







AgWOW

Ag Weather Outlook for Wisconsin

Week of September 9, 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

Emilee Gaulke

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

Steve Vavrus

State Climatologist
Wisconsin State Climatology Office
sivavrus@wisc.edu

Derrick Raspor

GLRI Field Coordinator Wisconsin USDA-NRCS <u>derrick.raspor@usda.gov</u>

Key Points

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

- 1) Last week was <u>unseasonably cold</u> across the state, with multiple nights <u>dipping into the 30s</u>.
- 2) <u>Precipitation</u> was concentrated in the north last week, helping <u>replenish</u> <u>soils</u> in that region.
- 3) Drought remains <u>non-existent</u> in WI despite minimal precipitation in the south over the past 2 weeks.
- 4) Outlooks for mid-to-late September indicate <u>warmer-than-normal</u> <u>conditions</u> are likely.
- 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>.

Wx Highlight → Continued Cool

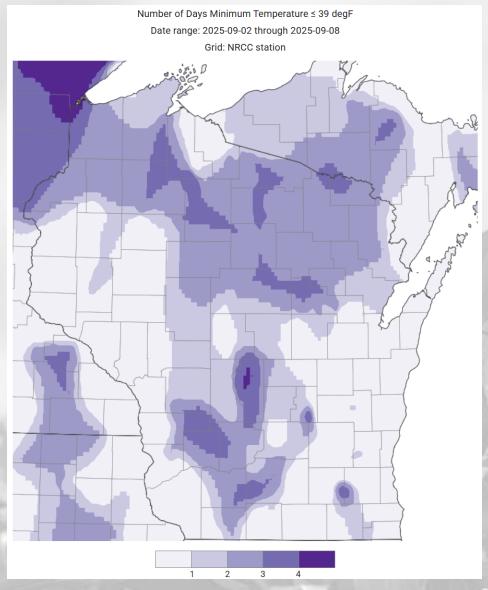


Table shows the departure from average temperature by climate division

➤ Average (1991-2020) low temp for 9/2-9/8 → upper 40's (N) to mid 50s (S)

Climate Division	Sep 2	Sep 3	Sep 4	Sep 5	Sep 6	Sep 7	Sep 8
WI-1 (NW)	0.7	-4.7	-15.7	-14.4	-13.2	-12.5	-6.3
WI-2 (NC)	-1.0	-8.1	-14.8	-13.3	-10.2	-10.0	-6.2
WI-3 (NE)	-0.2	-3.2	-12.0	-11.6	-9.5	-8.6	-5.4
WI-4 (WC)	-3.0	-6.2	-14.3	-13.2	-12.1	-12.6	-9.2
WI-5 (C)	-2.6	-6.3	-13.8	-13.6	-11.1	-12.0	-8.7
WI-6 (EC)	-2.3	-3.3	-13.0	-13.0	-11.2	-11.8	-8.2
WI-7 (SW)	-3.3	-5.5	-13.2	-12.7	-12.6	-13.0	-9.6
WI-8 (SC)	-4.0	-6.0	-13.1	-12.2	-11.5	-12.2	-9.5
WI-9 (SE)	-3.7	-5.4	-12.8	-11.5	-11.4	-11.9	-9.4

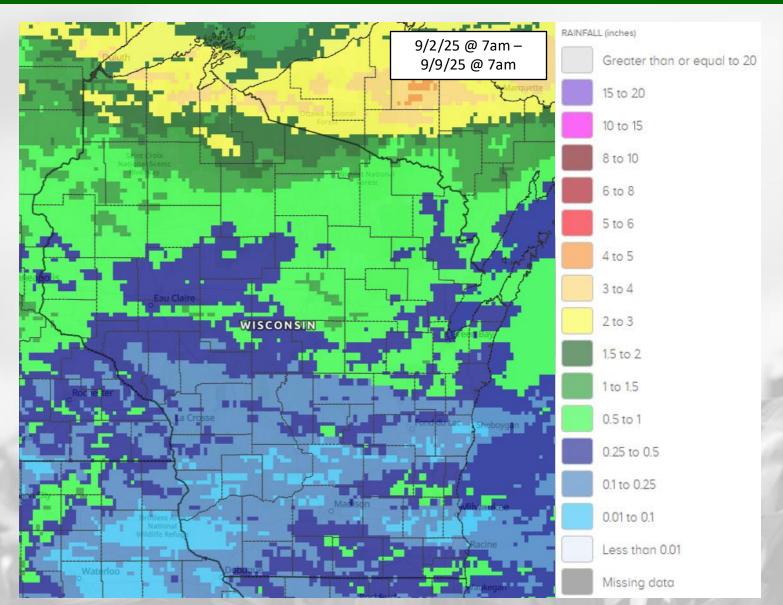
- Multiple days across the state with lows dipping down into the 30s
- Coldest Wisconet reading → Black River Falls, 9/7 (32.2°F)
- Coldest day \rightarrow Sept. 4 (statewide avg. temp = **50.0°F**)

Freeze Photos



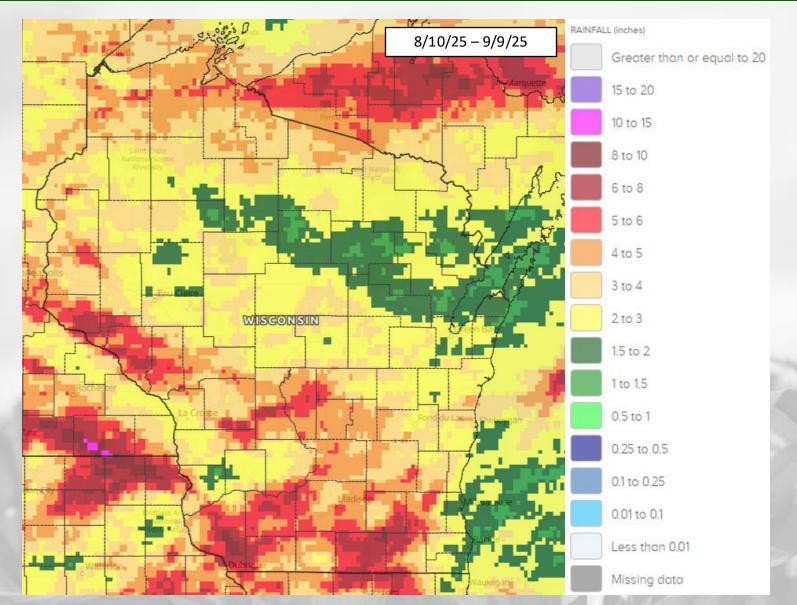


7 Day Precip



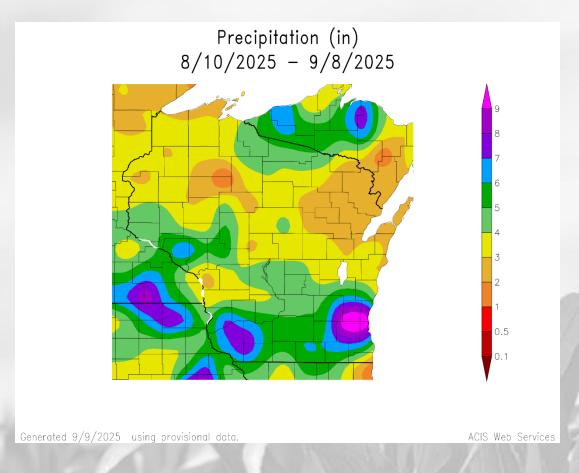
- 0.5" or less across the southern half of the state.
- Highest totals along Lake Superior →
 2-4"
- Totals of 0.5-2" common across the north.

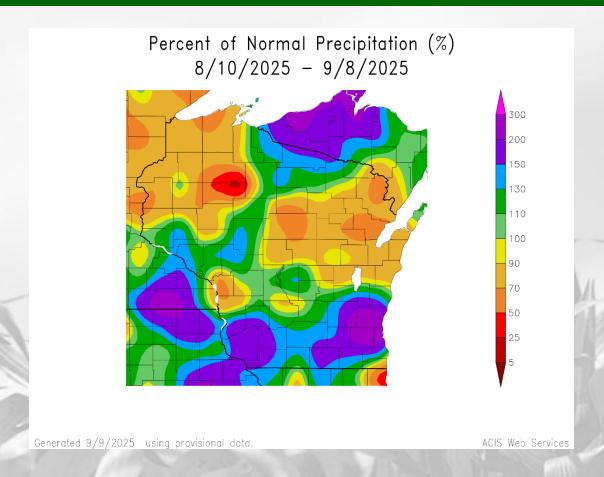
30 Day Precip



- 4+" common across southern, west-central, and northern WI.
- Localized areas of 8" or more in Grant and Rock Counties.
- Lowest totals across the NC/NE and in the far SE → <2"

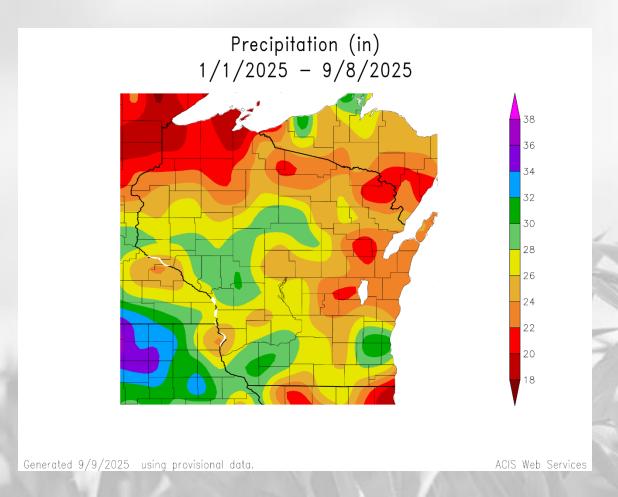
30 Day Precip Total/Percent Avg.

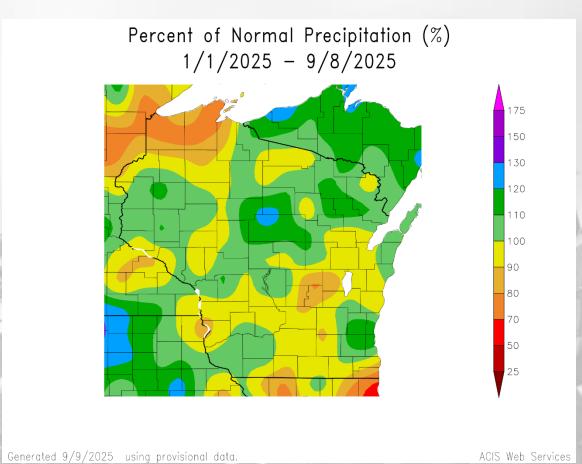




- 110-150+% of normal across southern, west-central WI, and northern WI → 4" or more.
 - Last 2 weeks have been 50% or less of normal across southern WI.
- Below normal for most of northern WI totals of 4" or less.

2025 Precipitation (so far)





Soil Moisture Models

- Near-normal soil moisture levels in the top 1 meter of soil across most of WI. Above normal in the south-central region.
- Decreasing dryness in the far NW following a wetter week up there. Increasing dryness in the east-central.

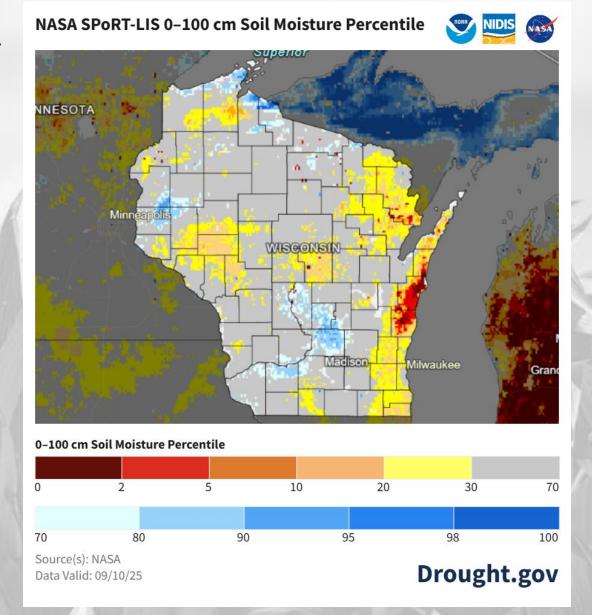
Model Notes:

Red areas = top 5 driest in 100 years.

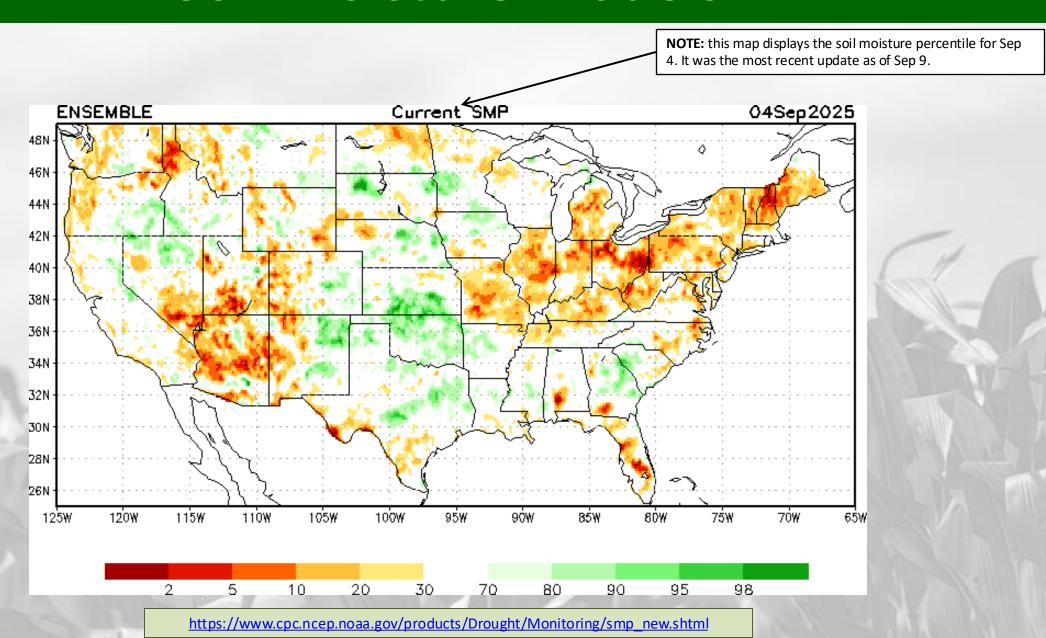
Dark red areas = top 2 driest in 100 years.

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.

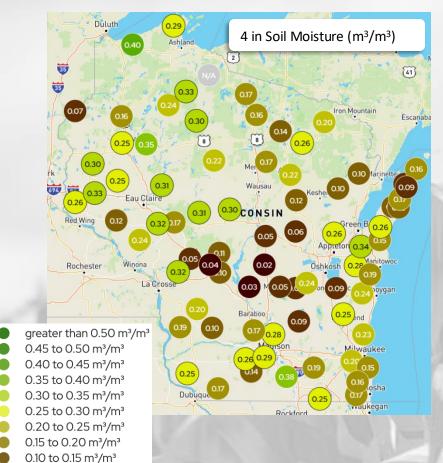


Soil Moisture Models



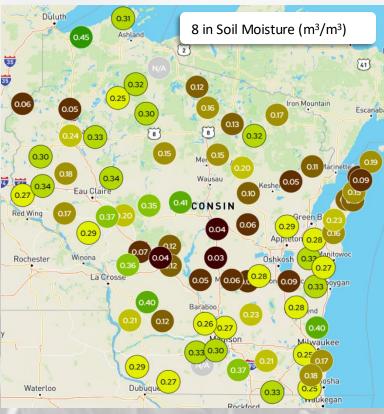
Wisconet Soil Moisture

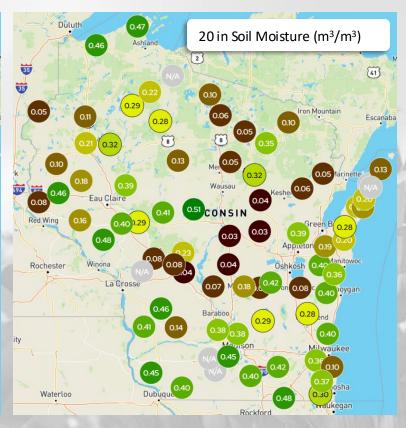
Maps showing soil temperature conditions on September 9th @ 12:30 pm. Units of map values are {Volume of water}/{Volume of soil}.



0.05 to 0.10 m³/m³

0.00 to 0.05 m³/m³





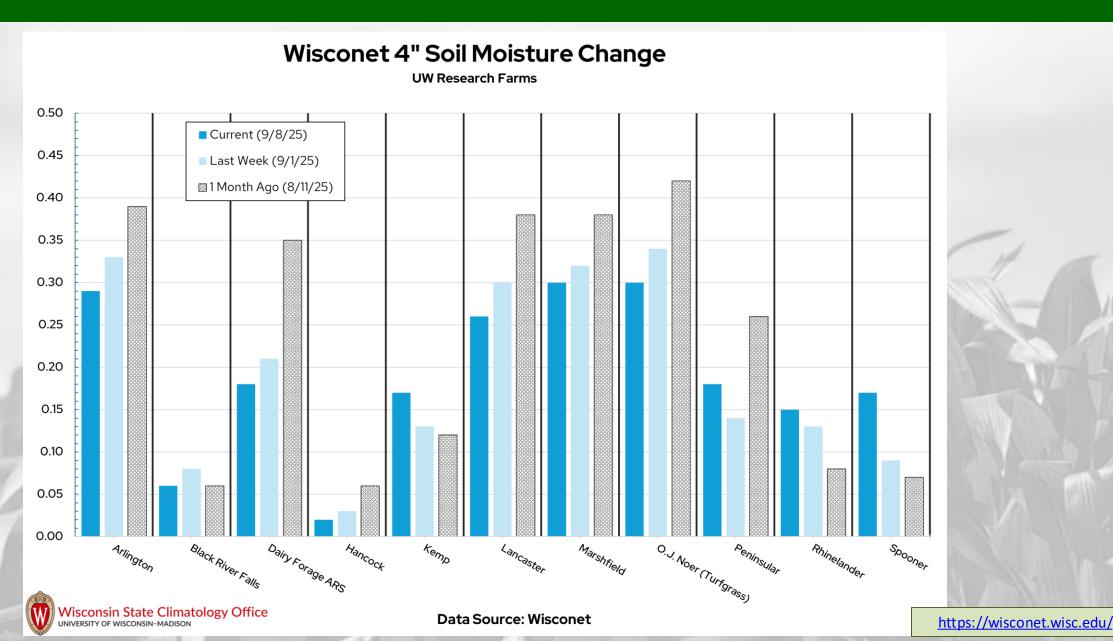
Wisconet Soil Moisture

Change in soil moisture from September 2nd (Start) to September 8th (End).

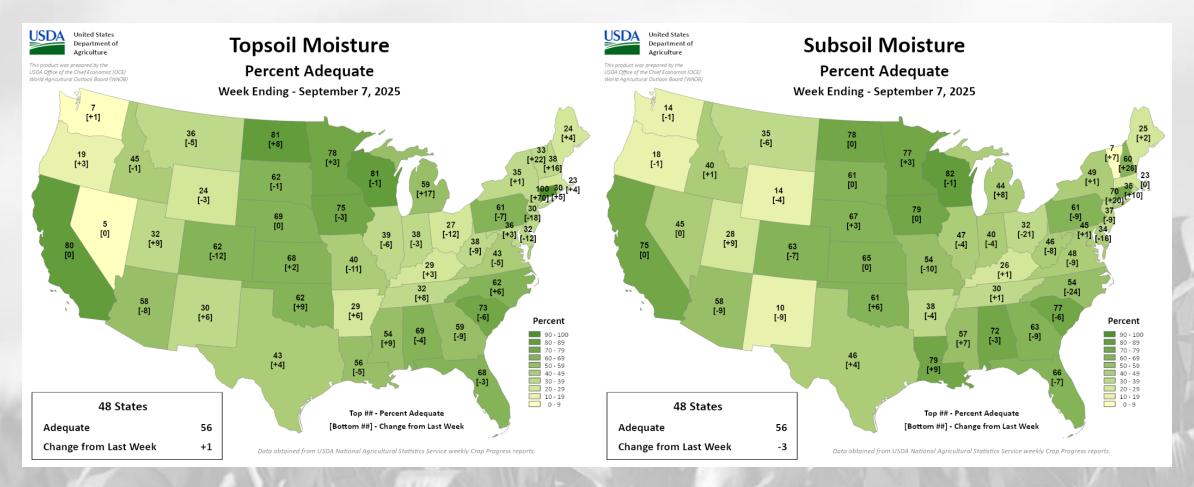
Units of change values are {Volume of water}/{Volume of soil}.

Research Farm	County	Total Precip (in)	4" Change (Start) (End)		8" Ch (Start)	8" Change (Start) (End)		20" Change (Start) (End)	
Arlington	Columbia	0.11	0.33	0.29	0.31	0.28	0.41	0.38	
Black River Falls	Jackson	0.08	0.08	0.06	0.09	0.08	0.09	0.08	
Dairy Forage ARS	Sauk	0.06	0.20	0.18	0.29	0.27	0.40	0.38	
Hancock	Waushara	0.08	0.03	0.02	0.04	0.03	0.05	0.04	
Kemp	Oneida	1.08	0.13	0.17	0.13	0.17	0.05	0.07	
Lancaster	Grant	0.00	0.29	0.26	0.33	0.30	0.47	0.45	
Marshfield	Marathon	0.52	0.32	0.30	0.43	0.41	0.52	0.51	
O.J. Noer (Turfgrass)	Dane	0.22	0.33	0.30	0.34	0.31	0.46	0.46	
Peninsular	Door	0.72	0.14	0.18	0.15	0.15	0.20	0.20	
Rhinelander	Oneida	0.86	0.12	0.15	0.11	0.13	0.05	0.05	
Spooner	Washburn	1.00	0.09	0.17	0.05	0.05	0.12	0.11	

Wisconet Soil Moisture



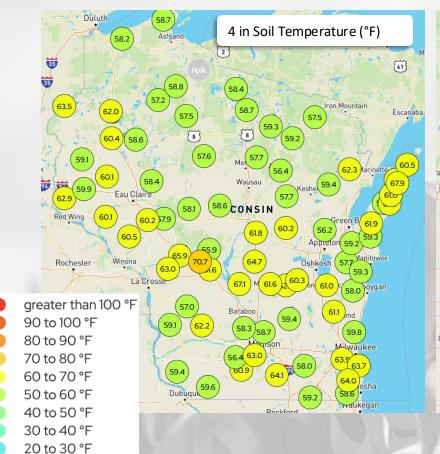
Adequate Soil Moisture



- 81-82% of agricultural soils in the state reporting adequate topsoil and subsoil moisture.
- 15% of fields in the state are reported as having short to very short topsoil moisture, an increase from last week.

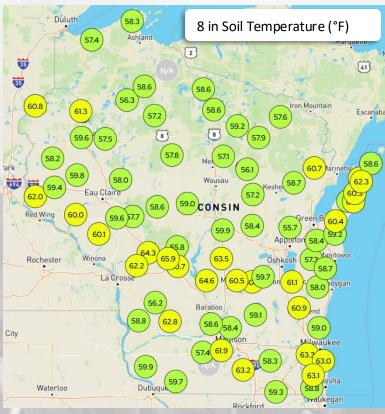
Wisconet Soil Temperature

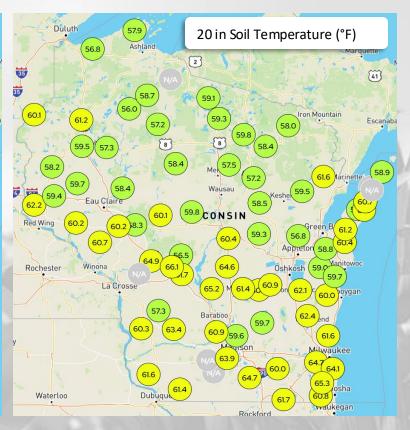
Maps showing soil temperature conditions on September 9th @ 12:30 pm.



10 to 20 °F

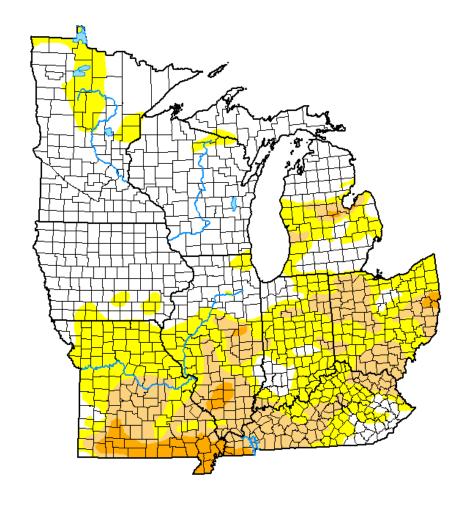
less than 10 °F





US Drought Monitor

U.S. Drought Monitor Midwest



September 9, 2025

(Released Thursday, Sep. 11, 2025)
Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	50.88	49.12	19.63	3.38	0.00	0.00
Last Week 09-02-2025	52.70	47.30	14.18	0.18	0.00	0.00
3 Month's Ago 06-10-2025	62.68	37.32	8.83	0.11	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 09-10-2024	34.42	65.58	22.40	6.02	2.01	0.70

Intensity:

None D2 Severe Drought
D0 Abnormally Dry D3 Extreme Drought
D1 Moderate 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







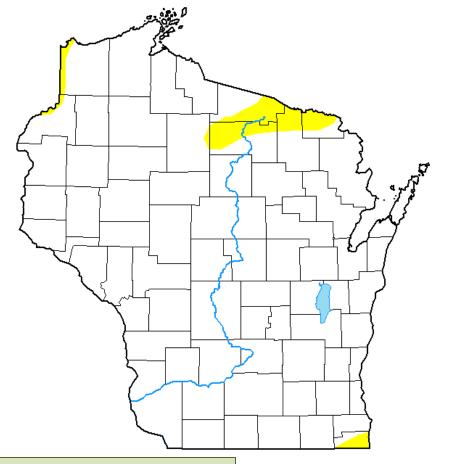
droughtmonitor.unl.edu

- Midwest: Compared to last week:
 - Increase in D0-D2 coverage.
- Midwest: 1 class degradation across the southern and eastern parts of the region. D2 common across southern MO
- Wisconsin: The state is still drought-free! D0 in isolated locations (NC, SE).
- 80.4% of the Midwest is drought free (~19.6% in D1 or D2).

Note: D0 is not considered drought.

US Drought Monitor

U.S. Drought Monitor
Wisconsin



September 9, 2025

(Released Thursday, Sep. 11, 2025) Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	96.30	3.70	0.00	0.00	0.00	0.00
Last Week 09-02-2025	96.30	3.70	0.00	0.00	0.00	0.00
3 Month's Ago 06-10-2025	52.97	47.03	4.70	0.00	0.00	0.00
Start of Calendar Yea 01-07-2025	r 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 09-10-2024	53.37	46.63	0.00	0.00	0.00	0.00

Intensity:

None []

D2 Severe Drought

D0 Abnormally Dry
D1 Moderate 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

Author: Brad Pugh

Brad Pugh CPC/NOAA









droughtmonitor.unl.edu

Amount of state in:

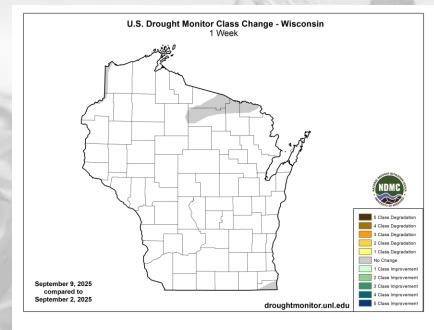
• D1-D4 - 0.0% --

• D2-D4 - 0.0% --

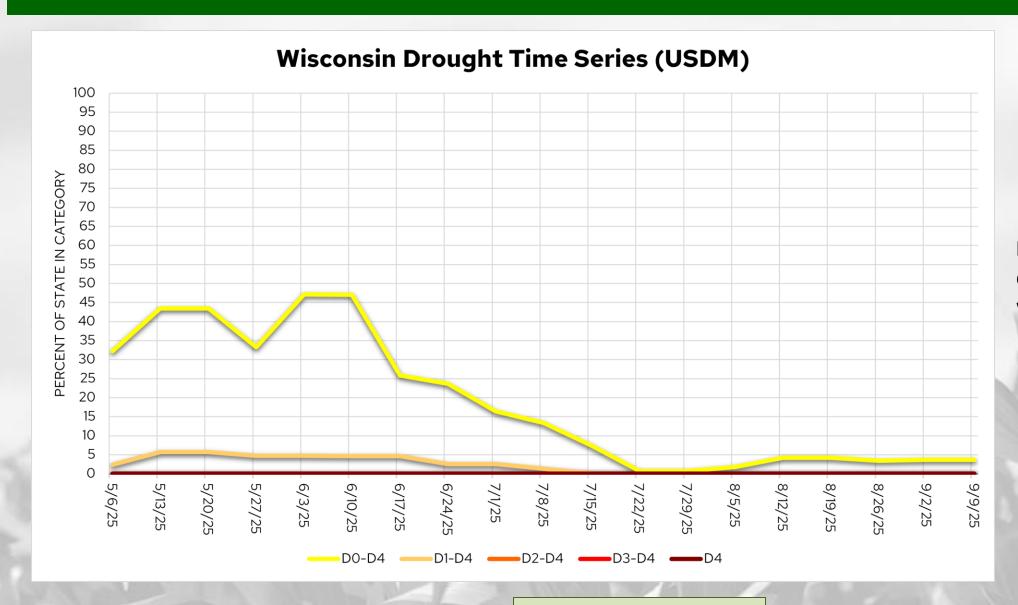
• D3-D4 - 0.0% --

• D4 - 0.0% --

<u>Note</u>: ↑↓ indicate change from last week. Red up arrows indicate increase in drought area; vice-versa for green arrows. -- indicates no change from last week.



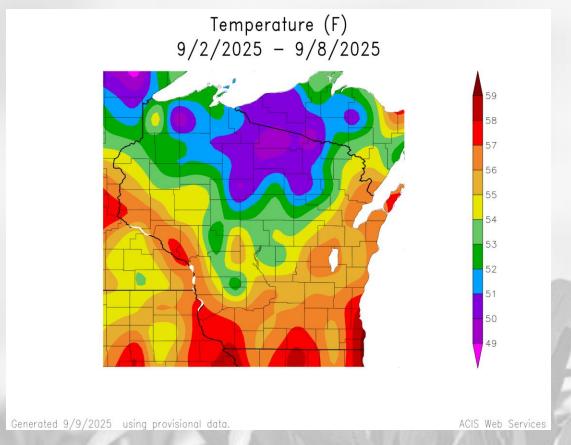
USDM Time Series

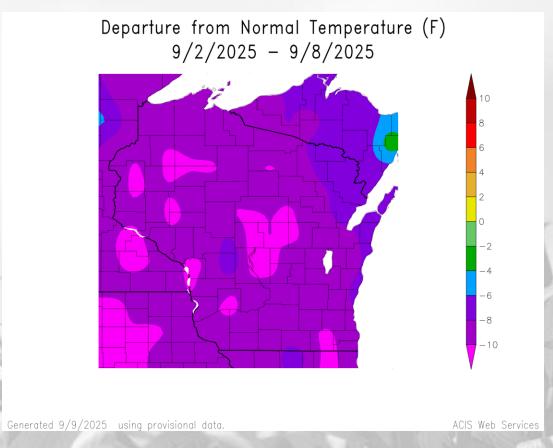


No change in conditions since last week.

http://droughtmonitor.unl.edu/

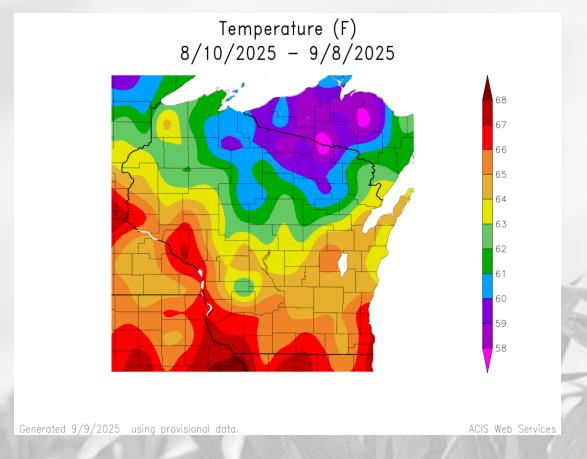
7 Day Temperatures

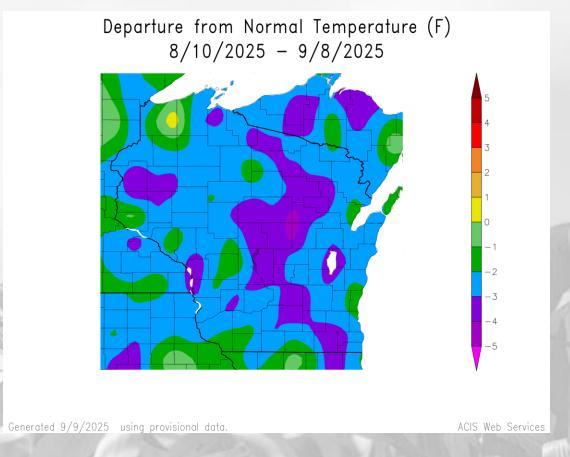




- Average temp. range of 56-59°F in the south and west; to 49-52°F in north-central WI.
- Well below average temperatures statewide
 - 8-10°F below average for most of WI.

30 Day Temperatures

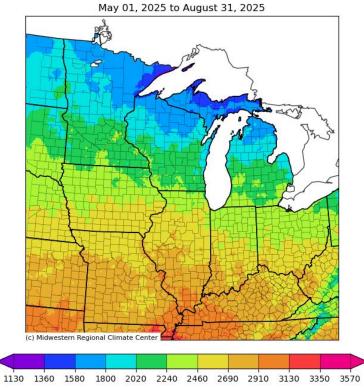




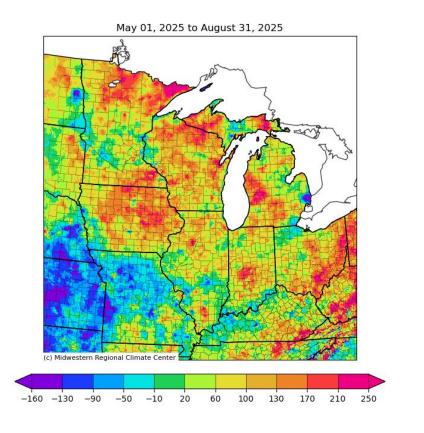
- Average temps. ranged from 65-68°F in the south and west; to 58-61°F for the far north.
- 2-4°F below normal for most of the state.

Growing Degree Days (Base = 50°F; Since May 1)

Accumulated Total MGDD (50°F/86°F)



Accumulated Total MGDD (50°F/86°F): Departure from 1991-2020 Normals

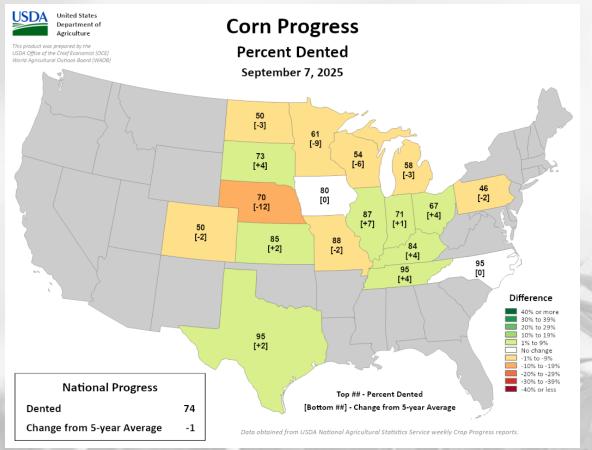


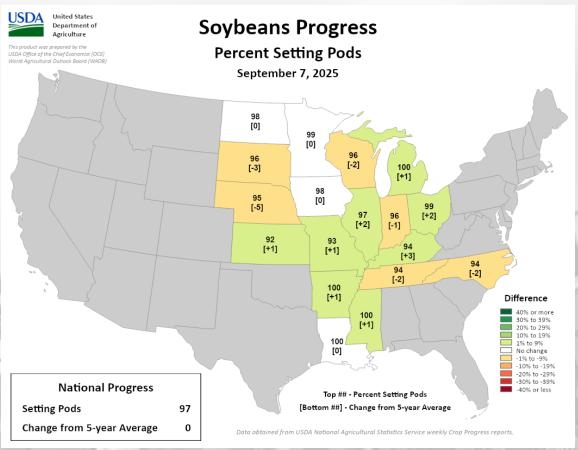
- Range from 2200-2400
 GDD in the SW to 1600-1800 GDD in the N.
- GDD accumulation is running >100 GDD ahead of schedule across most of WI. Nearer to normal in the far NW and SE.

To calculate GDD for your corn variety and planting date, use this <u>tool</u>.

To see specific degree models for pests in your location, use the <u>Vegetable</u> <u>Disease & Insect Forecasting Network</u>.

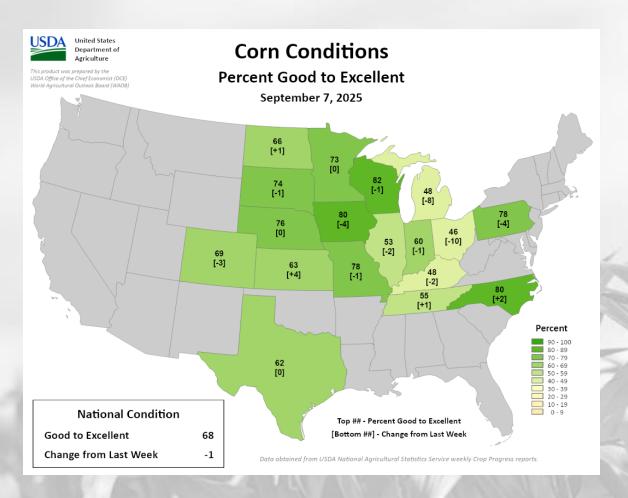
Corn & Soybean Progress

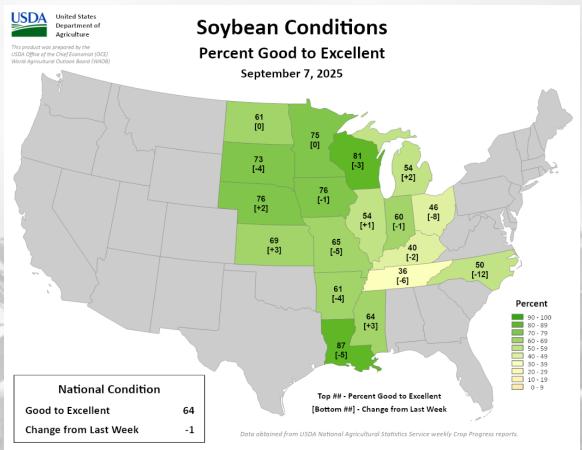




- Corn denting is 54% complete in WI fields which is behind the normal pace for late August.
 - Doughing in nearly complete (88%) in WI corn fields.
- Soybean pod setting is 96% complete in WI fields which is behind the normal pace for late August.

Corn & Soybean Condition





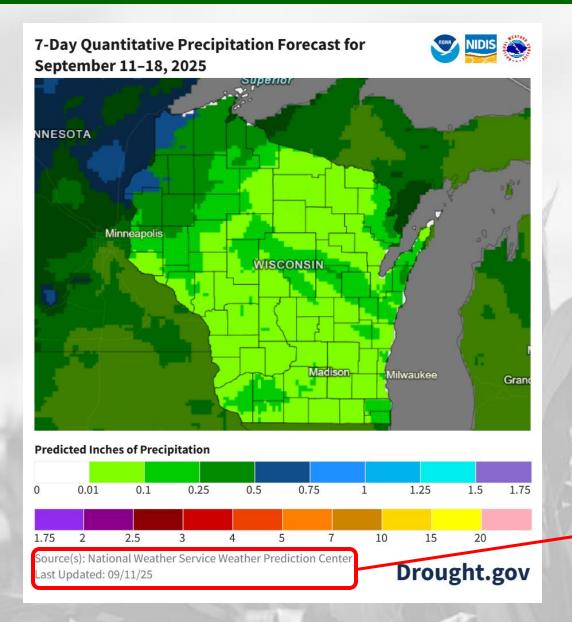
Crop Progress Report

Crop progress report for Wisconsin for the week ending on Sep 7th

- Corn doughing is **88**% complete. Denting is **54**% complete (3 days behind the 5-year average). **10**% of the corn is mature.
 - Condition was rated 82% good to excellent.
- Soybean pod setting is running at **96**% complete, with coloring at **26**% complete (4 days behind the 5-year average).
 - Condition was rated 81% good to excellent.
- Winter wheat seeding for next year is 9% complete.
- The third cutting of alfalfa hay was **97**% complete, with the fourth cutting at **65**% complete (5 days ahead of the 5-year average).
- Pasture and range conditions are rated 70% good to excellent (down 3% from last week).
- Potato harvest is at 40% complete.

<u>Full report</u>: https://www.nass.usda.gov/Statistics_by_State/Wisconsin/Publications/Crop_Progress_&_Condition/2025/WI-Crop-Progress-09-08-25.pdf

7 Day Precip Forecast

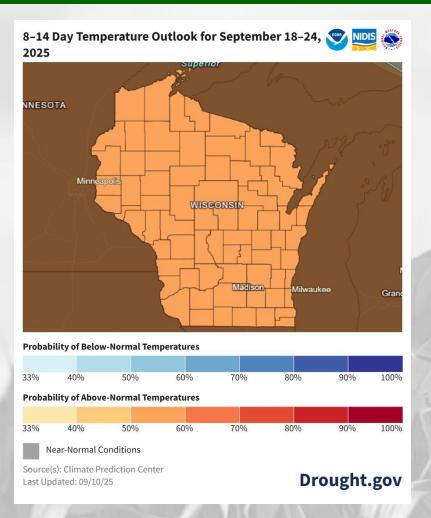


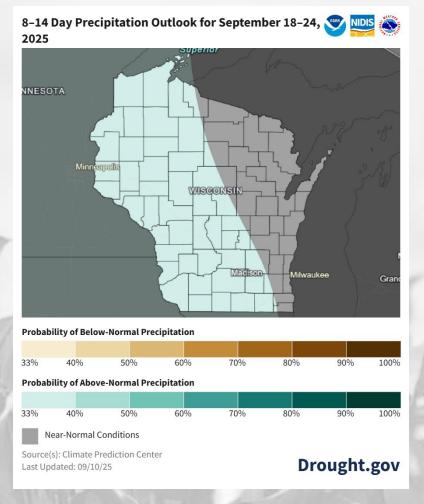
- When? → best chances on Friday night into Saturday (9/12-13) and Wed next week (9/17).
- Where? → best chances in the NW, with lesser chances statewide.
- <u>Check your local forecast</u> for details on totals and timing.
- Average precip (1991-2020) for this week: 1.08"

Forecast for 9/11/25 thru 9/18/25 (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

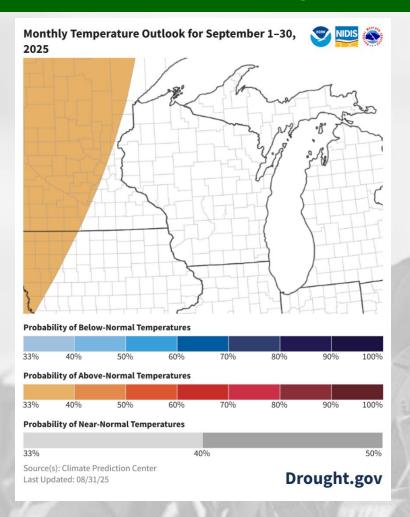


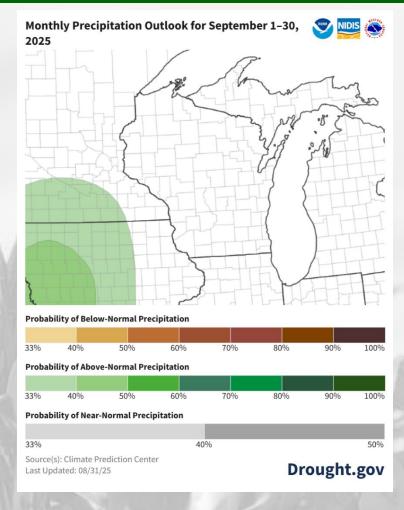


http://www.cpc.ncep.noaa.gov/ https://www.drought.gov/states/wisc onsin

Mid-to-Late September: Strong lean (50-60% chance) towards <u>above normal</u> temperatures statewide. Slight lean towards <u>above normal</u> precip in the western half; <u>near normal</u> elsewhere.

30 Day Temp & Precip Outlook



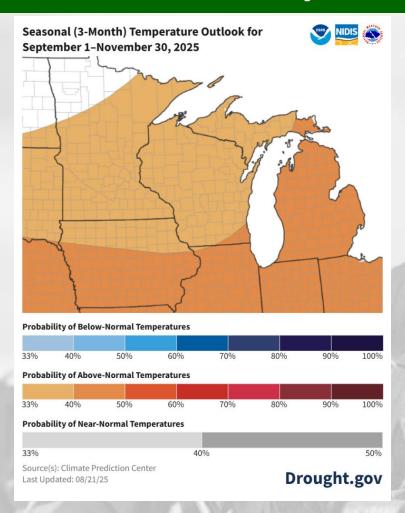


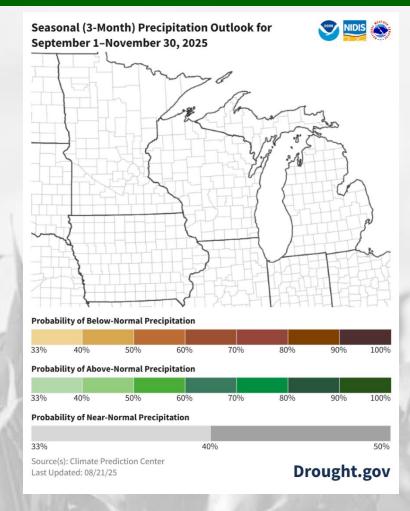
http://www.cpc.ncep.noaa.gov/ https://www.drought.gov/states/wisc onsin

Month of September: <u>Uncertainty</u> for temperatures and precipitation with equal chances for above, near, and below normal statewide.

> Statewide normals (1991-2020) for September are 58.5°F and 3.75".

90 Day Temp & Precip Outlook





http://www.cpc.ncep.noaa.gov/ https://www.drought.gov/states/wisc onsin

Fall 2025: Temperatures leaning slightly towards <u>above normal</u> statewide (more so in the SE), with <u>uncertainty</u> for precipitation.

> Statewide normals (1991-2020) for Sep-Nov are 46.0°F and 8.51".

Take-Home Points

Current Conditions

- Wisconsin was unseasonably cold last week, with some folks experiencing temps 10°F or more below average. Overnight lows dipped into the 30s on a few nights, even in central and southern WI.
- Rainfall was **concentrated in the north** last week, with the southern half of WI experiencing 0.5" or less. Conditions in the southern part of WI have been quite dry (**50% or less of normal**) over the past 2 weeks.

Impact

- After a relatively dry week, Wisconet research farm stations show **decreases in 4" soil moisture** from last week at most sites. The exception are northern stations, which showed a gain in topsoil moisture from the rainfall. Overall, soil moisture is rated >80% adequate.
- Drought remains non-existent in the state despite a drier-than-normal last 2 weeks for the southern half of WI.
- Corn and soybean progress are running **3-4 days behind normal pace**, but reports indicate that **83-84**% of corn and soybean fields are rated good to excellent (NASS). Potato harvest, winter wheat seeding, and 3rd/4th cutting of alfalfa are all underway.

Outlook

- Precip for the next 7 days is once again **most likely to occur in the north**, namely in the NW.
- Climate probabilities for mid-to-late September indicate a strong lean (50-60% chance) towards warmer-than-normal conditions.
- The outlooks for the month of September (updated 8/31) are uncertain for temps and precip with equal chances.

Agronomic Considerations

Field Work and Conditions

- With a warmup this week, frost chances are negligible.
- Recent cooler weather may be impacting corn grain and silage maturity.

Manure Applications

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

Pest Management

- Check moth trap catches in your region with the <u>DATCP Pest Survey</u>. Sign up for insect pest alerts specific to your region.
- Scout for evidence of <u>soybean gall midge</u> (SGM not presently in Wisconsin; however, the pest has been located in nearby states) which can indicated with dead/wilted plants along field edges. This can indicate maggot infestation. Active feeding is over; however damage can be apparent in the fall.
- Monitor for corn earworm through mid-September.
- <u>Southern Rust</u> has been reported across the state. Heavy disease pressure can cause premature dry down, reduced kernel weight, and lower yield potential.
- Fall armyworm egg-laying may be occurring in late-planted corn fields. Also be vigilant of activity in alfalfa fields. Pay attention to trap catches through mid-September.

Forage Management

- Use the <u>alfalfa cutting tool</u> to plan remaining alfalfa harvests for <u>stand persistence</u>.
- Consider <u>in-field management strategies</u> to reduce mycotoxins in silage. <u>Begin sampling and estimating moisture as silage matures</u>. Read <u>corn silage harvest management</u> considerations.
- Silage chopping has begun in the southern region of the state. Foliar disease presence can make silage harvest timing critical. Read these considerations for <u>managing disease at</u> chopping.
- Explore the new Corn Silage Dry Down Monitoring Tool to see what samples are measuring at in your region as well as read regional reports.
- Consider planting a <u>cover crop after silage</u>. This will aid in reducing soil erosion going into winter.

Small Grains

• The window to plant winter wheat is approaching (September 20-October 10). Review planting and management guidelines as well as Top 9 suggestions for 2025 establishment.

Fruit Considerations

General

- Reminder: Always read and follow directions on the label and keep in mind pre-harvest intervals (PHI) as we move through harvest!
- Growers who experienced heavy rainfall and flooding in the past month should review best practices for identifying and preventing root rots: Rainfall and root rots in commercial fruit operations (University of Connecticut)
- <u>Sun scald and southwest injury</u> to trunks and branches has been observed across many orchards and vineyards this summer, likely due to wide variations in winter temperatures that can cause trunk and branch damage.
- Fruit sunburn has been observed across many fruit crops in southern WI. Consider removing this fruit to prevent other pests attracted to the volatiles (scent).
- Sanitation: remove and destroy (chop/compost) fallen fruit ~weekly to prevent any internally developing larvae from reaching maturity, and to limit the spread of disease.
- Wisconsin fruit growers can reference the Midwest Fruit Pest Management Guide (MFPMG) for a list of registered products and recommended best practices. View the MFPMG Online or order a hard copy here: MFPMG Hard Copy.

Apples

- Apple and grape growers can reference the NEWA weather station network to monitor for disease infection periods in their area. Check out your nearest weather station: <u>NEWA Weather</u> Station Network (Cornell).
- Sooty blotch and flyspeck continues to be observed in Southern WI, pushed along by warm, humid conditions. Continue monitoring NEWA models.
- Apple growers should continue monitoring pheromone traps and degree-day (base 50°F) accumulation for Codling moth.
- Apple maggot pressure is variable across the state. Growers should continue to use red sphere traps to monitor populations.
- Check out the WI DATCP Orchard Insect Pest Bulletin for more information on current insect trap captures across the state.

Grapes

- Table grape harvest has begun, with wine grapes soon to follow at West Madison Ag. Research Station. Check out last weeks WI Fruit Crop Scouting Report for updates on grape maturity testing.
- Black rot and fruit rot symptoms have been reported in vineyards around WI. Review this 2022 article by Dr. Leslie Holland on Fruit and Cluster Rots for more information on black rot and fruit rot management.
- Overview of grape insect/mite monitoring and management: Grape Insects and Mite Pests, 2024 Field Season (Cornell, 2024).

Berries

• Grape and berry growers monitoring spotted wing drosophila should continue checking and refreshing traps weekly through harvest.

Vegetable Considerations

Pests

- Be on the lookout for <u>cabbage aphids</u> which are white to grey in color. The aphids themselves may be difficult to see so look for yellowing and wilting leaves, deformed heads, and drops of honeydew aka aphid waste which is a thick, sticky liquid. Their populations can explode quickly in the fall as reproduction rates actually increase in cool temperatures (50-68°F).
- <u>Tarnished plant bug</u> also known as lygus bug risk is high in northern WI. While tarnished plant bugs prefer plants that are budding or flowering, they will move into nearby vegetable crops if flowering weeds are terminated or dry down. The adults are extremely mobile, so it is best to use a sweep net to scout for adults and nymphs either in the early morning or late afternoon/early evening.
- The recent dry weather means that the risk of damage from western flower thrips is high across much of the state. Thrips can be difficult to control as of result of their small size and their tendency to hide. Control options can be found here.
- While the peak of the second generation of adult Colorado potato beetles is occurring in central and northern WI, larva populations are decreasing. Remember that the impact of insecticides on adults is minimal. Detailed management info can be found here.
- The second generation of adult <u>crucifer flea beetles</u> are active in northern WI. Yellow sticky cards can be used to help determine their population. Treatment is recommended when 10-20% of a stand shows damage. Populations can be spotty across a field so spot treatment can be very effective.

Diseases

- Potato yield and tuber size can be negatively affected by <u>silver scurf</u> and <u>black dot</u>. These diseases can both occur on the same plant and are difficult to distinguish. An important management strategy for both diseases include limiting the amount of time between vine kill and harvesting as tubers are at greater risk the longer they remain in warm, moist soil. Read <u>Dr. Amanda Gevens newsletter</u> for more information on the life cycle and management of both diseases.
- When possible, <u>harvest mature winter squash</u> rather than let it sit in the field. During rain events, fruits can become infected by the soil dwelling pathogens <u>fusarium</u> and <u>phytophthora</u>. Additionally, as vines die back, squash bugs will be more attracted to the fruit. The damage caused by their feeding can provide entry points for diseases.
- Scout for symptoms of <u>alternaria and cercospora</u> on carrot leaves. These diseases can be difficult to tell apart as both cause brown lesions often surrounded by a yellow halo. One distinguishing factor can be the timing of infection. Cercospora often occurs on young, rapidly growing plants while alternaria often occurs on older plants although can occur on young plants as well. Both can cause yield loss due to petioles breaking off during mechanical harvest is disease pressure is high.
- Angular leaf spot has been commonly diagnosed on cucurbits in recent weeks. Symptoms may be confused with downy mildew as lesions are angular and bound by leaf veins. A few ways to help distinguish them is that angular leaf spot often starts as small water soaked lesions on the underside of leaves, the lesions will turn white and papery as they age, and under humid conditions milky colored ooze may form on the spots. The bacteria can survive on plant debris for up to two years. Either remove and destroy or till in infected plant tissue at the end of the season.
- The first symptoms of <u>brassica alternaria</u> are pin sized black specks on the leaves or stem. As the lesions expand, they will form concentric rings and black, sooty spores form during periods of high humidity. Sources of inoculum include infected plant debris and brassica weeds. It is spread by wind, rain, and insects like flea beetles.

User Survey

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

LINK TO SURVEY

Your feedback will help us better serve your ag-weather data needs through AgWOW.

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

Thank you!!

-The AgWOW Team

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
bmmason2@wisc.edu

Emilee Gaulke

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

Steve Vavrus

State Climatologist
Wisconsin State Climatology Office
sjvavrus@wisc.edu

Derrick Raspor

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