Grass Control in Corn, Cotton, and Soybean

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## Old-school grass control

<table>
<thead>
<tr>
<th>Corn</th>
<th>Cotton</th>
<th>Soybean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetochlor or metolachlor PRE and/or POST</td>
<td>Trifluralin PPI</td>
<td>Trifluralin PPI</td>
</tr>
<tr>
<td>Accent</td>
<td>Fluometuron +/- pendimethalin PRE</td>
<td>Alachlor, metolachlor PRE</td>
</tr>
<tr>
<td></td>
<td>MSMA +/- prometryn or diuron directed</td>
<td>Graminicides as needed</td>
</tr>
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<td></td>
<td>Graminicides as needed</td>
<td></td>
</tr>
</tbody>
</table>
Revolution in mid-90’s

No worries. Roundup’s got it! Right?
GR johnsongrass
GR johnsongrass

Nontreated

Corvus PRE

Capreno + Liberty POST
GR johnsongrass

Nontreated

2 applications, 3 weeks apart

2 weeks after last application

3 applications, 3 weeks apart
Missed grass

J. Bond – MS State Univ.
Missed grass

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Missed grass

Junglerice escaping 2 applications of Engenia + Roundup PM

L. Steckel – Univ. of Tennessee
Missed grass

Junglerice escaping
2 applications of Engenia + Roundup PM in cotton

L. Steckel – Univ. of Tennessee
Missed grass

Goosegrass escaping 2 applications of Engenia + Roundup PM in soybean

L. Steckel – Univ. of Tennessee
Response of Junglerice Screen to Selected Herbicides across 3 locations

L. Steckel – Univ. of Tennessee
What is going on?

• Antagonism between dicamba and glyphosate or clethodim has been reported

• Rich Zollinger, Extension Weed Scientist at North Dakota St. Univ., posted on NDSU’s Crop & Pest Report in 2017

• Larry Steckel, Extension Weed Scientist at Univ. of Tennessee, posted on the Utcrops blog in 2019

• Both reported antagonism of clethodim and/or glyphosate by dicamba

• Scientific literature indicates this as well
What is going on?

- Poor coverage due to nozzles
- Poor coverage due to boom height
- Poor coverage due to sprayer speed
- Poor environmental conditions
What is going on?

• Resistance
  • Goosegrass in MS and TN
  • Johnsongrass in MS and LA
  • Italian ryegrass – MidSouth
  • Barnyardgrass/junglerice
    • Suspected populations in all MidSouth states

Junglerice escaped 40 oz of glyphosate

L. Steckel – Univ. of Tennessee

Virginia Tech Univ.
Solution?

• Don’t tank-mix dicamba with clethodim...or any graminicide

• Program if you have GR Palmer amaranth and troublesome grasses
  • Spray dicamba alone
  • 5-7 days later, apply glyphosate + clethodim

• Old weed science rule
  • Broadleaf herbicide 1\textsuperscript{st}, graminicide 7 days later
  • Graminicide 1\textsuperscript{st}, broadleaf herbicide 2 days later
Solution?
Questions?