Horseweed
Horsweed stand counts 6 weeks after PRE in ½ m quadrats

- **Soybean row spacing**
  - 7.5 inches
  - 15 inches
  - 30 inches

- **Untreated**
- **Diamba**
- **Gramoxone**

[Bar chart showing the comparison of horsweed stand counts for different row spacings and treatments.]
3 weeks after POST % horseweed control

**Soybean system**

- Liberty
- Roundup
- Dicamba

**Herbicides**
- None
- Sharpen
- Valor
- Spartan

**% horseweed control**

- Liberty: Sharpen > None > Valor > Spartan
- Roundup: Sharpen > None > Valor > Spartan
- Dicamba: Sharpen > None > Valor > Spartan
PRE – Roundup
POST – Roundup + Basagran

PRE – Roundup + Sharpen
POST – Roundup + Basagran

PRE – Roundup + Valor
POST – Roundup + Basagran
PRE – Roundup + Sharpen
POST – Roundup + Basagran

PRE – Xtendimax + Sharpen
POST – Xtendimax + Roundup

PRE – Gramoxone + Sharpen
POST – Liberty
Control of Volunteer Corn in Wheat
Axial Bold

- Registered for wheat and barley
- 15 fl oz/A
  - Full rate of Axial
  - Yellow foxtail rate of Tacoma/Parity
- Application window
  - Wheat, emergence to pre-boot
  - Barley, emergence until jointing
Woolly Cupgrass

- Observed in North Dakota at two locations
  - Fargo
  - Hankinson
- Screening
- Treflan
- Dual
- Zidua
- Outlook

- Far-go
- atrazine
- Warrant (half-rate?)
- Callisto
Worked
- glyphosate
- Liberty
- Axial
- Assure II*
- clethodim*

Working
- Impact/Armezon
- Beyond/Raptor
- Accent
- Tacoma/Parity
- Discover

Didn’t Work
- Everest
- Varro
- TeamMate
- Facet
Travel Speed Affected Control more than Droplet Size \((\text{Aim+2,4-D+Everest})\)

- 4.5 mph, across size
- 12 mph, medium
- 12 mph, ultra coarse
Broadleaf Weed Control with PWM Technology

• Determine if there is an interaction between droplet size and travel speed
• Four droplet sizes (250, 400, 600, 750 µm) and three speeds (5, 10, 15 mph)
• Two crops, two chemical programs each
  • Soybean
    • Glyphosate + dicamba (Xtend system)
    • Glufosinate + fomesafen (Liberty + Flexstar)
  • Wheat
    • Bromoxynil & pyrasulfotole (Huskie)
    • 2,4-D + thifensulfuron + tribenuron (2,4-D + Affinity TM)
• All trials will be repeated in 2019
Broadleaf Weed Control with PWM Technology

• Soybean trials
  • Excellent control for both Xtend and Liberty systems
  • No apparent interaction between droplet size and speed

Prosper, ND. Xtendimax treatments
2,4-D + Affinity

- Overall, control was better 4 weeks after treatment
- Common lambsquarters
  - Good to excellent control 14 DAT
  - Near complete control 28 DAT
- Common ragweed
  - Good control when sprayed with handboom
  - Poor control 14 DAT with PWM sprayer
  - Marginally acceptable control 28 DAT with PWM sprayer

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<th>Droplet Size</th>
<th>Speed (mph)</th>
<th>14DAT (%)</th>
<th>28DAT (%)</th>
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LSD P=0.05 | 9 | 3 | 25 | 11
Huskie

- Fair to good control 14 DAT
- Control good to excellent by 28 DAT
- PWM sprayer generally allowed similar control to handboom
  - Trend for less control with very large droplets
  - Variable speed trends

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