Issue 858

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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. Pre-harvest weed control in wheat

Making a herbicide application that will not directly influence crop yield is a difficult decision to make. However, pre-harvest applications may be beneficial, especially in wheat fields that were not treated earlier in the season. When broadleaf weeds grow rapidly in wheat fields at the end of the growing season, several potential concerns arise such as harvest difficulties, dockage problems, weed seed production, and soil water depletion. A pre-harvest herbicide application can address these concerns. However, it is very difficult to estimate the value of pre-harvest weed treatments as it is influenced by the effects on harvest efficiency and dockage. It may not pay to treat wheat with lower weed densities unless harvest is delayed. If the weeds are about to set seed, a pre-harvest treatment can go a long way toward reducing weed problems in future years by preventing seed production.

Herbicides labeled for use as harvest aids in wheat are listed in Table 1. There are differences in how quickly they act to control the weeds, the interval requirement between application and grain harvest, and the level or length of control achieved. All of them will require thorough spray coverage to be most effective. Paraquat is sometimes mentioned as a possible herbicide for pre-harvest application but is **not** labeled for pre-harvest treatment in wheat**.** Application of paraquat to wheat is an illegal treatment and can result in a quarantine and destruction of the harvested grain, along with severe fines.

Figure 1. Weeds in wheat near harvest time. Photo by Dallas Peterson, K-State Research and Extension.

Table 1. Herbicides for use a pre-harvest weed control options in wheat.

Product (rate)	Weeds controlled	Application timing	PHI* (days)	Comments
Metsulfuron (0.1 oz + 0.25 to 0.5 % v/v nonionic surfactant)	Some broadleaf weeds	Hard dough stage	10	Apply in combination with glyphosate or 2,4-D Do not use on soils with a pH greater than 7.9 12- to 34-month rotation interval for soybeans Kochia, pigweeds, and marestail may be resistant
2,4-D LVE (1 pt of 4lb/gal	Broadleaf weeds.	Hard dough stage	14	Weak on kochia and wild buckwheat

product or 2/3 pt 6 lb/gal product)				
Dicamba (0.5 pt)	Broadleaf weeds	Hard dough stage and green color is gone from nodes	7	Do not use treated wheat for seed unless a germination test results in 95% or greater seed germination.
Glyphosate (1 qt of 3 lb ae/gal product, or 22 fl oz of Roundup PowerMax or WeatherMax)	Grasses and broadleaf weeds	Hard dough stage (30% or less grain moisture).	7	Consult label for recommended adjuvants Not recommended for wheat being harvested for use as seed Kochia, pigweeds, and marestail may be resistant.
Aim EC (1 to 2 fl oz + 1% v/v crop oil concentrate)	Pigweeds, kochia, lambsquarters, Russian thistle, wild buckwheat		7	Acts quickly, usually within 3 days Regrowth of weeds may occur after 2-3 weeks or more, depending on the rate used.
Sharpen (1 to 2 fl oz + 1% v/v methylated seed oil + 1 to 2% w/v AMS or 1.25-2.5% v/v UAN	Broadleaf weeds	Hard dough stage (30% or less grain moisture).	3	1 month rotation interval for soybean

*PHI = Pre-harvest interval, or days required between application and harvest.

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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. For more information, see 2021 Chemical Weed Control for Field Crops, Pastures, Rangeland, and Noncropland, K-State publication SRP-1162.

2. Meet the new Southeast Area Agronomist, Bruno Pedreira

Bruno Pedreira is the new Southeast Area Agronomy Extension Specialist. He joins K-State Research and Extension at the Southeast Research and Extension Center in Parsons as an associate professor.

Bruno C. Pedreira was born in Salvador, Brazil. He got his B.S. degree in Agronomy from 'Federal University of Lavras', Lavras, Brazil. He completed his M.S. and Ph.D. degrees, along with a post-doctoral position, in Animal Science and Pasture from ESALQ/University of São Paulo, Piracicaba, Brazil. Since 2010, Pedreira worked as a researcher at Embrapa Agrossilvipastoril in Sinop, Mato Grosso, Brazil.

His research program on forage-based cropping systems explores the contribution of the crop-pasture-livestock systems, fertility management, and weed control to enhanced land-use efficiency and profitability. This applied research program generates information to support an active and innovative extension educational program in a sustainable agricultural system, addressing the critical needs of producers.

He has been a reviewer for several international scientific journals including: Crop Science, Agronomy Journal, European Journal of Agronomy, Grass and Forage Science, Agricultural Systems, Crop, Forage and Turfgrass, and Grassland Science. He is a member of the Crop Science Society of America, American Society of Agronomy, Brazilian Society of Animal Science, and Brazilian Society of Integrated Systems. He also is on the Directorial Board of the Brazilian Society of Animal Science and the Brazilian Society of Integrated Systems.

Dr. Pedreira may be reached at 620-820-6124 or by email at pedreira@ksu.edu. You can also follow him on Twitter at @PedreiraBC.

Bruno Pedreira, Southeast Area Regional Agronomist

3. Several K-State publications on insect pest management updated for 2021

Several K-State Research and Extension publications related to insect management in Kansas were recently updated and are available to the public.

These publications were prepared to help producers manage insect populations with the best available methods proven practical under Kansas conditions. They are revised annually and intended for use during the current calendar year. The user should know that pesticide label directions and restrictions are subject to change, and some may have changed since the date of publication.

Full versions of each fact sheet are available online with links provided below.

Wheat Insect Pest Management - https://bookstore.ksre.ksu.edu/pubs/MF745.pdf

Alfalfa Insect Pest Management - https://bookstore.ksre.ksu.edu/pubs/MF809.pdf

Sorghum Insect Pest Management - https://bookstore.ksre.ksu.edu/pubs/MF742.pdf

Soybean Insect Pest Management - https://bookstore.ksre.ksu.edu/pubs/MF743.pdf

The economics of control should be considered in any pest management decision. Because costs vary greatly over time and are influenced by factors beyond the scope of this publication, product cost is not a consideration for including or omitting specific insecticide products in these recommendations. Growers should compare product price, safety, and availability when making treatment decisions.

Growers also need to consider the impacts of insecticides on non-target organisms like pollinators and natural enemies. Rotating insecticide groups can help combat insecticide resistance issues by leveraging different modes of action. The user bears ultimate responsibility for correct pesticide use. For proper use, always read label directions carefully before applying pesticides. Remember, it is illegal to use a pesticide in a manner inconsistent with the label.

More information on pests covered in these publications is available at:

www.entomology.k-state.edu/extension/insect-information/crop-pests/

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4. 2021 Kansas wheat plot tours

After over a year of virtual events, the Department of Agronomy and K-State Research and Extension will host several face-to-face winter wheat variety plot tours in different regions of the state, starting May 10 and going into June Make plans to attend a plot tour near you to see and learn about the newest available and upcoming wheat varieties, their agronomics, and disease reactions.

A preliminary list of plot tour locations, dates, times, and directions is provided below. Stay tuned to the eUpdate for any updates/additions to this list. There are still some tours that are being finalized.

Plot	Area	Agent	Date	Time	Main speaker	Directions
Wichita	NW	Rick Horton	6/9	4:30 PM	Lollato	Plot tour located just south of the Horton Seed Farms near Leoti, KS.
Twin Creeks	NW	Keith VanSkike	6/14	7:00 AM	Haag	Travel on HWY 36 west of Oberlin, KS about 2.5 miles. GPS coordinates: 39.828330, -100.584228
Twin Creeks	NW	Keith VanSkike	6/14	12:00 PM	Haag-Guorong-Lollato	Decatur (state line) plots - several trials - KYN, VPT, in furrow urea, KWC, etc
Twin Creeks	NW	Keith VanSkike	6/14	7:00 PM	Haag	From Dresden, KS travel South on 23 then at the #9 and 23 intersection go east on #9 to 2000th Road on the North side of the road. GPS: 39.568082, -100.36731
River Valley - LeClair	NC	Rebecca Zach	NA	NA	NA	From Clifton, 6 1/4 miles north on Eagle road, plots on the west side of the road north of 6th.
Wild West District	SW	Ron Honig	NA	NA	NA	SE 17-31-34. Go 6 miles NE of Hugoton on Hwy 56 to Rd V (County RD 16), then east 12 miles to Rd B, then 5 miles north and then 1/2 mile east on field road.
Ford Co. - Dodge City	SW	Andrea Burns	TBD	TBD	Local?	Highway 50 Bypass & 116 Road Across from Koch Nitrogen Plant, Dodge City
Thomas Co.	NW	Emily Bennigsdorf	6/7	7:30 am CT	Haag-Lollato	Solomon Creek Farms located 5 miles south of

						Levant/I-70 Interchange on County Road 11, east side of road
Sunflower District – Wallace County	NW	Jeanne Falk Jones	6/8	6:30 am MT breakfast at CAB, 7:30 am MT at Mai Farms, 10:00 am MT at E&H Farms	Haag	Mai Farms: 9 mi south of Sharon Springs to Field Road and 3.5 mi east E&H Farms: 3 mi west of Weskan to Road 3 and south 5.5 mi (just south of intersection of Gooseberry Rd and Rd 3)
Sunflower District – Sherman County	NW	Jeanne Falk Jones	6/8	5:30 pm MT	Haag	At F&J Farms - 7 miles north of Goodland on Hwy 27, east of the Quonset building
Tribune Experiment Station (Spring Crop Tour)	NW	Alan Schlegel	6/9	8:45 am MT Registration 9:00 am MT Tour starts	Schlegel	1 mi west of Tribune on Hwy 96 to station headquarters
Sunflower District – Cheyenne County	NW	Jeanne Falk Jones	6/9	5:30 pm CT	Haag	From St. Francis, go 14 miles west to Road 1 and north 3.4 miles
Barber Co. (Isabel)	SW	Justin Goodno	Virtual	Virtual	NA	Intersection of Main St and Hwy 42 on Isabel.
Barber Co. (Kiowa)	SW	Justin Goodno	Virtual	Virtual	NA	HYW 281 / HWY 2 intersection on the north side of Molz shop and grain bins.

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