



K-STATE
Research and Extension

Extension Agronomy

eUpdate

11/06/2025

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.

Subscribe to the eUpdate mailing list: <https://listserv.ksu.edu/cgi-bin?SUBED1=EUPDATE&A=1>

1. Winter Annual Grass Control in Winter Wheat..... 3

2. Color Banding on Seedling Wheat..... 6

3. Protect Your Soybeans Next Year: Test for Soybean Cyst Nematode After Harvest..... 8

4. 2025 Kansas Soybean Yield and Value Contest - Entries due Nov. 15..... 12

5. Share Your Input: Digital Ag and AI Survey for Farmers..... 14

6. Sorghum Connection Launches Second Year of Winter Educational Series..... 16

1. Winter Annual Grass Control in Winter Wheat

Beneficial rains have brought much-needed moisture to the Kansas wheat crop. However, the moisture can also trigger winter annual weeds, especially in fields with poor wheat stands or where continuous wheat or wheat-fallow rotations are used. This article will focus on the grass weeds common in wheat.

Like wheat, winter annual grasses typically emerge in the fall (although early spring emergence is possible). They go dormant during the coldest months, then resume growth and produce seeds in the spring. The weedy brome species cheatgrass (also known as downy brome), Japanese brome, and cheat are among the grass weeds most commonly found in Kansas wheat (Figure 1). Jointed goatgrass and feral rye are also prevalent and are especially challenging to control. Cheat and feral rye are typically found in the eastern parts of the state, whereas cheatgrass and jointed goatgrass are more often found in the west. Table 1 provides a list of postemergence herbicides labelled for these species and their efficacy on each species.



Figure 1. Cheatgrass (downy brome) growing in winter wheat. Photo by Patrick Geier, K-State Research & Extension.

Table 1. Postemergence herbicides for controlling winter annual grasses in Kansas.

Herbicide	Cheat (downy brome)	Cheatgrass	Japanese brome	Jointed goatgrass	Feral rye
Aggressor (CoAXium wheat only) ²	G-E	G-E	G-E	G-E	G-E
Batalium Amped	F-G	F-G	F-G	P-F	-
Beyond Xtra (Clearfield wheat only) ²	E	G-E	E	E	G
Everest 3.0	G-E	P-F	G-E	-	-
Metribuzin	F-G	F	G	-	-
Olympus	E	F-G	E	P	-
Osprey	F	F	F	-	-
Outrider	G-E	F-G	G-E	-	-
Powerflex HL, GR1	E	F-G	E	-	-
¹ Ratings: E = excellent, G = Good, F = fair, P = poor, - = weed not listed on herbicide label. Products with residual activity are in bold . ² Application of Aggressor to non-CoAXium wheat or Beyond Xtra to non-Clearfield wheat will result in severe crop injury.					

Considerations for Herbicide Applications

As a general rule, fall applications will provide better control of these weeds than spring applications. However, it is important to remember that weeds must be actively growing for herbicides to be effective. Be aware of the temperatures in your area to ensure weeds are not dormant. One temperature guideline to consider using is low temperatures above freezing and high temperatures above 50°F for three to five days before and after the application. Delaying applications until spring, when herbicide can be mixed with topdress fertilizer, is an option, although this can lead to greater yield loss due to competition and reduced herbicide efficacy. Furthermore, spring applications may not meet crop rotation intervals. Always read the herbicide label to determine recropping intervals and adjuvant requirements.

The growth stage is also important when applying several of these herbicides. For example, Aggressor herbicide should be applied between the 4-leaf to jointing stage, before the grassy weeds exceed the 4- to 5-leaf stage. Beyond Xtra can be applied to one gene Clearfield varieties between tiller initiation and jointing, and the two-gene Clearfield Plus varieties between the 2-leaf and the second joint stage of growth. Batalium Amped can start to be applied at the 2-leaf stage. Outrider can be applied after wheat is in the two-leaf stage, but before the jointing stage in the spring. Olympus can be applied after emergence but before the jointing stage. However, applications before wheat tiller initiation have a greater risk of stunting the crop.

Other Options: Crop Rotation and Seed Destruction

Crop rotation is an effective method of preventing winter annual weeds in wheat. One or more summer annual crops between wheat crops disrupts the life cycle of winter annual weeds, allowing for the use of other cultural and chemical methods for their control. Narrower row spacings or

increased wheat seeding rates can make wheat more competitive with weeds. In dry environments, seeding wheat deeper into moist soil may allow wheat to emerge before weedy brome seeds that must germinate from dry soil nearer the soil surface. Alternatively, delaying planting until after the first flush of weedy grasses has emerged may also be an effective cultural management practice when moisture is abundant.

Seed destruction of some winter annual grasses (cheatgrass, feral rye, and jointed goatgrass) at wheat harvest may be a viable option to reduce the amount of weed seed that returns to the soil seedbank, which may reduce the density of winter annual grasses in the following seasons. More information on harvest weed seed destruction can be found at:

<https://eupdate.agronomy.ksu.edu/article/harvest-weed-seed-destruction-a-tool-for-managing-herbicide-resistant-weeds-601-1>

Summary

Several effective options exist to control weedy brome species. Jointed goatgrass and feral rye control options are more limited and will likely require planting either a Clearfield or CoAXium wheat variety. In fields where winter annual grasses are known to be a problem, cultural practices can be implemented to reduce their impact, such as using an herbicide-resistant wheat variety or rotating to a summer crop

For additional information about these herbicides, see [2025 Chemical Weed Control for Field Crops, Pastures, Rangeland, and Noncropland](#), K-State publication SRP-1190.

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.

Patrick Geier, Weed Scientist, Garden City
pgeier@ksu.edu

Logan Simon, Southwest Area Agronomist, Garden City
lsimon@ksu.edu

Sarah Lancaster, Extension Weed Management Specialist
slancaster@ksu.edu

Jeremie Kouame, Weed Scientist, Agricultural Research Center – Hays
jkouame@ksu.edu

Jeanne Falk Jones, Northwest Area Agronomist, Colby
jfalkjones@ksu.edu

2. Color Banding on Seedling Wheat

Occasionally, a field of seedling wheat may appear to have an off-color, and when examined more closely, color banding is evident on newly emerged seedlings. This banding can range from light yellow to reddish-purple in color (Figure 1).



Figure 1. Color banding on newly emerged wheat seedlings from temperature fluctuations, with a close-up view in the bottom photo. Photox by Jeanne Falk Jones, K-State Research and Extension.

What causes color banding?

The bands of color on an otherwise green plant are the result of temperature extremes, likely warm daytime highs and freezing (or near-freezing) temperatures at night. These wide swings in temperature result in significant fluctuations in photosynthate production and utilization within the plant, affecting plant growth. This typically occurs on the first leaf to emerge from the soil, on tender leaf tissue. You may see only one band or two to three bands, with each band representing a temperature swing. These plants are typically found throughout the field, not just on a field edge.

Color banding can occasionally be seen in the spring, after a cold event. This typically appears as a purple band on the stem, near the leaf collar of the most recently emerged leaf. The purple is typically a result of sugar accumulation in the tissue when crop growth is temporarily paused due to the cold temperatures. This area is the most tender plant tissue due to recent stem elongation. It is most often seen on the plants near the edge of a field, as these plants were the most exposed to the cold temperature.

What does this mean for the wheat?

The wheat will recover from this discoloration, and it will not affect plant growth and development. In the seedling wheat, if you revisit the field after a week of good growing conditions, additional leaves will have developed, and the banding will likely not be found.

Jeanne Falk Jones, Northwest Area Agronomist, Colby
jfalkjones@ksu.edu

Lucas Haag, Agronomist-in-Charge, Tribune
lhaag@ksu.edu

Romulo Lollato, Wheat and Forages Extension Specialist
lolato@ksu.edu

3. Protect Your Soybeans Next Year: Test for Soybean Cyst Nematode After Harvest

Soybean cyst nematode (SCN) is the number one yield-limiting pathogen of soybean and is distributed in fields throughout eastern and central Kansas. This pest has been identified in 64 counties that account for more than 85% of the state's soybean production (Figure 1). A recent 2-year survey of soybean growers in Kansas found that fewer than 10% of growers test for SCN.

Visible symptoms of SCN can easily be confused with other issues in soybean production. SCN also weakens plants, making them more susceptible to other diseases such as Sudden Death Syndrome (SDS). Because SCN populations can increase rapidly and persist in the soil for years, regular monitoring is essential. Sampling helps determine whether current management strategies, such as crop rotation and use of resistant soybean varieties, are effectively reducing nematode numbers. Without testing, populations can build silently, resulting in significant long-term yield losses.

The best time to test for SCN is immediately after harvest, when soil conditions are favorable for sampling and before making seed and rotation decisions for next season. Confirming SCN presence, estimating population levels, and monitoring the effectiveness of resistant varieties form the foundation of a successful integrated management plan.



Figure 1. As of October 1, 2025, SCN was identified in 62 Kansas counties that produce >85% of Kansas soybeans. Map by William Rutter and Chandler Day, K-State Research and Extension.

To collect a SCN sample, you will need:

1. A soil probe (or sharpshooter spade)
2. A bucket

3. A labeled bag. The label should include the following information:
 - a. Field identification (*i.e.*, Field ID: North Farm, near Doe Creek)
 - b. Size of the area being sampled (*i.e.*, 20 acres)
 - c. Crop rotation history (*i.e.*, soybean, corn, and soybean)

Recommended field pattern for sample collection:

If your field is fairly uniform, divide it into quadrants or sections for your SCN sample collection. Fields with different cropping histories or soil types should be sampled separately. **For each quadrant, collect 10 to 20 cores to a depth of 6 to 8 inches.**

Walk the area in a systematic pattern, such as a “Z” pattern (Figure 2). Collect a total of 10 to 20 soil cores, emptying each into the bucket after collection. All core samples should be mixed well to account for variation between cores. After mixing, collect 1 pint of soil (~2 cups) in a labeled plastic bag and seal.

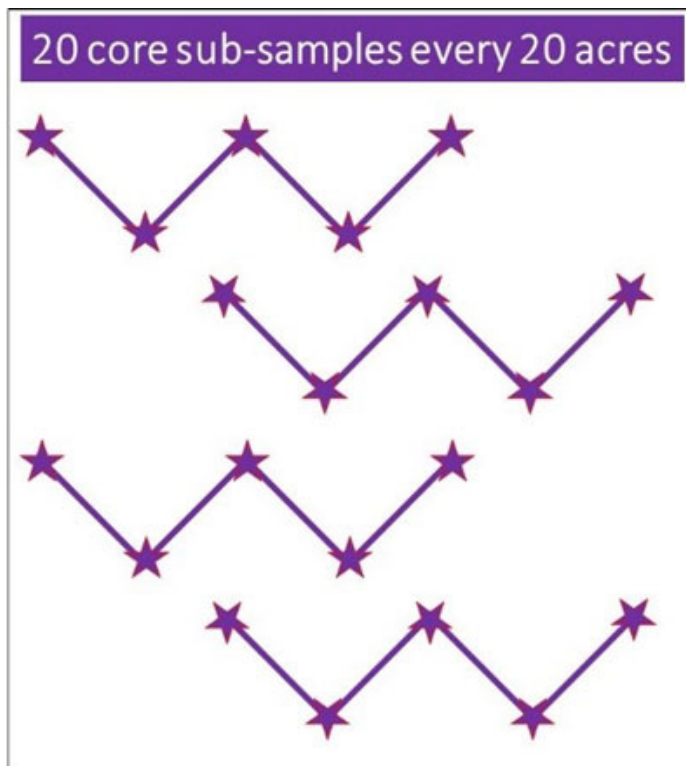


Figure 2. Example of a good sampling pattern for collecting soil to test for SCN.

Preparing and sending samples

When sending your samples to the diagnostic lab, make sure to:

1. Ship overnight or as fast as possible
2. Avoid leaving bags in the sun
3. Send the samples to the Plant Disease Diagnostic Lab in the K-State Plant Pathology Department.
4. Fill out the [Plant Disease Diagnostic Check](#)

sheet at https://www.plantpath.k-state.edu/extension/diagnostic-lab/documents/2021_PP_DiseaseLabChecksheet.pdf

Shipping address:

K-State Plant Disease Diagnostic Lab
4032 Throckmorton PSC
1712 Claflin Road
Manhattan, KS 66506
clinic@ksu.edu
785-532-1383

For a step-by-step demonstration, watch this short video: <https://youtu.be/b6Eo0isl110>

Remember, your results will only be as good as the sample you send to the lab!

Diagnostic testing fees:

- Internal clients (KSRE agents): \$25
- External clients (crop consultants, farmers, and others): \$35

More details about fees are available at: <https://www.plantpath.k-state.edu/extension/plant-disease-diagnostic-lab/services-and-fees.html>

What to do if you find SCN in your fields

There are management options that can help reduce SCN populations and reduce the yield losses in your fields. You can enter the SCN counts provided by the K-State Disease Diagnostic Lab, along with your soil parameters, into the online SCN Coalition Profit Checker tool:

<https://www.thescncoalition.com/profitchecker/calculator/>. The output will help you decide what the most economical SCN management strategy is for your fields next season.

Soil sampling for fertility, too?

If you plan to sample for soil fertility, you can save time by collecting both sets of samples during the same field visit. The sampling procedure is nearly identical, simply **split the soil into two portions**:

- One for the **Soil Testing Laboratory**
- One for the **Plant Disease Diagnostic Laboratory**

Keep the soil for SCN testing **field-moist**, and follow the handling and shipping instructions above.

More information on soil fertility testing is available at: <https://www.agronomy.k-state.edu/outreach-and-services/soil-testing-lab/>

Rodrigo Onofre, Row Crop Plant Pathologist
onofre@ksu.edu

Chandler Day, Row Crop Diagnostician
chandlerday@ksu.edu

William Rutter, Plant Nematologist
wrutter@ksu.edu

4. 2025 Kansas Soybean Yield and Value Contest - Entries due Nov. 15

There's still time to enter the 2025 Kansas Soybean Yield and Value Contest! All soybean farmers in Kansas are encouraged to enter their competitive soybean crop. The statewide Kansas Soybean Value Contest, which analyzes protein, oil, and other soybean qualities, is also open for entries. Strong participation across the state provides a snapshot of growing conditions in each region and allows friendly competition among peers.



Entries must be postmarked or submitted electronically by November 15, 2025. Yield contest districts are determined by region, tillage method, and irrigation status, with a total of 18 districts under consideration. Only one entry per field will be accepted. An individual may enter multiple categories within the yield contest (conventional, no-till, dryland, or irrigated), but only one entry may be accepted per district. Individuals may submit one entry into the value contest.

Results are expected to be released in mid-December, followed by official recognition of the winners at the Kansas Soybean Celebration on January 30 in Salina.

Eligible fields must consist of at least five contiguous acres as verified by the Farm Service Agency, GPS printout, or manual measurement. A non-relative witness, either Kansas State Research and Extension personnel or a specified designee, must be present at harvest and should ensure that the combine grain hopper is empty prior to harvest. Official elevator-scale tickets with moisture percentage and foreign matter included must accompany entries to be considered.

The awards are as follows:

- In each category:

Kansas State University Department of Agronomy
2004 Throckmorton Plant Sciences Center | Manhattan, KS 66506
www.agronomy.ksu.edu | www.facebook.com/KState.Agron | www.twitter.com/KStateAgron

- 1st Place - \$300 and a farm sign
- 2nd Place - \$200 and a certificate
- 3rd Place - \$100 and a certificate
- The overall highest yields in the dryland and irrigated categories will each receive an additional \$1,000. The producer with the highest yield that exceeds the record high yield (126.6) will receive an additional \$1,000.

No-Till on the Plains may have additional awards for the no-till categories.

Individuals looking to submit a value contest entry should send a 20-ounce sample, which Ag Processing, Inc. evaluates to determine its value. Monetary awards are also given to the three highest-value entries.

The top yield contest winner for the state, the top value contest winner for the state, and one randomly drawn individual who entered both contests will win a sponsored trip for two to the Commodity Classic in San Antonio, TX, February 25-27, 2026. Airfare, accommodations, and registration will be covered.

A full guide of contest rules and regulations, and the digital entry form are available at kansassoybeans.org/contests. Questions may be directed to the Kansas Soybean office by phone at 877-KS-SOYBEAN (877-577-6923) or local KSRE offices.

Sarah Lancaster, Extension Weed Science Specialist
slancaster@ksu.edu

Jancey Hall, Kansas Soybean
hall@kansassoybeans.org

5. Share Your Input: Digital Ag and AI Survey for Farmers

Are you a Kansas farmer working in row crops, specialty crops, or livestock/ranching? We invite you to share your perspective on Digital Agriculture and Artificial Intelligence (AI) in farming systems by completing a brief survey.

Your survey responses will help identify opportunities, challenges, and resource needs across Kansas as these technologies continue to evolve.

The information collected in this survey is strictly confidential and will be used solely for academic and educational purposes. All responses are anonymous and will not be linked to any individual. We appreciate your participation and collaboration.

The survey takes less than 10 minutes to complete and is open to all producers and growers in Kansas.

Scan the QR code in the flyer below or click the link below to participate:

https://kstate.qualtrics.com/jfe/form/SV_bwoxVYFC5t10Wge?Q_CHL=qr

ATTENTION FARMERS

Survey Participants Needed

**Inclusive
Criteria**

**Anonymous
Responses**

**10-15 Minutes
to Complete**



Help us discover the needs in Kansas Digital Ag & AI

If any of the following apply to you,
you qualify to take our survey:

- Row crop production
- Specialty crop production
- Livestock ranching/operation

Scan Here



[https://kstate.qualtrics.com/jfe/form/
SV_bwoxVYFC5t10Wge](https://kstate.qualtrics.com/jfe/form/SV_bwoxVYFC5t10Wge)

Kansas State University Department of Agronomy

2004 Throckmorton Plant Sciences Center | Manhattan, KS 66506

www.agronomy.ksu.edu | www.facebook.com/KState.Agron | www.twitter.com/KStateAgron

6. Sorghum Connection Launches Second Year of Winter Educational Series

The Sorghum Connection Series, a collaboration between the Kansas Grain Sorghum Commission (KGSC), K-State Research & Extension, and the K-State Department of Plant Pathology, announces its second year of a comprehensive winter educational series focused on enhancing the profitability of sorghum producers across the state.

Following this year's field day events, which welcomed over 120 growers, Sorghum Connection offers an additional series of multiple one-day events across Central and Western Kansas. The events are scheduled for:

- **December 3** at the South Hutchinson Community Building in Hutchinson
- **December 4** at the Buffalo Bill Cultural Center in Oakley
- **December 5** at the Hy-Plains Feedyard in Montezuma

Each event will begin with registration at 9:30 a.m. and will conclude at 2:30 p.m.

Attendees will receive valuable data-driven information from industry leaders from K-State, the United Sorghum Checkoff Program, and many others on key topics for both grain and forage sorghum, including, but not limited to:

- Effectively managing forage sorghum in water-limited silage
- Enhancing sorghum digestibility for cattle
- Integrated weed management
- Strategies for optimum yield and profitability

The program also looks to the future of the sorghum crop system, covering advancements such as the application of spray drones in precision agriculture and highlighting breakthroughs in farmer-directed crop improvement.

There is no cost to attend; however, an RSVP is required. To register or learn more about these events, visit www.ksgrainsorghum.org/sorghum-connection.



2025 SORGHUM CONNECTION WINTER SERIES

Mark your calendars for local winter summits aimed to bring multi-disciplinary, data-driven information to Kansas sorghum producers to help improve on-farm productivity and profitability.



WEDNESDAY, DECEMBER 3 | HUTCHINSON
South Hutchinson Community Center
101 W. Ave. C, South Hutchinson, KS, 67505

THURSDAY, DECEMBER 4 | OAKLEY
Buffalo Bill Cultural Center
3083 US-83, Oakley, KS 67748



FRIDAY, DECEMBER 5 | MONTEZUMA
Hy-Plains Feedyard
7505 US-56, Montezuma, KS, 67867

REGISTER HERE



K-STATE
Research and Extension

Rodrigo Onofre, Row Crop Plant Pathologist
onofre@ksu.edu

Kansas State University Department of Agronomy
2004 Throckmorton Plant Sciences Center | Manhattan, KS 66506
www.agronomy.ksu.edu | www.facebook.com/KStateAgron | www.twitter.com/KStateAgron

Maddy Meier, Kansas Sorghum
maddy@ksgrainsorghum.org