



K-STATE
Research and Extension

Extension Agronomy

eUpdate

04/30/2026

These e-Updates are a regular weekly item from K-State Extension Agronomy and Kathy Gehl, Agronomy eUpdate Editor. All of the Research and Extension faculty in Agronomy will be involved as sources from time to time. If you have any questions or suggestions for topics you'd like to have us address in this weekly update, contact Kathy Gehl, 785-532-3354 kgehl@ksu.edu, or Dalas Peterson, Extension Agronomy State Leader and Weed Management Specialist 785-532-0405 dpeterso@ksu.edu.

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1. Soybean Response to Standing Water and Saturated Soils

Soybean planting is underway in Kansas, with approximately 15% planted, according to the USDA-NASS Crop Progress and Condition Report from April 26, 2026. However, heavy rainfall has occurred in many locations across the eastern half of Kansas. As measured by the Kansas Mesonet, some of these areas recorded over 200% of normal, with 7+ inches of moisture in the last 30 days (Figure 1). These repeated heavy events have tended to favor the same locations. As a result, soils are saturated, and runoff has been excessive in localized regions, favoring standing water and high streams/rivers. While drier conditions are forecast for the coming week in the east, below-normal temperatures will keep soils saturated until either evaporation increases or plant growth uses the moisture.

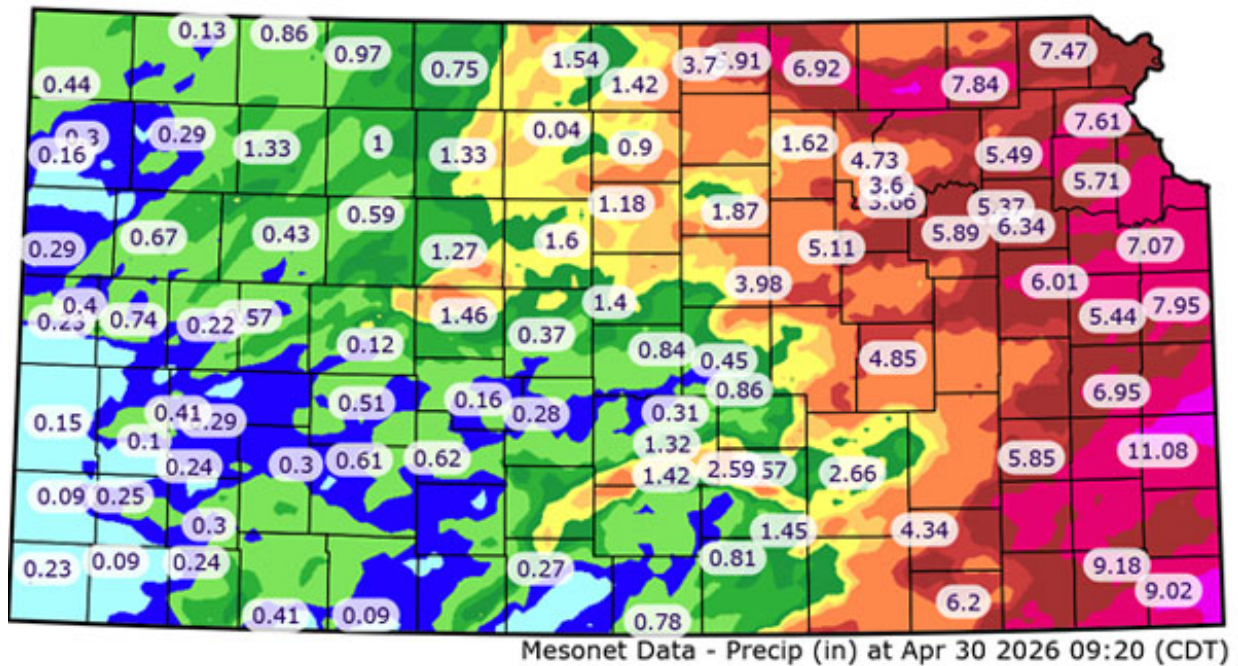


Figure 1. Precipitation observed in the last 30 days on the Kansas Mesonet as of April 30, 2026.

Wet soil conditions will slow emergence, make the soil more susceptible to compaction (limiting root growth), and cause poor plant-to-plant uniformity after emergence (Figure 2). Sidewall compaction occurs when soybeans are planted when the soil is too wet, immediately followed by dry weather. Soil surface crusting is another potential challenge for soybean emergence.



Figure 2. Soybean plants slowly emerging and showing a lack of uniformity. Photo by I. Ciampitti.

After emergence, how will soybeans respond to standing water and saturated soil conditions?

If soybean plants are submerged for less than 48 hours, they have a good chance of surviving. Plants can survive underwater longer at cool temperatures than at warm ones. Submerged soybean plants can survive for up to 7 days when temperatures are less than 80 degrees F.



Figure 3. Soybean seedlings under water. Photo by D. Shoup, K-State Extension.

Assessing plant injury

To determine whether the soybeans are damaged after the water recedes, split the stem at the tip and examine the growing point. A healthy growing point will be firm and white or cream-colored. A soft, dark growing point indicates injury. In some cases, the silt coating the plant after short-term flooding can cause more damage than the water itself, possibly even leading to plant death.

Even if the fields do not have standing water and plants are not fully submerged, waterlogged soils can cause problems if the waterlogging persists too long. When soils are saturated for a prolonged period, a lack of oxygen in the roots can lead to the accumulation of lactic acid and other products of anaerobic respiration. This is the underlying cause of plant damage in waterlogged soils, where only the roots are flooded.

Injury can depend on variety, growth stage, duration of waterlogging, soil texture, fertility levels, diseases present, and, in some cases, residual herbicide use. Interactions of these factors make it hard to predict how a given soybean field will react to waterlogged soils.

Variety differences have been reported, and researchers have identified possible genes associated with tolerance to waterlogged conditions. Scientists in Missouri have screened a number of soybean varieties, subjecting them to two periods of flooding, each lasting 2 weeks. The average yield reduction for all varieties was 61%. Yields were reduced by 39% for the most tolerant varieties and 77% for the least tolerant. Producers should check with their seed supplier regarding information about a particular variety.

Growth stage factors

Research examining the influence of the growth stage on the degree of injury from waterlogged soils has provided mixed results.

- **Germination.** Saturated conditions during germination can reduce successful germination by up to 40% and can inhibit seedling growth. Seeds that are further along in the germination process at the time of saturation sustain more injury.
- **Vegetative growth stages.** Excess water during vegetative stages usually causes less injury than waterlogging during reproductive and grain-filling stages. Short-term waterlogging (2 to 3 days) at V2 to V4 can reduce yield by 0% to 50%, depending on soil texture, variety, and subsequent weather. Yield reductions from waterlogging during the early vegetative stages have been attributed to reduced plant population, shorter plants with fewer branches, and fewer pods per plant.
- We are far from the **reproductive stages**, but for the record, waterlogging for 2 to 3 days at R2 usually causes greater yield reductions than if it occurs during the vegetative stages. Waterlogging at R1 reduced the number of pods per node. At R5, yield reductions have been attributed to reduced seed size.

Duration of soil saturation

The longer the soil is saturated, the greater the injury, mortality, and consequent yield reductions. During germination, saturated conditions for 48 hours can decrease germination by 30% to 70%, depending on the timing of the saturation, nearly twice the yield decrease resulting from durations of 24 hours or less. For plants that have emerged, a waterlogged condition lasting less than 2 days often causes little or no noticeable yield reduction. Intolerant varieties begin to show yield reductions after 2 days of saturation, whereas tolerant varieties can withstand up to 4 days of waterlogging with little yield reduction. As the duration of soil saturation increases, researchers have documented greater reductions in population, height, pods per plant, yield, and leaf tissue nitrogen.

Other factors

Soil conditions also play a role in the severity of waterlogging-induced injury. Coarser-textured soils drain more quickly, minimizing the duration of oxygen deprivation to the roots. Fine-textured soils retain water longer, increasing the risk of injury.

Fields that are flooded or at or above the soil's water-holding capacity are more likely to develop root rot (Figure 4). Flooding accompanied by cooler temperatures favors *Pythium* root rot, whereas warmer temperatures favor *Phytophthora* and *Rhizoctonia* root rots. Whether *Phytophthora* root rot develops often depends on the tolerance or resistance of the variety used.



Figure 4. Stand loss in a wet area due to *Phytophthora* root rot. Photo by Rodrigo Onofre, K-State Extension.

Herbicide considerations

Some residual herbicides are more likely to cause soybean injury than others in waterlogged conditions. In many cases, slower plant metabolism caused by cool, wet conditions can result in greater injury from herbicides like acetochlor (Warrant, others; group 15; see Figure 5) or metribuzin (Sencor, others; group 5; see Figure 6). In addition, group 14 herbicides such as flumioxazin (Valor, others) can cause injury if soybean seedlings are emerging at the time of heavy rainfall. In the worst cases, the hypocotyl may be girdled by a necrotic lesion, leading to plant death (Figure 7). In general, yield loss from herbicide injury is only a concern to the extent that the stand is reduced.



Figure 5. Injury from group 15 herbicides (Dual, Outlook, Warrant, Zidua) may result in “drawstringed” or heart-shaped leaves. Photos by Sarah Ganske, K-State Extension.



**Figure 6. Injury from metribuzin may appear as interveinal chlorosis on the lower leaves.
Photo by Sarah Ganske, K-State Extension.**



Figure 7. Injury from PPO-inhibiting herbicides like flumioxizan can cause necrotic lesions on plant parts that come in contact with the herbicide, including cotyledons, hypocotyls (left). PPO inhibitors can also cause leaf malformations and necrosis (right). Photos by Travis Legleiter, University of Kentucky.

Need help with a seedling problem?

Contact your local K-State Extension Office. They will work with you to send photos of the problem (close-up, seedling, field shot) and plant samples to the K-State Plant Disease Diagnostic Lab. Here are guidelines that can help get a good sample to the lab:

Use this link for the sample submission form:

<https://www.plantpath.k-state.edu/extension/diagnostic-lab/documents/DiseaseLabChecksheet.pdf>

- Fill out the accompanying Plant Disease Diagnostic Lab Form (PDF) as completely as possible.
- Send a sample characteristic of the problem that exhibits a range of symptoms.
- Dig (do not pull) up the seedling so the roots remain intact.
- Send a plentiful amount (~10 seedlings) of fresh plant material (including roots). Shake off most of the soil.
- Seal the plant material in an appropriately sized plastic bag and pack it in a crush-proof container.
- **Do not add water or wet paper towels to the sample!**
- Put the accompanying information sheet in a separate plastic bag to keep it dry.

- Bring your sample to the local K-State Extension Office for overnight shipping early in the week.

Shipping address:

K-State Plant Disease Diagnostic Lab
4032 Throckmorton PSC
1712 Claflin Road
Manhattan, KS 66506

Phone Number: 785-532-6176

Email: clinic@ksu.edu

Take-home Message

- Short-term flooding (<48 hours) often results in minimal damage, but risk increases quickly with longer durations.
- Waterlogged soils limit oxygen to roots, leading to plant stress, reduced growth, and potential stand loss.
- Early-season saturation can reduce germination, plant population, and uniformity.
- Prolonged wet conditions increase the likelihood of root diseases and herbicide injury.

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2. Effect of Standing Water and Saturated Soils on Corn

If corn has been planted, standing water or saturated soil conditions in parts of a field can affect corn now or later. Periods of early-season water saturation can cause immediate problems for small corn plants and can have season-long implications as well. Heavy rainfall has occurred in many locations across the eastern half of Kansas. As measured by the Kansas Mesonet, some of these areas recorded over 200% of normal, with 7+ inches of moisture in the last 30 days (Figure 1). These repeated heavy events have tended to favor the same locations. As a result, soils are saturated, and runoff has been excessive in localized regions, favoring standing water and high streams/rivers. While drier conditions are forecast for the coming week in the east, below-normal temperatures will keep soils saturated until either evaporation increases or plant growth uses the moisture.

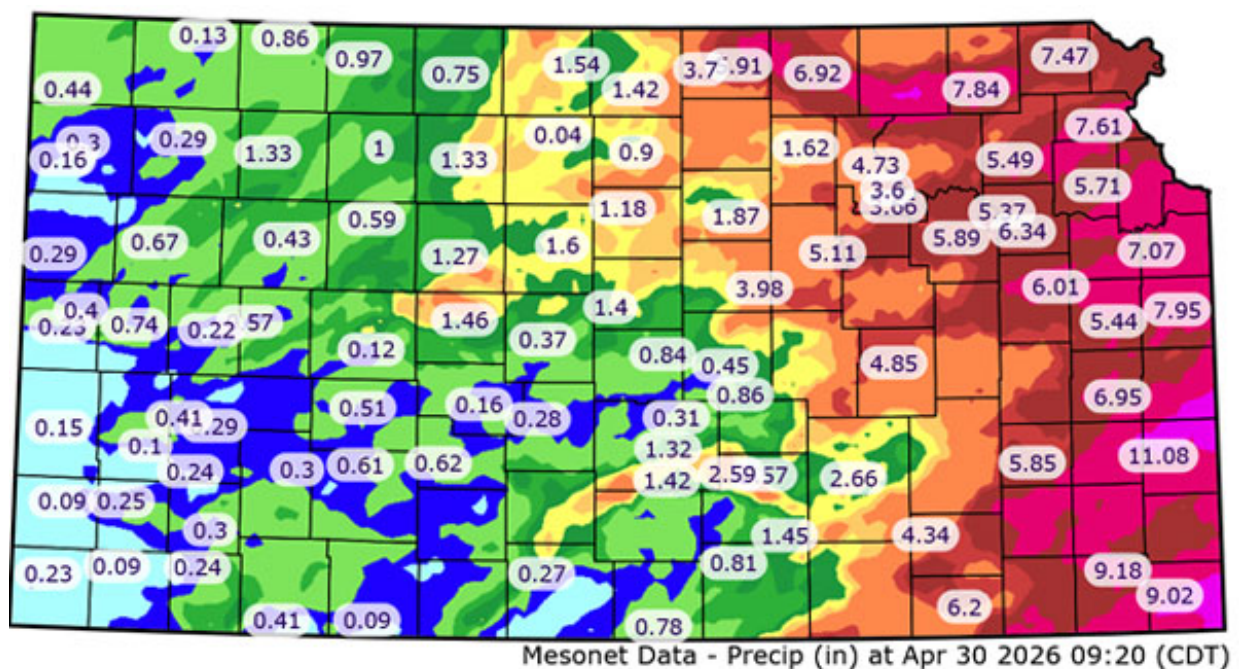


Figure 1. Precipitation observed in the last 30 days on the Kansas Mesonet as of April 30, 2026.

Factors affecting flood damage to corn include

- corn growth stage,
- the duration and frequency of saturated or standing water, and
- air and soil temperature while water is standing.

Saturated soil after corn emergence

After corn emerges, saturated soils inhibit root growth, leaf area expansion, and photosynthesis because of the lack of oxygen and cooler soil temperatures. Yellow leaves indicate a slowing of photosynthesis and plant growth. Leaves and sheaths may turn purple from the accumulation of

sugars if photosynthesis continues, but growth is slowed. Corn plants can recover with minimal impact on yield if the plants stay alive and conditions return to normal fairly quickly.



Figure 2. Young corn plants affected by water standing and soil erosion. Photo from K-State Extension.

Although root growth can compensate to some extent later in the season, a saturated profile early in the season can confine the root system to the top several inches of soil, setting up problems later if the root system remains shallow. Corn plants in this situation are prone to late-season root rot if wetness persists throughout the summer, and to stalk rots if the plants experience mid- to late-season drought stress. Plants with shallow root systems also become more susceptible to standability problems during periods of high winds.

Tolerance of young corn plants to full submersion

Young corn plants can tolerate only a few days of full submersion. In some cases, symptoms and

stand problems seen late in the season may trace back to flooding when the plants were young. Before V6, when the growing point is at or below the soil surface, corn can survive only 2-4 days of flooding. The chances of plant survival increase dramatically if the growing point is not completely submerged or if it is submerged for less than 48 hours. After 48 hours of soil saturation, soil oxygen is depleted, and critical plant functions (photosynthesis, water uptake, and nutrient uptake) are impaired.

Thus, young corn plants are more susceptible than corn beyond the V6 stage, when the plants are taller, and the growing point is above the surface. Research has demonstrated yield reductions from early-season flooding ranging from 5% to 32%, depending on soil nitrogen status and duration of flooding.

Complicating factors

Temperatures can influence the extent of damage from flooding or saturated soils. Cool, cloudy weather limits flooding damage because growth is slowed, and cool water contains more oxygen than warm water. Warm temperatures can increase the chances of long-term damage.

Silt deposition in the whorls of vegetative corn plants can inhibit the recovery of flooded corn plants. Enough soil can be deposited in the whorl to inhibit the emergence of later leaves. A heavy layer of silt on leaf surfaces can potentially inhibit photosynthesis or damage the waxy surface layer of the leaf (cuticle), making the leaves subject to drying out. New leaves should not be affected if they can emerge normally. Ironically, what is often best for the silt-covered plants is a small shower to help wash the leaves off.

In some instances, the soil in the whorl may contain certain soft-rotting bacteria. These bacteria can cause the plant's top to rot. The whorl can easily be pulled out of a plant infected with these soft-rotting bacteria. In addition, a rather putrid odor will be present. These plants will not recover.

Disease considerations

Flooding can increase the incidence of moisture-loving diseases like crazy top downy mildew. Saturation for 24 to 48 hours allows the crazy top fungus spores found in the soil to germinate and infect flooded plants. The fungus grows systemically in the plant, often not causing visual symptoms for some time. Symptom expression depends on the timing of infection and the amount of fungal growth in the plant. Symptoms include excessive tillering, rolling and twisting of upper leaves, and proliferation of the tassel. Eventually, both the tassel and ear can resemble a disorganized mass of small leaves, hence the name "crazy top" (Figure 3).



Figure 3. Crazy top in corn. Photo by Rodrigo Onofre, K-State Extension.

Other concerns: Denitrification, cold weather crown stress, and root lodging

Saturated soils can also cause loss of N fertilizer by either denitrification (loss of N to the atmosphere, mainly as nitrous oxide gas) or leaching (movement of N beyond the rooting zone). For any of these losses to occur, N should be present in the mobile nitrate (NO_3^-) form. Depending on the timing and source of fertilizer application, most of the N may still be in the stable ammonium (NH_4^+) form. However, the conversion to nitrate happens quickly as soil temperature continues to increase. Under wet spring planting conditions, corn may respond to in-season N applications if a large portion of early-applied N is lost to these processes. If corn remains N-deficient later in the season, expect considerably higher levels of stalk rot.

Another condition associated with extended periods of cool, wet soil is commonly referred to as *cold-weather crown stress* (Figure 4). Internal stalk cells in the crown nodes can become “leaky” when cell membranes become chilled, and oxygen is limited because of the saturated soils. Hybrids with “southern” genetics are more susceptible to this problem than are northern types. Plants may

recover from this damage, but they will be much more susceptible to stalk rot later in the season if hot, dry temperatures occur, since water and nutrients cannot be efficiently moved through the damaged crown.



Figure 4. The corn plant is showing symptoms of cold-weather crown stress. Photo by Doug Jardine, K-State Extension.

The best advice is to scout your corn after the water drains from the fields. Check the appearance of new leaves and the standability of the corn.

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3. Wheat Disease Update: Leaf Rust and Stripe Rust are Active in Kansas

Although drought stress remains the dominant concern for the 2026 wheat crop, we are continuing scouting efforts for major wheat diseases in the region. Here we provide a quick update on the status of wheat rusts in the state. In addition, we provide an update about Fusarium head blight (FHB) risk.

This week, leaf rust has appeared in additional counties (Figure 1), particularly in fields that have experienced periods of moisture. Irrigated fields may be particularly vulnerable. Overall, prevalence remains low and observations have been at trace levels. With recent wet weather, we may see leaf rust levels continue to build. Stripe rust was also reported at low levels last week (Figure 2). As a reminder, we reviewed the key differences between leaf, stem, and stripe rust on April 2:

<https://eupdate.agronomy.ksu.edu/article/wheat-rust-outlook-and-reminders-for-the-2026-season-689-3>. Last week, we reported the first detections of leaf and stripe rust in Sumner County: <https://eupdate.agronomy.ksu.edu/article/wheat-disease-update-scab-risk-and-rust-outlook-692-5>.

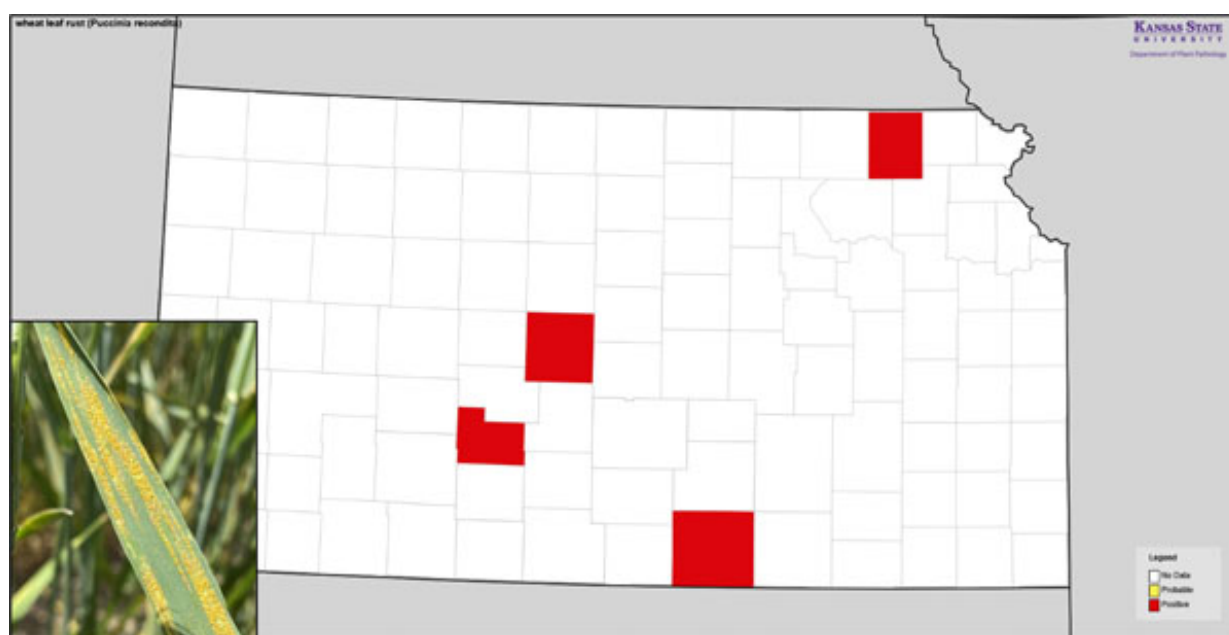


Figure 1. Leaf rust status in Kansas as of April 30, 2026. Most reports have been at low levels to date. Red means at least one confirmed observation within the county. Real-time updates can be found here: <https://wheat.agpestmonitor.org/>.

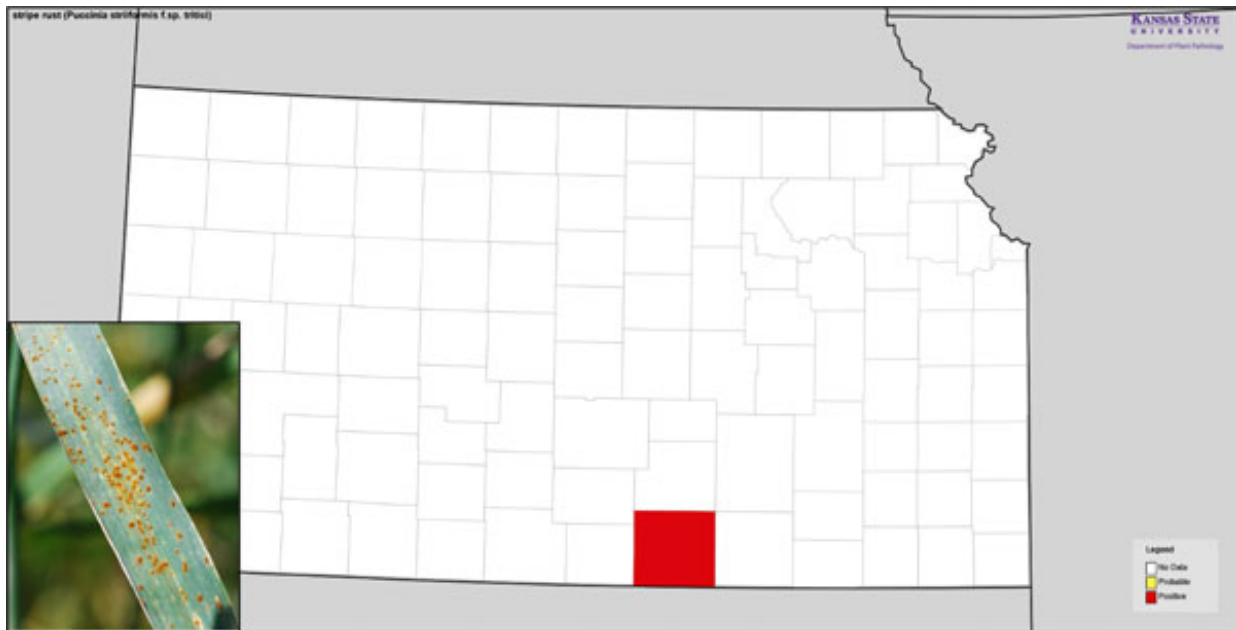


Figure 2. Stripe rust status in Kansas as of April 30, 2026. Most reports have been at low levels to date. Red means at least one confirmed observation within the county. Real-time updates can be found here: <https://wheat.agpestmonitor.org/>.

Now is a great time to double-check variety ratings for leaf and stripe rust. Many varieties that are common in Kansas have ratings of 4 or better for leaf rust and would likely not benefit from a fungicide application (https://bookstore.ksre.ksu.edu/pubs/kansas-wheat-variety-guide-2025_MF991.pdf). If a variety rates 5 or higher for leaf rust, that field should be scouted more closely (if it is still within a fungicide application window). As a reminder, most fungicides have preharvest intervals that are growth-stage or time-to-harvest based (e.g., 30 days to harvest). There are many fungicides labeled for the control of both leaf and stripe rust. The efficacy of major products is summarized in the 2026 wheat fungicide efficacy guide:

https://bookstore.ksre.ksu.edu/download/foliar-fungicide-efficacy-ratings-for-wheat-disease-management-2026_EP130.

In addition to leaf and stripe rust activity, the risk for Fusarium head blight (scab) remains high in the southeast part of the state (extending into south central and northeast counties) (Figure 3). We more extensively reviewed reminders for Fusarium head blight management last week (<https://eupdate.agronomy.ksu.edu/article/wheat-disease-update-scab-risk-and-rust-outlook-692-5>).

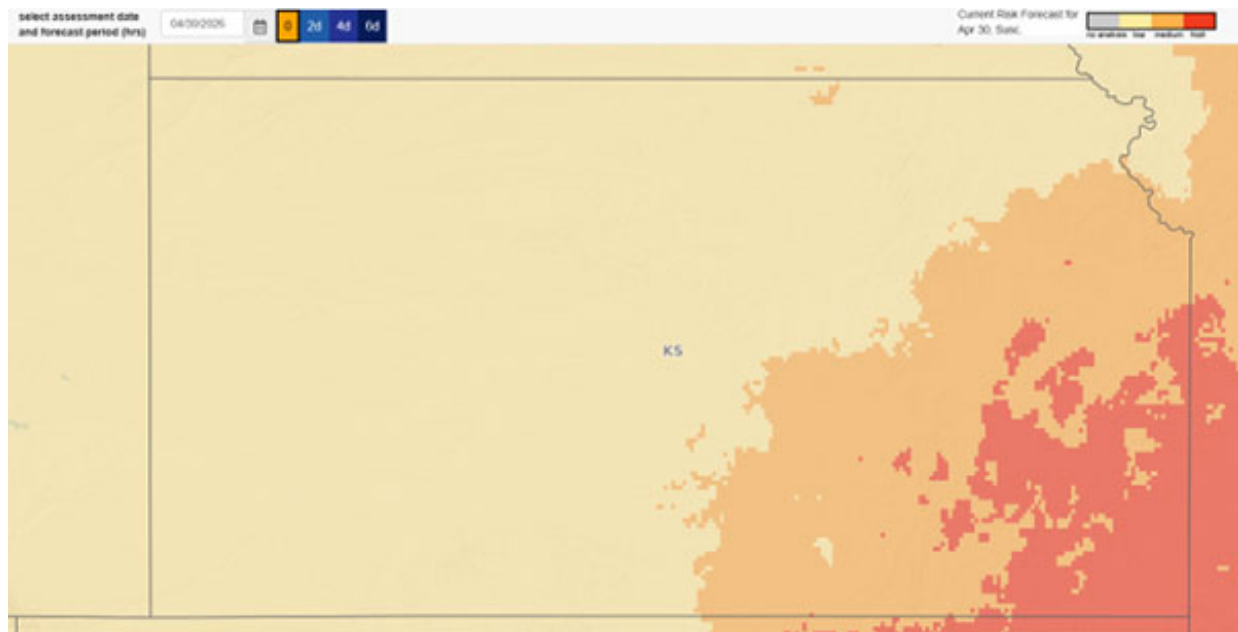


Figure 3. Fusarium head blight (scab) risk for April 30, 2026. Red areas indicate the most favorable weather for scab over the last two weeks, and yellow indicates less favorable weather. This model is calibrated for susceptible varieties of winter wheat. This interactive map can be accessed at www.wheatcab.psu.edu.

As always, you can report wheat diseases to me (andersenk@ksu.edu) or your local K-State County Extension Office.

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4. 2026 Kansas Wheat Plot Tours: May 11-May 22

The Department of Agronomy and K-State Research and Extension will host several winter wheat variety plot tours in different regions of the state starting May 11, 2025. Please make plans to attend a plot tour near you to see and learn about the newest available and upcoming wheat varieties, their agronomics, and their disease reactions. Below is a list of plot tour dates for May 11 through May 22, times, and locations with directions. This list will be continually updated in the coming weeks.

May 11 – Monday

Time	County	Location/Town	Agent	Directions
8:30 AM	Harper	Harper	Jenni Carr	South of Harper. 1½ mile west of K2 on US 160.
6:00 PM	Pratt	Pratt	Jenna Fitzsimmons	2 miles west and ½ mile south of BTI-Pratt.

May 12 – Tuesday

Time	County	Location	Agent	Directions
11:00 AM	Barber	Isabel	Justin Goodno	North of Isabel on the intersection between Main Street and SE 120th St.
5:00 PM	Barber	Kiowa	Justin Goodno	May Precision Ag: 126 S 7th, Kiowa, KS 67070

May 13 – Wednesday

Time	County	Location	Agent	Directions
11:00 AM	Kingman	Spivey	Grace Schneider	Bock Seeds Test Plot: 7681 SW 80 Ave, Kingman, KS 67068
8:30 AM	Barton	Great Bend	Stacey Campbell	West Barton Co Rd & NW 50 Ave
5:00 PM	Edwards	Kinsley	Baley Dogett	Head 2 miles west out of Kinsley on L Road then north 1.75 miles on 70th Ave.
6:00 PM	Ellis	Hays	Stacey Campbell	Hays Ag Research (Ct. So 1232 240th Ave. From office, go south on the east side of blacktop road)

May 14 – Thursday

Time	County	Location	Agent	Directions
10:00 AM	Kiowa/Comanche	County line	Madi Ary and Levi Miller	1 mile south of the Kiowa/Comanche County Line on the west side of HWY 183.
11:00 AM	Ellsworth	Lorraine	Craig Dinkel	2 miles west of Lorraine on Ave W west of 8th rd on the north side of the road GPS coordinates 38.55120 N

				- 98.35416 W
11:30 AM	Harvey	Newton	Alex Acheson	435-471 E Dutch Ave, Newton, KS 67114
5:00 PM	Reno	Buhler	Patrick Bergkamp	Directions pending
6:00 PM	Pawnee	Larned	Kyle Grant	From Larned, go north on Toles Ave. 5 miles north, ½ mile east, and ¼ mile north. Plot is on the east side of the road.

May 15 – Friday

Time	County	Location	Agent	Directions
8:30 AM	Dickinson	Abilene	Brett Toews	Take 15 Hwy straight south of Abilene, the plot is just north of 1100 th Ave.
11:30 AM	McPherson	Galle	Shad Marston	23rd Ave and Cheyenne Rd, just north
3:30 PM	McPherson	Inman	Shad Marston	1/4 mile east of 4th Ave and Cheyenne Rd.

May 18 – Monday

Time	County	Location/Town	Agent	Directions
10:00 AM	Cowley	Ark City	Jeff Seiler	From Arkansas City, go 3 miles north on 77 to 232nd Rd. Plot is ¼ mile west on 232nd. South of cemetery; GPS: 37.143063, -97.035559
6:00 PM	Sumner	Caldwell	Randy Hein	From Caldwell, go east two miles to Sumner Rd. The plot is one mile south on the west side of the road 37.018780, -97.565116

May 19 – Tuesday

Time	County	Location	Agent	Directions
8:00 AM	Sedgwick	Andale	Jeff Seiler	From Andale, 3 miles south on 147th to 37th ST N, 1 mile east to 231st St. Plot is ½ mile south on east side of the road GPS: 37.742161, -97.607422
9:00 AM	Labette	Parsons	James Coover	Southeast Research and Extension Center
10:45 AM	Sedgwick	Clearwater	Jeff Seiler	From Clearwater, 3 miles north on 135th to 79th St. Plot is 1 ¾ miles west on the south side of the road; GPS: 37.547553, -97.531633
6:00 PM	Sumner	Belle Plaine	Randy Hein	From Belle Plaine, go east 4 miles to Greenwich Rd. Go south about 3 ¾ miles. Plot is on west side of the road; GPS:

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May 20 – Wednesday

Time	County	Location	Agent	Directions
9:30 AM	Rush	La Crosse	Lacey Noterman	Drive south on US-183 S out of La Crosse. Continue for about 8–10 miles. Turn right (west) onto KS-4 W. Follow KS-4 W for several miles (traveling toward the Alexander area). Turn left (south) onto local county roads toward Alexander. Continue south until County Rd. 140. Turn here. Drive to the intersection with Avenue N
2:00 PM	Ness	Ness City	Lacey Noterman	From Ness City, go North on Highway 283 for four miles and then turn east on Road 170 for 1 mile, and then turn is 1/4 mile south on Road T.
6:00 PM	Lane	Dighton	Lacey Noterman	The plot is located 7 miles west of Dighton to Eagle Road, 2 miles south to west Road 130, then 200 yards west toward Ehmke's farmstead, east of the scale. A meal will be provided.

May 21 – Thursday

Time	County	Location	Agent	Directions
10:30 AM	Smith	Lebanon	Sandra Wick	Turn north at the junction of Highway 36 and 281 (Lebanon). Go ½ mile; the plot is on the east side of the highway.
1:30 PM	Jewell	Esbon	Sandra Wick	Turn north at Highway 36 and the Esbon turnoff. Go about ½ mile; the plot is on the east side.
4:00 PM	Finney	Garden City	Logan Simon	Southwest Research and Extension Center
4:30 PM	Mitchell	Beloit	Sandra Wick	7 miles south of Beloit on K14 to P Road, go west 250 road, then ½ mile north on 250, plot is on east side of road, couple hundred feet north of old grain bin.

May 22 – Friday

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Time	County	Location	Agent	Directions
8:00 AM	Ottawa	Minneapolis	Jay Wisbey	106 highway, ½ miles south of Minneapolis, to the East of the first curve.
11:00 AM	Saline	Solomon	Jay Wisbey	2 miles south of Old 40 Highway on N Gypsum Valley Road

Plot tours are still being finalized, and details will be updated soon. Stay tuned to the eUpdate for any changes to this schedule.

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5. Sidewall Compaction from Planting into Wet Soils

Planting, tillage, and generalized traffic after wet weather can cause soil compaction, particularly sidewall compaction in the seed furrow. The worst cases of sidewall compaction occur after a field has been planted, when the soil is too wet, followed by a period of dry weather. If the soil stays moist, the roots can usually grow through the walls of the seed furrow. However, if the soil dries, the roots can have a harder time growing through the seed furrow wall and instead grow along the furrow, resulting in sidewall compaction (Figure 1).



Figure 1. Sidewall and seed zone compaction in heavy clay soil. Photo by Stu Duncan, K-State Extension.

With corn, the plants might look fine for some time, but the symptoms mimic drought stress and/or nutrient deficiency after the plants grow to several inches tall (Figures 2 and 3).



Figure 2. Potassium deficiency in a field with sidewall and seed zone compaction in a wet, clayey soil. Photo by Stu Duncan, K-State Extension.



Figure 3. Planting into a cold, saturated soil resulted in sidewall compaction, leading to crown rot and "chronic" corn. Photo by Stu Duncan, K-State Extension.

Given the limitations in remediating sidewall compaction once it occurs, the best practice is to avoid creating the problem and wait until the field dries for planting. The way to test for this is to dig down to the desired planting depth and form a ball of soil. Next, see if the ball crumbles or cracks, or if it deforms like molding putty. If it crumbles, it is ready to plant. If it deforms, it would be best to wait before resuming field operations. Even waiting as little as half a day could make a big difference.

Other considerations

- **Planting too shallow:** This may lead to wheel compaction below the seedling depth. This results in limited downward root growth and seeds growing horizontally.
- **Too much down pressure:** If you must work in wet soil, then the down pressure of the row unit and press wheels needs to be reduced to limit compaction around the seed.
- **Soil structure:** Tilled soils often lack proper soil structure, causing the standard closing wheel to pinch the sidewalls over the seed from additional pressure. This is frequently a concern in heavier-textured soils, i.e., higher clay content.

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6. Plan Now for Volunteer Corn Control

We can debate whether or not volunteer corn is truly a “weed,” but it can certainly be a problem in soybean fields following corn (Figure 1). According to [research conducted in South Dakota](#), soybean yield loss was 8-9% when volunteer corn density was about 1 plant per 10 square feet. Yield loss increased to 71% at volunteer corn densities of about one plant per square foot. Conversely, [other scientists concluded](#) that corn grain yield is not reduced by volunteer corn, so long as the volunteer corn is harvested along with the hybrid corn. However, the authors also noted negative impacts, including inefficiencies in harvest, disease outbreaks, and poor stewardship of insect-resistant traits.

One factor that makes volunteer corn management difficult is the prevalence of glyphosate- and/or glufosinate-resistant varieties and hybrids. In addition, tank mixes with dicamba or 2,4-D to control broadleaf weeds may reduce the effectiveness of glyphosate and Group 1 herbicides like clethodim (Select Max, others) or quizalofop (Assure II, others). However, farmers can take some steps early in the growing season to manage volunteer corn.



Figure 1. Volunteer corn emerging with soybeans. Photo by Sarah Ganske, K-State Extension.

Burndown options

As mentioned above, glyphosate will not control glyphosate-resistant volunteer corn. Glufosinate (Liberty, others) will control volunteer corn, provided the corn is not glufosinate-resistant (LibertyLink). Paraquat (Gramoxone, others) will also control volunteer corn that has emerged prior to soybean planting. Regrowth is possible if the growing point is not killed, meaning contact herbicides will be ineffective if applied to volunteer corn smaller than V6. Please note that

Gramoxone will not be available for sale after 2026 (see the eUpdate article in this issue). Clethodim (Select, others) could also be used in a burndown application, but it should be applied at least six days before corn planting. In some cases, tillage may be the most effective option.

At planting options - soybeans

In [research conducted at the University of Nebraska](#), pre-emergence applications of sulfentrazone in combination with imazethapyr, cloransulam, metribuzin, or chlorimuron (Authority Assist, Authority First, Authority MTZ, or Authority XL) reduced volunteer corn growth compared to non-treated controls. Other treatments, including flumioxazin (Valor, others) alone or in combination with chlorimuron (Valor XLT) or cloransulam (FirstRate), or fomesafen + metolachlor (Prefix) or saflufenacil + imazethapyr (Optill), **did not** reduce volunteer corn growth. There are no residual herbicide options to control volunteer corn at the time of field corn planting.

Over-the-top options

Group 1 herbicides (Select Max, Assure II, Fusilade, Poast, and others) are typically very effective over-the-top options for volunteer corn control in soybean. However, [research from Indiana](#) and [Canada](#) suggests that volunteer corn control by clethodim formulations without “fully loaded” surfactants can be reduced up to about 60% when applied with glyphosate or glyphosate plus 2,4-D and up to about 75% when applied with glyphosate plus dicamba. The reduction in control can be minimized by increasing the rate of the Group 1 herbicide to the maximum labeled rate or by using a more aggressive adjuvant. [Research from North Dakota](#) suggests that adding a high surfactant oil concentrate (HSOC) can improve volunteer corn control by tank mixtures of clethodim plus glyphosate, but neither NIS nor AMS improves control.

One potential option to control volunteer corn in emerged corn is to use an Enlist® corn hybrid. Enlist corn hybrids can be sprayed with Assure II herbicide, which would control glyphosate and/or glufosinate-resistant volunteers.

For more detailed information, the “**2026 Chemical Weed Control for Field Crops, Pastures, and Noncropland**” guide is available online at <https://www.bookstore.ksre.ksu.edu/pubs/CHEMWEEGUIDE.pdf> or check with your local K-State Extension office for a paper copy.

The use of trade names is for clarity to readers and does not imply endorsement of a particular product, nor does exclusion imply non-approval. Always consult the herbicide label for the most current use requirements. Users should read and follow all label directions.

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7. Herbicide Safeners in Crop Protection

Herbicide safeners are included in many herbicides and seed treatments to prevent crop injury.

However, there are not many resources that explain how safeners work and when they are used. This article will discuss how safeners work and which herbicides and crops they benefit.

What are safeners?

Safeners were developed in the 1970s to protect corn from S-metolachlor injury. [Safeners](#) have been developed for seed treatments, pre- and post-emergence applications, and can also be applied to standing water in rice fields. Seed-treatments and pre-emergence options are most common, especially for corn and sorghum. Safeners are often co-formulated with herbicides for pre- and post-emergence applications. A wide variety of safeners are available for grasscrops, but very few have been developed for broadleaf crops. Common commercialized safeners are presented in Table 1.

How do safeners work?

Safeners protect specific crop species by enhancing the crop's ability to detoxify specific herbicides. Protection occurs when a safener increases the expression of genes that produce enzymes that metabolize herbicides and other chemicals in the crop. [These enzymes](#) include cytochrome P450 monooxygenases (CYP450s), glutathione S-transferases (GSTs), UDP-glucosyltransferases (UGTs), and ATP-binding cassette transporters (ABD transporters). However, safeners are species-specific, so the enzymes in weeds are unlikely to be affected by the safeners.

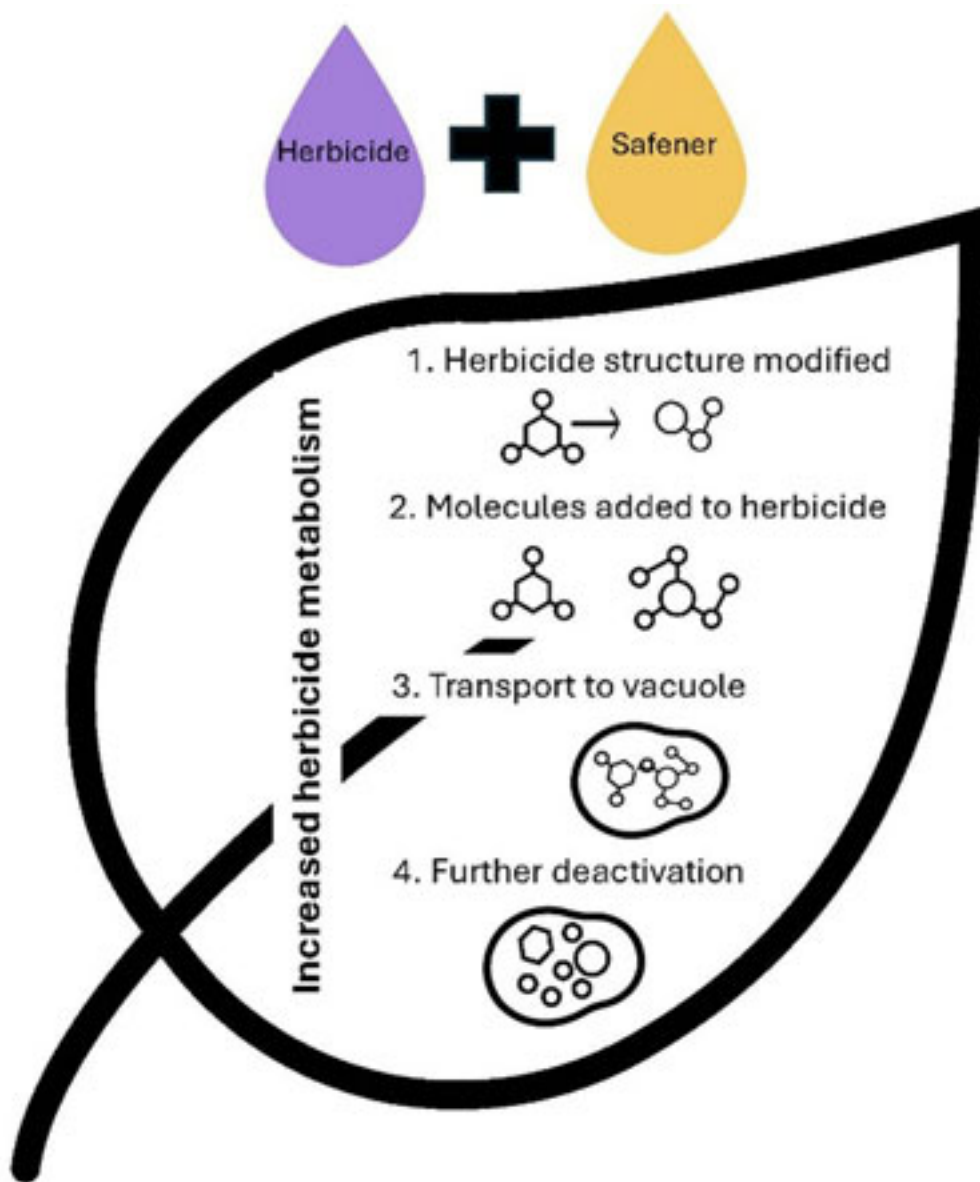


Figure 1. When safeners are used with herbicides, they increase herbicide metabolism to reduce crop injury. Graphic created by Yasir Parrey, Kansas State University.

Table 1. Application timing and associated herbicides of some commercialized safeners used in Kansas crops (adapted from Rosinger, 2014).

Safener	Application timing	Active ingredient (Herbicide group)	Example products	Crop
Benoxacor	Pre- and Post-emergence	S-metolachlor (15)	Dual II Magnum, Acuron, Lexar, Lumax, Resicore Rev	corn
Cloquintocet	Post-emergence	pinoxaden (1), quizalofop (1), flucarbazone (2),	Aggressor, Axial, Everest 3.0, PowerFlex	wheat, other

		pyroxsulam (2), bicyclopyrone (27)	HL, Quelex, Talinor	cereals
Cyprosulfamide	Pre- and Post-emergence	Thiencarbazone (2), dicamba (4), isoxaflutole (27),	Balance Flexx, Corvus, DiFlexx, TriVolt	corn
Dichlormid	Pre-emergence	acetochlor (15)	Surpass	corn
Fluxofenim	Seed treatment	S-metolachlor (15)	Dual II Magnum	sorghum
Furilazole	Pre-emergence	acetochlor (15)	Harness®, SureStart II, TripleFLEXII, Resicore	corn
Isoxadifen	Post-emergence	nicosulfuron (2), rimsulfuron (2), dicamba (4), tembotrione (27)	Accent Q, Capreno, Laudis, Revulin Q, Status, Steadfast Q,	corn
Mefenpyr	Post-emergence	fenoxaprop (1), mesosulfuron (2), thiencarbazone (2) pyrasulfotole (27)	Osprey, Puma, Huskie, Varro	grain sorghum, wheat, other cereals

Possible negative effects of safeners

Co-formulated safeners have a risk of [herbicide detoxification in weeds](#), which is less of a concern for seed-applied safeners. However, seed-applied safeners have also been shown to interact with the soil to reduce crop [germination rates](#).

Possible uses of safeners in the future

Identifying safeners for use in broadleaf crops, along with further development of safeners that can be applied to seeds, could improve weed management in the future. In addition, the range of herbicides applied to some crops could be expanded by combining safener-based crop protection with varieties that have enhanced herbicide tolerance. For example, if a wheat variety can inherently tolerate an herbicide better than others, a safener may further enhance detoxification and reduce the risk of crop injury. A greater understanding of safener mechanisms of action (MOA) could inform product development and herbicide resistance management in the future.

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8. Sales of Paraquat to be Discontinued after 2026

Earlier this spring, Syngenta announced to customers that it would discontinue the sale of Gramoxone (paraquat)

The announcement states that sales will continue until current supplies run out or until December 31, 2026, whichever comes first. The letter emphasizes that the decision is financial and not related to regulatory or legal actions. Other companies, including AMVAC (Parazone), have also stopped manufacturing and sales.

Alternatives for Paraquat

When considering options for replacing paraquat for burndown applications, group 14 herbicides, such as those listed in Table 1, are viable alternatives. They generally provide rapid control of emerged broadleaf weeds and, in the case of Sharpen and Reviton, some short-term residual activity. Glyphosate should be included in these applications for grass control and susceptible broadleaf species. Glufosinate (Liberty, others) is another nonselective herbicide that could be used in these situations. Combinations of glufosinate with a group 14 herbicide will likely improve control.

Table 1. Herbicides for burndown applications in lieu of paraquat

Herbicide (Example)/ Group #	Rate per acre	Adjuvant	Weeds controlled
glufosinate (Liberty Ultra)/Group 10	34 fl oz/a	3 lbs AMS/A	Grasses and broadleaves
carfentrazone (Aim EC)/Group 14	0.5–1.5 oz/a	1% v/v COC	Broadleaves
pyraflufen (Venue, Vida)/Group 14	3–4 oz/A (Venue) 0.5–2 oz/A (Vida)	1–2% v/v COC	Broadleaves
saflufenacil (Sharpen)/Group 14	1–2 oz/A	MSO 1% v/v + AMS (8.5–17lb/100 gal)	Broadleaves
tiafenacil (Reviton)/Group 14	1–3 fl oz/A	MSO 1% v/v + AMS (8.5–17lb/100 gal)	Broadleaves + some grasses

The [K-State Chemical Weed Control Guide](#) can help understand where these alternatives for paraquat can be utilized for burndown in crop rotations and crop rotation restrictions. For fallow specifically, Table 2 shows the efficacy ratings on specific weed species.

Table 2. Efficacy ratings for specific weed species.

	Vol unt eer Wh eat	Cra bgr ass	Fox tail	San dbu r	Sha tter can e	Koc hia	Mar esta il/h orse wee d	Pig wee ds	Rus sian this tle	Fiel d bi nd wee d	Joh nso ngr ass (e sta blis	Tu mbl e wi nd mill gras

													hed s)	
glufosinate	Liberty Ultra	G	G	E	F-G	G	F	F	G	F	F	F	F	-
carfentrazone	Aim EC	-	-	-	-	-	F-G	-	F-G	F-G	P	-	-	
pyraflufen	Venue, Vida	-	-	-	-	-	G	P	P	G	F-G	-	-	
saflufenacil	Sharpen	-	-	-	-	-	G	E	E	E	-	-	-	
tiafenacil	Reviton	-	P	G	-	F	G	G	G	F	-	-	-	
E = Excellent, G = Good, F = Fair, P = Poor, gray boxes = weed not listed on the herbicide label														

In addition, Syngenta has announced that FlexstarGT 3.5 sales will be discontinued on June 30, 2026, or until supplies last. FlexstarGT 3.5 is a premix of glyphosate and fomesafen.

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9. Kansas Climate Report and Drought Update: April 22-28, 2026

This Kansas climate and drought update summarizes weather conditions across Kansas for April 22–28. Included are statewide and division updates on temperature, precipitation, soil conditions, evapotranspiration, and degree days, along with current drought status and short- and medium-term outlooks.

Temperature

The beginning of the period was well above normal. Both April 22 and 23 averaged around 12 degrees above normal, with most highs in the 70s and 80s. A few 90s were observed both days, mainly in the southwest on the 22nd and in south central Kansas on the 23rd. Richfield and Medicine Lodge recorded the week's warmest temperature of 94°, the former on the 22nd and the latter the following afternoon. Lows were mostly in the 40s and 50s, but on the 28th, many locations dipped into the 30s, including at the Cheyenne County Mesonet site, which recorded a freeze at 31 degrees. The coldest readings of the week were on the 24th, when parts of western Kansas dropped into the upper 20s. Oakley, Colby, and the Sherman County Mesonet site all recorded lows of 28°, sharing the week's coldest reading.

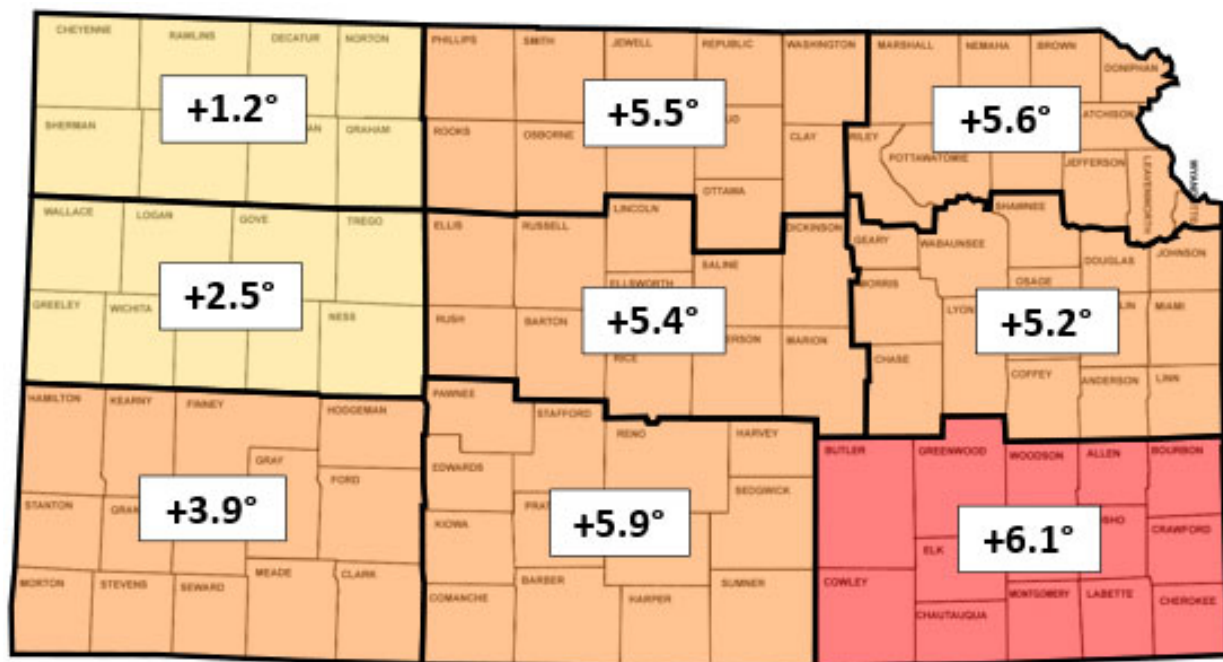
The statewide 7-day average temperature was 60.5°, or 4.2° above normal (Figure 1, top). All divisions were above normal, with departures ranging from +1.2° in the northwest to +6.1° in the southeast. As of April 29, the average April temperature is 59.2°, 6.9° above normal. Should April finish at that same value, it will rank as tied for the 6th warmest April on record. Only seven days in April have averaged below normal, while ten days this month have averaged at least 10 degrees above normal.

Precipitation

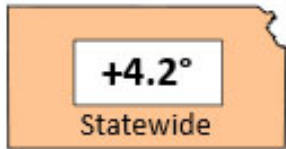
Multiple rounds of showers and thunderstorms, along with some severe weather, impacted the state during the period. The first event began on the afternoon of the 23rd. Storms fired up ahead of an advancing cold front in north central and central Kansas during the mid-afternoon. The storms moved eastward and northeastward across the state. Additional storms formed in south central Kansas, which also pushed east. Precipitation ended in all areas before sunrise. Observers in 16 different counties recorded over one inch of rain, with the highest total 1.81" in Cowley and Marion Counties. On the 25th, isolated storms formed across the state, prompting a few severe thunderstorm warnings. Metropolitan Wichita had thunderstorms early in the evening, and seven CoCoRaHS observers recorded between 2 and 3 inches of rain in Sedgwick County. The following afternoon, a bowing line of storms formed in central Kansas and tracked eastward into northeast and east central Kansas. Additional cells formed in south central and southeast Kansas during the evening. A second round of storms developed in west central Kansas during the mid-evening and tracked eastward into the overnight hours. Repeated rounds of storms moving across northeast and east central Kansas led to high rainfall totals and isolated reports of flooding. Totals for the 24-hour period ending at 7 AM on April 27 were highest along and near the I-70 corridor from Hays through Salina and Topeka to Kansas City, with more than two dozen counties receiving at least 2 inches of rain, based on amounts recorded by CoCoRaHS observers. The Topeka and Lawrence areas picked up at least 3 inches of rain, and a reporter southeast of Topeka measured 5.15" of rain. The same observer had 6.25" for the week, the state's highest total. Unfortunately, in areas along the Colorado border and in southwest Kansas, precipitation was generally less than one-tenth of an inch.

The statewide average precipitation for the 7-day period was 1.15", or 139% of the weekly normal of 0.82" (Figure 1, bottom). This average was heavily influenced by the two wettest divisions: east central (3.25") and northeast (2.38") Kansas. Southwest Kansas was the driest division, averaging only 0.01". Precipitation for the first four weeks of the growing season has averaged 2.92" across the state, or 0.25" above normal. The three eastern Kansas divisions are all over 2 inches above normal, with east central both the wettest division (6.72") and the most above normal (+3.26"). Northwest (0.37") and southwest (0.38") are the driest divisions.

For the year to date, the state's average precipitation is 5.48", or 0.94" below normal. The three eastern divisions are all above normal while the three western divisions are all at less than half of normal. East central Kansas is by far the wettest division (12.89"; departure +4.67"), while northwest (1.18"; -2.77") and southwest (1.21"; -2.50") are driest. The three central divisions are all below normal, ranging from 65 to 96 percent. Statewide, 67% of the state is below normal for the year, with 37% of the state at least two inches below normal. Both of these numbers are five percent lower than last week, indicating some improvement in rainfall departures across the state.



-9.0° or less	-8.9° to -6.0°	-5.9° to -3.0°	-2.9° to -0.1°	0.0°	+0.1° to +2.9°	+3.0° to +5.9°	+6.0° to +8.9°	+9.0° or more



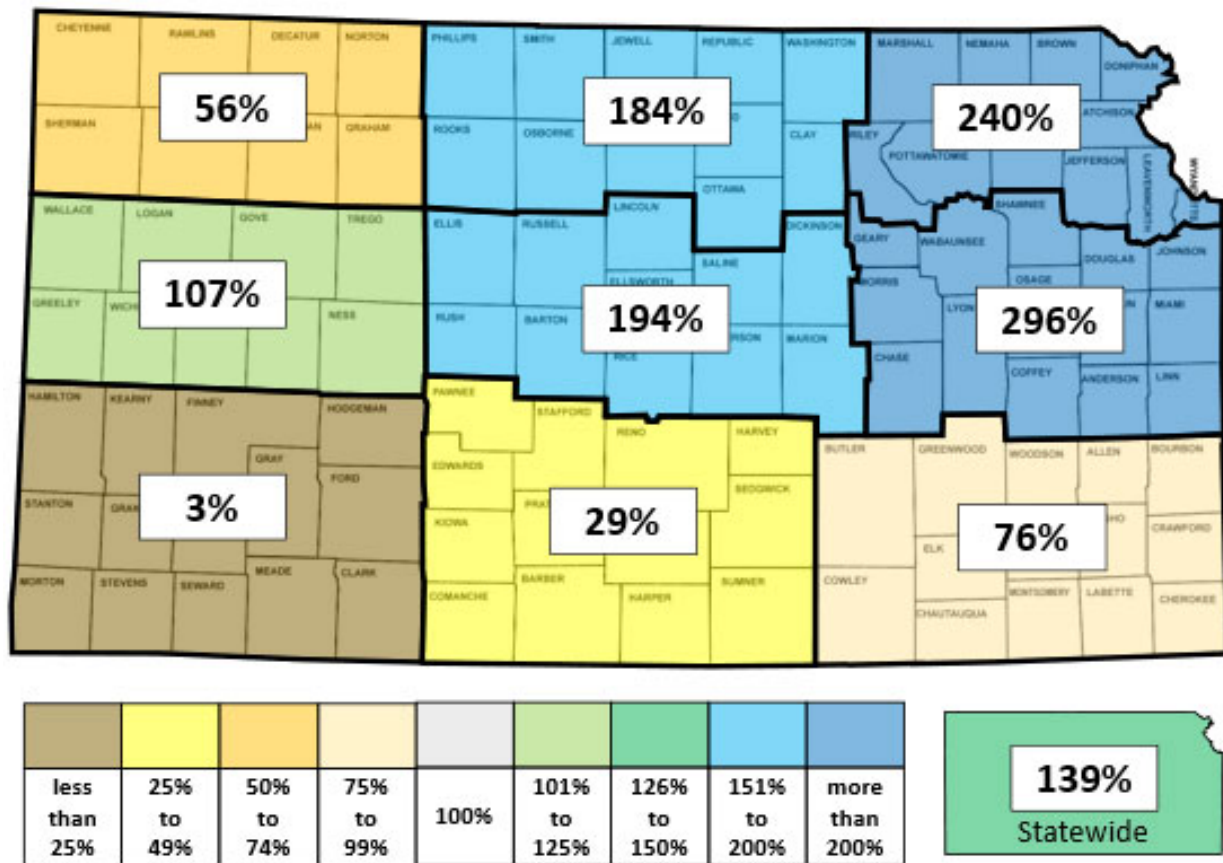


Figure 1. This week's departure from normal temperature (°F, top) and percent of normal precipitation (bottom) by Kansas climate division. Maps generated by Matthew Sittle, K-State Extension.

Severe Weather

There were numerous reports of severe weather during the period. Nearly 30 tornado warnings were issued across eastern Kansas during the period, and 7 tornadoes were sighted. Three occurred on the 23rd: two in Morris County and one in Lyon County. Four additional tornadoes were spotted in southeast Kansas on the 26th: Two in Labette County, and one each in Montgomery and Wilson Counties. Over 140 severe thunderstorm warnings were issued, with 125 reports of severe hail at least 1 inch in diameter. The largest report was 4" in diameter in Marion County on the 23rd. There were at least 25 reports of severe winds of 58 mph or greater. The highest wind gust was 82 mph at the Cherokee County Mesonet site on the 26th.

Agricultural

Daily statewide averages from the Kansas Mesonet for several variables are summarized in Table 1.















Soil temperatures continue to rise thanks to another week of above-normal temperatures. The average 2" soil temperature rose 1.1° this week to 63.7°, or 5.2° above normal. Divisional soil temperatures ranged from 61° in the northwest to 67° in the southwest. The only division in which soil temperatures fell below 50 degrees at any time during the week was in the northwest, but the percentage of time temperatures were that low was just one percent.

Weekly **evapotranspiration (ET) for grass**, estimated from Kansas Mesonet data, averaged 1.02", or 0.06" below the 7-day normal of 1.08". Southwest was the only division with above normal ET (+0.08"). Divisional averages ranged from 0.84" in east central to 1.30" in southwest Kansas. For the first four weeks of the growing season, total ET across Kansas has averaged 4.94", or 0.45" above normal. Departures range from +0.00" in the southeast to +1.04" in the southwest.

The state averaged 66% of the **maximum possible solar radiation** this past week, below the climatological average of 72% of maximum for the seven-day period. April 26 was the lowest at 33% of maximum, while April 24 was the highest at 99% of maximum.

The average 2-meter **wind speed** for the period was 9.2 mph, above the weekly normal of 8.3 mph. April 22 was the windiest day with an average of 13.1 mph, one of two days with an average of at least 10 mph. The prevailing wind direction was from the north, recorded 25% of the week, based on 5-minute wind reports from the Kansas Mesonet.

Table 1. Average statewide daily climate data from the Kansas Mesonet for selected variables. ET-grass is the average daily evapotranspiration at each Mesonet site. The listed wind direction is the compass point with the highest count of daily observations. Solar radiation is the average percentage of maximum possible sunshine.

	Wed Apr 22	Thu Apr 23	Fri Apr 24	Sat Apr 25	Sun Apr 26	Mon Apr 27	Tue Apr 28
High Temp	77°	81°	74°	71°	65°	69°	60°
Normal High/Low	68° 42°	68° 43°	69° 43°	69° 43°	69° 44°	70° 44°	70° 44°
Low Temp	56°	54°	43°	47°	47°	46°	40°
2m Wind Speed (mph) & Direction							
ET-Grass	0.17"	0.23"	0.21"	0.13"	0.06"	0.15"	0.10"
2" Soil Temp	66°	67°	65°	64°	62°	63°	61°
% Max Solar Radiation							

Degree Days Summary

The average was 81 **growing degree days** (GDD) for the week. This was 11 above the normal of 70. Divisional averages ranged from 57 to 99 across the state, with departures ranging from -4 in the northwest to +21 in the southeast. Since April 1, the state has averaged 356 GDD, or 108 above normal. All divisions are at least 70 above normal, with five divisions more than 120 GDD above normal.

Thanks to above normal temperatures, heating degree days (HDD) for the period were below normal again this week, averaging 46, or 23 below the normal of 69. Since July 1, the statewide average is 3880, or 1124 below the normal of 5004. The state averaged 6 cooling degree days (CDD) for the week, above the weekly normal of 4. The average count of CDD so far in 2026 is 61, or 48 above the normal amount of 13.

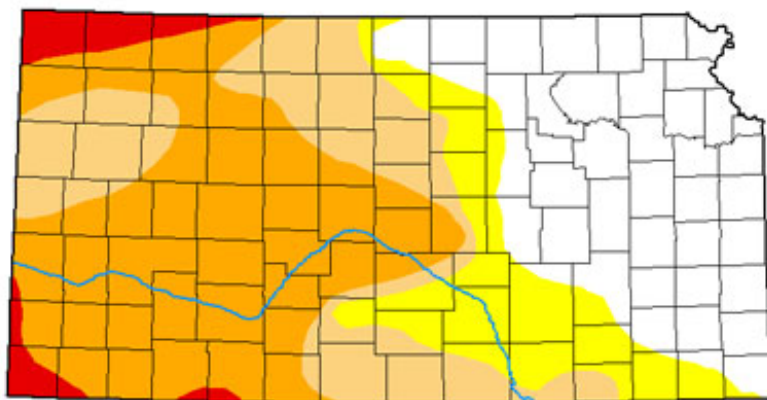
There was an average of 91 **alfalfa weevil degree days** across the state this week, bringing the average since January 1 to 992. Divisional averages ranged from 887 in north central to 1082 in the southeast. All divisions have now exceeded the pupa stage threshold of 814. There was an average of 84 **western corn rootworm** (WCR) degree days across Kansas, which brings the yearly average up to 323. Divisional averages for the year ranged from 218 in north central to 419 in south central Kansas. Egg hatch of rootworms typically begins at 380 WCR degree days, which has now been reached in southwest and south central Kansas. Southeast Kansas should exceed this threshold in the next few days.

Drought







In the April 28 update of the US Drought Monitor, parts of 31 counties were improved by one category (Figure 2, bottom). Areas in far southeastern Kansas where heavy rainfall was upgraded, as were portions of north central, central, northeast, and east central Kansas. There were multiple areas of one-category degradations across western Kansas. New areas of D3 were added in parts of 10 counties: Cheyenne, Rawlins, Decatur, and Norton in the northwest, and Hamilton, Stanton, Morton, Stevens, Meade, and Clark in the southwest. A new area of D2 was introduced in the Dodge City, Cimarron, and Sublette areas. The combination of adjustments resulted in a decrease in the percentage of Kansas in drought (D1 or worse) from 59.8 to 57.1 percent. However, the percentage of Kansas in D2 or worse increased from 32.6 to 37.7 percent this week. The amount of drought-free area in Kansas increased from 27.7% to 29.9% this week. The composite Drought Severity and Coverage Index (DSCI) increased 3 points to 169, indicating a slight worsening of overall conditions in the state. This is the highest DSCI since October 2024.

U.S. Drought Monitor
Kansas

April 28, 2026
(Released Thursday, Apr. 30, 2026)
Valid 8 a.m. EDT



Intensity:

-  None
-  D0 Abnormally Dry
-  D1 Moderate Drought
-  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>

Author:

Brad Rippey
U.S. Department of Agriculture



droughtmonitor.unl.edu

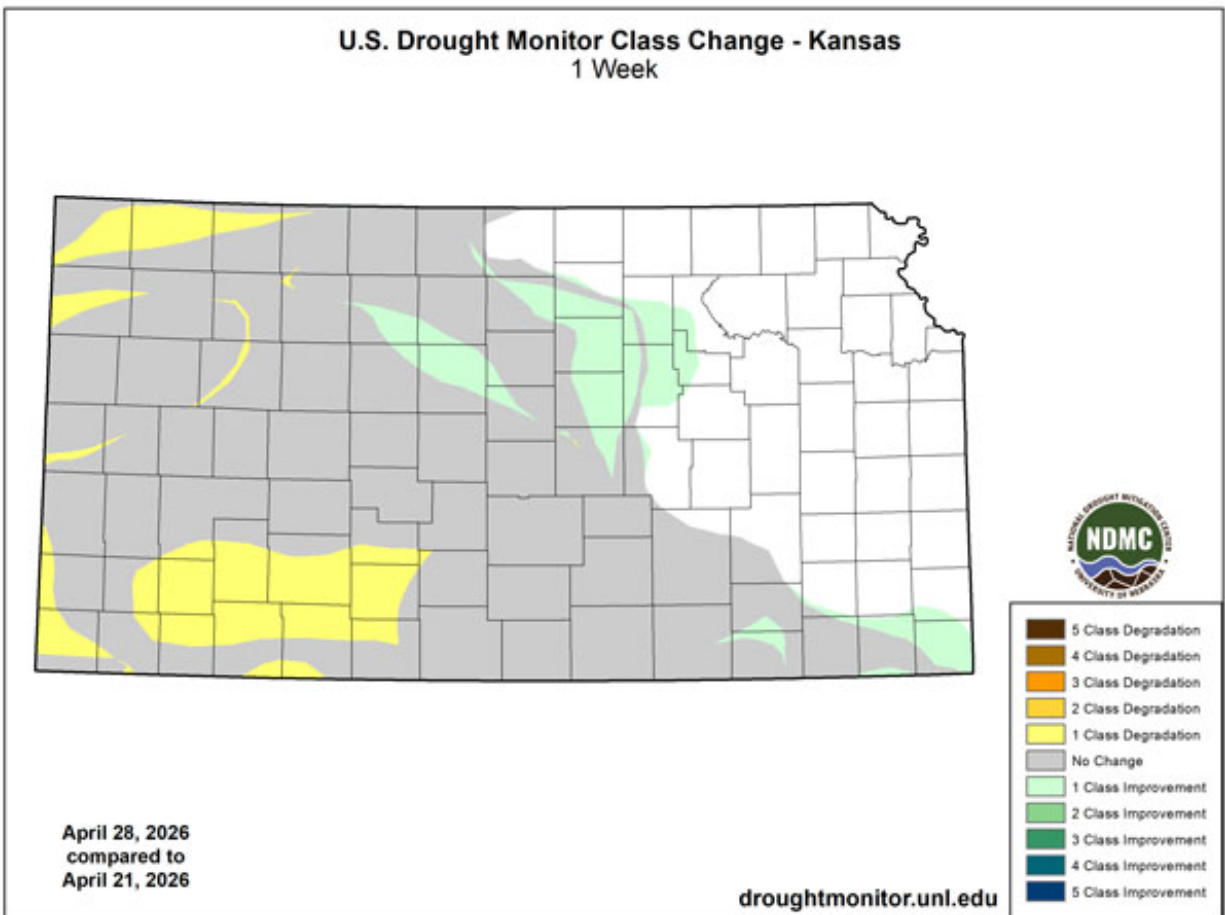


Figure 2. Current weekly drought status (top) and change in category over the past week (bottom) for Kansas (Source: U.S. Drought Monitor).

Looking ahead

The Weather Prediction Center’s **7-day precipitation forecast valid for the period April 29 through May 5**, calls for below normal precipitation in nearly all areas, but parts of west central Kansas could pick up over half an inch of rainfall if a system passing to the west of the state produces moisture that can spread far enough east (Figure 3). The rest of the state is expected to receive less than one-quarter inch of rainfall. Average precipitation for the forecast period is 0.50” in western, 0.84” in central, and 1.22” in eastern Kansas. Temperatures are forecast to average within a couple of degrees of normal, with a slow warming trend expected during the period. Kansas’ average daily high and low for the 7-day period are 71° and 46°, respectively.

In the slightly longer term, the **8 to 14-day outlook for May 6 through 12** slightly favors below-normal temperatures for a second straight week (Figure 4, top). The probability of below-normal temperatures increases from west to east, ranging from 33% along the Colorado border to 44% along the Missouri border. Precipitation probabilities (Figure 4, bottom) for any one outcome amongst above, below, and near normal precipitation are no higher than 36% at any location in the state, suggestive of a low confidence forecast with nearly equally likely outcomes. Above-normal precipitation is slightly favored in the southeast, with near-normal precipitation most likely across the remainder of the state. Far northeastern Kansas has slightly elevated chances of below normal precipitation.

Looking even further ahead, the **Climate Prediction Center's weeks 3 and 4 outlook** (Figure 5), issued on April 24 and valid for the 14-day period from May 9 through 22, favors below-normal temperatures across most of the state. The highest probabilities, ranging from 40 to 50 percent, lie across the eastern third of the state. Probabilities across the western two-thirds of the state range from 33 to 40 percent, with a small area across far southwestern Kansas having equal probabilities of above-, below-, and near-normal temperatures. Above normal precipitation is favored statewide, with most probabilities in the 33 to 40 percent range. Far southeastern Kansas has slightly higher probabilities, ranging from 40 to 50 percent.

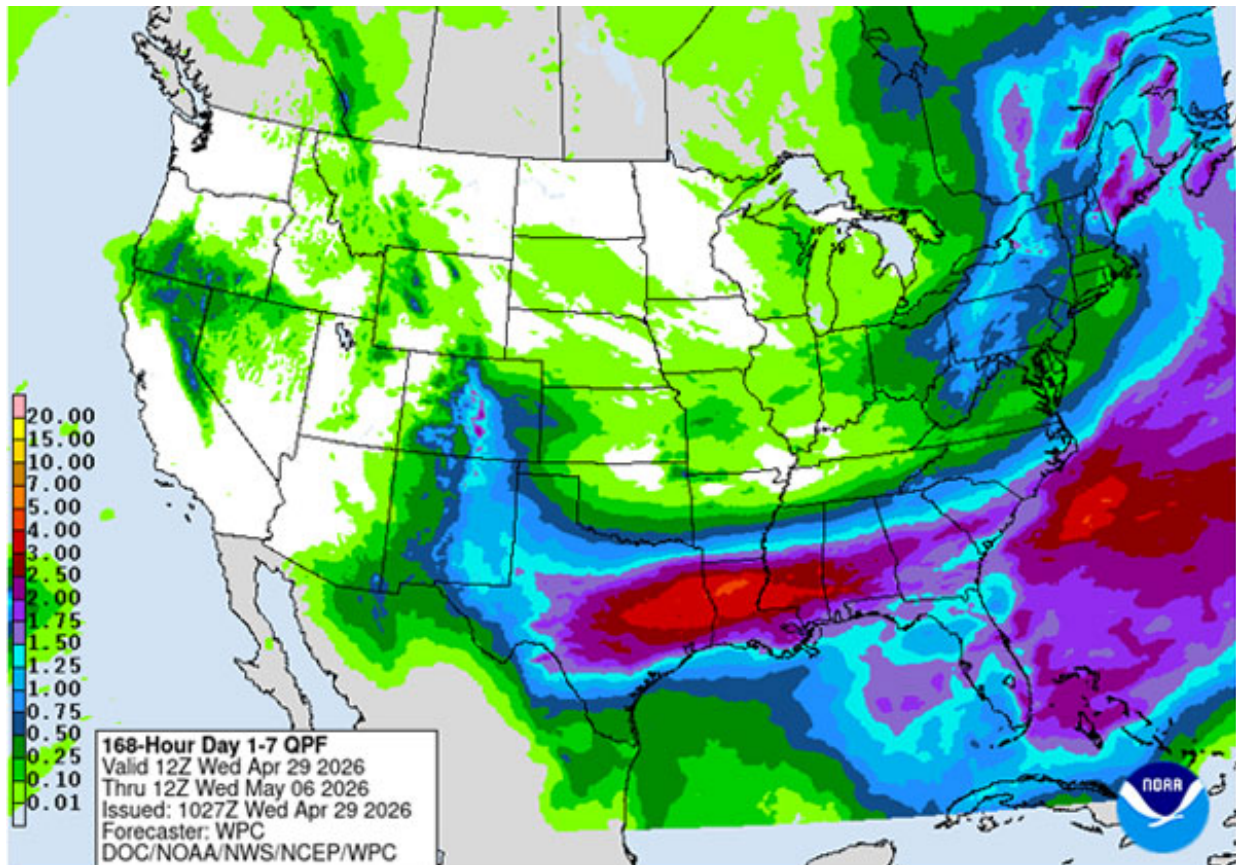


Figure 3. The National Weather Service Weather Prediction Center's (NWS-WPC) 7-day precipitation forecast.

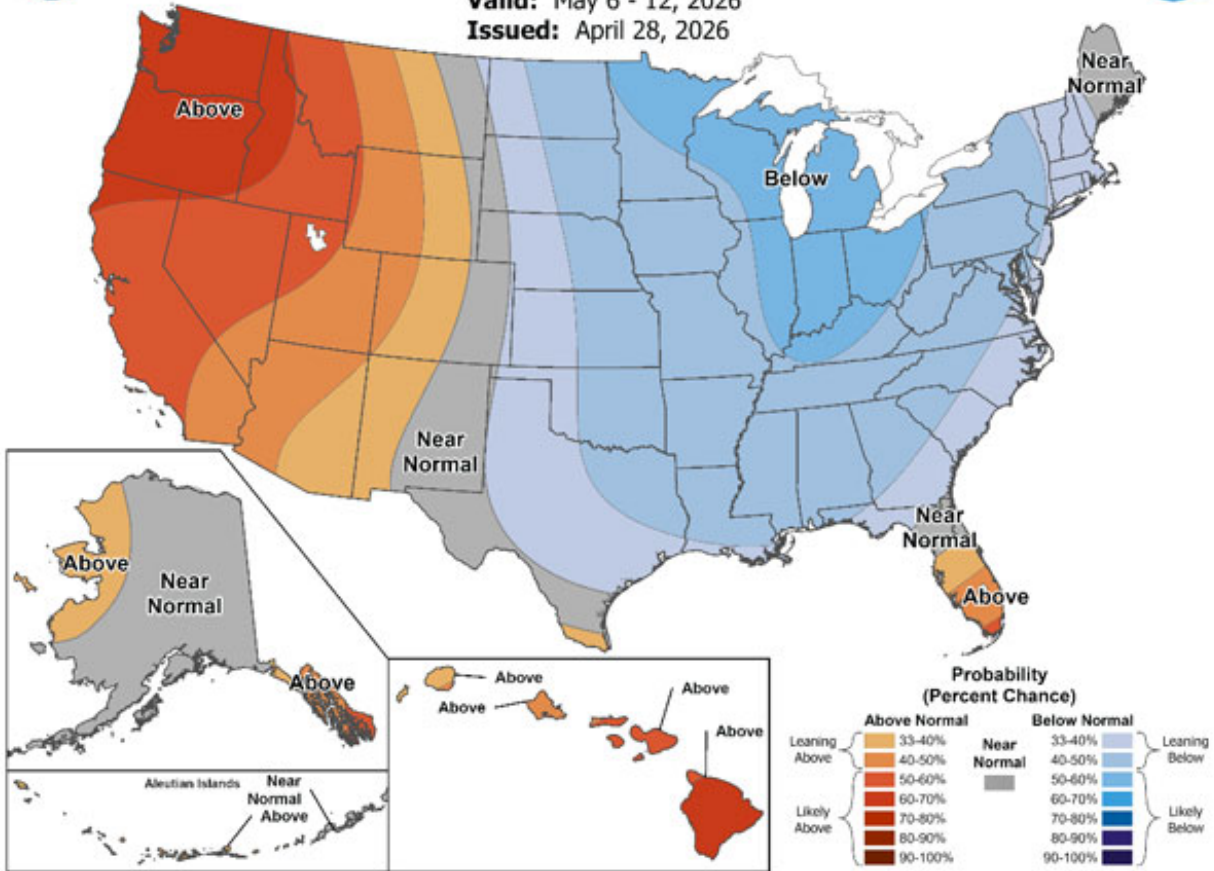


8-14 Day Temperature Outlook



Valid: May 6 - 12, 2026

Issued: April 28, 2026



Kansas State University Department of Agronomy

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8-14 Day Precipitation Outlook



Valid: May 6 - 12, 2026

Issued: April 28, 2026

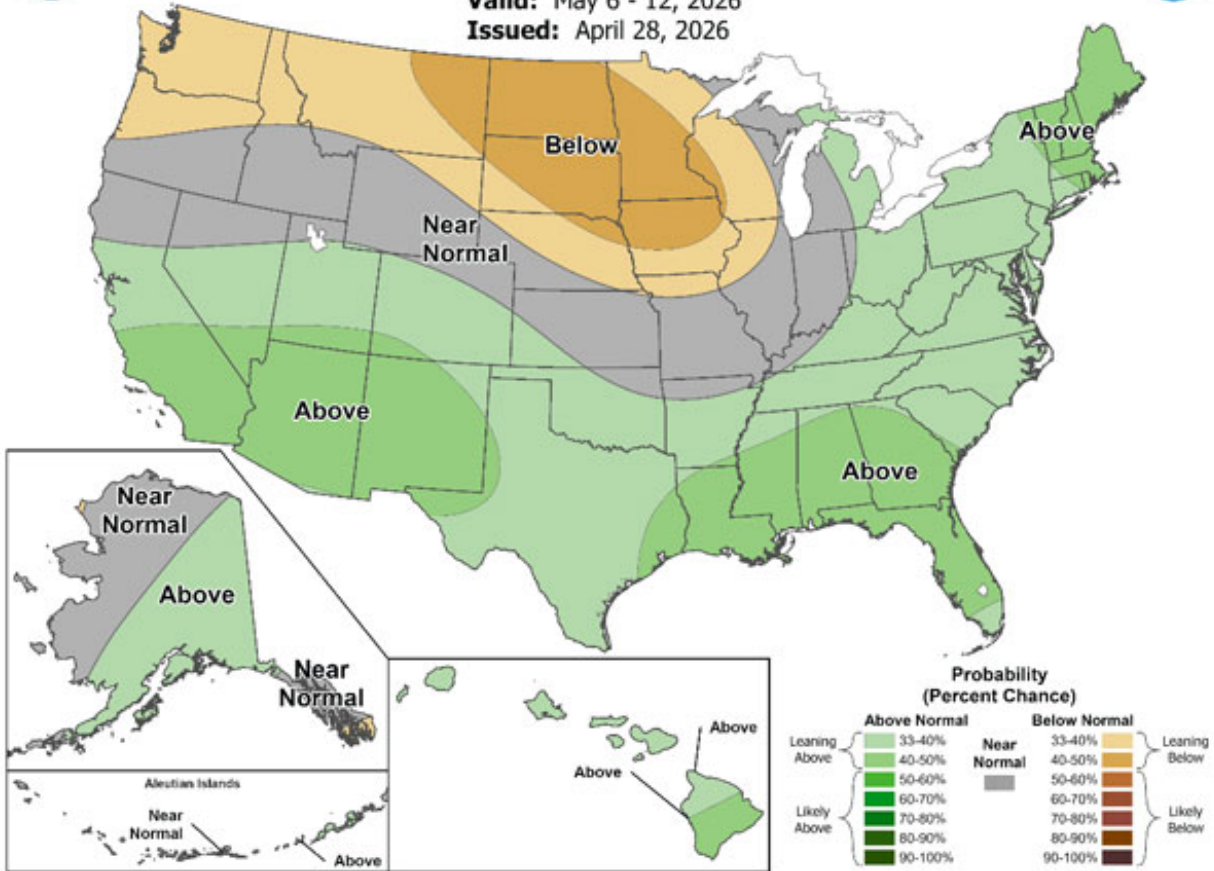


Figure 4. The National Weather Service Climate Prediction Center's (NWS-CPC) 8 to 14-day temperature (top) and precipitation (bottom) outlooks.

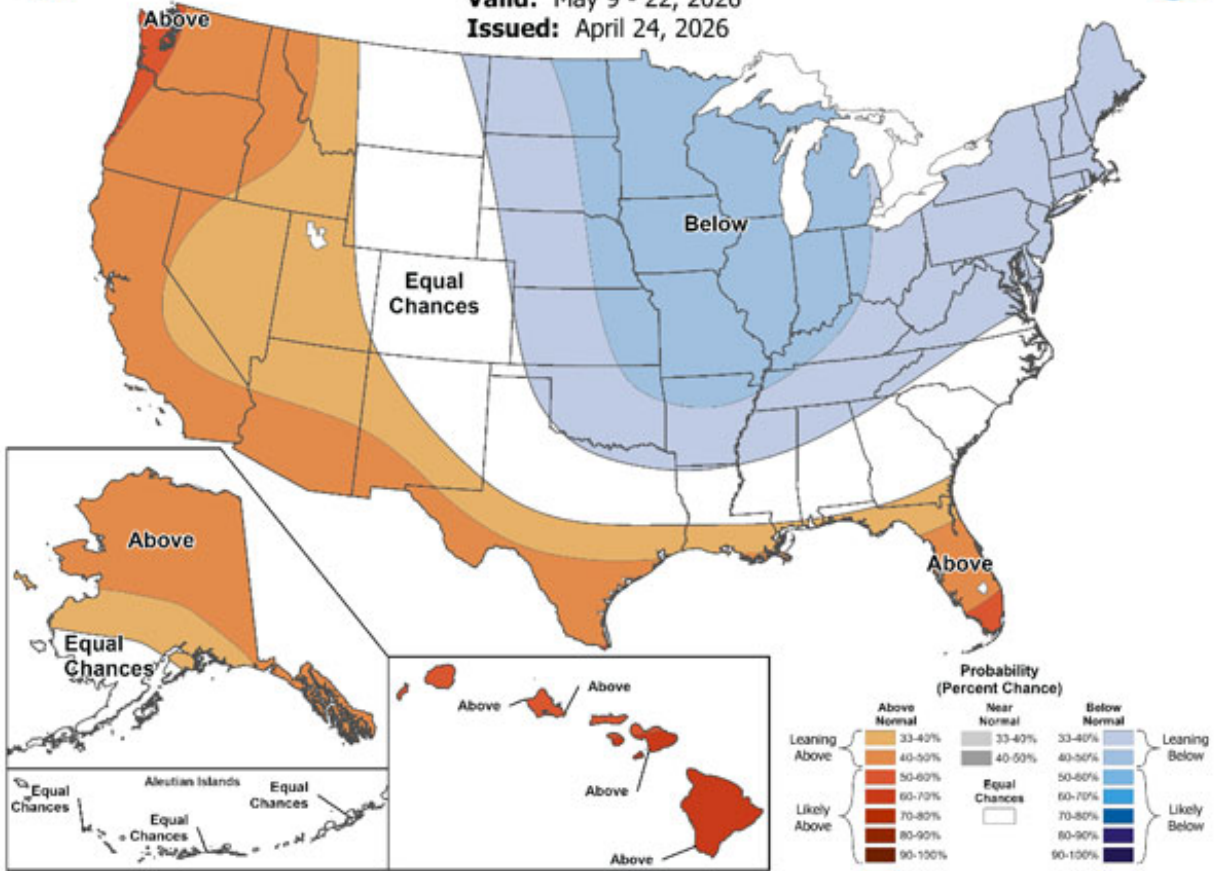


Week 3-4 Temperature Outlook



Valid: May 9 - 22, 2026

Issued: April 24, 2026



Kansas State University Department of Agronomy

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Week 3-4 Precipitation Outlook



Valid: May 9 - 22, 2026
Issued: April 24, 2026

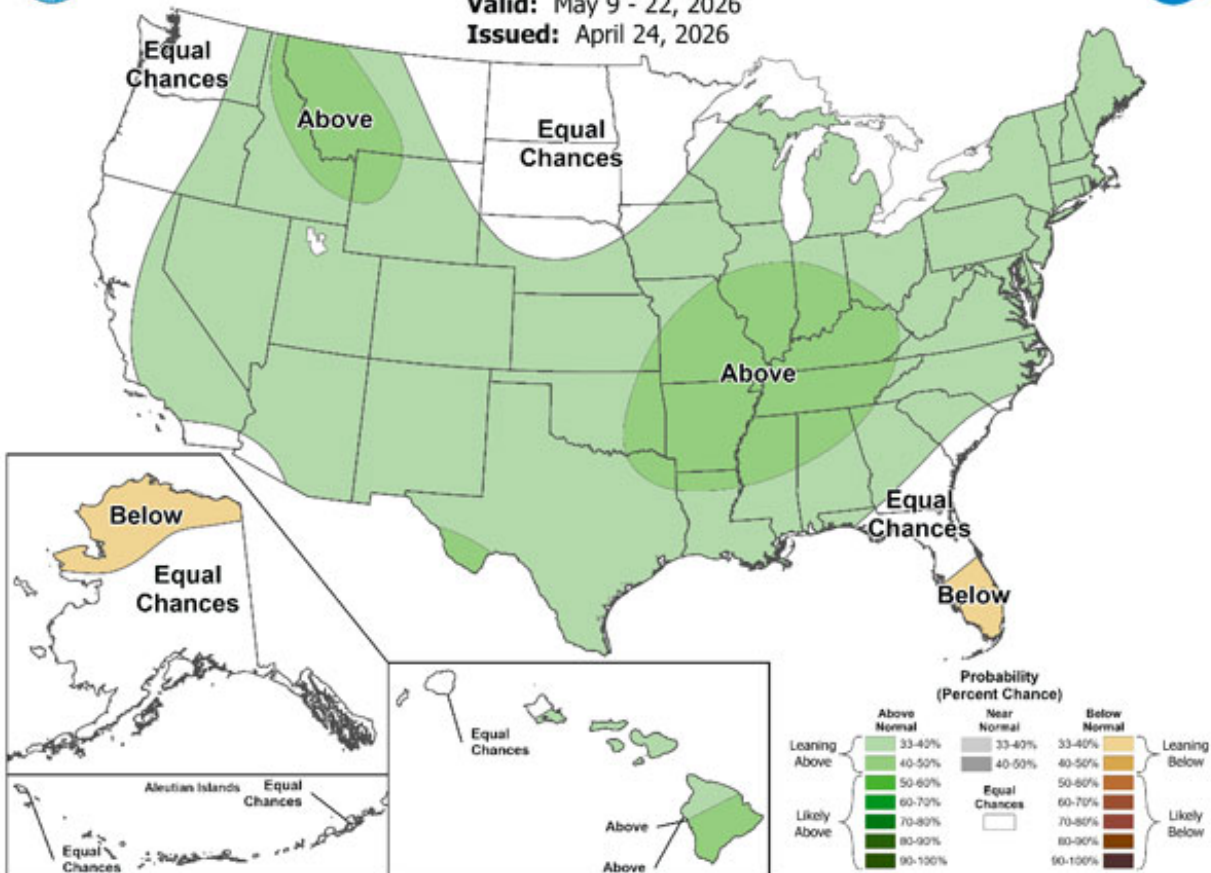


Figure 5. The Climate Prediction Center’s weeks 3 and 4 outlooks for temperature (top) and precipitation (bottom).

This article is an edited version of the weekly Kansas Drought Update and Climate Report; the full report includes additional tables and maps. If you would like to receive the full report delivered to your email each week, please send a request to Matt at msittel@ksu.edu to be added to the distribution list.

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