Issue 1032

K-STATE Research and Extension

Extension Agronomy

eUpdate

12/12/2024

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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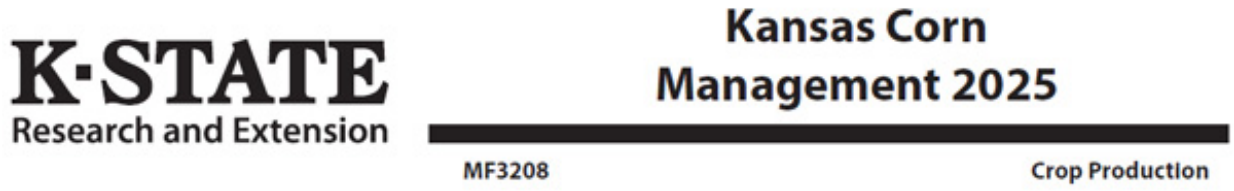
1. Corn management in Kansas for 2025

K-State Research and Extension has released a popular publication updated for the 2025 growing season: MF3208 *Kansas Corn Management*.



This publication offers advice to producers, crop consultants, and agronomists to manage Kansas corn crops as efficiently and profitably as possible. The recommendations provide guidelines and must be tailored to each producer's cropping conditions.

This comprehensive guide is written specifically for Kansas and includes valuable, up-to-date information on:

- Planting practices
- Plant density and yield gain
- Dry down before harvest
- Weed management
- Nutrient management
- Diseases
- Insect management
- Machinery
- Irrigation

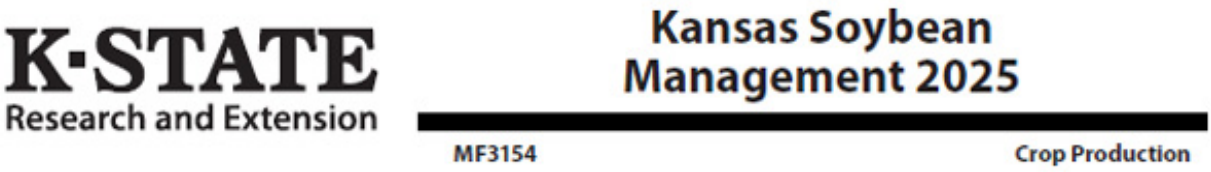
Visit the KSRE Bookstore to order paper copies of this publication or to view/download the online version: https://bookstore.ksre.ksu.edu/download/kansas-corn-management-2025_MF3208

Contributors to the 2025 version of this publication include:

Ignacio Ciampitti - Farming Systems
Sarah Lancaster - Weed Management
Dorivar Ruiz Diaz - Soil Fertility and Nutrient Management
Jonathan Aguilar - Bio and Ag Engineering – Irrigation
Ajay Sharda, Bio and Ag Engineering – Planting Systems
Rodrigo Onofre - Plant Pathology
Brian McCornack and Anthony Zukoff - Entomology
Victor Gimenez, Federico Gomez, and Priscila Cano - Crop Production and Cropping Systems

2. Soybean management in Kansas for 2025

K-State Research and Extension has released a popular publication updated for the 2025 growing season: MF3154 *Kansas Soybean Management 2025.*



This publication offers advice to producers, crop consultants, and agronomists to help manage Kansas soybean crops as efficiently and profitably as possible. Recommendations provide guidelines and must be tailored to the diverse conditions in cropping systems across the state.

This comprehensive guide is written specifically for Kansas and includes valuable, up-to-date information on:

- Tillage and rotations
- Variety selection
- Planting practices
- Seed quality management and potential uses
- Weed management
- Fertilizer requirements
- Diseases
- Insects
- Irrigation

Visit the KSRE Bookstore to order paper copies of this publication or to view/download the online version: https://bookstore.ksre.ksu.edu/item/kansas-soybean-management-2025_MF3154

Contributors to the 2025 version of this publication include:

Ignacio Ciampitti and Luiz Felipe- Farming Systems
Sarah Lancaster - Weed Management
Dorivar Ruiz Diaz - Soil Fertility and Nutrient Management
Jonathan Aguilar - Bio and Ag Engineering – Irrigation
Rodrigo Onofre - Plant Pathology
RJ Whitworth - Entomology

3. Waterers and Watering Systems: A Handbook for Livestock Producers and Landowners

A team of Kansas State University watershed specialists has revised a publication with tips on safeguarding the state's water resources while providing grazing animals with the water they need.

The publication, Waterers and Watering Systems: A Handbook for Livestock Producers and Landowners, is available online at https://bookstore.ksre.ksu.edu/pubs/S147.pdf and may also be available at local extension offices in Kansas.

There are three main methods to deliver water to livestock:

- Provide direct access to a water source such as a stream or pond;
- Allow water to flow by gravity from a higher elevation into a waterer or tank;
- Pump water from a lower elevation to a higher elevation into a waterer or tank.

Water delivery is often a combination of the water source, a power source, a pipeline to convey the water to the waterer, and the waterer itself. Each component of the watering system should be selected for compatibility with the entire watering system and livestock needs.

This handbook assists in the design of a watering system that fits your budget, site, and livestock needs. Some systems require specific geological formations (such as springs) or depend on specific elevation differences. While components may be off-the-shelf, the arrangement and installation of a watering system must be adjusted to each site. As you look through this handbook, keep in mind the characteristics of your land and site, the time you have available for management and upkeep, and the size and type of animal you have. These will all factor into decisions about which option to choose.

Various factors contribute to poor water quality and ultimately result in poor livestock performance or death. Mineral, biological, and chemical components can impair water quality. Drought conditions can concentrate components as water levels drop. Manure runoff often affects multiple water-quality constituents, such as nitrates, blue-green algae, and undesirable bacteria. Tolerance to each constituent varies by species, health condition, age, and season. Providing livestock with improved access to plentiful, clean water is a good reason to upgrade a watering system.

The full publication can be viewed at https://bookstore.ksre.ksu.edu/pubs/S147.pdf.

Editors:

Carol Balwin, Range Specialist
carolbaldwin@ksu.edu

Hershel George, Watershed Specialist, retired

Additional authors:

Jeffrey Davidson, Flint Hills Watershed Specialist
Jaymelynn Farney, Beef Systems Extension Specialist - Parsons

Ron Graber, Central Kansas Watershed Specialist
Will Boyer, Northeast Watershed Specialist
Stacie Minson, Big Creek/Little Smoky Hill River Watershed Specialist
Daniel Skucius, Northeast Watershed Specialist

Kansas State University Department of Agronomy
2004 Throckmorton Plant Sciences Center | Manhattan, KS 66506
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4. Kansas Drought Update and Climate Report: December 4-10, 2024

Temperature summary

A 9-day run of below-normal temperatures ended on the first day of the period, December 4, when the average temperature across the Kansas Mesonet was nearly 10 degrees above normal. There was a 1-day return to below-normal conditions on the 5th before milder weather took hold again. There were 4 straight days of above-normal temperatures from the 6th through the 9th before another cooldown on the 10th brought slightly below-normal readings to end the period. The average high temperature was a chilly 36° on the 5th or 11 degrees below normal. But two days later, the average high on the 7th was 65°, over 18 degrees above normal. While the average high on the 8th was a bit cooler (58°), the week's warmest temperature was recorded that afternoon in Wallace at a warm 74°. Goodland's high of 68° on the 8th, while two degrees shy of a daily record, was 23 degrees above the normal for the date of 45°. Despite the rollercoaster ride of readings, average lows were below freezing on all 7 days and in the upper teens on both the 5th and the 6th. The 7-day average temperature was 37.5°, or 2.6° above normal (Figure 1). All nine divisions were above normal for the week; departures ranged from +0.4° in east central and southeast Kansas to +6.1° in northwest Kansas. The month to date is running 1.4 degrees above normal for December, based on Kansas Mesonet data for the first 10 days of the month. January through November 2024 currently ranks as the 4th warmest of the past 130 years, and there is the potential to move up on the final ranking for the full year of 2024 should warmer-than-normal conditions dominate the remainder of this month, which is currently forecast.

Precipitation summary

The only precipitation in the state during the period was in the form of isolated showers in southern and eastern Kansas on the afternoon and evening of the 8th. The highest precipitation total was 0.03" reported by the cooperative observers in Sedan and Pittsburg and a CoCoRaHS observer near Iola. The remainder of the state was dry for the entirety of the period. The statewide average precipitation for the 7-day period was 0.00"; the normal amount is 0.28". Despite the recent dryness, precipitation remains above normal for the water year, which began on October 1. The average statewide total for the water year to date is 5.99", or 1.69" above the normal of 4.30" (Figure 1). All nine divisions are above normal, with percents of normal ranging from 117% in the northeast to 196% in southwest Kansas. Departures from normal range from +0.87" in northeast to +3.11" in southeast Kansas. For the year, the statewide average precipitation is 27.66", or 2.47" below normal. Two divisions are above normal for the year: southwest (112%), west central (105%). East central slipped to below normal this week (99%, -0.37"). North central has the lowest percent of normal (86%) as well as the largest departure from normal (-3.99").

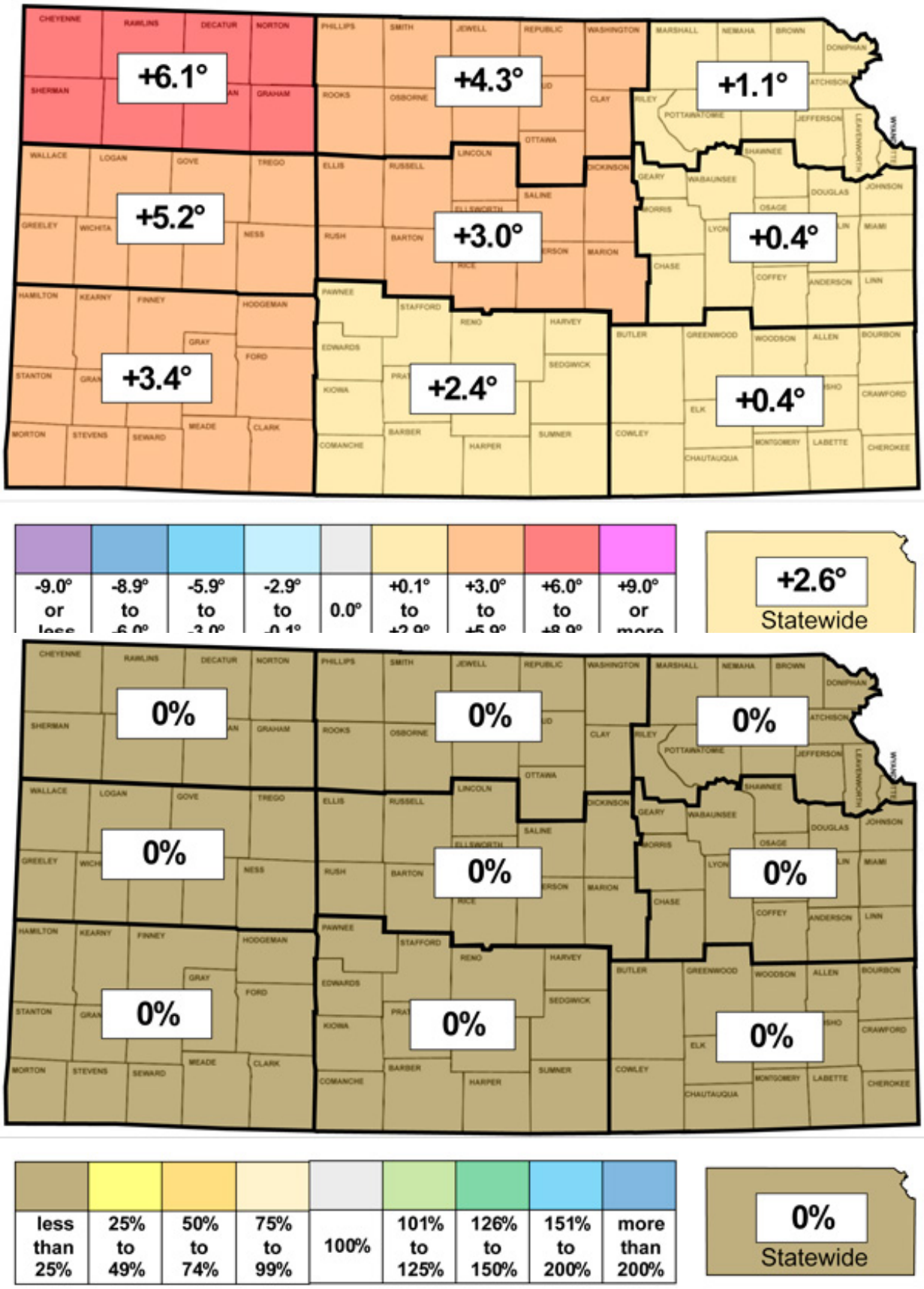


Figure 1. This week's departure from normal temperature (°F, top) and percent of normal

precipitation (bottom) by Kansas climate division. Source: MRCC.

Drought update

In this week's US Drought Monitor map, the only change since last week was a 1-category improvement that includes parts of six counties in southwest and west central Kansas: Wichita, Scott, Lane, Ness, Kearny, and Finney. This change removed 2.1% of the D0 area in the state; 33.4% of Kansas is now free of any drought status (Figure 2). The statewide Drought Severity and Coverage Index (DSCI) fell 2 points and now stands at 96.

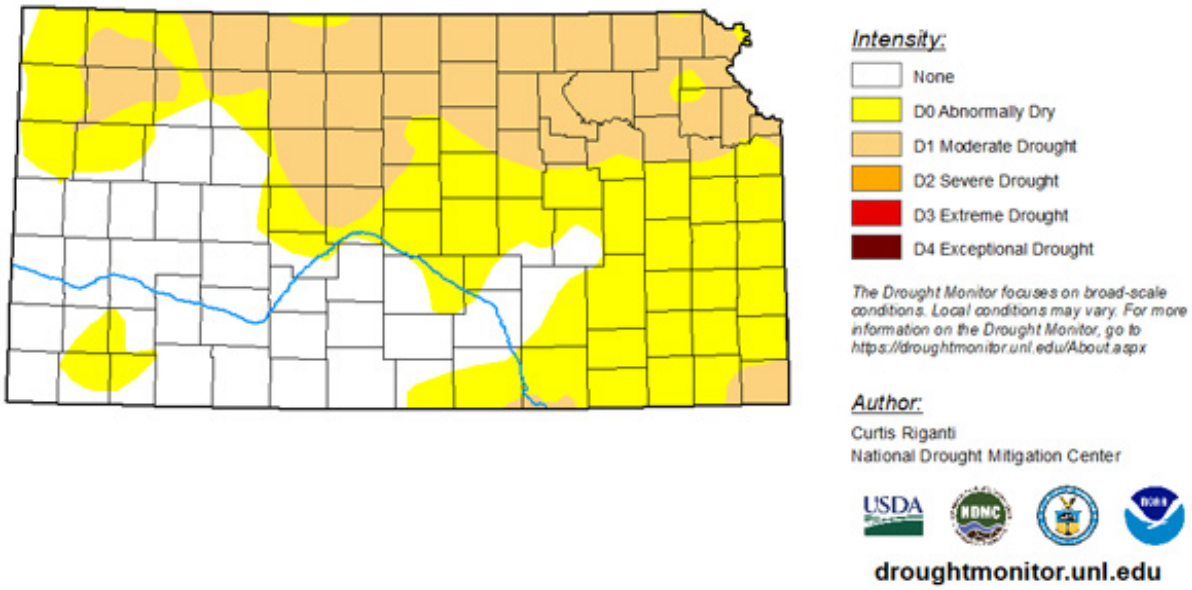


Figure 2. Current weekly drought status as of December 10, 2024. Source: UNL Drought Monitor.

Weather outlooks

The Weather Prediction Center's 7-day precipitation forecast, valid for the period December 11th through the 17th, calls for precipitation in the eastern half of the state. Amounts are expected to be light in most areas, but a few areas may pick up 0.25" or more. A few of the higher forecast totals include 0.36" at Coffeyville, 0.35" at Lawrence, 0.34" at Parsons, and 0.28" at Olathe and Topeka. Most, if not all, of the precipitation should fall in liquid form, as a warming trend is predicted during the period. Average temperatures are expected to run from 2 to 10 above normal degrees during the period, with the highest departures expected in southern Kansas, where highs early next week could reach into the 60s. The average daily high and low across Kansas for this period are 44° and 22°. Average 7-day precipitation is 0.15" in western, 0.25" in central, and 0.38" in eastern Kansas.

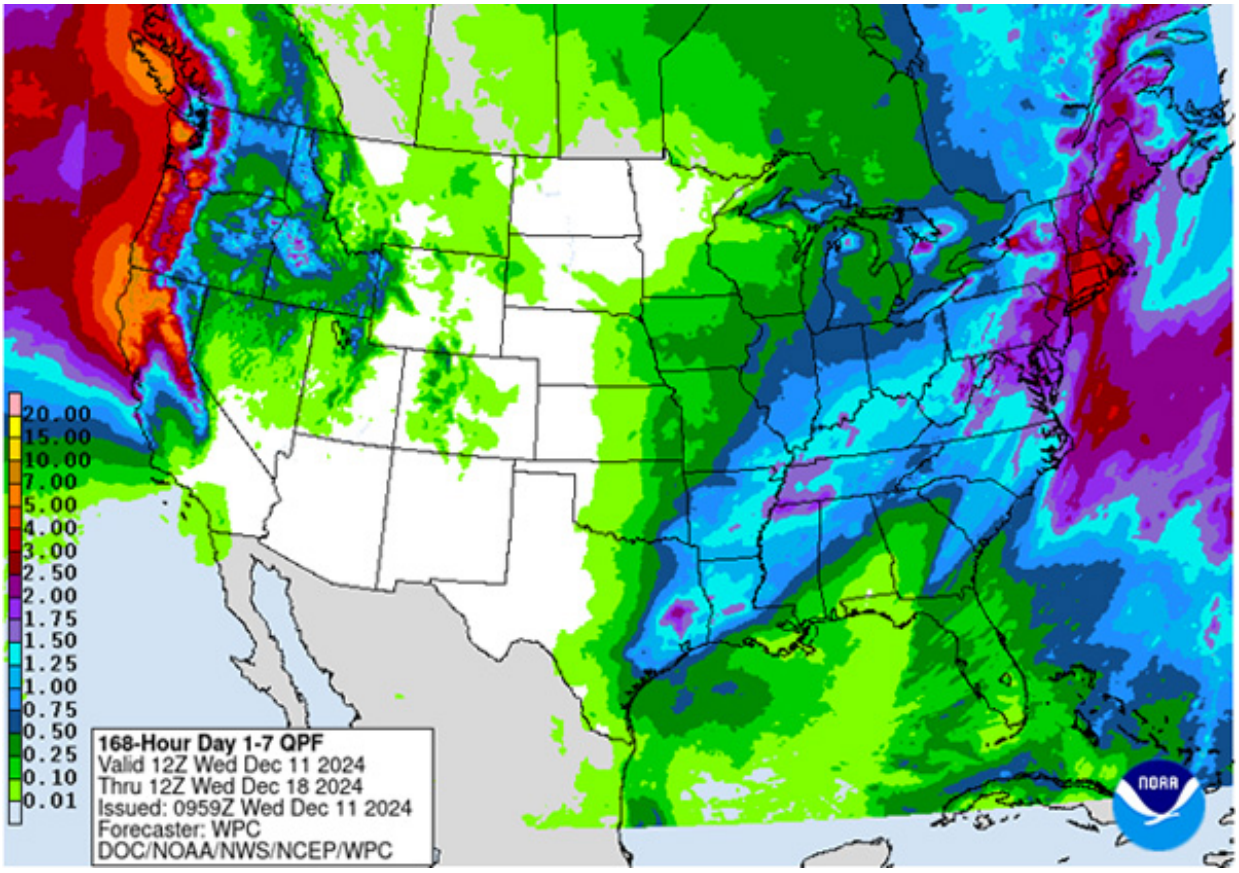
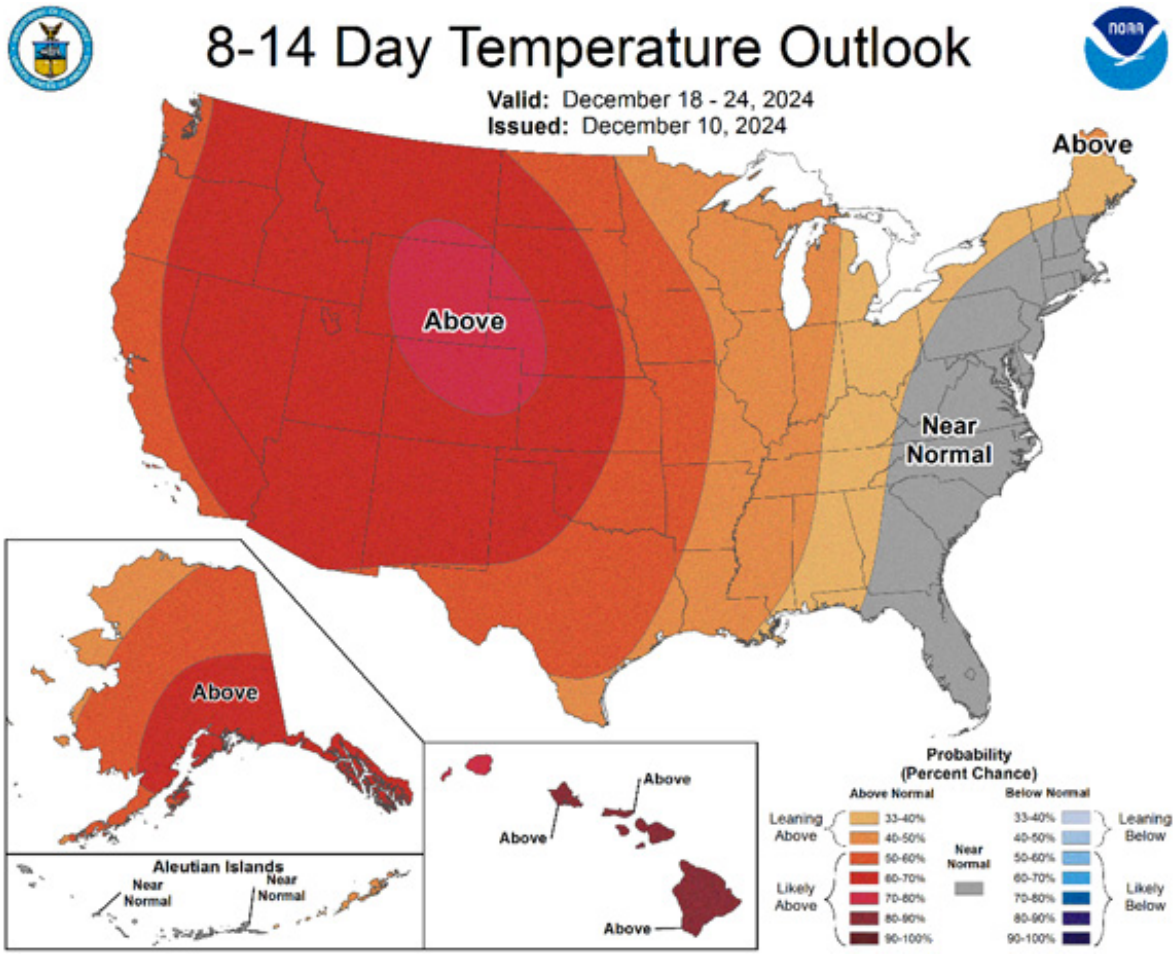


Figure 3. The National Weather Service Weather Prediction Center's (NWS-WPC) 7-day precipitation forecast (Dec. 11 to Dec. 17, 2024).

In the longer term, the 8 to 14-day outlook (Figure 4), valid for December 18-24, strongly favors above-normal temperatures statewide, with probabilities ranging from 55% in the far southeast to 74% in the far northwest. Below-normal precipitation is slightly favored in most areas, with the highest probability of below-normal precipitation at 37% in far northwest Kansas. Near normal precipitation is favored south and east of a line from Olathe to Wellington, with a maximum probability of 36% in the far southeast. None of the precipitation probabilities are particularly noteworthy as they indicate low confidence in any one event occurring.



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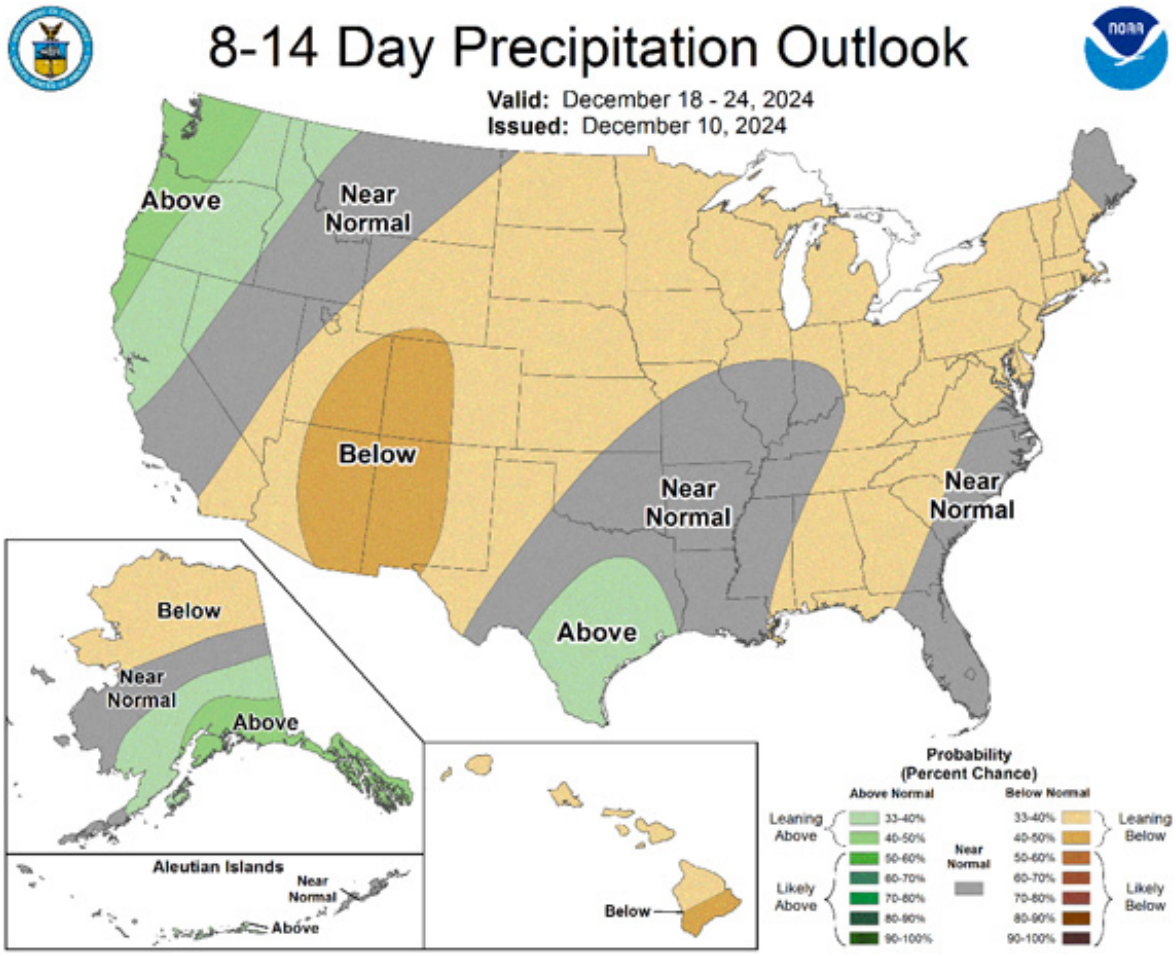
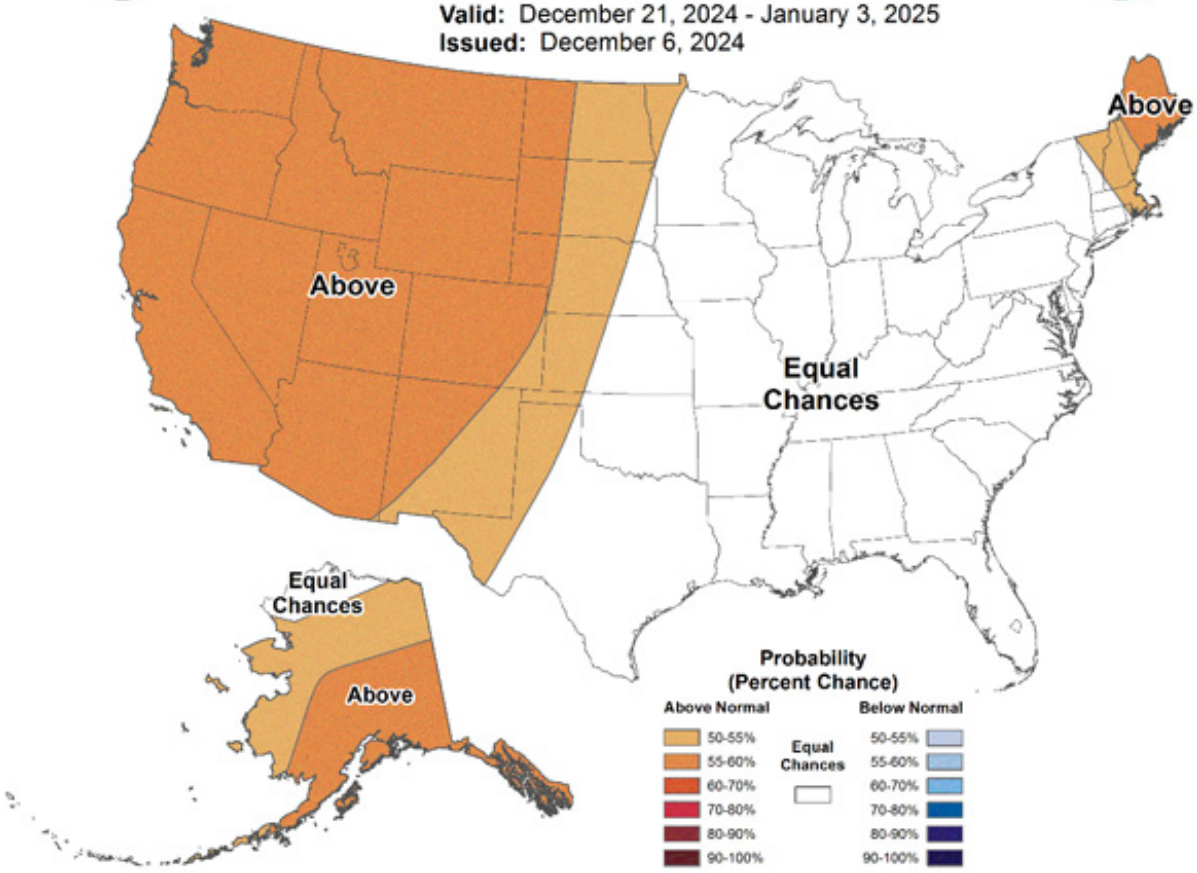


Figure 4.The National Weather Service Climate Prediction Center's (NWS-CPC) 8 to 14-day temperature (top) and precipitation (bottom) outlooks.

Looking even further ahead, the Climate Prediction Center's weeks 3 and 4 outlook, valid for the 14-day period from December 21st through January 3rd, including Christmas and New Year's Day, calls for above-normal temperatures in western Kansas, with near-normal temperatures in east. The entire state has equal chances of above and below precipitation.

Weeks 3-4 Temperature Outlook

Valid: December 21, 2024 - January 3, 2025
Issued: December 6, 2024



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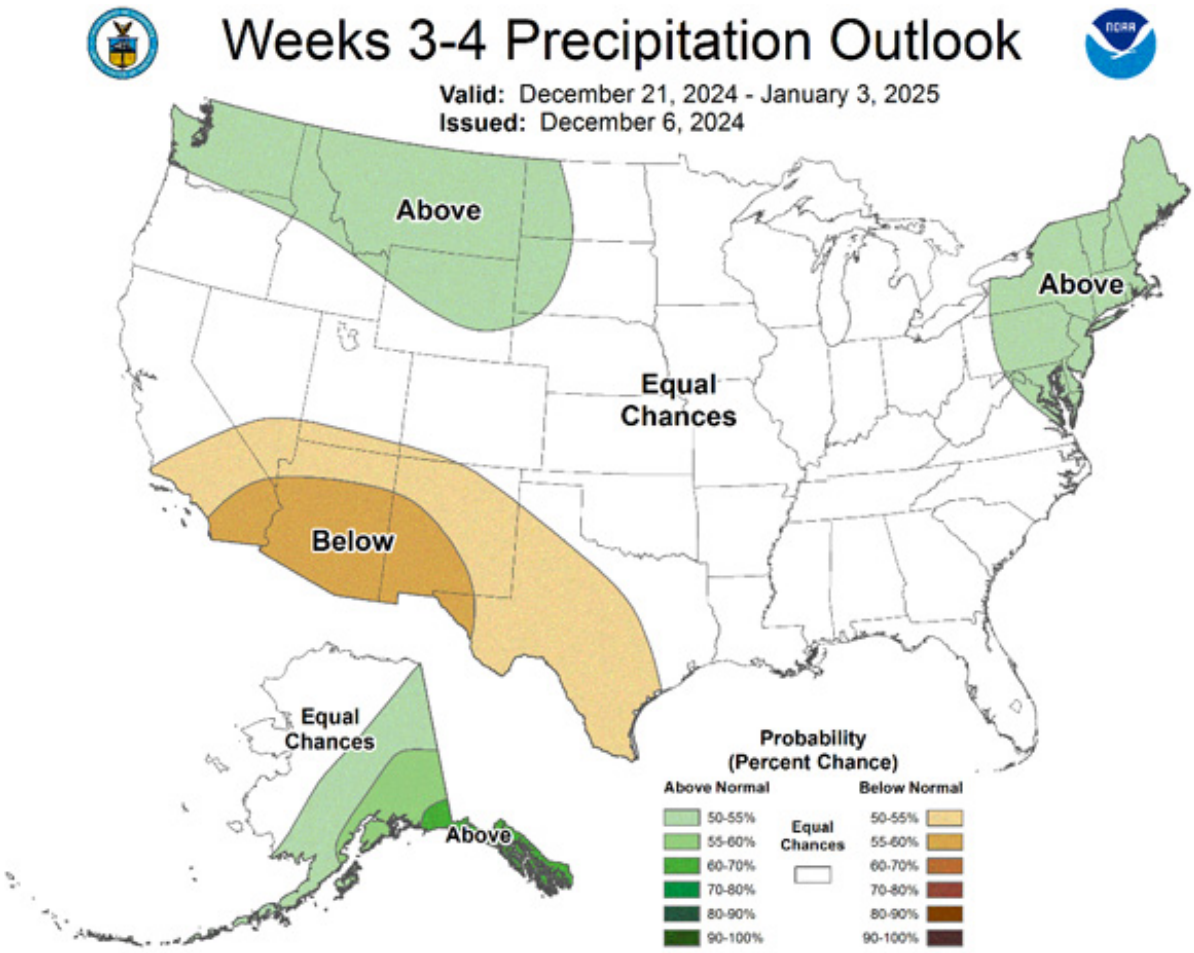

Figure 5.The Climate Prediction Center's weeks 3 and 4 outlooks for temperature (left) and precipitation (right).

This article is a shortened version of the weekly Kansas Drought Update and Climate Report**.** 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. He will add you to his distribution list.

Matthew Sittel, Assistant State Climatologist
msittel@ksu.edu

5. Save the Date for the 2025 Corn and Soybean Schools

For the second year, Kansas Corn and Kansas Soybean are partnering with K-State Research and Extension to offer the Kansas Corn and Soybean Crop Schools. These full-day winter learning sessions will feature informative presentations for both crops.

The Kansas Corn and Soybean Schools will cover several issues and opportunities for growers and are tailored to each region. Topics include weed control, insect resistance, fertility management, disease management, late-planting seasons, economics, and farm policy. Morning refreshments and a hot lunch are provided at these in-person schools. CCA and Commercial Pesticide Applicator credits have been applied for.

2025 Kansas Corn and Soybean Crop Schools

Each program will start at 9:00 AM (check-in at 8:30 AM) and conclude at 3:00 PM.

- **January 14 (Tuesday) – Highland**
  Geiger Ag
- **January 15 (Wednesday) – Parsons**
  K-State Southeast Extension and Research Center
- **January 16 (Thursday) – Hesston**
  AGCO
- **January 17 (Friday) – Oakley**
  Buffalo Bill Cultural Center

Stay tuned to the Agronomy eUpdate for the complete agendas to be released soon. Registration for all locations is open at https://kscorn.com/Schools/.

Luiz Felipe Almeida, Cropping Systems Graduate Student
luizfelipeaa@ksu.edu

Kathy Gehl, Extension Program Coordinator
kgehl@ksu.edu

Emily Koop, Kansas Corn
ekoop@ksgrains.com

Jancey Hall, Kansas Soybean
hall@kansassoybeans.org