Issue 826

K-STATE Research and Extension

Extension Agronomy

eUpdate

11/06/2020

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. Herbicide-resistant grain sorghum hybrids - Are they here yet?

Herbicide-resistant grain sorghum has been a topic of conversation for several years. Now there are some questions among varieties available for next spring, with others getting closer to commercialization. This article will provide an overview of weed management in these herbicide-resistant grain sorghum systems. A preliminary summary of K-State weed control data in these production systems is included as Figure 1.

iGrowth – This is the trait that made news this summer. iGrowth grain sorghum has been developed by Advanta Seeds. These hybrids are resistant to the herbicide imazamox, which you might remember as Raptor or Beyond. The only formulation labeled for use in iGrowth sorghum Imiflex. UPL is seeking approval for pre-emergence and post-emergence applications of the product, however approval has not yet been granted.

Imazamox is a Group 2 (ALS-inhibiting) herbicide that controls a range of grass and broadleaf weeds. Key species controlled by imazamox include large crabgrass, foxtails, seedling johnsongrass, and shattercane, kochia, common lambsquarters, morninglories, nightshades, pigweeds, common sunflower, and velvetleaf. One concern with this technology is that resistance to ALS-inhibiting herbicides is found in kochia, Palmer amaranth, waterhemp, common sunflower, shattercane, and other weed species in Kansas. The widespread occurrence of resistance to ALS-inhibiting herbicides means that Imiflex should be combined with other effective herbicide modes of action to control resistant plants and slow the development additional herbicide resistance.

Inzen – Inzen grain sorghum hybrids are resistant to the herbicide nicosulfuron. The formulation approved for use in grain sorghum is called Zest, but nicosulfuron is also the active ingredient in Accent and a component of Pastora, Revulin Q, Steadfast, and others. This herbicide has received an EPA label for application to Inzen varieties that are between 4 and 20 inches tall.

Similar to Imiflex, Zest is a Group 2 herbicide. However, it is primarily active on grass weeds, including large crabgrass, foxtails, and sandburs. In addition to concerns regarding herbicide-resistant weeds, producers should be aware of long rotation intervals to some other crops including non-Inzen grain sorghum varieties.

Inzen sorghum and Zest are approved for commercial production with limited availability expected for 2021.

Double Play – This trait has been developed by S&W Seeds. Double Play grain sorghum hybrids are resistant to the herbicide quizalofop, which is the active ingredient in Assure II. ADAMA is currently awaiting EPA approval for the herbicide label that will be used in Double Play grain sorghum.

Quizalofop is a Group 1 (ACCase-inhibiting) herbicide that only controls grasses, but it is quite good at controlling species such as shattercane and crabgrass, which are often problematic in grain sorghum. Weed resistance to Group 1 herbicides is less common than group 2, but is still an important concern. Quizalofop resistance has not been reported in Kansas, but resistant biotypes of johnsongrass, giant foxtail, downy brome, and wild oat have been reported elsewhere in the US.

S&W anticipates expanded testing of Double Team sorghum for 2021, but has not provided an anticipated commercialization date.

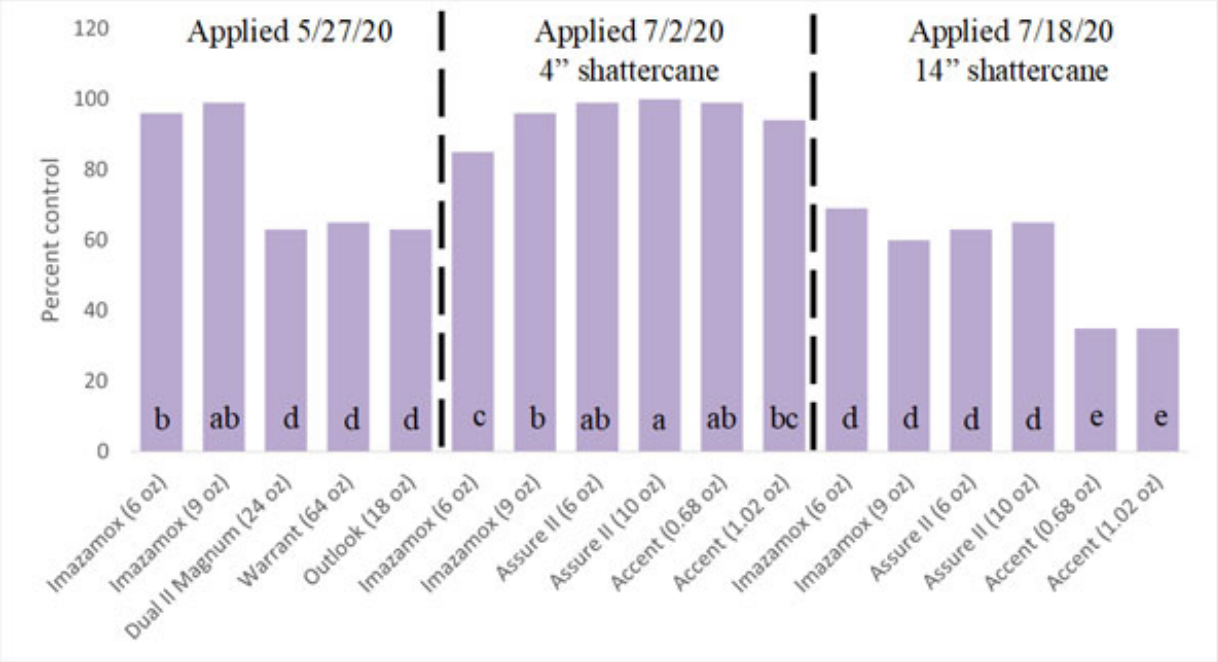

Figure 1. Shattercane control in a fallow area near Garden City KS. Weed control was recorded on July 24. Similar letters indicate similar weed control. Data from Currie and Geier, unpublished data.

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2. UPDATED - EPA approves labels for over-the top dicamba application

The information in the table below was revised on Friday, November 6, to reflect updated information recently provided by company representatives.

Labels for XtendiMax, Engenia, and Tavium were granted unconditional Section 3 labels on October 27, 2020. The labels will be effective until 2025. Updated labels for XtendiMax and Engenia, and a preliminary label for Tavium can be accessed by clicking the name of each product in the table.

	XtendiMax	Engenia	Tavium
Application cutoff	Through June 30 or R1 soybean Through July 30 in cotton	Through June 30 in soybean Through July 30 in cotton	Through June 30 or V4 soybean Through July 30 or 6-leaf cotton
Drift reduction adjuvant	Required, check website for tankmix requirement	Not required, check website for tankmix requirement	Required, check website for tankmix requirements
Volatility reduction agent	Required	Required	Required
Downwind buffer	240 ft (110 ft with approved hooded sprayer)	240 ft (110 ft with approved hooded sprayer)	240 ft (110 ft with approved hooded sprayer)
Forecast	48 hours no runoff producing event	48 hours no runoff producing event	48 hours no runoff producing event
Training	Updated every year	Updated every year	Updated every other year

As before, each company will maintain a website that lists approved hooded/shielded sprayers, spray nozzles, and tank-mix partners. Those websites will be:

XtendiMax): www.xtendimaxapplicationrequirements.com

Engenia: www.engeniatankmix.com

Tavium: www.taviumtankmix.com

The EPA also issued a clarification limiting the use of Special Local Needs (Section 24(c)) labels to add additional state-specific restrictions. At this time, it is unclear if the Kansas Department of Agriculture will seek any modifications to the federal label.

In a recent survey, 56% of producers indicated they will plant dicamba-resistant soybeans in 2021, down from 78% who reported planting dicamba-resistant soybeans in 2020. A potential increase in non-dicamba-tolerant soybeans for 2021 highlights the need for extra care when making in-crop dicamba applications.

Sarah Lancaster, Extension Weed Science Specialist
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3. Ag-Climate Update for October 2020

The Ag-Climate Update is a joint effort between our climate and extension specialists. Every month the update includes a brief summary of that month, agronomic impacts, relevant maps and graphs, 1-month temperature and precipitation outlooks, monthly extremes, and notable highlights.

October 2020: Wide temperature swings with little precipitation

October was much drier than normal. It ranked as the 11th driest October since 1895. All divisions averaged below normal for the month, resulting in an expansion of drought across the state. Almost all of the precipitation came at the last week of the month, with the result that all of the state had abnormal dry conditions or worse (Figure 1).

Temperatures were uniformly cooler than normal across the state. The statewide average for October was 3.5 degrees cooler than normal. The thermal heat unit deficit was largely driven by cold maximum temperatures. Statewide there were 214 new daily record low maximums and 69 new record low minimums

Figure 1. Poor wheat stands due to dry soils and uneven residue. Photo by Romulo Lollato, K-State Research and Extension.

View the entire October Ag-Climate Summary, including the accompanying maps and graphics (not shown in this summary), at http://climate.k-state.edu/ag/updates/.

4. 2020 Crop Pest Management Schools in Russell, Phillipsburg, and Oakley

Be sure to get registered to attend one of the 2020 Crop Pest Management Schools scheduled in December 2020. Each school will start at 7:50 am with registration and conclude at 5:00 pm. A lunch will be provided to all participants. The cost to attend is $40. Each school will feature a variety of topics on weed control, insects, and diseases.

Registration information for all three schools is included below along with agendas for Russell and Phillipsburg (Figures 1 & 2). The dates and locations of each school are:

- **December 8 – Russell, KS**
  Fossil Creek Hotel
  Dole-Specter Conference Center

Register by Monday, November 30 at www.midway.ksu.edu or by phone by calling either the Russell office at 785-483-3157 or the Ellsworth office at 785-474-4442. Attendance is limited to 50 people.

- **December 9 – Phillipsburg, KS**
  Huck Boyd Community Center

Register by Monday, November 30. Contact Cody Miller at 785-543-6845 or codym@ksu.edu
Payment will be taken at the door (cash or check only)

- **December 10 – Oakley, KS**
  Buffalo Bill Cultural Center

Register online at https://bit.ly/368GXvG. For questions, please contact using email/phone at bainc@ksu.edu 785-743-6361

Commercial applicator and Certified Crop Advisor credits have been applied for.

For more information, please visit:

www.midway.ksu.edu

www.goldenprairie.ksu.edu

www.phillipsrooks.ksu.edu

Crop Pest Management School

K-STATE Research and Extension
Midway District

December 8, 2020

Fossil Creek Hotel
Dole - Specter Conference Center
Russell, KS

Cost to attend $40

Lunch provided

Register by Monday, November 30 at www.midway.ksu.edu or call
Russell 785-483-3157
Ellsworth 785-474-4442
If you register to attend and end up not being able to come please notify us ASAP by the end of the day, Dec 4th

7:50 Registration
8:15 Technology Update in Insect Control
9:10 Those Challenging Weeds - Palmer Amaranth
10:05 Break
10:20 Alfalfa Management - Insects & Diseases
11:15 Technology Update in Weed Control
12:10 Lunch
12:50 Wheat Diseases
1:45 Application Technology
2:40 Break
2:55 Diseases of Row Crops (Corn, Soybeans & Grain Sorghum)
3:50 Kansas Regulations by Kansas Dept of Agriculture
4:45 Questions
5:00 Adjourn

Speakers
Dr. A.J. Sharda, K-State Ag Engineer
Dr. Vipan Kumar, K-State Weed Scientist
Dr. Sarah Lancaster, K-State Weed Specialist
Dr. J.P. Michaud, K-State Entomology Specialist
Dr. Romulo Lollato, K-State Wheat & Forages Specialist
Dr. Kelsey Anderson Onofre, K-State Wheat Pathologist
Dr. Rodrigo Borba Onofre, K-State Plant Pathology Postdoctoral Fellow

Credits Available:

Commercial Applicators:
1 Core Hour & 7 for 1A

Certified Crop Advisors:
8 Pest Management Credits

(Credits Applied for)

This meeting will be limited to 50 attendees due to COVID-19 restrictions

Kansas State University is committed to making its services, activities and programs accessible to all participants. If you have special requirements due to a physical, vision, or hearing disability, or a dietary restriction please let us know when placing your RSVP. K-State Research and Extension is an equal opportunity provider and employer.

K-STATE Research and Extension | Phillips Rooks District

Crop Pest Management School

December 9th, 2020
Huck Boyd Community Center
Phillipsburg, KS

Credits Available:
Commercial Applicators:
1 Core Hour & 7 for 1A
Certified Crop Advisors:
8 Pest Management Credits
(Credits Applied for)

KSU SPEAKERS:

Dr. Vipan Kumar, Weed Scientist
Dr. Rodrigo Onofre, Plant Path Postdoc Fellow
Dr. A.J. Sharda, Ag Engineer
Dr. Sarah Lancaster, Weed Scientist
Dr. JP Michaud, Entomologist
Dr. Romulo Lollato, Wheat & Forage Specialist
Dr. Kelsey Onofre, Wheat Pathologist

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3:50 Kansas Regulations by Kansas Dept of Agriculture
4:45 Questions
5:00 Adjourn

Cost: $40 per person – Lunch Provided
(Cash or Check Only – Payable at the Door)

Register by Monday, November 30

Please contact Cody Miller at 785-543-6845 or email codym@ksu.edu

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