

GRAIN SORGHUM WEED CONTROL: START CLEAN, STAY CLEAN

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Some key weed species



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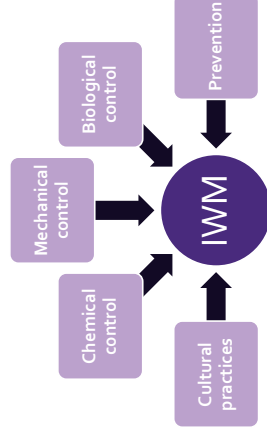
To what extent have limited herbicide options let you to
avoid growing grain sorghum?

A lot
Somewhat/ occasionally
Not at all

Start the presentation to see live content. For screen share software, share the entire screen. Get help at polliv.com/app

Back to the basics

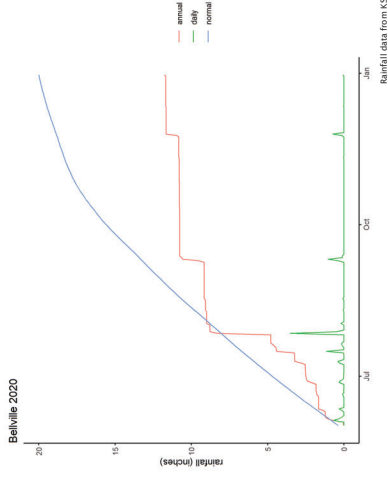
- Use integrated practices
- Make timely applications



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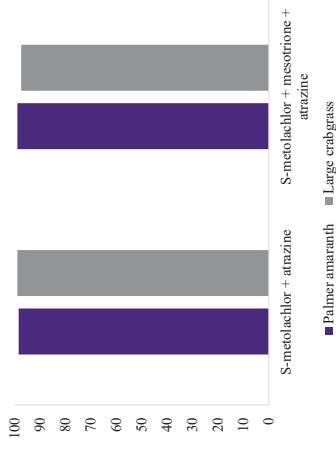
Potential carryover

- Accent
- Python
- Varro
- Classic
- FirstRate
- Pursuit
- Reflex
- Raptor
- Scepter



Start clean

- Burndown or tillage
- Atrazine
- Group 15
- Group 27 + atrazine



Start clean

| Herbicide | SOA group | Activation |
|----------------|----------------|-------------|
| Atrazine | Aatrex 4L | 5 NA |
| Acetochlor | Harness | 15 1/4-3/4" |
| S-metolachlor | Dual II Magnum | 15 1/2-1" |
| Dimethenamid-p | Outlook | 15 NA |
| Mesotrione | Callisto | 27 1/4" |

Stay clean

| Active ingredient | Trade name | Sorghum Timing | Palmer timing | Comments |
|----------------------------|-----------------------|----------------|---------------|--|
| 2,4-D | several | 5-15" | "small" | |
| Atrazine | several | <12" | 1.5" | later application with drop nozzles, injury > 6" in western KS |
| Bromoxynil | several | 3 lf - boot | 2" | |
| Dicamba | several | V3 - 12" | 3" | |
| Fluroxypyr | Starane Ultra, others | 3 lf - 7 lf | NA | later application with drop nozzles |
| Quinclorac | Facet, others | 12" | NA | |
| Fluroxypyr + bromoxynil | Starane NXT, others | V4 - V7/8 | NA | later application with drop nozzles |
| Pyrasulfotole + bromoxynil | Huskie | 3 lf - 30" | 4" | |
| Acetochlor | Warrant | 11" | NA | safened seed |
| Dimethenamid -P | Outlook | 12" | NA | safened seed |
| S-Metolachlor | Several | 75 d PHI | NA | safened seed |

What herbicides are you planning for your grain sorghum acres in 2021?

Start the presentation to see live content. For screen share software, share the entire screen. Get help at polliv.com/app

Herbicide-resistant grain sorghum

- **Inzen**
 - Corteva
 - Zest herbicide (nicosulfuron)
 - POST
 - Some varieties available in 2021?
- **iGrowth**
 - ADVANTA/UPL
 - Imiflex herbicide (imazamox)
 - PRE or POST
 - Launch in 2021
- **Double Team**
 - Sorghum Partners/ADAMA
 - First Act
 - Pilot launch in 2021
 - Waiting for herbicide registration, Canadian export approval

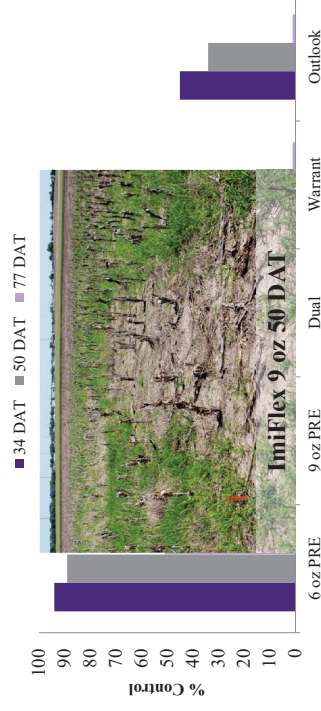


2020 Trials

- Fallow fields
- PRE:
 - Imazamox (Imiflex) vs Group 15 herbicides
- POST:
 - Imazamox (Imiflex), nicosulfuron (Zest) and quizalofop
 - 2 rates
 - 2 growth stages



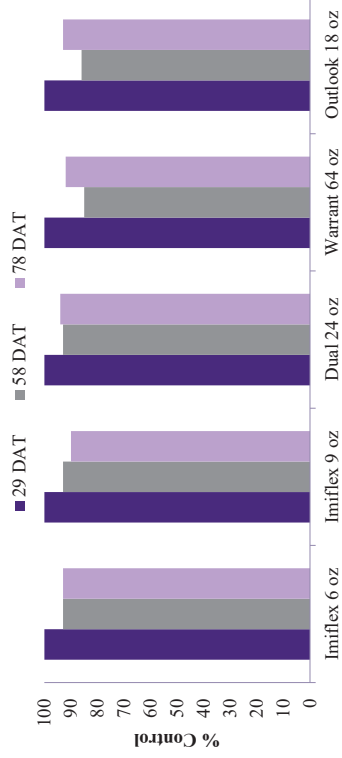
Green foxtail control PRE - Hays



Vipin Kumar, Brent Bean

USPP Large crabgrass control PRE - Garden City

UNITED SORGHUM CHECKOFF PROGRAM



Pat Geier, Randall Currie, Brent Bean

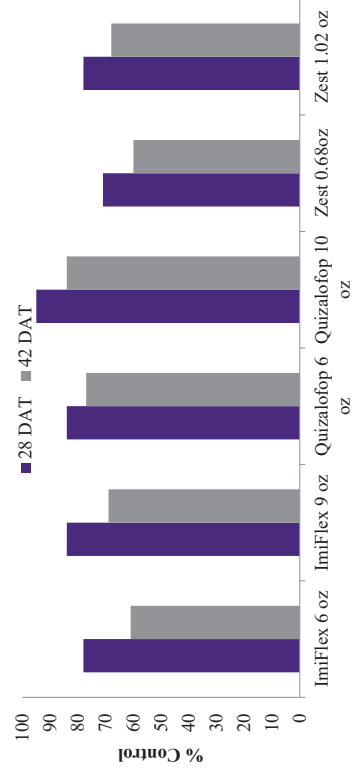
Garden City -28 DAT



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USPP Green foxtail control EPOST - Hays

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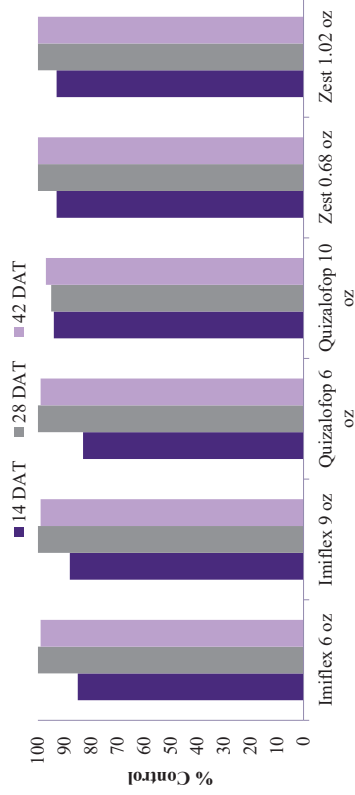
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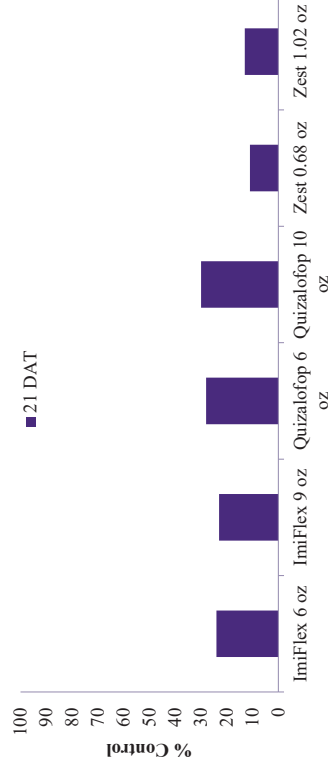
Large crabgrass control EPOST - Garden City



Pat Geier, Randall Currie, Brent Bean



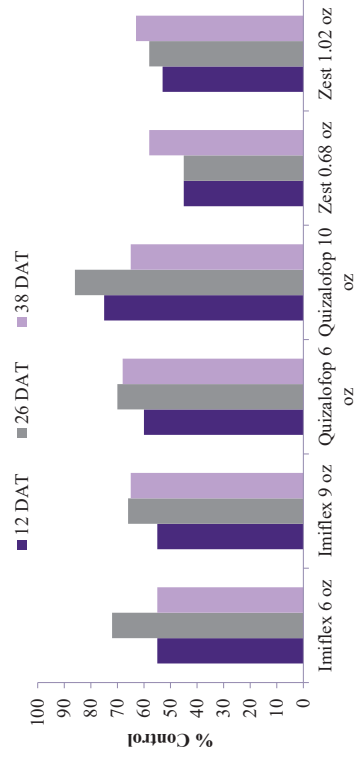
Green foxtail control LPOST - Hays



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Large crabgrass control LPOST - Garden City



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Rotational Restrictions

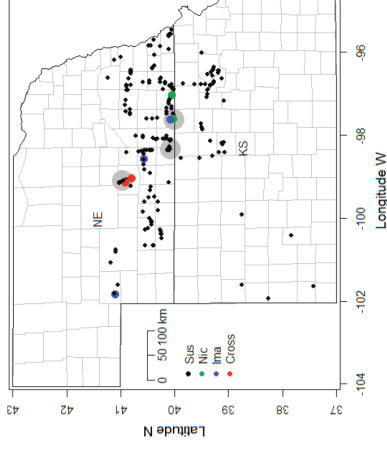
| Product | Corn (Field) | Soybeans | Wheat (winter) | Cotton | Canola | Sorghum | Sunflower |
|---------------|--------------|----------|----------------|--------|------------|---------|-----------|
| Zest | -- | 15 d | 4 mos | 10 mos | 10-18 mos | 18 mos | 10-18 mos |
| IMIFLEX | 8.5 mos* | -- | 3 mos* | 9 mos | 18-26 mos* | 18 mos | 9 mos* |
| Quizalofop ** | 120 d | -- | 120 d | -- | -- | 120 d | -- |

*Except Clearfield varieties
**Based on Assure II label

Stewardship

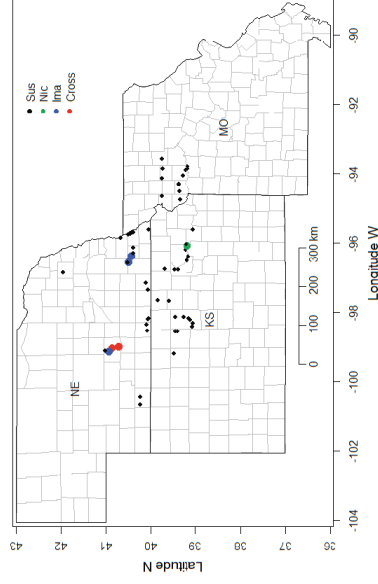
- Manage to slow the development of herbicide resistant weeds
 - One (IMIFLEX) or two (Zest) applications per year
 - Do not plant sorghum in the same field two consecutive years
 - Do not plant where ALS-resistant shattercane or johnsongrass occur
- Avoid outcrossing to shattercane and johnsongrass
 - Control escapes and grass along field edges
 - Ensure shattercane and johnsongrass are not flowering same time as sorghum

ALS-resistance in shattercane



Werle et al., 2016

ALS-resistance in johnsongrass



Werle et al., 2016

Which herbicide-resistant grain sorghum trait are you most interested in?

- Inzen
- Imiflex
- Double Team
- None of them

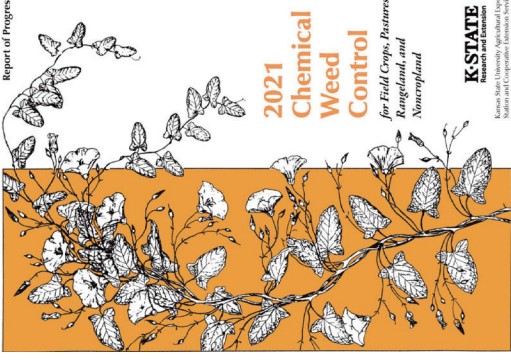
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Atrazine registration review

- Interim decision released Sept 2020
- Two more assessments
 - Endangered species assessment (deadline 9/28/21)
 - Endocrine disruptor screening
- Changes most likely to affect Kansas farmers
 - 15 MPH weed speed restriction
 - 5-foot buffer from edge of streams/rivers and endangered species habitat
 - Medium-sized droplets or larger

Report of Progress 1162



2021 Chemical Weed Control

for Field Crops, Pastures,
Rangeland, and
Noncropland

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