

# Wild Oat control in Wheat

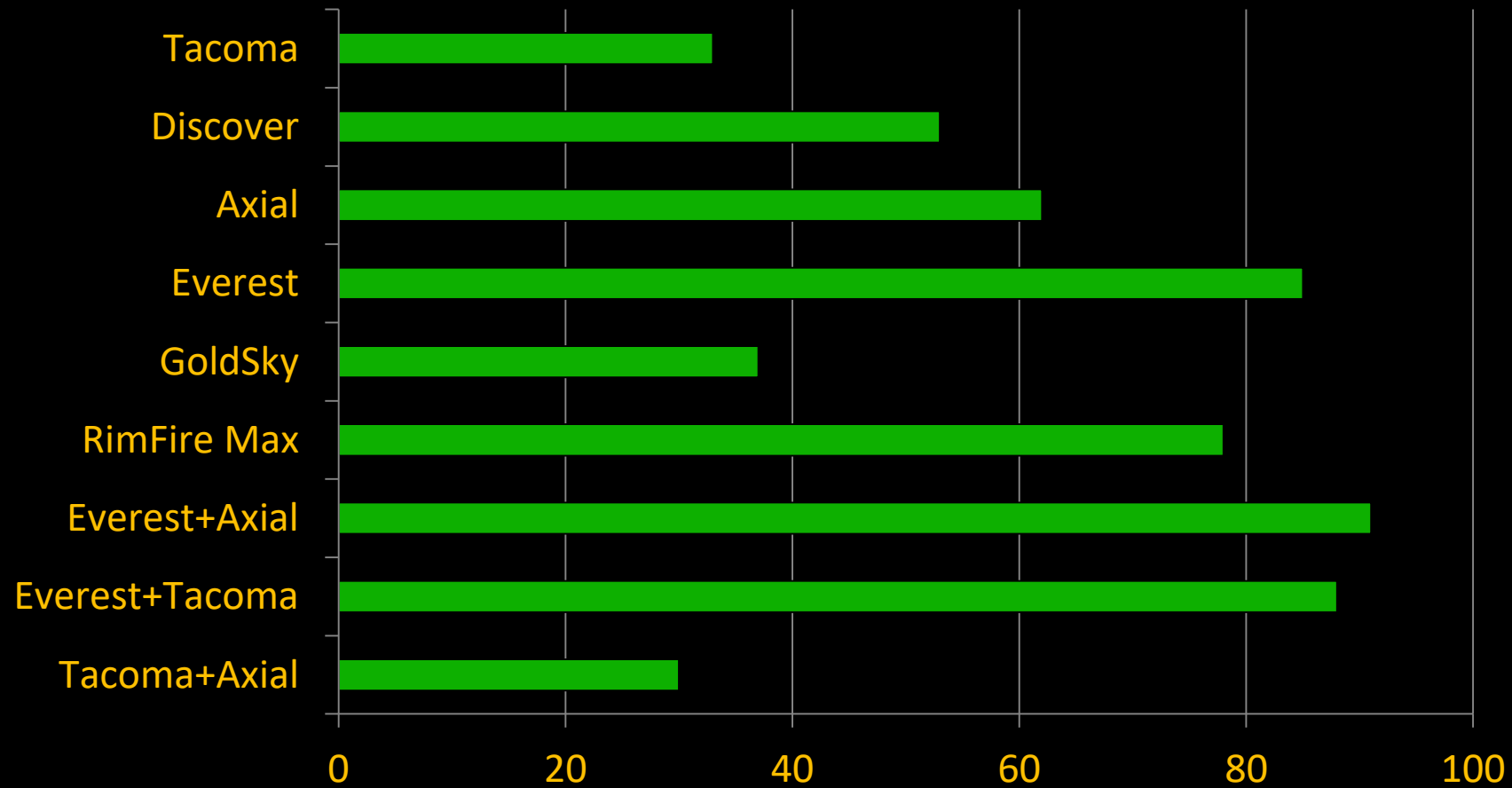
## Group 1 herbicides

- annual grasses
- excellent control
- cool, wet conditions
- death in 10 days
- control reduced in some mixtures

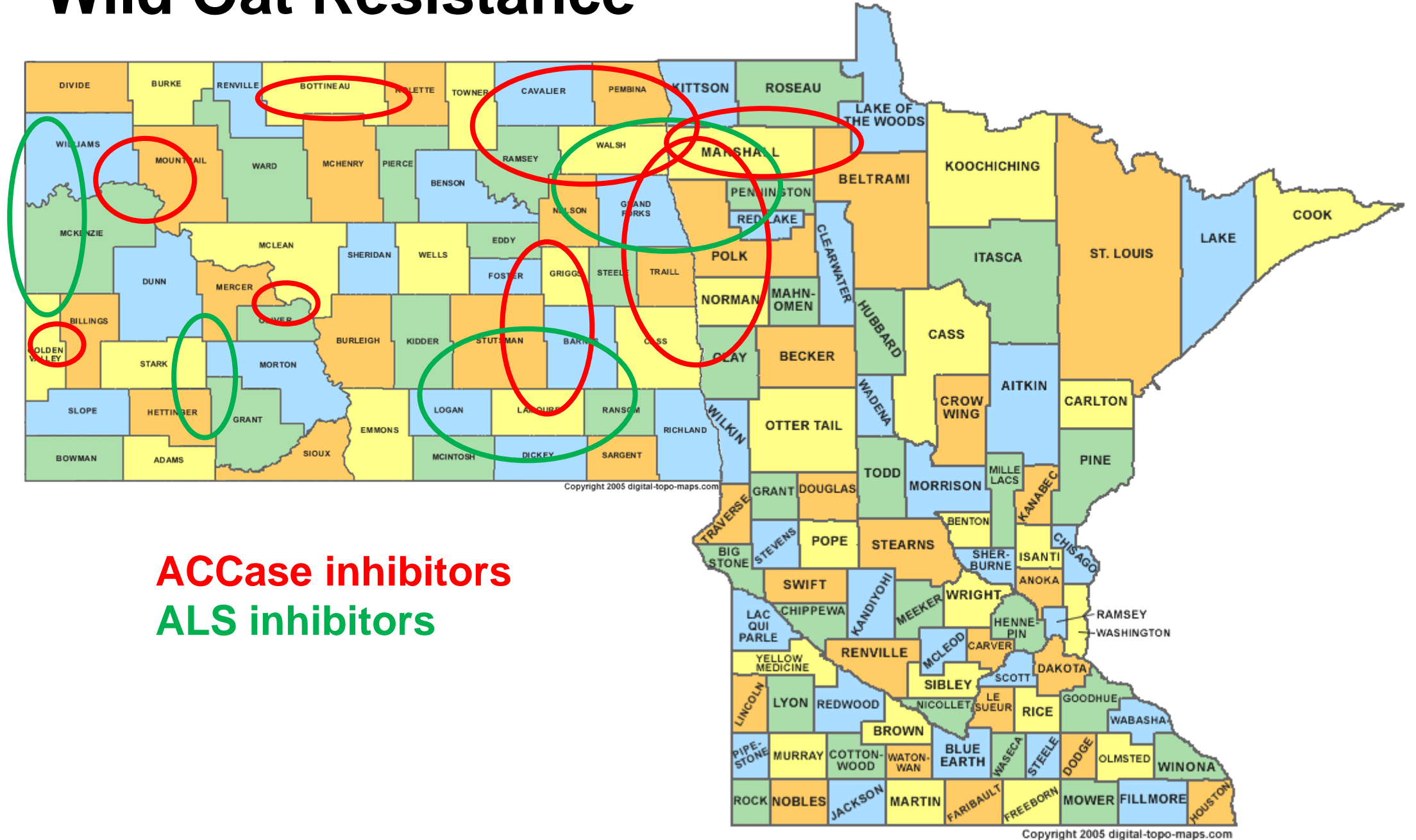
## Group 2 herbicides

- also some winter annual and perennial
- good to excellent control
- warm, dry conditions
- death in 3-4 weeks
- control seems robust across mixtures

# Resistant Wild Oat



# Wild Oat Resistance



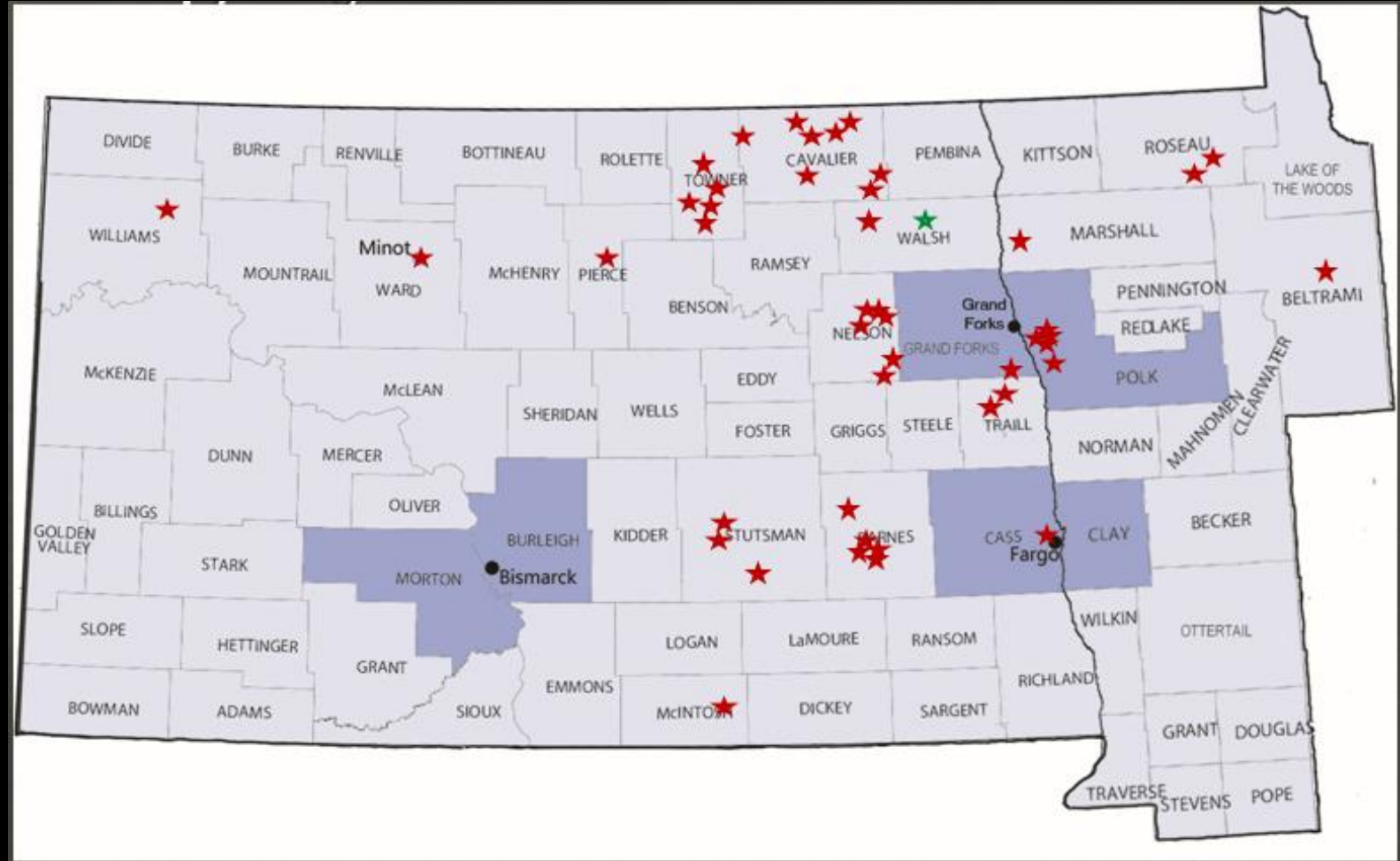
**ACCase inhibitors**  
**ALS inhibitors**

# Managing Early Stage Multiple Resistance in Wild Oat

- Target site resistance for Groups 1 and 2 are not related
- Highly self-pollinated, average 5% outcrossing
- In mixed resistance fields, plants resistant to Gr.1 or 2
  - Group 1                      30-65% control
  - Group 2                      40-70% control
  - Gr. 1 + Gr. 2                65-85% control
  - Gr. 2 fb Gr. 1               90-100% control

# Greenhouse research

- Wild oat sample sites
- Greenhouse studies
  - Far-Go
  - Characterization





# Four weeks after application



Check Axial Disc Puma SelM Everest Varro PowerFlex Raptor Matrix PowerMax



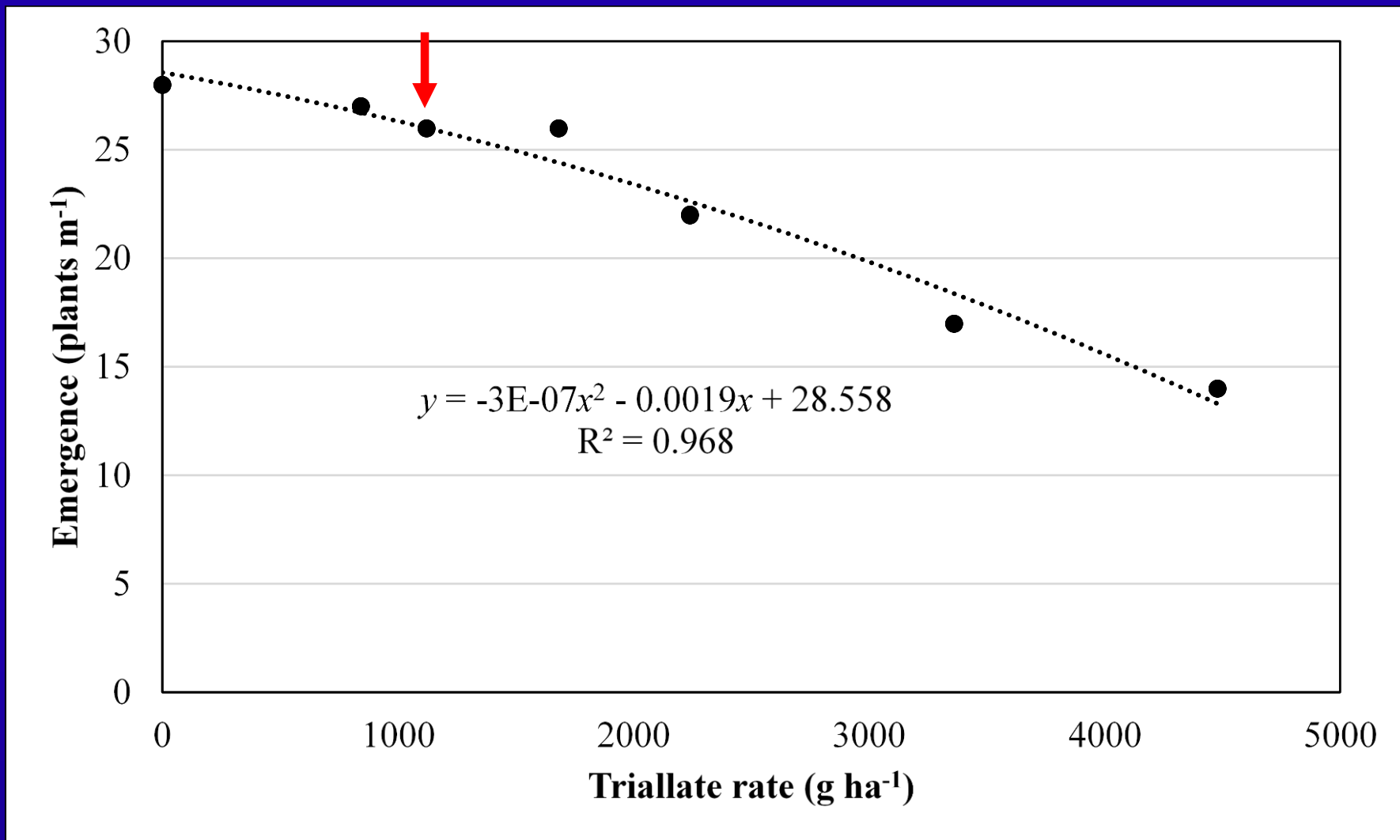
# Four weeks after application



Check  
Far-Go  
Far-Go + Axial  
Axial  
Far-Go + Varro  
Varro

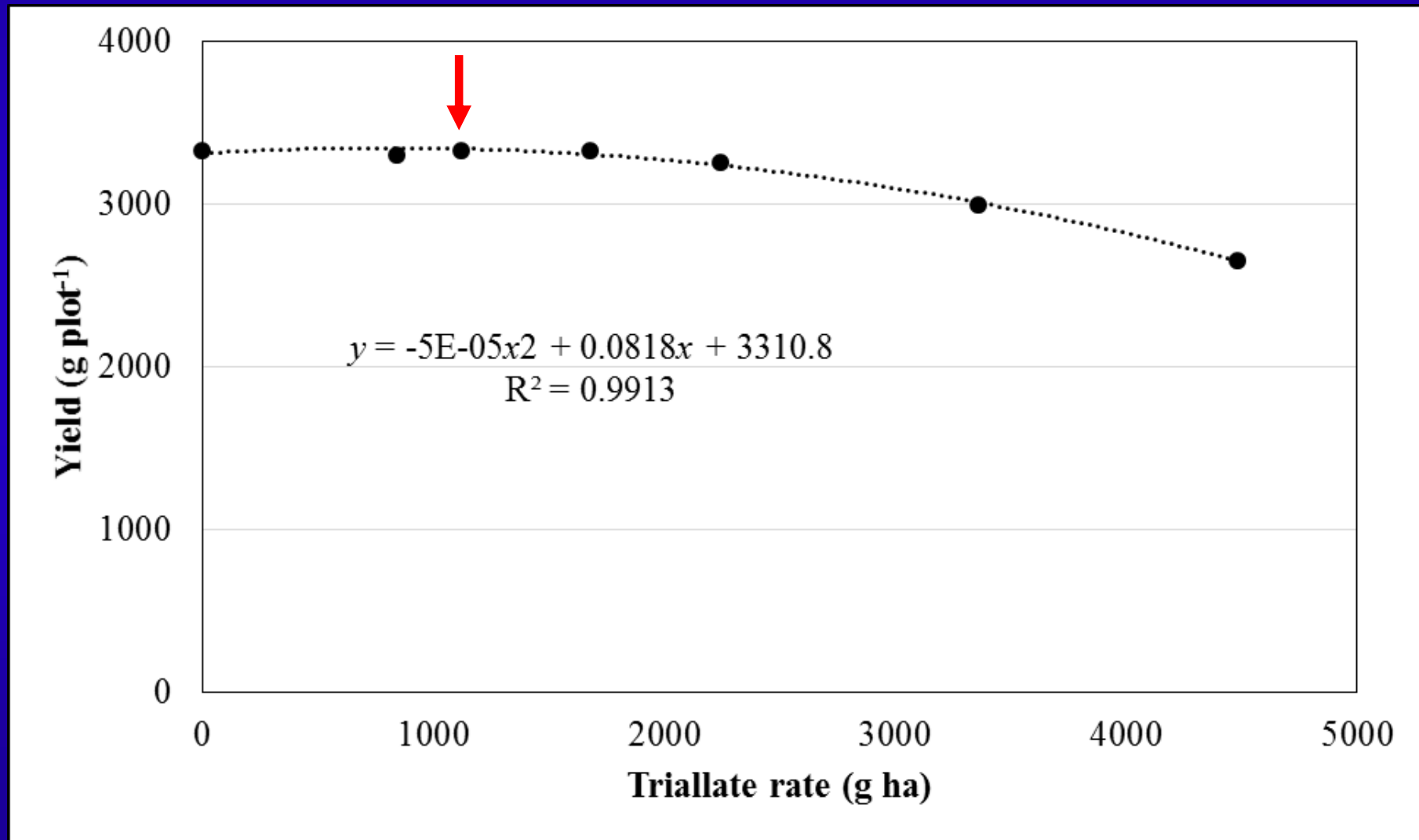


# Far-go/Avadex Injury





# Far-go/Avadex Yield Effect



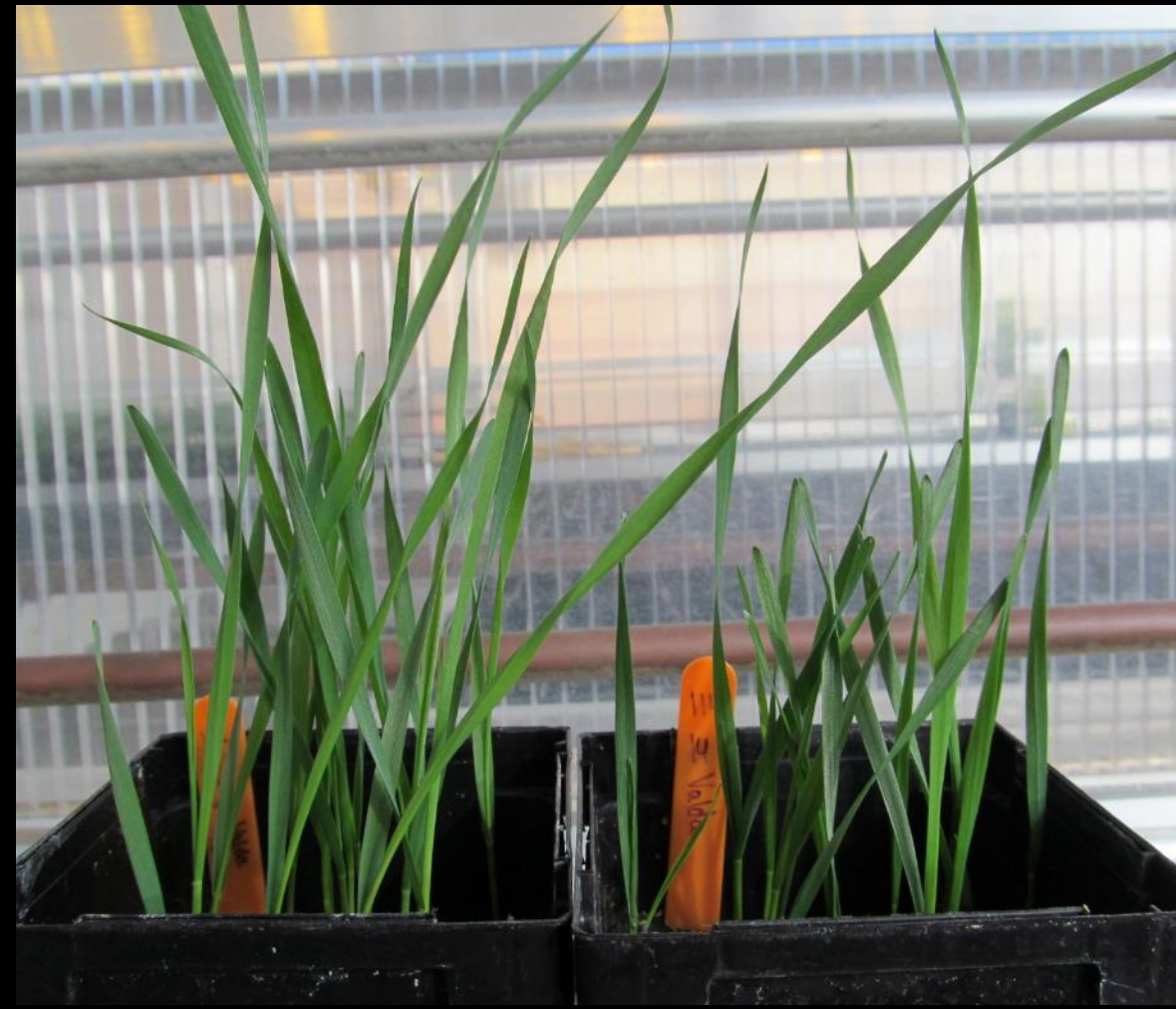




# Valda

# Cannon

Each grown in nontrt soil (left) and soil trt with triallate (right)



# Wheat Cultivar Tolerance to Triallate

Faller and Prosper have been standards

## More tolerant

Murdock

Valda

Bolles

Climax

Glenn

Barlow

## Similar to

9590

9479

Trogg

Wild Cat

Glennville

Cornerstone

## Less tolerant

Stingray

Cannon

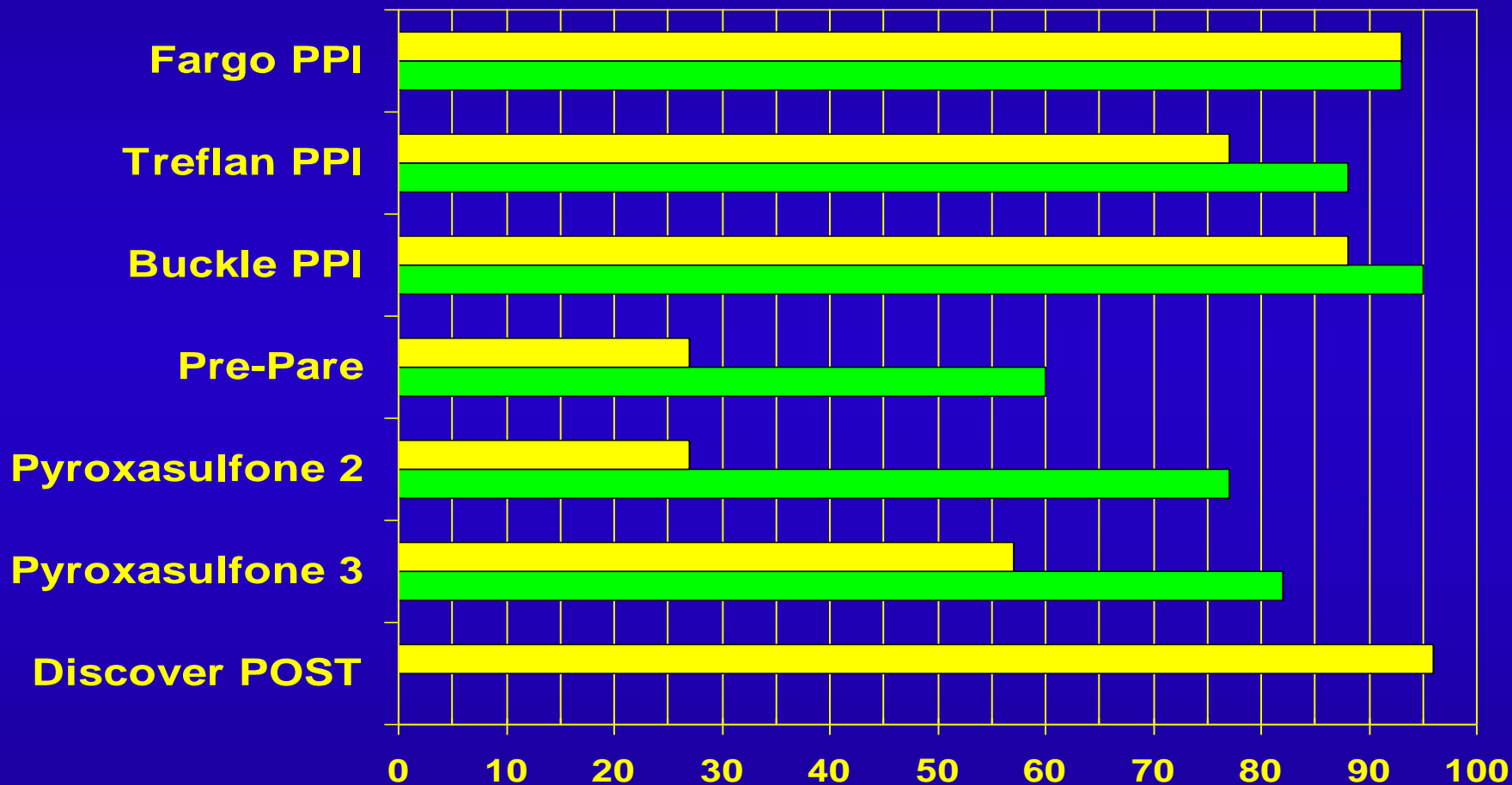
Spitfire

Ingmar

Soren



# Pre-Emergence Wild Oat Control



Control (%)

LSD (0.05) = 16, 12

# Pyroxasulfone

- Small Seeded

Green Foxtail- 28 DAT



Wild Oat- 28 DAT





# Foliar vs Soil Activity of Pyrooxasulfone



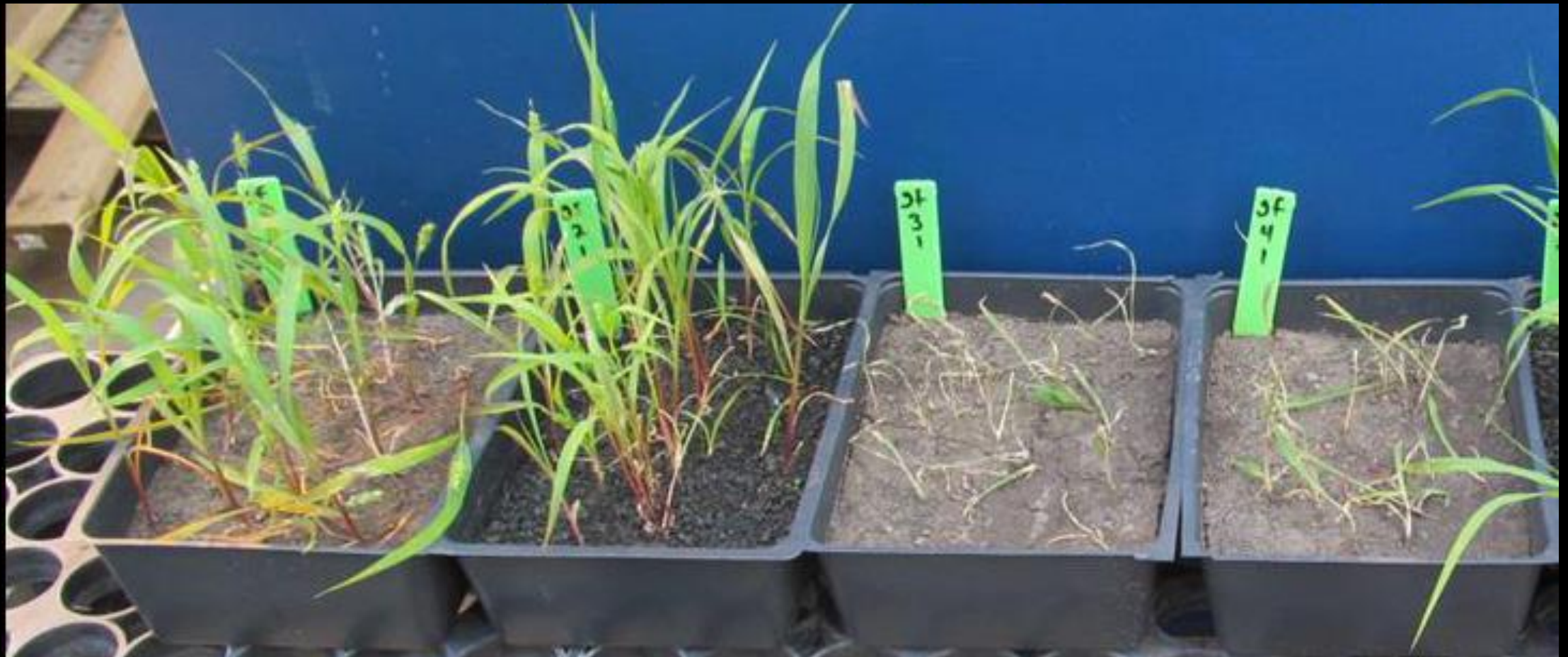


**Control**

**Foliar**

**Soil**

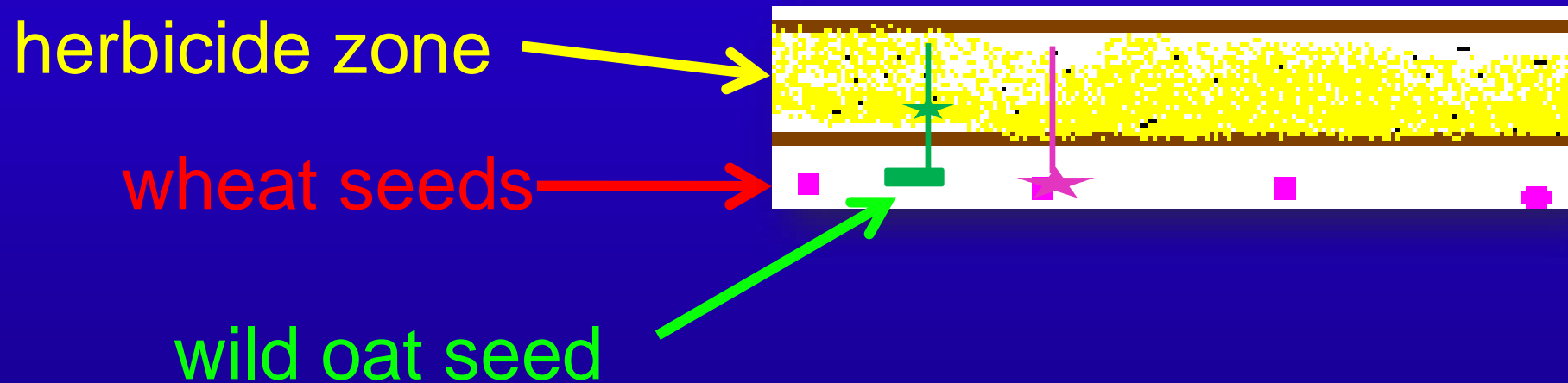
**Both**





# Zidua control of Wild Oat in Field

- Depends on getting herbicide to roots
- Delayed-pre application limits movement
- Better control in wet years
- Better control of shallow wild oat seed





Sharpen



Zidua



Pre-Pare



Olympus





# Triallate Treatments established fall 2020





**4 fl oz Zidua SC applied last fall**





**4 fl oz Zidua SC applied last fall**



# Zidua Rotational Crop Interval

	Zidua SC fl oz/A (oz ai/A)			
	1.75 (0.85)	3.25 (1)	4 (2)	6.5 (3.4)
Barley	11	11	11	11
Oat	11	11	11	11
Rye	11	11	11	11
Triticale	11	11	11	11
Wheat, HRSW	1	1	4	6

Durum appears more susceptible than HRSW in greenhouse.



# Wheat Cultivar Tolerance to Pyroxasulfone

## High

SY611C12

9479

9590

Alda

Ambush

Bolles

Faller

## Moderate

Linkert

Murdock

Vitpro

Washburn

## Low

3530

Glen

Ingmar

Toray

## Very Low

durum