25th Wild World of Weeds Workshop

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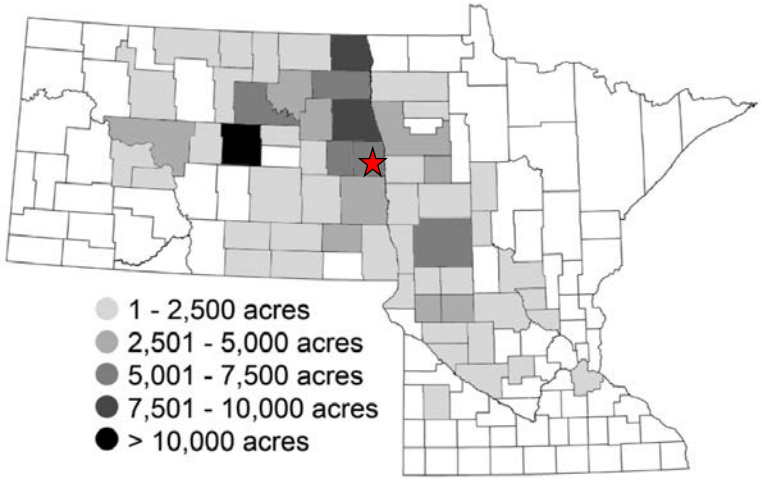
Death to Weeds

- Group 14 and 15 in Dry Bean
- Reviton vs Sharpen Residual Trial
- Rolling and Weed Control
- 5-Way Resistant Palmer amaranth in Corn
- Dicamba and soybean PREs

Group 14 and 15 in Dry Bean

- Two field experiments conducted near Hillsboro, ND in 2022
  - Sandy loam soil (60% sand, 29% silt, 11% clay)
  - pH = 6.2, OM = 3.1%
- ‘ND Palomino’ planted May 25
  - PRE treatments applied at planting
  - At least 25 mm rainfall by June 1
  - POST treatments applied June 22



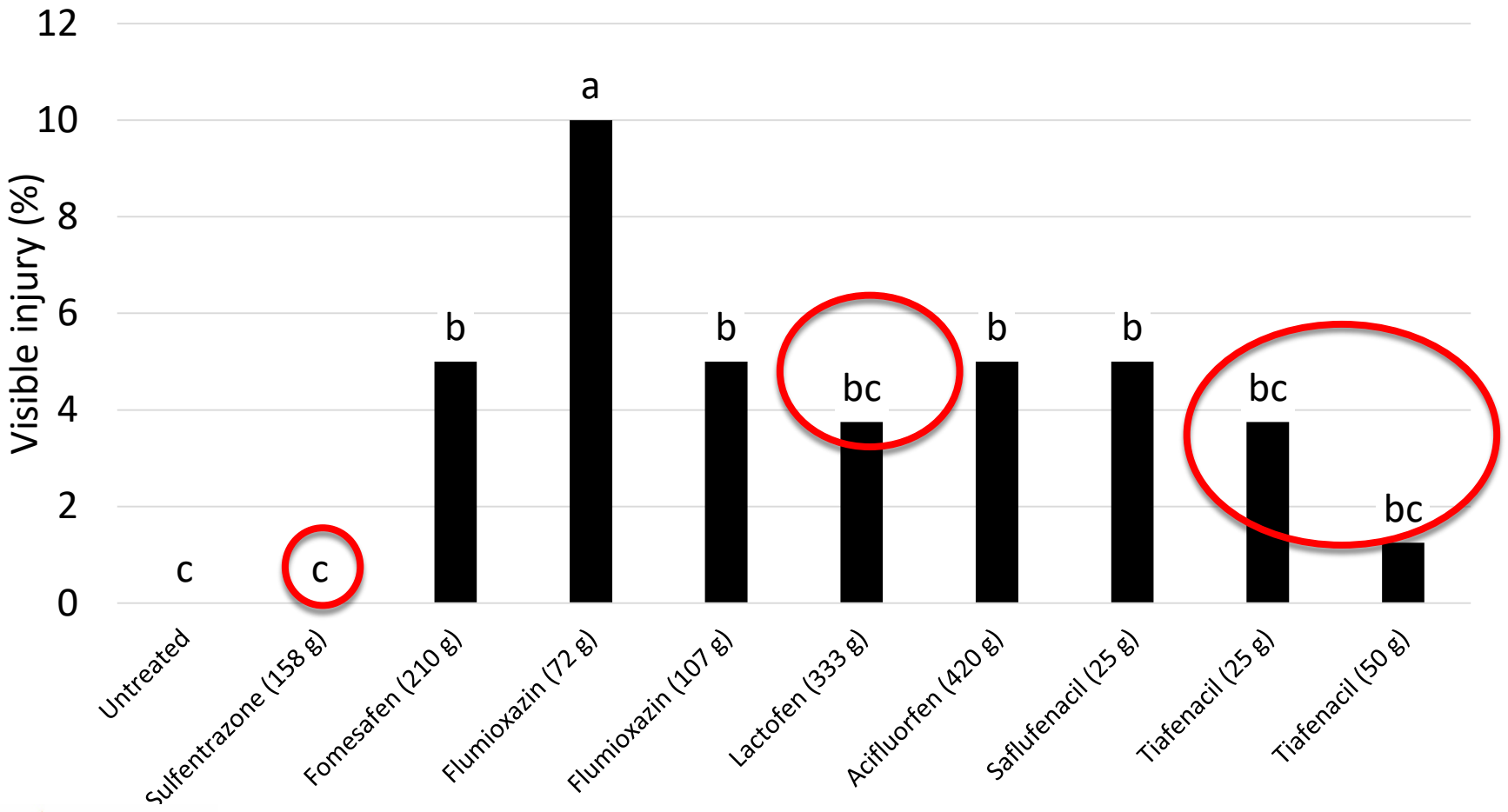
Treatments – Group 14 experiment

Herbicide	Product	Rate per (A)
Sulfentrazone	Spartan	4.5 fl oz
Fomesafen	Reflex	0.75 pt
Flumioxazin	Valor	2 oz
Flumioxazin	Valor	3 oz
Lactofen	Cobra	19 fl oz
Acifluorfen	Ultra Blazer	1.5 pt
Saflufenacil	Sharpen	1 fl oz
Tiafenacil	Reviton	1 fl oz
Tiafenacil	Reviton	2 fl oz

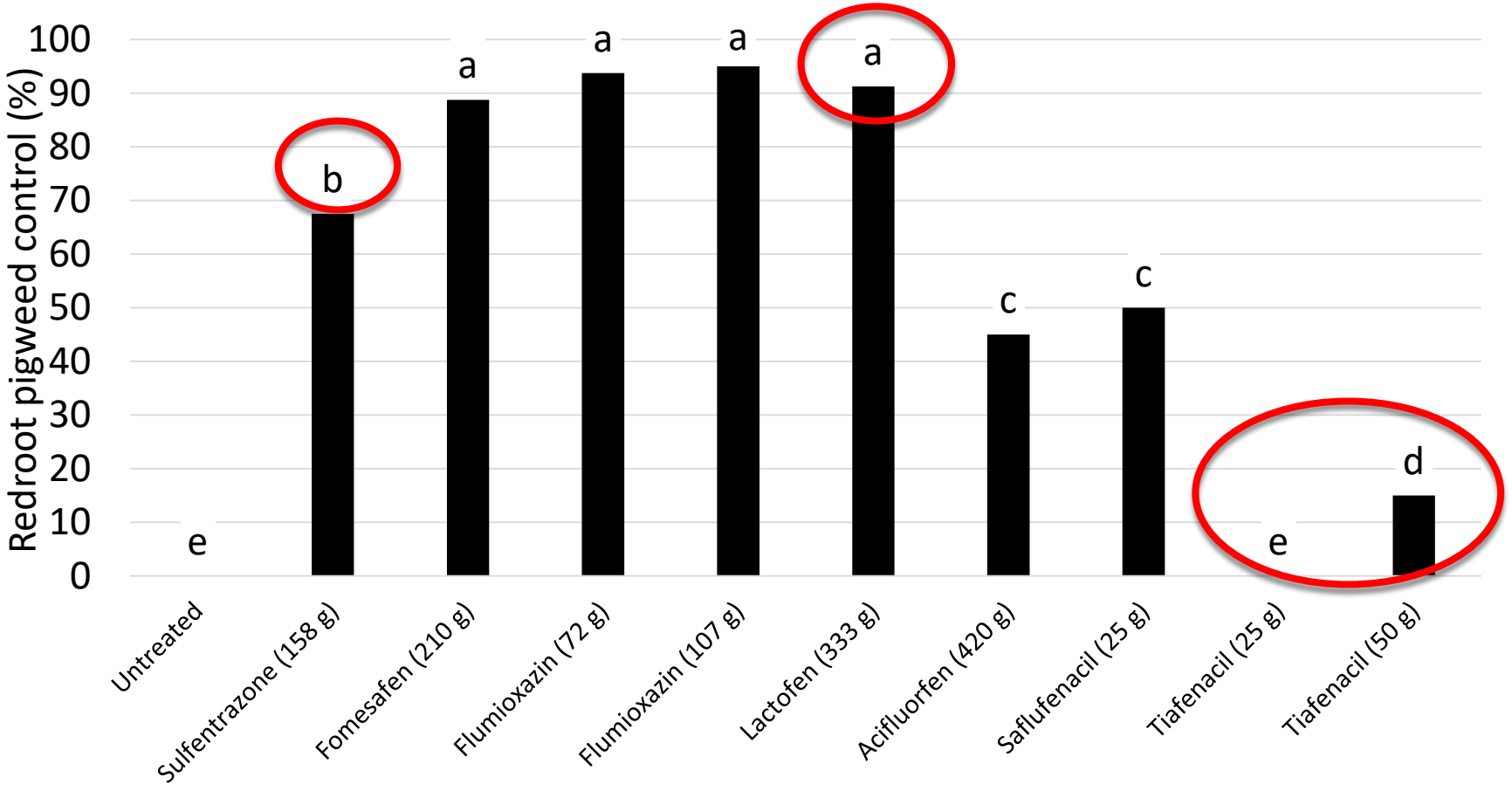
Treatments – Group 15 experiment

Herbicide	Product	Rate (per A)
S-metolachlor – PRE	Dual II Magnum	2 pt
Dimethenamid-P – PRE	Outlook	21 fl oz
Acetochlor – PRE	Warrant	1.5 qt
Pyroxasulfone – PRE	Zidua SC	5 fl oz
S-metolachlor – POST	Dual II Magnum	1 pt
Dimethenamid-P – POST	Outlook	1 pt
Acetochlor – POST	Warrant	1.5 qt
Pyroxasulfone – POST	Zidua SC	2.5 fl oz
Pyroxasulfone – POST	Zidua SC	5 fl oz

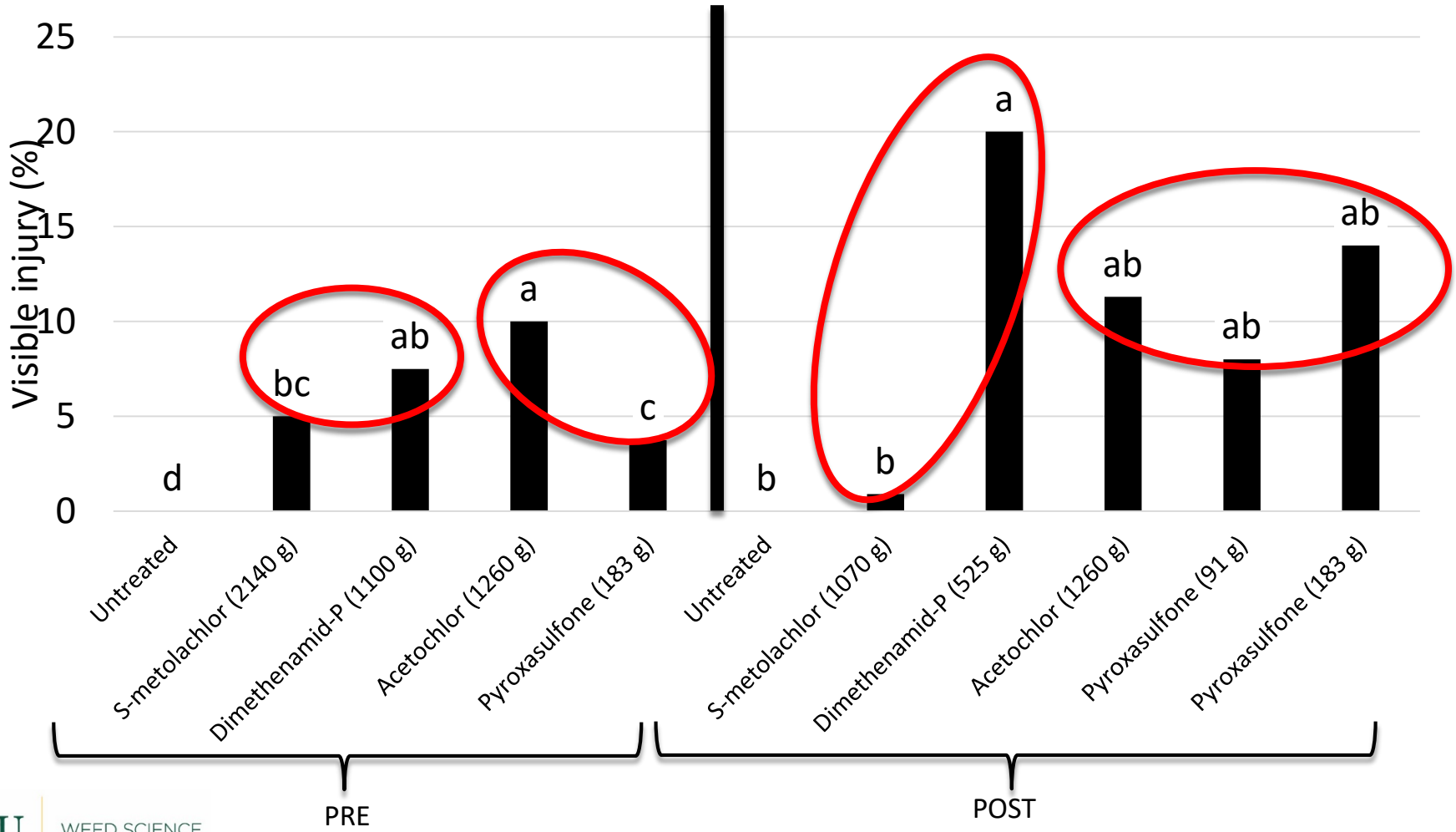
Group 14 Pinto Bean Injury, 28 DAT



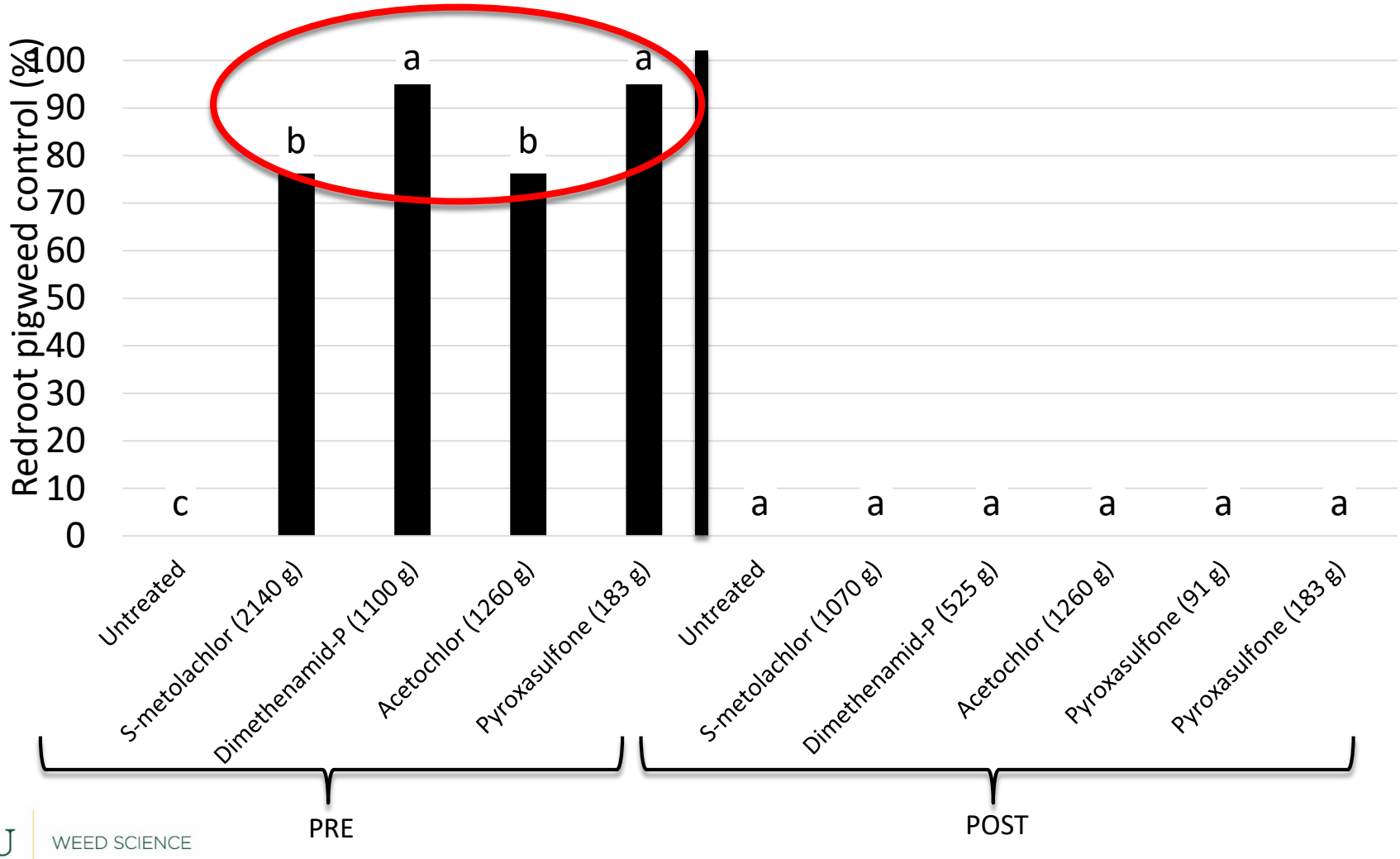
Group 14 Pigweed Control, 42 DAT



Group 15 Pinto Bean Injury, 28 DAT



Group 15 Pigweed Control, 42 DAT



Conclusions and Implications for Dry Beans

- Lactofen applied PRE had negligible injury to pinto bean and had statistically highest pigweed control
- Tiafenacil had no pinto bean injury and shows potential as a burndown herbicide in dry bean
- Pyroxasulfone and acetochlor performed similarly to other 15s

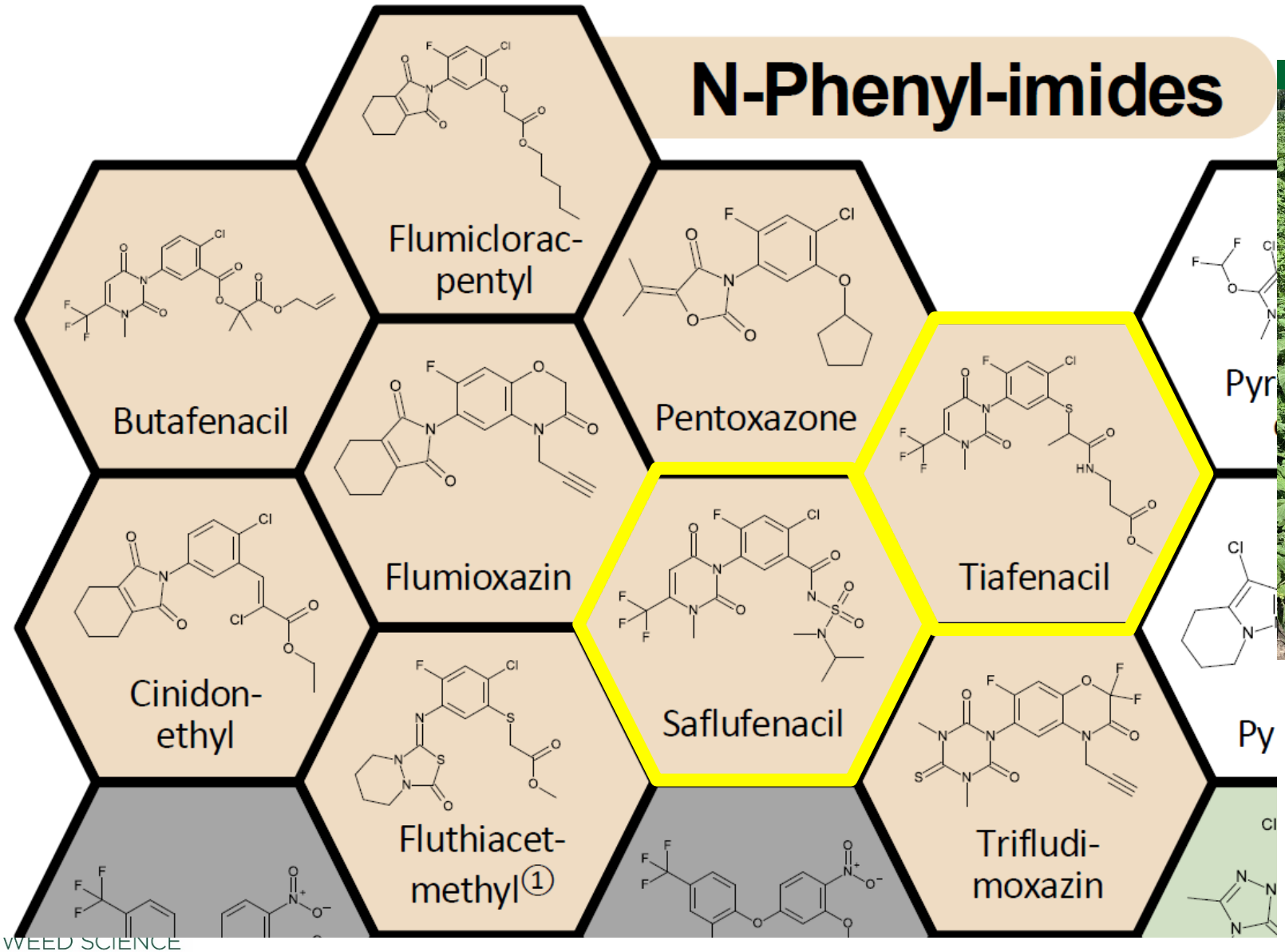
PREEMERGENCE APPLICATION RATES FOR *COBRA* HERBICIDE IN SNAP BEANS

State	Product Rate	Weeds Controlled	
Oregon	8 to 12 fl oz/A (0.125 - 0.19 lb ai/A)	Hairy Nightshade Black Nightshade Redroot Pigweed	(*Solan* (*Solan* (*Amara*
Tennessee	10 to 16 fl oz/A (0.16 – 0.25 lb ai/A)	Hairy Nightshade Black Nightshade Redroot Pigweed	(*Solan* (*Solan* (*Amara*

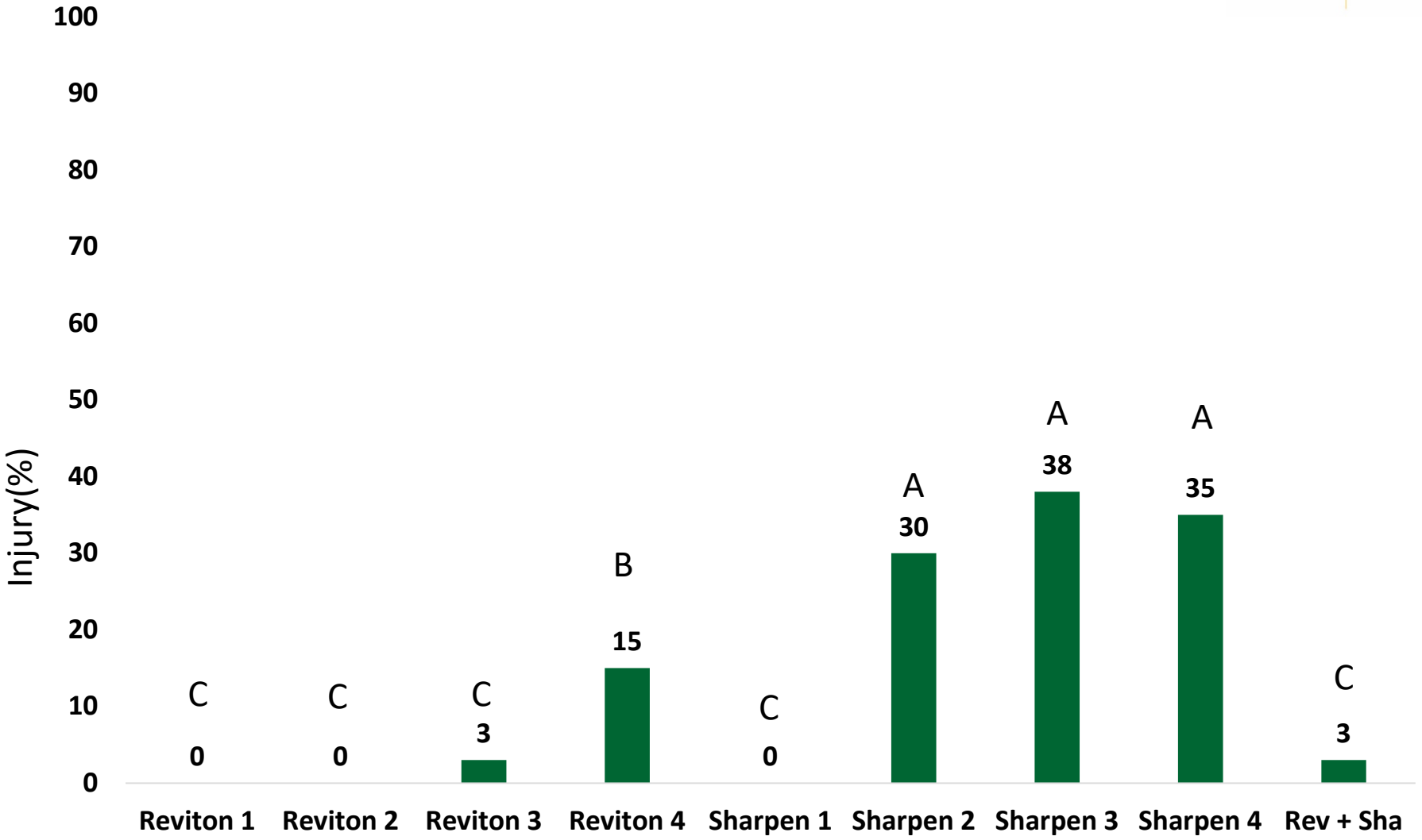
Preemergence

Cobra Herbicide may be utilized as a preemergence soil applied herbicide for control of annual broadleaf weeds in soybeans. Preemergence applications of *Cobra* Herbicide will provide approximately two weeks of residual control of the weeds listed in Table 5.

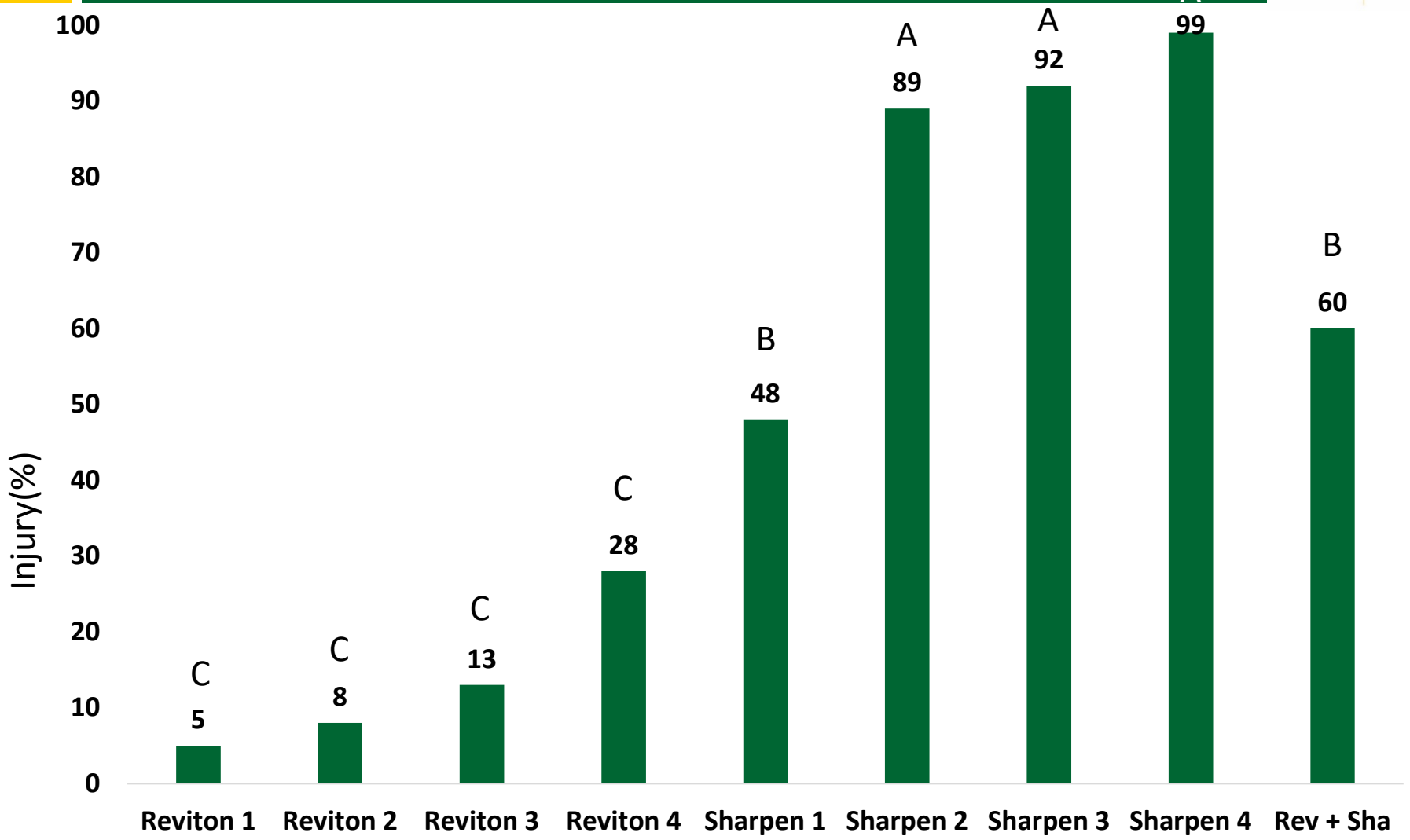
Reviton vs Sharpen Residual



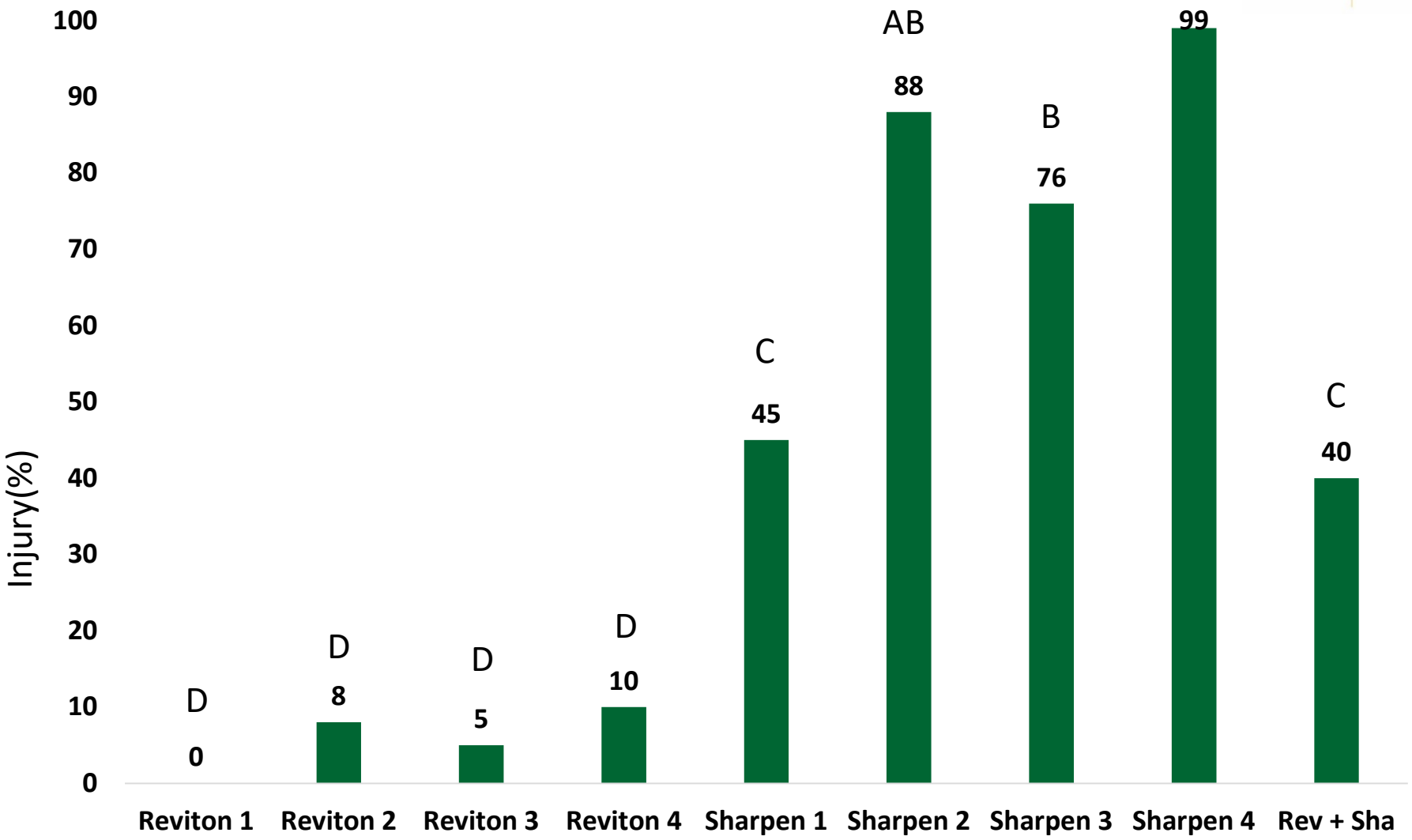
Residual Injury 28 DAP – Soybean



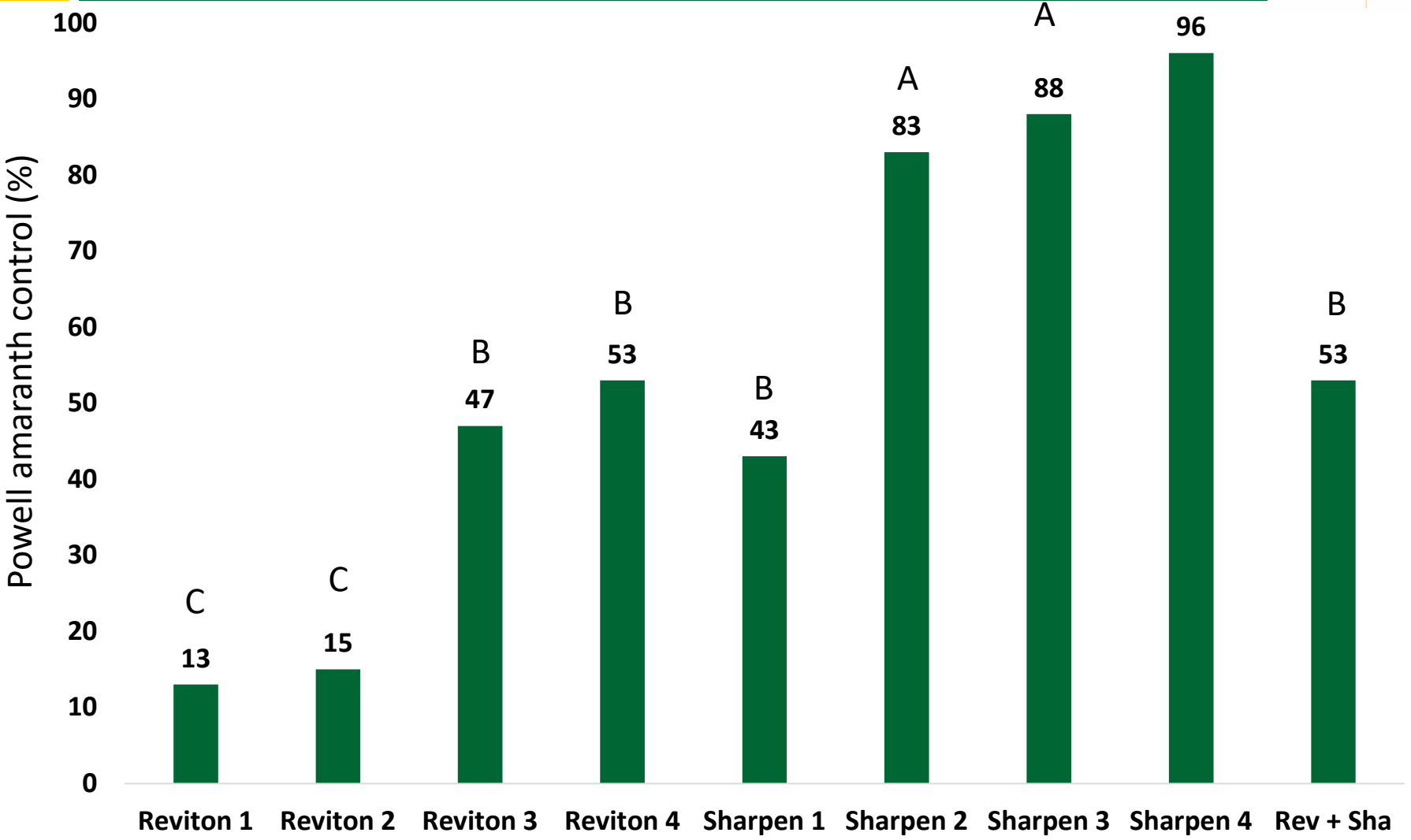
Residual Injury 28 DAP – Dry Bean



Residual Injury 28 DAP – Sunflower



Residual Control 28 DAP – Powell amaranth



Reviton vs Sharpen – 1 oz

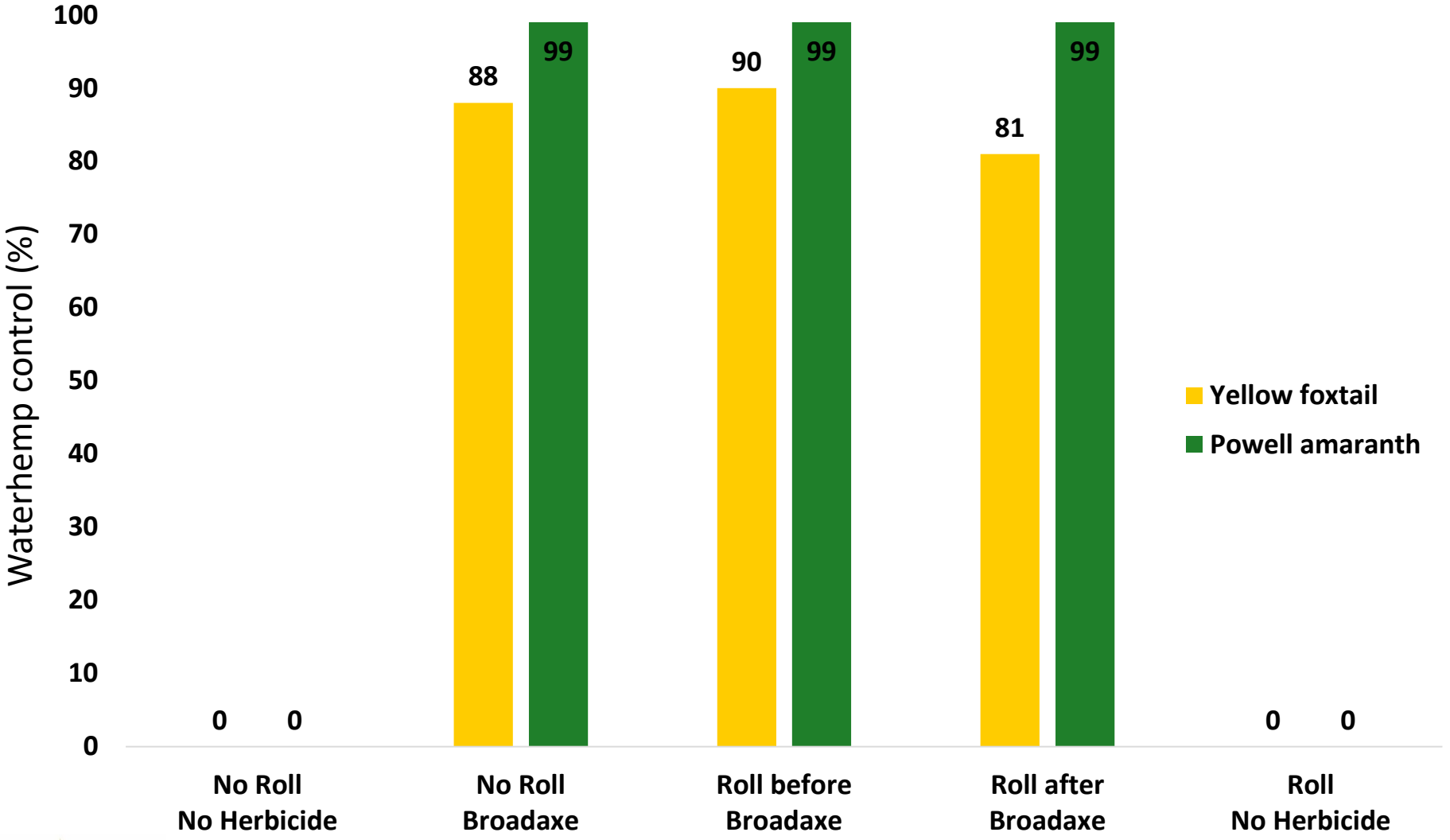
Reviton vs Sharpen – 2 oz

Reviton vs Sharpen – 4 oz

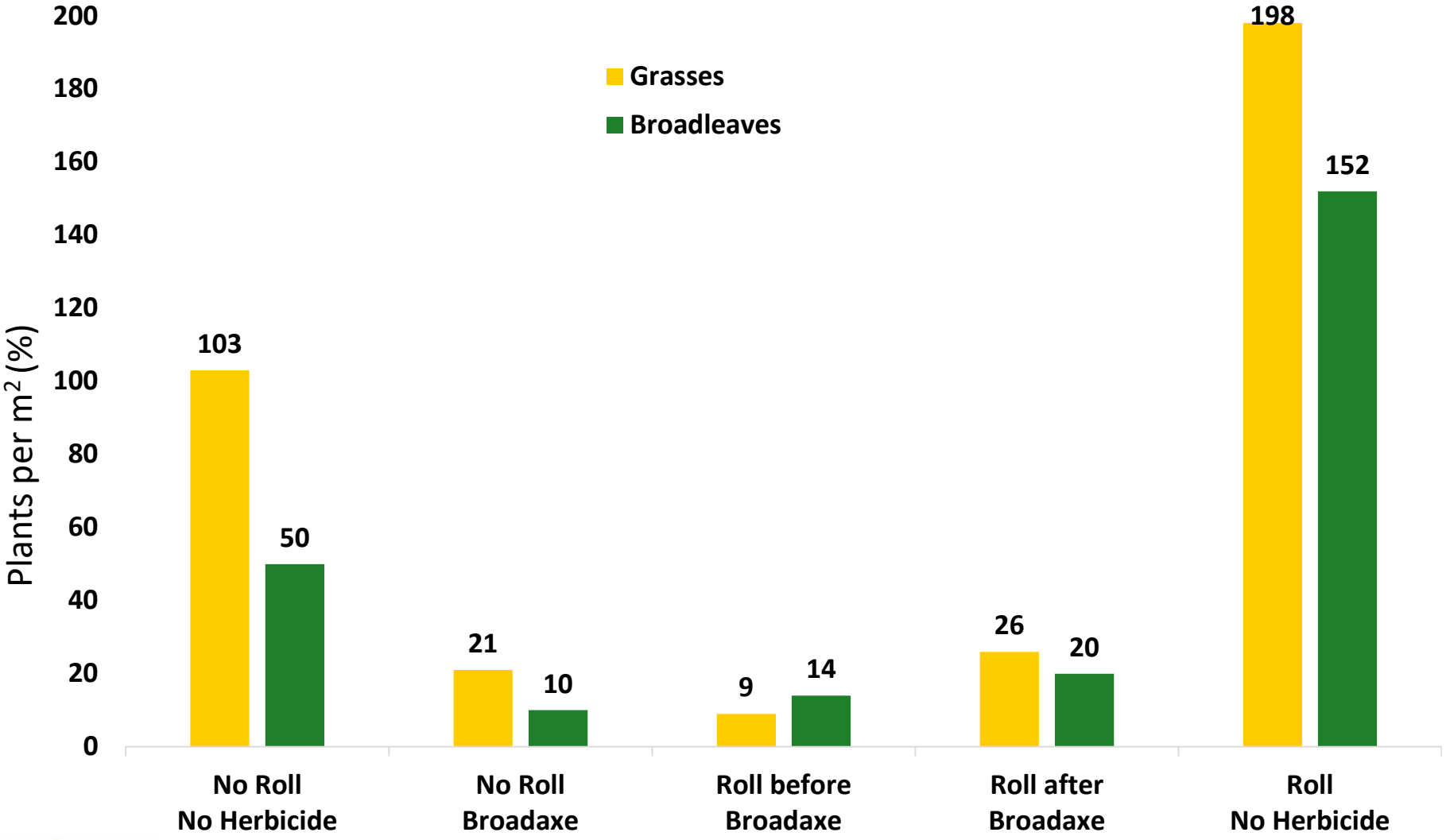
Does Rolling Influence Weed Control?

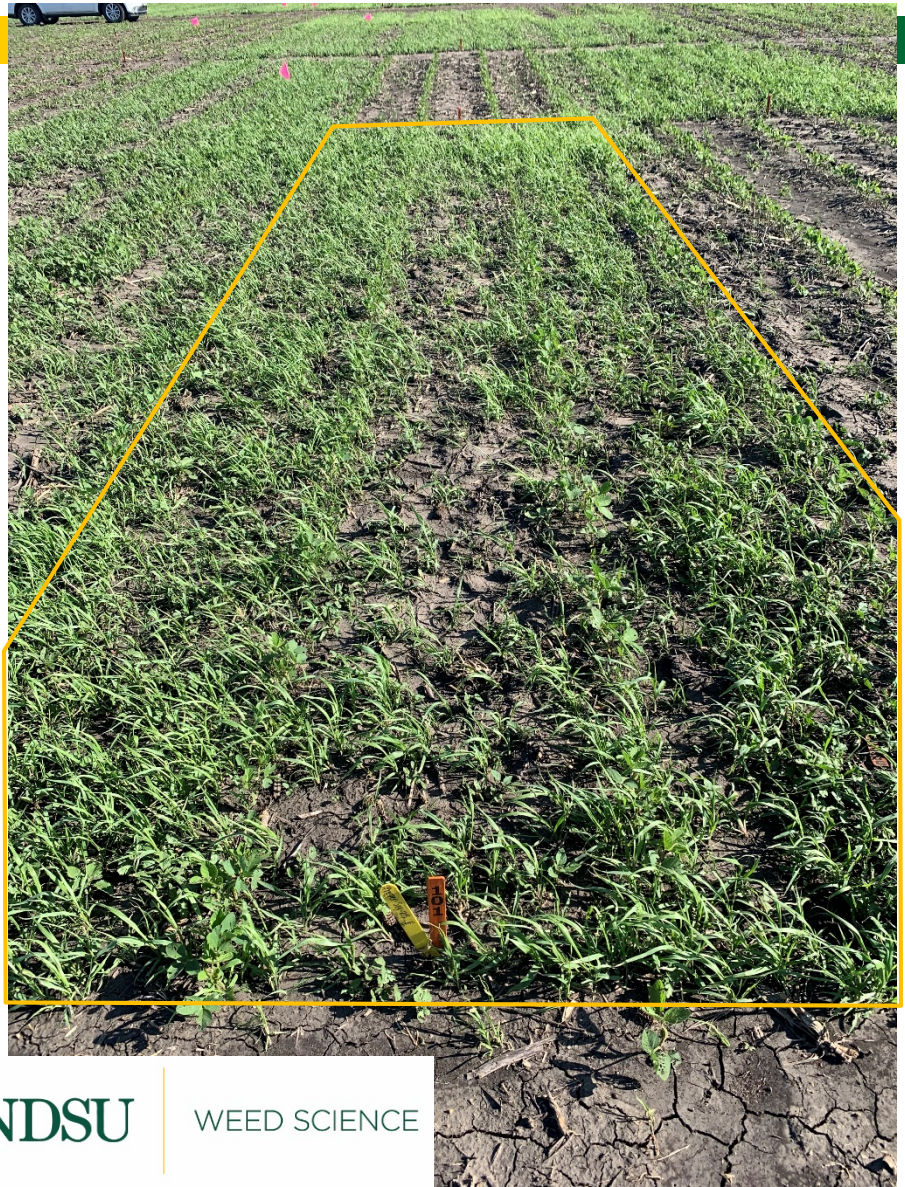
- Trial conducted at Prosper in 2022
- Soybean planted May 27
- Treatments:
  - Non rolled, no herbicide
  - PRE applied with no rolling
  - PRE applied after rolling
  - PRE applied before rolling
  - Rolled, no herbicide
- Herbicide = Broadaxe @ 25 fl oz/A
- Visible weed control, weed counts

Weed Control 4 Weeks after Planting



Weed Density 4 Weeks after Planting





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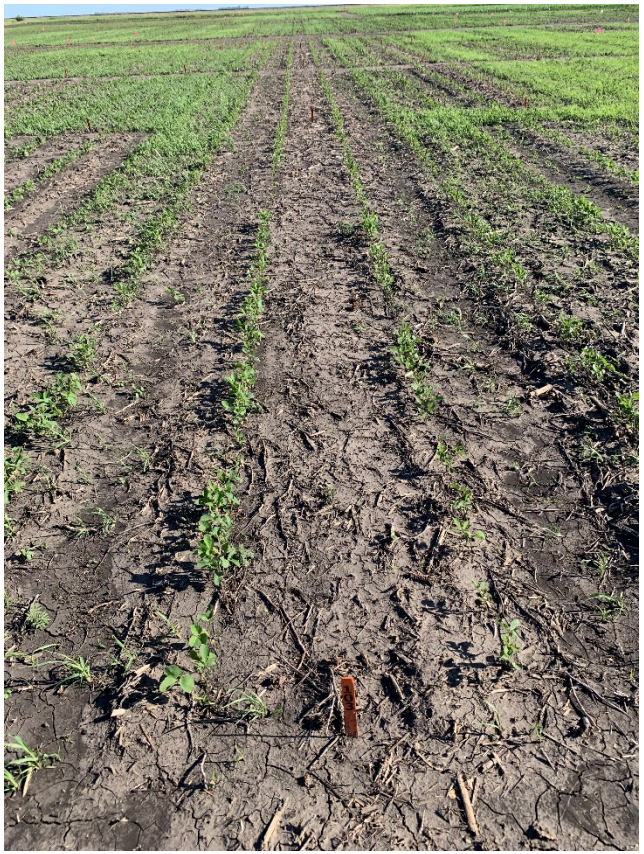
Rolling and Broadaxe

Non-Rolled

Rolled, then PRE



PRE, then Rolled

Palmer amaranth in Corn

- Research in 2021 and 2022 in Barnes County
  - Population resistant to Groups 2, 4, 9, 15, 27
  - Palmer starts emerging ~June 1
- 2021 – drought with limited rainfall events
  - Planted mid-May
  - Limited Palmer amaranth flushes
- 2022 – plenty of rainfall early
  - Planted early June
  - More Palmer amaranth flushes
  - Trials placed on more consistent pressure

Corn PRE fb POST – 2021

Herbicide (Rate/A) PRE @ planting; POST @ 11” corn (~28 days after planting)	Palmer Control 28 days after POST
Acuron (1.25 qt) PRE Acuron + Powermax (1.25 qt + 1 qt) POST	**99 A**
Lumax EZ (1.5 qt) PRE Halex GT (2.6 pt) POST	**99 A**
Acuron Flexi (1.125 qt) PRE Acuron Flexi + Powermax (1.125 qt + 1 qt) POST	**97 A**
Surestart II (2 pt) PRE Resicore + Aatrex + Durango (1.25 pt + 1 pt + 1.5 pt) POST	**99 A**
Keystone LA NXT (1.5 pt) PRE Realm Q + Durango (4 oz + 1.5 pt) POST	**99 A**
Balance Flexx (4 fl oz) PRE Capreno + Harness + Powermax + Aatrex (3 fl oz + 2 pt + 1 qt + 1 pt) POST	**99 A**
Harness Max (40 fl oz) PRE Harness Max (40 fl oz) POST	**99 A**
Harness Xtra (3.2 pt) PRE Sinate + Aatrex (28 fl oz + 1 pt) POST	**99 A**
Verdict (1 pt) PRE Status + Aatrex + Powermax (5 oz + 1 pt + 1 qt) POST	**99 A**
Verdict (10 fl oz) PRE Armezon PRO + Aatrex + Powermax (18 fl oz + 0.75 pt + 1 qt) POST	**99 A**

Corn PRE fb POST – 2022

Herbicide (Rate/A) PRE @ planting; POST @ 11” corn (~21 days after planting)	Palmer Control 28 days after POST
Acuron (1.25 qt) PRE Acuron + Powermax (1.25 qt + 1 qt) POST	**95 AB**
Lumax EZ (1.5 qt) PRE Halex GT (2.6 pt) POST	**97 AB**
Acuron Flexi (1.125 qt) PRE Acuron Flexi + Powermax (1.125 qt + 1 qt) POST	**86 C**
Surestart II (2 pt) PRE Resicore + Aatrex + Durango (1.25 pt + 1 pt + 1.5 pt) POST	**97 AB**
Keystone LA NXT (1.5 pt) PRE Realm Q + Durango (4 oz + 1.5 pt) POST	**91 BC**
Balance Flexx (4 fl oz) PRE Capreno + Harness + Powermax + Aatrex (3 fl oz + 2 pt + 1 qt + 1 pt) POST	**99 A**
Harness Max (40 fl oz) PRE Harness Max (40 fl oz) POST	**91 BC**
Harness Xtra (3.2 pt) PRE Sinate + Aatrex (28 fl oz + 1 pt) POST	**99 A**
Verdict (1 pt) PRE Status + Aatrex + Powermax (5 oz + 1 pt + 1 qt) POST	**97 AB**
Verdict (10 fl oz) PRE Armezon PRO + Aatrex + Powermax (18 fl oz + 0.75 pt + 1 qt) POST	**95 AB**

Corn EPOST – 2021

Herbicide (Rate/A) POST @ V2 corn (~14 days after planting)	Palmer Control 42 days after POST
Acuron GT (3.75 pt)	**97 A**
Acuron GT + Aatrex (3.75 pt + 1 pt)	**98 A**
Resicore + Powermax (1.25 qt + 26.6 fl oz)	**97 A**
Resicore + Aatrex + Powermax (1.25 qt + 1 pt + 26.6 fl oz)	**96 A**
Realm Q + Aatrex + Durango (4 oz + 1 pt + 24 fl oz)	**97 A**
Capreno + Harness + Powermax + Aatrex (3 fl oz + 2 pt + 1 qt + 1 pt)	**98 A**
Anthem Maxx + Callisto + Aatrex + Weathermax (4 fl oz + 3 fl oz + 1 pt + 22 fl oz)	**96 A**
Harness + Impact + Aatrex (1.75 pt + 1 fl oz + 1 pt)	**99 A**
Harness + Sinate + Aatrex (1.75 pt + 28 fl oz + 1 pt)	**98 A**
Armezon PRO + Aatrex + Powermax (18 fl oz + 1 pt + 1 qt)	**98 A**
Status + Outlook + Aatrex + Powermax (5 oz + 1 pt + 1 pt + 1 qt)	**97 A**

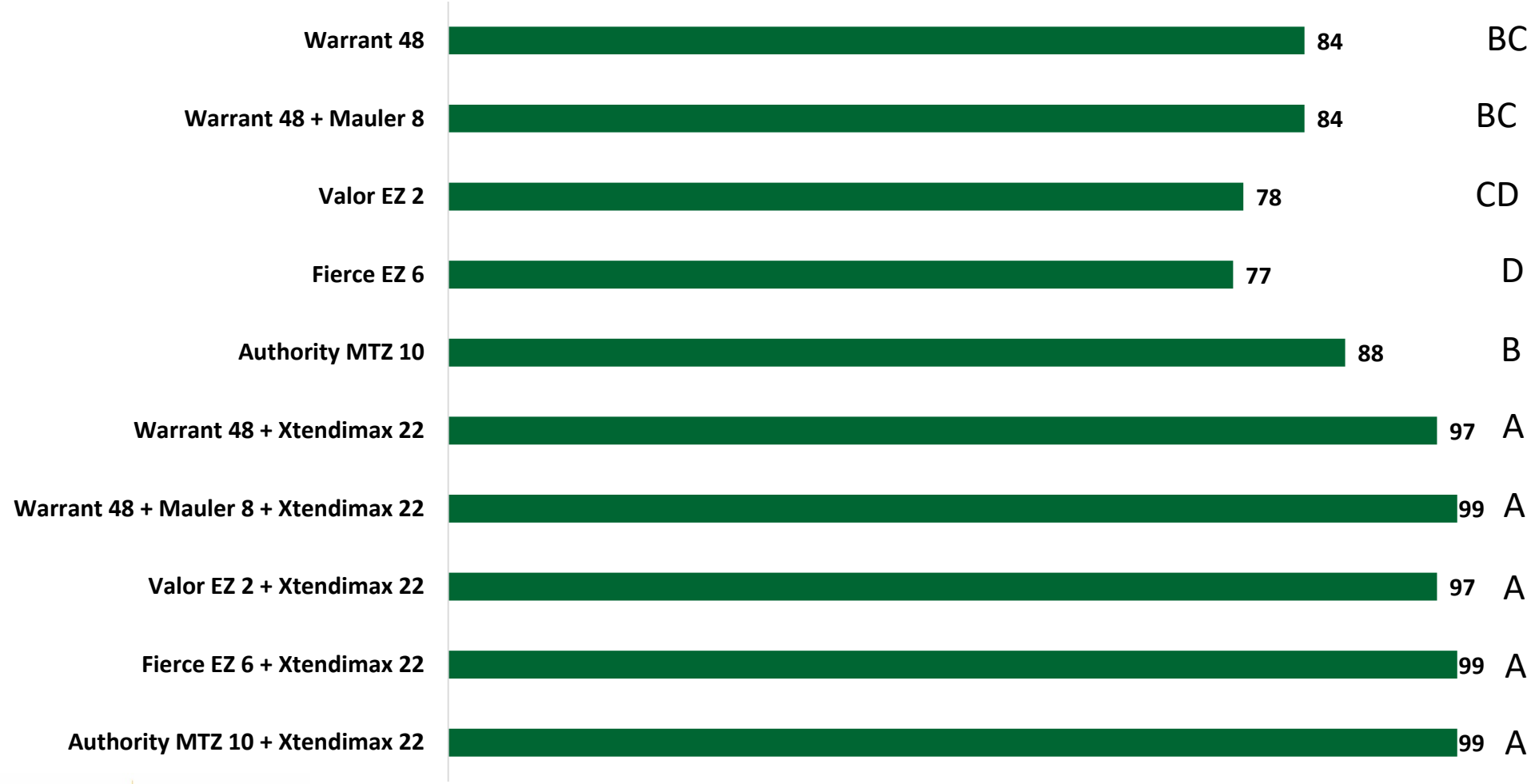
Corn EPOST – 2022

Herbicide (Rate/A) POST @ V2 corn (~14 days after planting)	Palmer Control 28 days after POST
Acuron GT (3.75 pt)	**35 C**
Acuron GT + Aatrex (3.75 pt + 1 pt)	**75 A**
Resicore + Powermax (1.25 qt + 26.6 fl oz)	**50 BC**
Resicore + Aatrex + Powermax (1.25 qt + 1 pt + 26.6 fl oz)	**75 A**
Realm Q + Aatrex + Durango (4 oz + 1 pt + 24 fl oz)	**40 C**
Capreno + Harness + Powermax + Aatrex (3 fl oz + 2 pt + 1 qt + 1 pt)	**88 A**
Anthem Maxx + Callisto + Aatrex + Weathermax (4 fl oz + 3 fl oz + 1 pt + 22 fl oz)	**78 A**
Harness + Impact + Aatrex (1.75 pt + 1 fl oz + 1 pt)	**80 A**
Harness + Sinate + Aatrex (1.75 pt + 28 fl oz + 1 pt)	**89 A**
Armezon PRO + Aatrex + Powermax (18 fl oz + 1 pt + 1 qt)	**70 AB**
Status + Outlook + Aatrex + Powermax (5 oz + 1 pt + 1 pt + 1 qt)	**81 A**

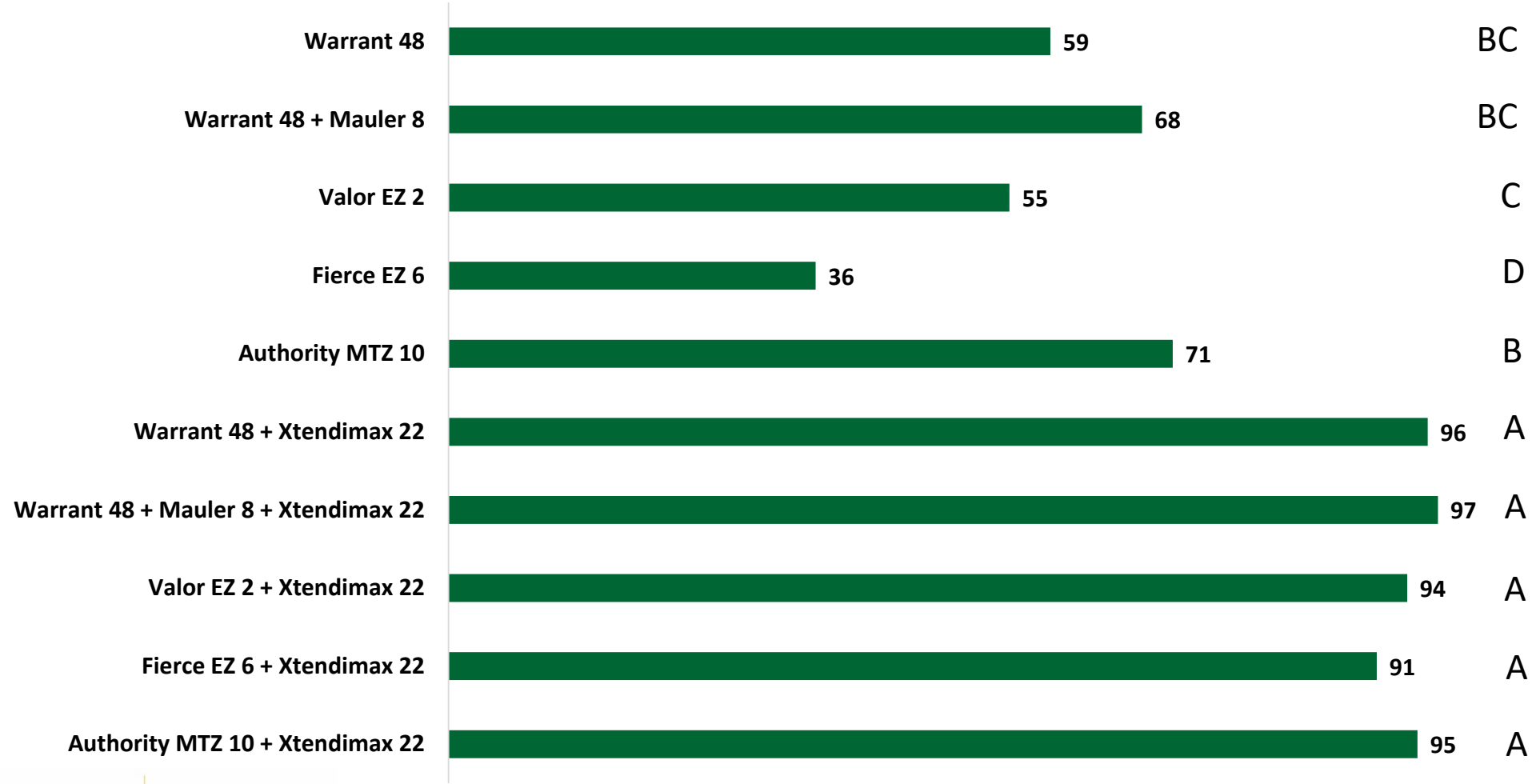
PRE Waterhemp Control with Dicamba

- Conducted at NW22 (Fargo) in 2021 and 2022
- PRE Herbicides applied with and without 0.5 lb dicamba
- Both years had <0.5” rainfall within 14 days after application

Waterhemp Control – 2021 and 2022
28 DAP



Waterhemp Control – 2021 and 2022
42 DAP



War Against Weeds Podcast

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K-STATE Research and Extension

The Ohio State University Weed Science

MU Extension University of Missouri

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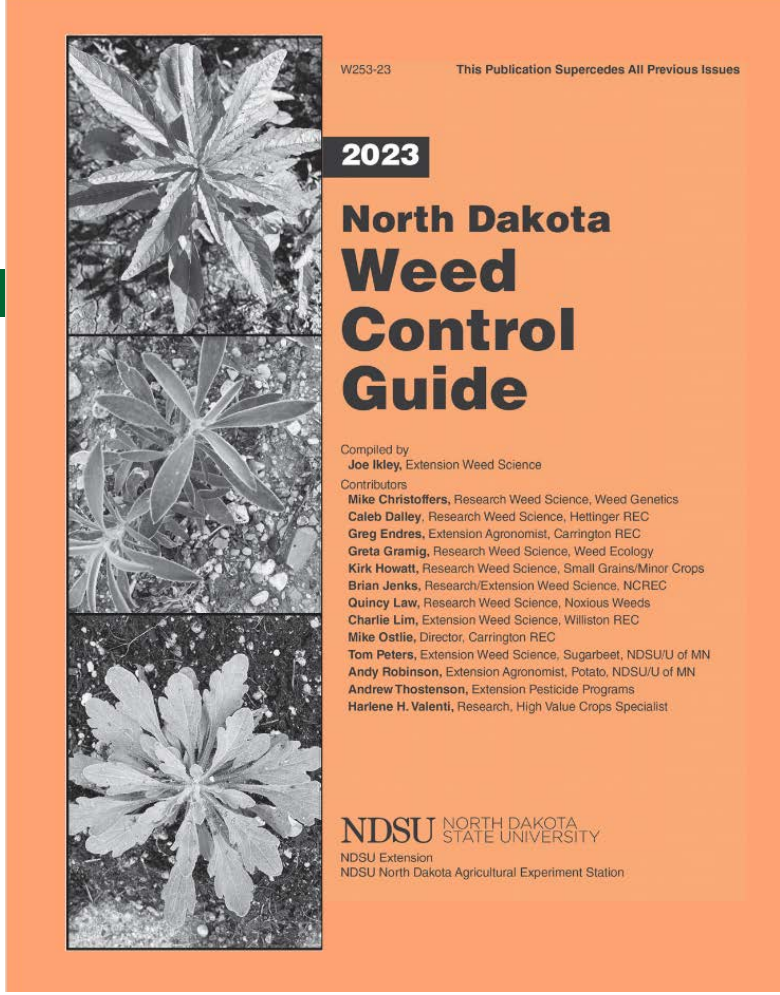

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