







# Wisconsin Ag Weather Outlook

### Week of May 5, 2025

#### Josh Bendorf

Climate Outreach Specialist Wisconsin State Climatology Office jbendorf@wisc.edu

#### Anastasia Kurth

Regional Crops & Soils Educator Sauk, Juneau, and Richland Counties UW-Madison Division of Extension anastasia.kurth@wisc.edu

#### Bridgette Mason

Assistant State Climatologist Wisconsin State Climatology Office bmmason2@wisc.edu

#### Rue Genger

Emerging & Specialty Crops Program Manager UW-Madison Division of Extension <u>rkgenger@wisc.edu</u> Steve Vavrus State Climatologist Wisconsin State Climatology Office sjvavrus@wisc.edu

Emilee Gaulke Diversified Vegetable Educator Waukesha County UW-Madison Division of Extension emilee.gaulke@wisc.edu Dennis Todey Director USDA Midwest Climate Hub dennis.todey@usda.gov

**Derrick Raspor** GLRI Field Coordinator Wisconsin USDA-NRCS derrick.raspor@usda.gov

# **Key Points**

Navigate to select slides by clicking on the <u>links</u> below.

- Precip was concentrated in the <u>south</u> last week, but this region still <u>lags</u> <u>the 30-year normal totals</u> for 2025.
- 2) Corn and soybean planting made <u>big strides</u> last week in part to <u>warmer</u> and <u>drier</u> soils.
- 3) Drought <u>conditions</u> are all but identical to last week.
- A <u>quiet week for precip</u> is predicted, and the warmth looks likely to continue into <u>mid-May</u>.
- For this week's agronomic recommendations from UW Extension, click <u>here</u>.
- For this week's crop progress updates from USDA NASS, click <u>here</u>.

### A Taste of Summer





35 stations in Wisconsin hit a new record high on April 29<sup>th</sup>, with daily highs of 10-15°F or more above normal in the southern half of the state. For some, 20°F or more above normal!

County	Avg. High Temp (April 29)			
Lafayette	85.0			
Green	84.0			
Rock	83.7			
Walworth	83.0			
Waukesha	82.5			
Adams	82.0			
Columbia	82.0			
Marquette	82.0			
Jefferson	81.5			
Sauk	81.3			

Table shows the counties with the highest maximum temperature on April 29<sup>th</sup>, averaged across all measuring stations in the county (Source: ACIS).

https://scacis.rcc-acis.org/

# 7 Day Precip



- **0.5-1.5**" of precip fell across the southern half of the state last week.
- Bullseye of heavier rainfall (2" or more) in the Madison area.
  - Dane County stations saw 2-3 days with ≥0.25" of precip last week.
- Lesser totals in the north, with totals of 0.1" or less in the north-central region.

https://water.noaa.gov/

# 30 Day Precip



- Heaviest precipitation concentrated in the westcentral region → 5-8"
- Totals of **3" or more** stretching from the west-central region to the NE up into the U.P.
- **2-4**" for many in the southcentral, eastern, and NW regions.
- Pockets of <2" along the IL border.</li>

https://water.noaa.gov/

# 30 Day Precip Total/% Avg.

Accumulated Precipitation (in): Percent of 1991-2020 Normals

April 06, 2025 to May 05, 2025



Eau Clain Green Ba Madison Milwauk (c) Midwestern Regional Climate Center 25 125 150 10 50 75 100 175

- Above climatological normal in a WC-to-NE belt → 3-5" common in this belt.
- Stations within the SC and SE regions were consistently 50% or less of the 30-year normal.
  - <2" over 30 days along the IL border.
- NW is also trending below normal.

# 90 Day Precip Total/% Avg.

Accumulated Precipitation (in): Percent of 1991-2020 Normals

February 05, 2025 to May 05, 2025



(c) Midwestern Regional Climate Center

25

50

75

100

125

150

175

- >7.5" common across most of WI, with totals highest in the WC-to-NE belt → >10" common
  - 125-175% the 30-year normal at many stations in the WCto-NE belt.
- Above the 30-year normal is common across most of the state expect for near the IL border and the far NW.

# 2025 Precipitation (so far)

January 01, 2025 to May 05, 2025 Eau Claire Green Bay Madison Milwaukee (c) Midwestern Regional Climate Center 1 5 7.5 10 12.5 15 0.01 0.1 0.5 1.5 2 3 4

Accumulated Precipitation (in)

Accumulated Precipitation (in): Departure from 1991-2020 Normals

January 01, 2025 to May 05, 2025



https://mrcc.purdue. edu/CLIMATE/

# Soil Moisture Models

- Similar to last week, there is 70<sup>th</sup> percentile or higher coverage in the central and NE counties. This area has expanded slightly to the west and south due to last week's rains.
- Abnormal dryness is still in place over the far south and SE but has diminished in coverage area from last week.
- Majority of the state is **near or above normal** for soil moisture.

#### Model Notes:

Red areas = top 5 driest in 100 years. Dark red areas = top 2 driest in 100 years. Blue areas = top 2 wettest in 100 years.

It's worth noting that each soil moisture model has their own characteristics and input variables, so there tends to be variation between models. Thus, it's worthwhile to look at multiple models opposed to just one.

https://weather.msfc.nasa.gov/sport/case\_studies/lis\_CONUS.html https://www.drought.gov/states/wisconsin









### Soil Moisture Models



### Wisconet Soil Moisture

Maps showing soil moisture conditions on May 6<sup>th</sup> @ Midday. Units of map values are {Volume of water}/{Volume of soil}.



https://wisconet.wisc.edu/

### Wisconet Soil Moisture

Change in soil moisture from April 29<sup>th</sup> to May 6<sup>th</sup>. Units of change values are {Volume of water}/{Volume of soil}.

Research Farm	County	4" Change	8" Change	20" Change
Arlington	Columbia	0.02	0.02	0.01
Dairy Forage ARS	Sauk	-0.01	-0.01	0.00
Hancock	Waushara	-0.04	-0.01	0.00
Kemp	Oneida	-0.05	-0.05	-0.02
Lancaster	Grant	0.01	0.01	0.00
Marshfield	Marathon	-0.02	0.00	0.01
O.J. Noer (Turfgrass)	Dane	0.05	0.02	0.01
Peninsular	Door	-0.02	-0.02	0.01
Rhinelander	Oneida	-0.05	-0.04	-0.04
Spooner	Washburn	{No Data}	-0.03	0.00
Black River Falls	Jackson	-0.06	-0.06	-0.12

### Adequate Soil Moisture



- 66% of agricultural soils in the state with adequate topsoil and subsoil moisture.
- **27%** of fields in the state are reported as having **surplus** topsoil moisture, **up 3%** from last week.

https://agindrought.unl.edu/Other.aspx

### Wisconet Soil Temperature

Maps showing soil temperature conditions on May 6<sup>th</sup> @ Midday



# **US Drought Monitor**

### U.S. Drought Monitor Midwest



May 6, 2025 (Released Thursday, May. 8, 2025) Valid 8 a.m. EDT

Drought Conditions (Percent Area)					ea)	
	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	67.29	32.71	<u>6. 10</u>	0. 11	0.00	0.00
Last Week 04-29-2025	69.25	30.75	<u>6</u> . 19	0. 11	0.00	0.00
3 Month s Ago 02-04-2025	41.23	58.77	31.62	2.46	0.00	0.00
Start of Calendar Year 01-07-2025	44.12	55.88	29.47	3.56	0.00	0.00
Start of Water Year 10-01-2024	21.78	78.22	28.15	6.40	1.46	0.66
One Year Ago 05-07-2024	74.02	25.98	9.97	2.59	0.00	0.00

Intensity:



The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to https://droughtmonitor.unl.edu/About.aspx

<u>Author:</u> Brad Pugh

CPC/NOAA



droughtmonitor.unl.edu

- Compared to last week:
  - Very minor changes
- No change in drought coverage in WI from last week. D1 persists in the far SW.
- 0.1% of the Midwest remains in D2 drought.
  - D2 only remains in east-central MI.
- **94%** of the Midwest is drought free (6% in D1 or D2).

<u>Note</u>: D0 is not considered drought.

http://droughtmonitor.unl.edu/

# **US Drought Monitor**

### U.S. Drought Monitor Wisconsin



May 6, 2025 (Released Thursday, May. 8, 2025) Valid 8 a.m. EDT

Drought Conditions (Percent Area)					ea)	
	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	67.75	32.25	2.41	0.00	0.00	0.00
Last Week 04-29-2025	67.79	32.21	2.41	0.00	0.00	0.00
3 Month s Ago 02-04-2025	15.27	84.73	43.00	0.00	0.00	0.00
Start of Calend ar Year 01-07-2025	36.12	63.88	39.54	0.00	0.00	0.00
Start of Water Year 10-01-2024	18.68	81.32	29.83	8.45	0.00	0.00
One Year Ago 05-07-2024	71.94	28.06	7.93	2.52	0.00	0.00





D2 Severe Drought
D3 Extreme Drought
D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to https://droughtmonitor.unl.edu/About.aspx

<u>Author:</u> Brad Pugh CPC/NOAA



droughtmonitor.unl.edu

### Amount of state in:

- D1-D4 2.4% --
- D2-D4 0.0% --

<u>Note</u>:  $\uparrow \downarrow$  indicate change from last week. Red up arrows indicate increase in drought area; vice-versa for green arrows.



### **USDM** Time Series



http://droughtmonitor.unl.edu/

# Wildfire Risk



A fire danger of **LOW** means wildfires do not easily ignite and will spread slowly.

A fire danger of **MODERATE** means wildfires can ignite and will spread but are relatively easy to contain.

A fire danger of HIGH means wildfires ignite easily, spread rapidly, and can be challenging to control.

A fire danger of VERY HIGH means wildfires start easily, spread rapidly with increased intensity and are difficult to control.

Map updated on 5/8/25

### 7 Day Temperatures





- Average temp. range of 50-55°F in the south to 40-45°F in the far north. Highs hit 80+ in the south last week.
- Within -/+1°F of normal across most of the state.
  - More above normal in the NW and cooler-than-normal along Lake Michigan.

### 30 Day Temperatures





- Average temperatures for the past month ranged from 45-50°F in the S & W to 35-40°F in the far NC.
  - Within -/+1°F of normal across the state compared to climatological (1991-2020) average.
  - Temps more above the climatological average in the NW

### Corn & Soybean Progress



- Corn and soybean planting made >10% jumps in progress from last week.
- Wisconsin is lagging behind neighboring states in planting progress.

https://agindrought.unl.edu/Other.aspx

# **Crop Progress Report**

### Crop progress report for Wisconsin for the week ending on May 5<sup>th</sup>

- Corn planting is 16% complete, up 12% from last week.
- Soybean planting is 17% complete, up 11% from last week.
- Winter wheat is rated 63% good to excellent.
- Pasture and range conditions are rated 47% good to excellent (up 10% from last week).
- Oats are 10% emerged and 36% planted.
- Potato planting is 55% complete, which is very near the average pace for planting.

In the news: https://www.brownfieldagnews.com/news/wisconsin-soil-moisture-levels-vary-as-some-planters-get-rolling/

### Frost/Freeze Risk

### Night of 5/8-9 (Inc. wind)



https://www.weather.gov/mkx/FrostFreezeProbs

After May 6 – Prob. Of Daily Low  $\leq$  32°F



https://mrcc.purdue.edu/gismaps/freeze\_probabilities\_2020

# 7 Day Precip Forecast

7-Day Quantitative Precipitation Forecast for May 8-15, 2025



Drought.gov

Source(s): National Weather Service Weather Prediction Center Last Updated: 05/08/25

- A fairly quiet week for precip is on tap.
  - Highest chances for precip in the NW and WC. Lesser to the east.
  - Predicted totals of 0.25" or less except for the far NW.
  - <u>Timing</u>: Friday and again on next week
     Thursday. <u>Check your local forecast</u> for details on totals and timing.

Forecast for 5/8/25 thru 5/15/25 (Begins at 7am CDT)

https://www.wpc.ncep.noaa.gov/qpf/p168i.gif https://www.drought.gov/states/wisconsin

# 8-14 Day Temp & Precip Outlook



Middle of May: Temperatures and precipitation leaning towards above normal.

# 30 Day Temp & Precip Outlook



Month of May: Temperatures leaning towards being <u>above normal</u>, with a lean towards <u>below-normal</u> precip.

# 90 Day Temp & Precip Outlook



Late Spring into Summer: Chances slightly lean toward <u>above normal</u> temperatures for S & E WI, with <u>uncertainty (equal chances</u>) for both temperature (outside of the S & E) and precipitation (statewide).

# Take-Home Points

### **Current Conditions**

- Most in the state received less than an inch of precip last week, with localized areas of 2+" in Dane County. Lesser totals in the north where it has been wetter in past weeks.
- Temperatures were seasonal, near to average across the state. Highs topped 80°F for many in the south on April 29<sup>th</sup>.

### Impact

- Soil moisture conditions that are **wetter-than-average** are **common across the north/central** but continue to remain dry in the southeast. However, more of the south is now in **near-normal conditions.** 
  - >97% of the state is drought-free, with the remining D1 coverage in the far SW.
- Corn and soybean planting made big gains from last week (16% & 17% complete, respectively; Source: NASS).
- Wisconet soil temperature readings at 4" are at or above 50°F across the entire state.

### Outlook

- Frost/freeze risk is **still existent** across the state, but the **risk is slim** outside of the north & central. Check this <u>link</u> for day-today freeze chances from NWS Milwaukee.
- Things look fairly quiet for precip this week, with the best chances for precip in the NW and WC.
- Mid-May is showing a lean towards warmer- and wetter-than-normal.
  - Probabilities for May are showing a lean towards warmer and drier.

# **Agronomic Considerations**

### **Field Work and Conditions**

- Soil temperatures and conditions are favorable for planting in the southern part of the state. Northern areas still have a frost risk this week.
- Avoid trafficking fields in moist conditions to prevent compaction and rutting.
- Consider preplant nitrate tests to assess nitrate levels before fertilizing.
- Avoid fertilizer applications in wet and cool conditions. Nitrogen loss is greater in wet conditions.
- In drier regions of the state, consider earlier termination of cover crops to retain soil moisture if conditions remain dry. If conditions are wet, consider delaying termination to manage excess soil moisture.

### **Manure Applications**

• Reminder of <u>Wisconsin's NR 151 Runoff Rules</u> with the timing of manure spreading and current runoff levels. Check <u>DATCP Runoff Risk</u> <u>Advisory Forecast.</u>

#### **Pest Management**

- Start scouting fields by foot to note any early emerging weeds.
- Ensure temperatures (day, night, and soil) are conducive for herbicide applications. Pre-emergent herbicides require moisture for activation.
- Be observant of black cutworm and true armyworm moths migrating to the state. Check trap catches in your region with the <u>DATCP Pest</u> <u>Survey</u>.

### **Forage Management**

- Southern to central regions of the state have reached 300 GDD for alfalfa which is the time to begin scouting for alfalfa weevil.
- Alfalfa stands in southern WI are rapidly growing. Watch for lodging if plants reach tall heights before first harvest. <u>See first harvest</u> <u>considerations here</u>.

### **Small Grains**

- Revisit small grain fertility needs.
- Reminder to properly stage small grains such as winter wheat, as many herbicides cannot be applied after Feekes 5.

More on the following slide  $\downarrow$ 

# Agronomic Considerations

### **Specialty Crops**

### Vegetables

- Adult seed corn maggot flies, which affect a range of vegetable crops, have emerged in southern Wisconsin. These pests overwinter in Wisconsin as pupae in the soil. When the flies emerge, they are attracted to fields with high organic matter. If possible, terminate and incorporate cover crops 2-3 weeks before planting to reduce the attractiveness of these fields as egg laying sites. Delaying direct seeding until soil is warmer will reduce the risk of seedling damage. Also be aware of similar risks from cabbage and onion maggot flies, which emerge later in the season.
- Common <u>asparagus beetle</u> populations will reach damaging levels in southern Wisconsin in the next 1-2 weeks. Scouting should occur in the afternoon when these beetles are most active
- Start scouting for black cutworm migrating to the state with weather fronts. Check trap catches in your region with the DATCP pest survey.
- Reference the <u>Vegetable Disease and Insect Forecasting Network</u> (VDIFN) to know what diseases and insects to be scouting for in your area.

### Fruit

- Apple growers can reference the NEWA weather station network to monitor disease infection events. Make sure to keep track of green tip and petal fall dates. Check out your nearest weather station: <u>NEWA Weather Station Network (Cornell)</u>.
- Wisconsin fruit growers can reference the Midwest Fruit Pest Management Guide for a list of registered products and recommended best practices. View the <u>MFPMG Online</u> or order a hard copy here: <u>MFPMG Hard Copy</u>.
- Reminder: Do not use insecticides or miticides during bloom to protect pollinators.
- Growers may consider visually scouting for mites and <u>aphids</u>. Use a hand lens to ID mites and check the undersides of leaves for aphids. Watch for curled, wrinkled, bronzed or stunted leaves.
- Growers may consider visually scouting for lepidopteran larvae feeding on young leaf material and/or hanging pheromone monitoring traps.
- Growers with historic populations of plum curculio or tarnished plant bug may consider monitoring orchard perimeters and/or hanging monitoring traps.

# User Survey

Are you a regular user of the Wisconsin Ag Weather Outlook (WAWO)? Or maybe you are viewing these slides for the first time this week? Either way, we want to hear **your** feedback on this new resource! Please take a few minutes and fill out this survey:

### **LINK TO SURVEY**

Your feedback will help us better serve your ag-climate data needs through WAWO.

If you have any trouble accessing or filling out the survey, please email Josh Bendorf at <u>jbendorf@wisc.edu</u>.

Thank you!! -The WAWO Team

### **Citizen Science Opportunity**

# CoCoRaHS – <u>Co</u>mmunity <u>Co</u>llaborative <u>Ra</u>in, <u>H</u>ail, & <u>S</u>now Network

### The Mission

(From cocorahs.org)

- Provide accurate high-quality precipitation data for endusers;
- Increasing the density of precipitation data available throughout the country;
- Encouraging citizens to have fun participating in meteorological science and heightening their awareness about weather;
- Providing weather education opportunities.



Sign Up Here: https://cocorahs.org/Content.aspx?page=application

### Contact Info



#### Josh Bendorf Climate Outreach Specialist Wisconsin State Climatology Office jbendorf@wisc.edu

#### **Anastasia Kurth**

Regional Crops & Soils Educator Sauk, Juneau, and Richland Counties UW-Madison Division of Extension anastasia.kurth@wisc.edu **Bridgette Mason** Assistant State Climatologist Wisconsin State Climatology Office <u>bmmason2@wisc.edu</u>

Rue Genger Emerging & Specialty Crops Program Manager UW-Madison Division of Extension rkgenger@wisc.edu Steve Vavrus State Climatologist Wisconsin State Climatology Office sjvavrus@wisc.edu

Emilee Gaulke Diversified Vegetable Educator Waukesha County UW-Madison Division of Extension emilee.gaulke@wisc.edu

#### Dennis Todey Director USDA Midwest Climate Hub dennis.todey@usda.gov

Derrick Raspor GLRI Field Coordinator Wisconsin USDA-NRCS derrick.raspor@usda.gov