INVESTIGATION OF DICAMBA CLAIMS

Tim Creger, Pesticide/Fertilizer Program Manager
• Before Dicamba

• Two years later
Why do SLAs Investigate Pesticide Complaints?

- Administer and enforce state and federal law
- Determine compliance and inform applicator education
- Satisfy Cooperative Agreements with EPA
- Maintain a credible regulatory program
<table>
<thead>
<tr>
<th>Year</th>
<th>Claims</th>
<th>Investigated</th>
<th>Staff Preparation</th>
<th>Field Response</th>
<th>Funding Availability</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>95</td>
<td>24</td>
<td>Overwhelmed</td>
<td>Unable</td>
<td>Exhusted by July 5</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2018</td>
<td>106</td>
<td>50</td>
<td>Better prepared</td>
<td>Field</td>
<td>High, continues</td>
</tr>
</tbody>
</table>
Observations: First year with technology (~500K acres of DT beans planted), many growers were unprepared for degree of drift and off-target symptoms. Some delays in planting resulted in overlap of corn dicamba applications and non-DT soybean emergence.

Observations: Better informed growers (~2M acres of DT beans planted), applicators better prepared, few claims in same areas as in 2017. Weather was not as great a factor in planting. Many claims came in later due to rescue treatments applied as late as mid-July.
Dicamba applied, Day 1

Symptoms observed, Day 7-10

NDA receives call, Day 8-12

NDA field inspection, Day 15

Samples to lab, Day 16-20

Report written after lab results, Day 50-75

<table>
<thead>
<tr>
<th>ANALYTE</th>
<th>FOUND</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dicamba</td>
<td>4.72 ppb</td>
</tr>
<tr>
<td>Dicamba Metabolite (DCSA)</td>
<td>ND ppb</td>
</tr>
</tbody>
</table>
## Comparison of Case Timing

<table>
<thead>
<tr>
<th>Approved Enforcement Response Policy stipulates the following timeline:</th>
<th>Typical Timeline for Dicamba Claims:</th>
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</thead>
<tbody>
<tr>
<td>Time to respond to call: 5 days</td>
<td>Response to call: 10 days</td>
</tr>
<tr>
<td>Time to initiate investigation: 3 days</td>
<td>Initiate investigation: 5 days</td>
</tr>
<tr>
<td>Inspection report due: 60 days</td>
<td>Inspection report submitted: 75 days</td>
</tr>
<tr>
<td>Pgm Mgr review: 15 days</td>
<td>Pgm Mgr review: 30 days</td>
</tr>
<tr>
<td>Case review: 60 days</td>
<td>Case review: 90 days</td>
</tr>
<tr>
<td>Enforcement proceedings: 60 days</td>
<td>Enforcement proceedings: 60 days</td>
</tr>
<tr>
<td>Total: 203 days</td>
<td>Total: 270 days</td>
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</tbody>
</table>
What do SLAs do when off-target claims are part of a “saturation effect”? 

- Green = Dicamba damaged soybean fields
- Red = Known dicamba applications
Lab Analysis for 2018

• 56 samples were tested for dicamba
• All but 4 had detections of dicamba (93% detection rate)
• Concentrations ranged from 1.5 ppb to over 5,000 ppb. Anything greater than 750 ppb typically means a direct application was involved (more than just just drift residue).
• Unanswered questions:
  • Can labs find dicamba residues from “vapor drift”?
  • If so, what sort of concentration ranges would be represented?
  • Is there a threshold concentration that extrapolates to a given yield loss?
Dicamba Enforcement Response Trends

- First year resulted in only one penalty action, and it was for refusing to submit RUP application records for an atrazine application made as part of a dicamba complaint.
- Second year found violations grouped in record keeping (90+% noncompliant) and application standards (boom height, nozzles, tank mixes, buffers, etc. that applicators admitted to). No ability to prove temperature inversion violations.
- When enforcement actions were issued for application standards, a much higher number were successfully challenged by applicator (especially weather conditions measured in the field).
- The only solid enforcement actions are for solid evidence violations like licensure, applicator training and record keeping; none of these involve application performance standards, so we really don’t know if the added label restrictions actually reduce off-target harm.
Dicamba has forced SLAs to change and adapt

• Revised complaint response policies
  – “triage” calls, somebody doesn't get the service they expect or need
• Inadequate or ineffective enforcement
  – States are scratching our heads about how to enforce something that fails to meet traditional enforcement models
• SLA’s can’t just “throw in the towel”, no matter how enticing that sounds
What Does the Future Hold?

RUP dicamba herbicides were reregistered by EPA with more likely to come.

New endangered species restrictions will cause problems for applicators and SLAs.

Additional herbicide-tolerant crops coming to market, adding to the complexity of the issue.
From a Regulatory Management Perspective:

Credibility of states to regulate pesticides has been eroded.

No apparent end in sight, (previous “tough problems” had a point where issues were resolved).

So many resources dedicated to dicamba, what becomes of routine work that provided compliance assurance?
2019: Deja Poo:

- The feeling you’ve heard all this crap before