

2008 CMDC

How We Fill The Pipeline –

Weed Management –

Lowell Sandell

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Dicamba Soybeans

Benefits:

- Resistance management
 - Multiple MOA on broadleaves
 - Difficult to control broadleaves
- Little residual or carry over (+/-)



Challenges:

- Drift
- Sprayer & line clean out



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Resistance Update

Nebraska

- Marestalk



United States

- Marestalk (18 states)
- Waterhemp (MO, IL, KS, MN)
- Palmer amaranth (GA, AK, TN)
- Common ragweed (MO, KS, AK)
- Giant ragweed (OH, AK, IN, KS, MN, TN)

Note:

- Lack of rotation and continuous use of glyphosate is likely the cause
- Much of Nebraska is moving into this pattern (glyphosate resistant corn / glyphosate resistant soybeans)

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Principals of Resistance Development

Resistance = (selection pressure) x (allele frequency)

- Pressure = (persistence) x (# individuals)
- Frequency of resistance alleles
 - Varies by species
 - Varies for each herbicide

Reduce selection intensity

- Threshold based management
- Rotate crops
- Rotate herbicides
- Combine herbicides
- Tillage
- Monitor for resistance



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Need for Active Glyphosate-Resistance Management

Theoretically, Nebraska is relatively more reliant upon herbicides

Lower crop populations

- Lower LAI
- 12,000 to 28,000 vs. 24,000 to 36,000



Adoption of No-Till

- Successful no-till is predicated on effective POST herbicides
- Maintaining herbicide efficacy is crucial to continued adoption of no-till

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