2012: How Tillage and Application Timing of Reflex Affects Palmer Amaranth Control

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Tillage is now a common scene
Growers: Pre-plant*/PRE herbicides applied
Percent (%) of acres treated

Diuron | Fluometuron | Pyrithiobac | Flumioxazin | Fomesafen

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37.8% | 45.8% | 26.9% | 25.1% | 24.7% | 26.9% | 2.8% | 81%

* Denotes a significant difference.
Percent control of Palmer amaranth by Reflex as impacted by tillage. 38 DAP.*
Prowl (1 pt) + Reflex (1 pt) 
30 days after treatment
## Tillage in Cotton During 2010

<table>
<thead>
<tr>
<th>%PPI tillage</th>
<th>GA Counties</th>
<th>#</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>1-9</td>
<td>Worth, Pulaski, Tift, Berrien, Echols, Turner, Brooks, Pierce, Marion, Grady,</td>
<td>10</td>
</tr>
<tr>
<td>10-19</td>
<td>Emanuel, Montgomery, Atkins, Coffee, Lowndes, Dooly, Wilcox, Thomas, Crisp, Schley, Webster, Colquitt</td>
<td>11</td>
</tr>
<tr>
<td>20-29</td>
<td>Bullock, Jefferson, Treutlen, Wheeler, Daugherty</td>
<td>5</td>
</tr>
<tr>
<td>30-50</td>
<td>Effingham, Telfair, Tattnall, Dodge, Toombs, Jeff Davis, Bleckly, Early, Lanier, Irwin, Lee, Macon</td>
<td>13</td>
</tr>
<tr>
<td>&gt;50</td>
<td>Jenkins, Johnson, Washington, Screven, Wayne, Laurens, Randolf, Decatur, Seminole, Miller, Taylor Ben Hill</td>
<td>12</td>
</tr>
</tbody>
</table>
Percent Palmer Amaranth control with Reflex PPI and PRE in 2010.

Irrigated: 99 A, 80 B
Dryland: 79 B, 98 A
Reflex: Soil moist at planting; rainfall 13 DAT.
Cotton injury is a big concern for growers!!
Irrigated May 13
Planted May 14
Irrigated May 19 during emergence
Objective

To determine if PRE, PPI or PRE and PPI split applications (PPI fb PRE) of Reflex has an impact on Palmer amaranth control.
Materials and Methods

- Tift County
- Plot Size 6 by 25 feet
- Replicated 4 times
- Randomized Complete Block Design
- DP 1050 BRF
- 10 Treatments
Application Methods

• PPI with a field cultivator before planting

• PRE immediately after planting

• Irrigated (no irrigation or rainfall for 7 DAT)
Herbicide Treatments: Comparison 1

• PPI Options:
  – Prowl + Reflex 1 pt/A
  – Prowl + Reflex 1.5 pt/A

• PRE Options:
  – Prowl + Reflex 1 pt/A
  – Prowl + Relfex 1.5 pt/A

• Split (PPI fb PRE)
  – Prowl + Reflex 0.5 pt/A fb Reflex 0.5 pt/A
  – Prowl + Reflex 0.75 pt/A fb Reflex 0.75 pt/A
Percent cotton injury with Reflex PPI, PRE, or Split Applied at 12 DAT.

Prowl H2O 2 pts/A included with all treatments.
Percent Palmer Amaranth control with Reflex PPI, PRE, or Split Applied at 35 DAT.

Prowl H2O 2 pts/A included with all treatments.
Non-treated
Prowl + Reflex ½ pt fb ½ pt Split Application
Herbicide Treatments: Comparison 2

• Split (PPI fb PRE)
  – Prowl + Reflex 0.75 pt/A fb Reflex 0.5 pt/A
  – Prowl + Reflex 0.75 pt/A fb Reflex 0.75 pt/A
  – Prowl + Reflex 1 pt/A fb Reflex 0.5 pt/A
  – Prowl + Reflex 0.75 pt/A fb Reflex 0.5 pt/A + diuron
Percent cotton injury with Reflex Split Applied at 12 DAT.

Prowl H2O 2 pts/A included with all treatments.
Percent Palmer control with Reflex Split Applied at 35 DAT.

Prowl H2O 2 pts/A included with all treatments.
Percent Palmer control with Reflex Split Applied at 35 DAT.

Prowl H2O 2 pts/A included with all treatments.
Conclusions

• In irrigated production, PRE applications are more effective if injury is not a concern.
• In dryland production, the split applications give you the best of both worlds.
Any Questions?