Auxin Technologies

WEED MGMT

STEWARDSHIP
Weed Management Programs

1. Clean at planting
2. Preemergence application
3. Sequential Timely POST’s (most fields)
4. Layby……..key to our future
Auxin Systems – Clean At Planting

- Tillage
- Cover Crop
- Burndown
## Burndown: 2,4-D vs Dicamba When Mixed with Roundup

<table>
<thead>
<tr>
<th>Plant</th>
<th>2,4-D</th>
<th>dicamba</th>
</tr>
</thead>
<tbody>
<tr>
<td>Horseweed</td>
<td>+</td>
<td>++</td>
</tr>
<tr>
<td>Primrose</td>
<td>++</td>
<td>+</td>
</tr>
<tr>
<td>Radish</td>
<td>++</td>
<td>+</td>
</tr>
<tr>
<td>Cost</td>
<td>++</td>
<td>+</td>
</tr>
<tr>
<td>Plantback</td>
<td>+ 2,4-D</td>
<td>+ dicamba</td>
</tr>
</tbody>
</table>
1. Resistance management!!!!!!
2. Coverage
3. Early-season competition
4. Need no injury concern, low cost ($9.18 without reward)
The non-treated control consisted of 1,464,000 per acre; LSD 21 K;
1. Clean at planting
2. PRE Required
3. Sequential POST’s
4. Layby:
Number of Palmer Amaranth Per Acre as Influenced by Roundup + Dicamba

- **No-POST**: 435,000
- **RU + dicamba**: 145,000
- **RU + dicamba twice**: 6534

Roundup PowerMax 1 qt/A; dicamba 0.5 lb ai/A.
Number of Palmer amaranth Per Acre as Influenced by Roundup + Dicamba

- **No-POST**: 435,000
- **RU + dicamba**: 145,000
- **RU + dicamba twice**: 6534

A Liberty + Residual followed by RU + Dicamba is also very effective if a little more timely!!!
TANK MIXTURES:

1. numerous glufosinates
2. numerous glyphosates
3. Dual Mag
4. Warrant
5. Valor
6. Direx
7. Staple???
Layby..critical to **FARM** sustainability!!

For Palmer: Direx + MSMA; add Envoke or dicamba for MG.

If grasses: Roundup + Direx; add Envoke or dicamba for MG.
Overtop or Directed Layby? Year 1!

Palmer Control

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Percentage</th>
<th>Plants/Acre</th>
</tr>
</thead>
<tbody>
<tr>
<td>RU + dicamba</td>
<td>100 a</td>
<td>0</td>
</tr>
<tr>
<td>RU + dicamba</td>
<td>95 b</td>
<td>1684</td>
</tr>
<tr>
<td>RU + Direx</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Warrant + Direx PRE; **No plants visible outside of the plot area; 363,000 plants per acre in control.
Large Acreage – Photo After Year 3!

Direx + Warrant PRE
RU + dicamba
RU + dicamba
RU + Direx

Direx + Warrant PRE
RU + dicamba
RU + dicamba
RU + dicamba
Dicamba – Engenia, FeXapan, XtendiMax

STEWARDSHIP
Key for Success – Change in Behavior

1. Identify fields that should not be treated with a given herbicide – especially auxins.

No grower wants to drift!

2. Help growers understand how far particle drift and volatility/drift can go!
Key for Success – Change in Behavior

Pesticide Footprint

AVOIDANCE
Vegetable Sensitivity to Glyphosate
Yield loss occurred at 1/8X: Squash 56-64%, Tomato 28 to 41%. Veg 41, 2003. Simulated drift study making applications broadcast at 15 GPA.
**Visual Tomato, Pepper, and Watermelon Injury from Clarity (dicamba)**

4 studies; 2010. Simulated drift study making applications broadcast at 15 GPA.
Crop Sensitivity – Dicamba
non dicamba-tolerant soybean

Veg 32: 27 DAT. Simulated drift study making applications broadcast at 15 GPA.
Maximum Visual Injury. 10 DAT, Tifton GA.

Percent Maximum Injury: (Epinasty and Stunting)

Snap bean: LSD = 8; Lima Bean: LSD = 7; Cowpea: LSD = 7.
How Much Clarity Per Acre Does One Need To Injure A Snap Bean Field?

Clarity 4 L (0.3776 ml)
Pepper Yield Loss from Simulated Drift Rates of 2,4-D. 2010.

No herbicide (5470)

Lb/A

1/50 X  1/100 X  1/150 X  1/200 X  1/400 X

2300*  2732*  4356*  4392*  4875*

58%  40%  25%  19%  9%

*=less than control
Fruit Maturity and Malformation

Max of 20% visual plant injury

1/125 X  Non-treated
National Bicentennial Farm