



K-STATE
Research and Extension

Extension Agronomy

eUpdate

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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. Considerations for weed control following wheat harvest

Post-harvest weed control in wheat stubble is very important to conserve soil moisture and prevent weeds from going to seed and adding to the weed seedbank that must be managed in future years. Weeds can grow quickly once the wheat canopy is removed and can easily become difficult to manage, especially in the hot, dry conditions of summer. The species that are often targeted with post-harvest herbicide applications are often Palmer amaranth and kochia; however, controlling volunteer wheat is also an important objective for these applications (Figure 1).



Figure 1. Palmer amaranth and volunteer wheat can quickly emerge once the wheat canopy is removed at harvest. Photo by Sarah Lancaster, K-State Research and Extension.

Historically, the key herbicides for weed control in wheat stubble were glyphosate plus 2,4-D and/or dicamba. However, the development of herbicide resistant weeds has reduced the effectiveness of these products. Higher rates of 2,4-D and dicamba may improve control, but it is important to consider other options, especially those with residual activity on key species like pigweeds and kochia. Some options are described in the next paragraphs of this article.

Gramoxone (paraquat) is a non-selective, contact herbicide that can be used in fallow fields. It should be applied at 0.5 to 1.0 pounds of paraquat/A, which is equal to 2 to 4 pints of GramoxoneSL 2.0 or 1.3 to 2.7 pints of GramoxoneSL 3.0. Thorough spray coverage is important for good control,

which means medium to coarse droplet sizes and greater spray volumes (20 GPA or more). Gramoxone should be applied with NIS, COC, or MSO. Because paraquat is a contact herbicide regrowth is common, especially of large weeds (Figure 2). Adding a Group 5 herbicide, such as **atrazine** or **metribuzin** can enhance control of larger weeds and add some residual activity. Atrazine will also help control volunteer wheat. It's also important to remember that paraquat is a restricted use pesticide that requires additional training for handling.



Figure 2. This large Palmer amaranth is re-growing after being sprayed with paraquat. Photo by Sarah Lancaster, K-State Research and Extension.

Sharpen (saflufenacil) is a Group 14 herbicide that is primarily a contact herbicide but also provides some residual activity. Use 2 to 3 oz/A for larger weeds and residual activity. Sharpen works best with the addition of methylated seed oil. Sharpen requires complete coverage so using 15 to 20 gallons/acre spray solution is important.

Valor (flumioxazin) can provide contact and residual activity of key species like pigweeds. Valor EZ can be applied at 2 to 4 fl oz/A. Crop rotation should be considered when selecting the application rate. The 4 fl oz rate has a 4-month rotation interval for corn, cotton, sorghum, soybean, sunflower, and wheat; but lower rates have fewer restrictions. If targeting emerged weeds, NIS or COC should be included in the application.

All herbicides are most effective when applied to weeds that are actively growing. This means it is necessary to wait for a at least 2-3 inches of regrowth if weeds were cut off by the combine. It may be tempting to wait further delay applications to wait for later weed flushes; however, consider including a product with residual activity, rather than waiting, in order to prevent poor control of large weeds.

Additional information can be found in the [2021 Chemical Weed Control for Field Crops, Pastures, Rangeland, and Noncropland](#), K-State publication SRP-1162.

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.

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2. Cut-off dates for XtendiMax, Engenia, and Tavium applications

Farmers planning to apply XtendiMax, Engenia, or Tavium to their dicamba-resistant soybeans have about one week remaining to make those herbicide applications. One of the requirements on the 2021 labels for over-the-top applications of herbicides containing dicamba was a cut-off date for applications. **The last day these products can legally be applied to soybeans is June 30.** The cut-off date for cotton is July 30.

Additional information can be found in the [2021 Chemical Weed Control for Field Crops, Pastures, Rangeland, and Noncropland](#), K-State publication SRP-1162.



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requirements.

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3. World of Weeds - Stinkgrass

Stinkgrass (*Eragrostis cilianensis*) has recently started flowering at the K-State Agronomy Ashland Bottoms research farm in Manhattan and is this month's World of Weeds feature.

Ecology of stinkgrass

Stinkgrass is a warm-season annual grass that is native to Europe. It can be found in fields, pastures, roadsides, and lawns throughout the United States.

Identification

Stinkgrass has hairless leaf blades that are 2 to 6 inches long and about 0.25 inch wide. The leaf sheaths are overlapping and hairless, except for a tuft of longer hairs at the collar. The ligule is a fringe of short, dense hairs (Figure 1, left). Stems reach up to 24 inches tall and are angled up at the nodes (Figure 1, right).



Figure 1. Left: Stinkgrass ligule and long hairs on collar. Right: Stinkgrass growth habit with stems bending upward at nodes. Photos by Sarah Lancaster, K-State Research and Extension.

Glands that produce the odor for which the plant is named can be found scattered along the veins of the leaves and leaf sheaths, as well as in a ring below the nodes.

The inflorescence is a dense, pyramid-shaped panicle, dark-green to tan in color and 2 to 8 inches long (Figure 2, left). Each spikelet contains 7 to 40 individual flowers (Figure 2, right).



Figure 2. Left: Stinkgrass panicle emerging. Right: Stinkgrass florets with many flowers. Photos by Sarah Lancaster, K-State Research and Extension.

Management

There is limited research specifically evaluating stinkgrass control. Observations in herbicide evaluation trials at K-State suggest that Group 15 products such as Dual and Harness/Warrant provide suitable pre-emergence control. Greenhouse studies at North Dakota State University suggest that Liberty, Roundup, and Assure II provide excellent post-emergence control.

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4. 2021 Kansas Corn Yield Contest



Corn harvest in Kansas will be here before you know it. Corn producers in the state are encouraged to keep in mind the Kansas Corn Yield Contest before they fire up the combines this year.

Kansas Corn, in conjunction with K-State Research and Extension, are conducting the 2021 Kansas Corn Yield Contest. New this year, the Kansas Corn Yield Contest has joined the National Corn Yield Contest (NCYC). To participate in the Kansas Contest, growers must enter the NCYC. This will simplify the entry process while building Kansas participation in both contests. Many seed companies will cover the cost of entry. For more details in this voucher program, go to <https://www.ncga.com/get-involved/national-corn-yield-contest/profile/voucher-program>.

All corn producers are eligible to enter the contest, but must be members of the Kansas Corn Growers Association (KCGA). A KCGA membership includes one to the NCGA. Information regarding entry deadlines can be found at: <https://kscorn.com/yeildcontest/>

Benefits of contest participation

The contest is a fun way for producers to showcase and compare their high yielding and high quality corn with other growers in their districts and state, and provide motivation to producers to improve productivity. The contest also serves as a vehicle to improve farming practices and increase awareness of best management practices (BMPs) to improve and sustain corn yields.

In addition to grower recognition, cash awards will be awarded at the district and state levels. The districts align with crop reporting districts, plus a NNE district which includes Doniphan and parts of Brown and Atchison counties (Figure 1). In addition, one statewide dryland winner and one statewide irrigated winner will be announced. District winners will receive \$300 and a plaque. Second place entries will receive a \$200 prize and third place will receive a \$100 prize. The highest yielding dryland and irrigated entries statewide will receive an additional \$500 prize. National Corn Yield Contest winners will be announced December 15, 2021. Kansas Corn Yield winners will be recognized at the Kansas Corn Symposium in January 2022.

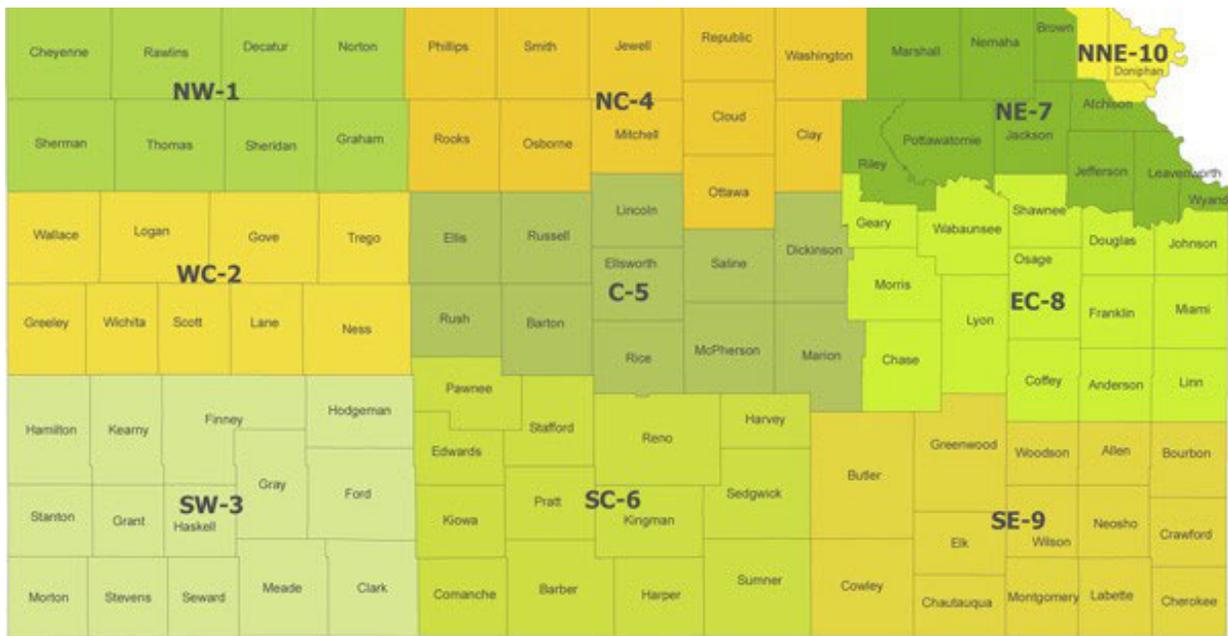


Figure 1. Dryland and irrigated contest districts. Note: NNE includes only those fields north and/or east of KS Hwy 73 in Brown, Doniphan, and Atchison counties.

A publication summarizing the results from the 2019 Kansas Corn Yield Contest can be viewed at:

<https://bookstore.ksre.ksu.edu/pubs/MF3463.pdf>. The 2020 contest results will be summarized in a similar publication that will be soon be available to view online. A list of the 2020 Kansas Corn Yield Contest winners is available at: <https://kscom.com/contest/#2020Winners>.

For complete contest information, visit <https://kscom.com/contest/>.

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