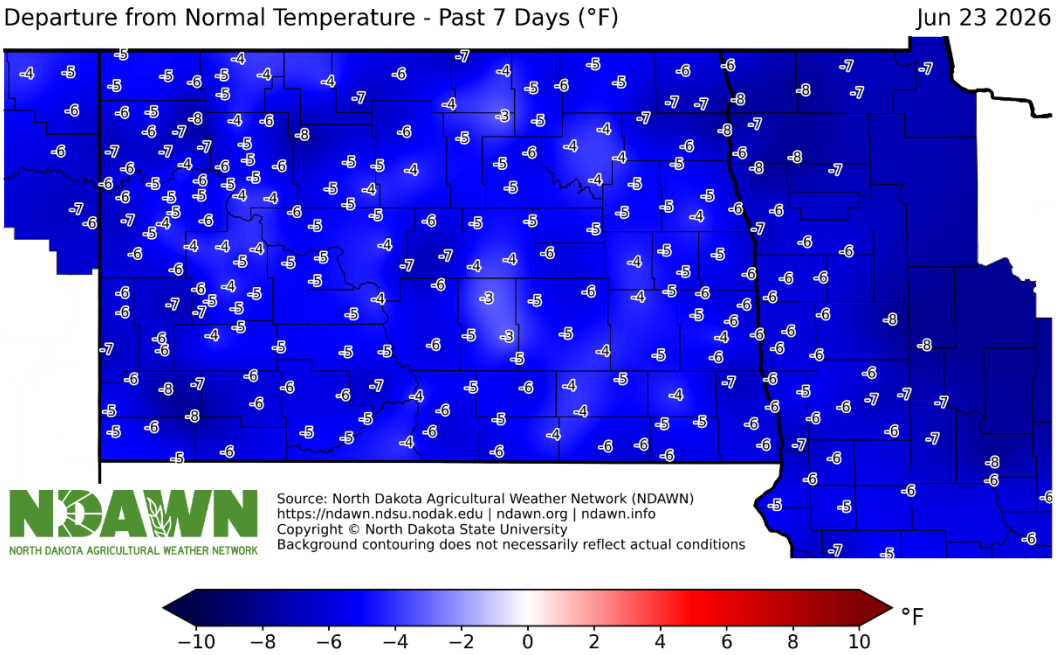

Figure 3. Departure from Average Temperatures for the 7-Day Period Ending June 23, 2026

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. Eastern North Dakota is expected to record 30% to 40% more growing degree days this week from what was recorded this past week.

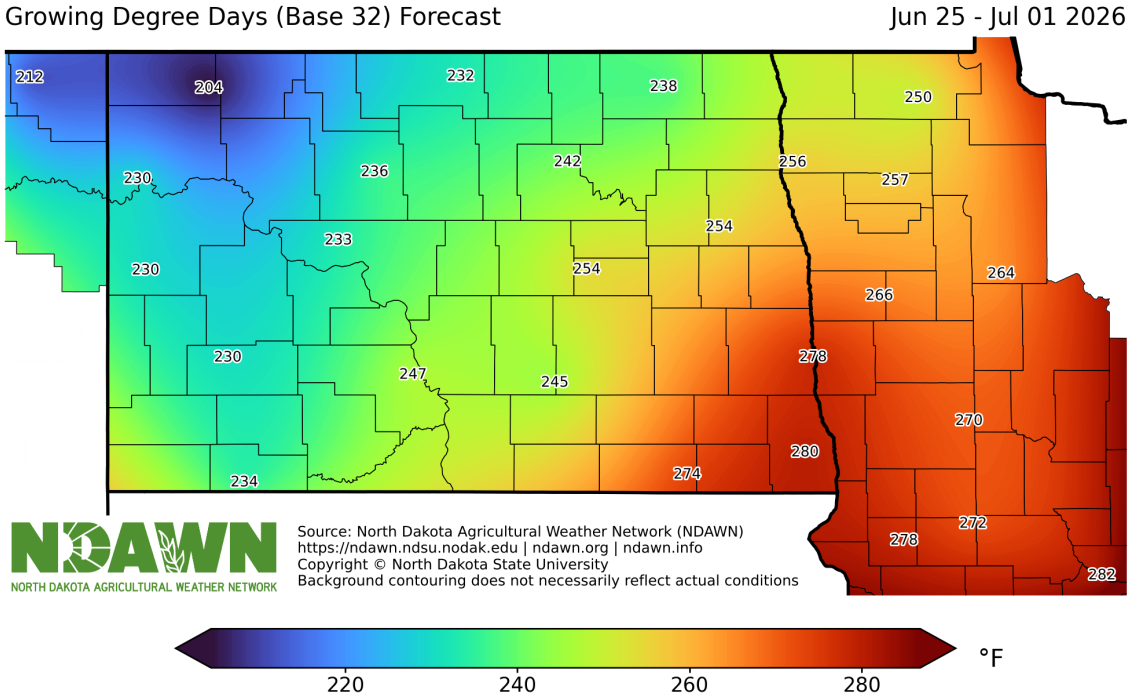

Figure 4. Estimated Growing Degree Days Base 32° for the Period of June 25 to July 1, 2026

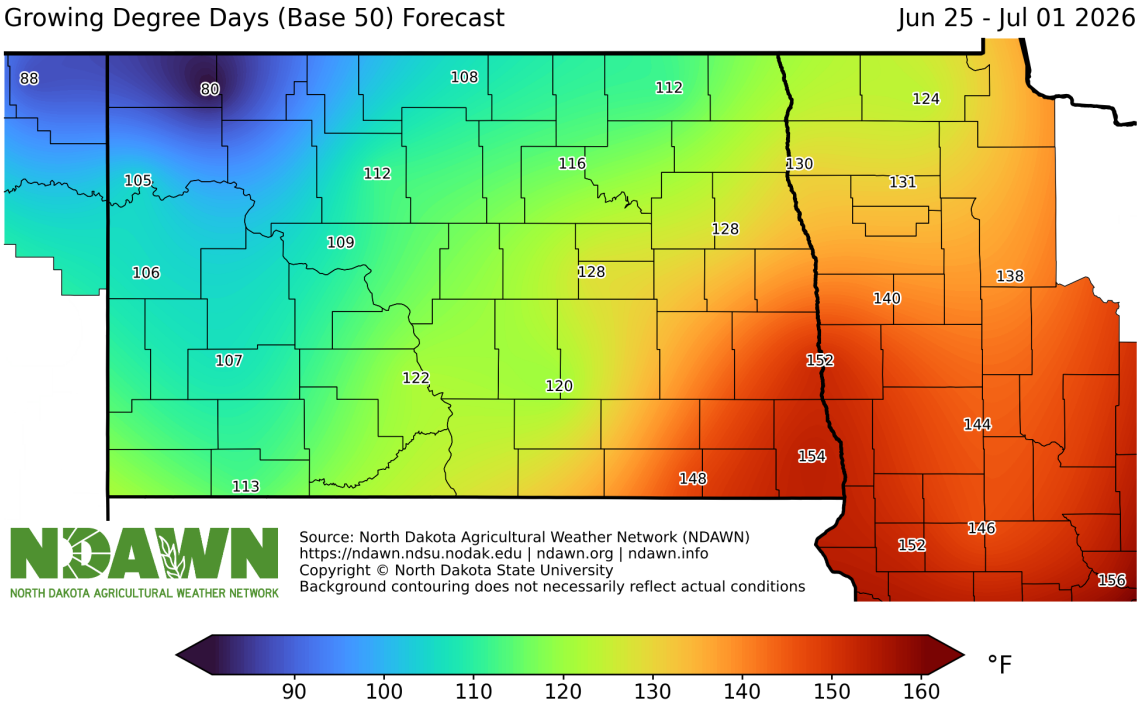

Figure 5. Estimated Growing Degree Days Base 50° for the Period of June 25 to July 1, 2026

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

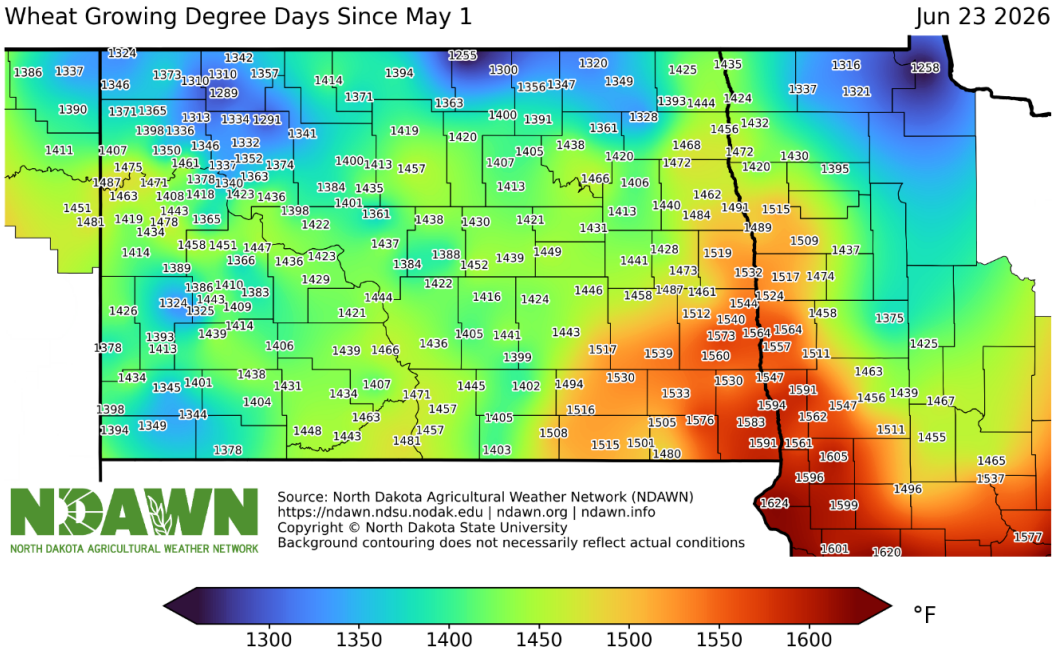

Figure 6. Wheat Growing Degree Days (Base 32°) for the Period of May 1 through June 23, 2026

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.

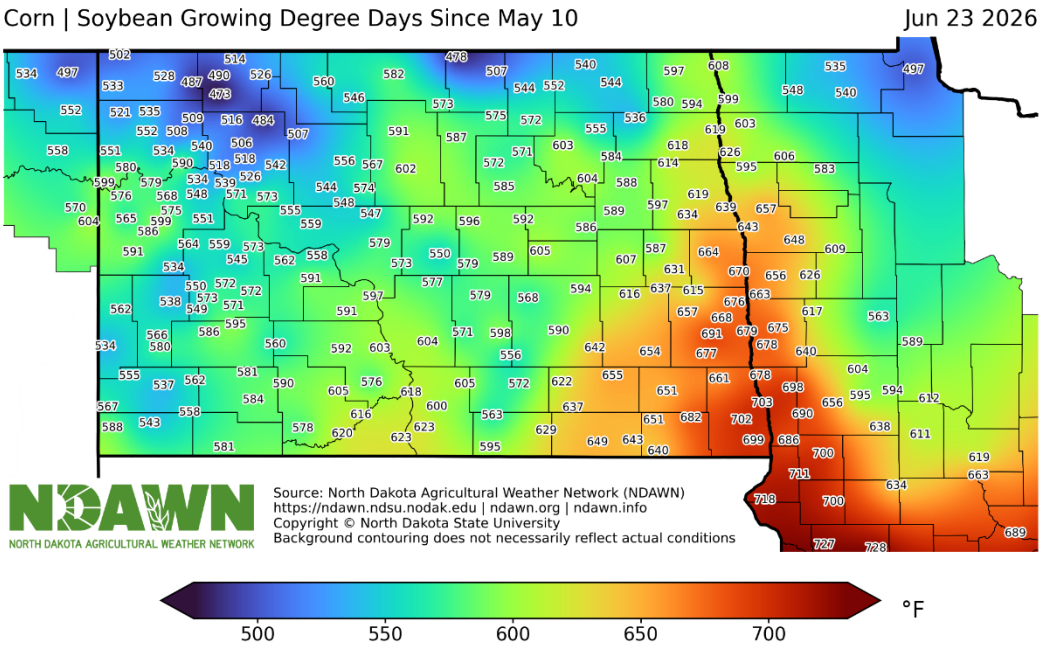

Figure 7. Corn Growing Degree Days (Base 50°) for the Period of May 10 through June 23, 2026

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