Update: Fungicides for Soybean Rust Control

Section 18 and Section 3

Martin A. Draper
National Program Leader, Plant Pathology
Treatment needs

- Ultimate need: 74 million acres
- Affected counties
  - 132 in 2005
  - 236 in 2006
- Why many products?
  - Production demands
  - Distributes risk
  - Grower choice
  - Stabilizes pricing for producers
Treatment needs

- Ultimate need: 74 million acres
- EPA Request
  - How many acres are at risk?
  - Ultimately, 74 million worst case
History

• EPA allowed a Quarantine Section 18
• Initial submission filed in November 2003
  – Myclobutanil (Laredo) - 04/04 – activation date
  – Tebuconazole (Folicur) – 05/04
  – Propiconazole (Tilt, PropiMax, Bumper) – 06/04
  – Tetraconazole (Domark) – 03/05
  – Pyraclostrobin (Headline) – Sec 3 granted Dec. 2004
  – Propiconazole + Trifloxystrobin (Stratego) 12/04
  – Boscalid + Pyraclostrobin (Pristine) – approved but “withdrawn”
• Soybean rust find in continental US – 11/10/04
  – EPA revised activation date
History

- Strategies followed to persuade EPA of need
  - Inadequate product supplies
    - Need more products
    - Distributed manufacturing
  - Need products with the highest efficacy
  - Need more premixes
    - May allow for lower efficacious rates of a.i. – stretches supplies
    - Reflects trend of successful disease control in South America
Actions

• First **product** amendment filed January, 2005
  – Propiconazole + Azoxystrobin (Quilt)

• Second **product** amendment filed February 2005
  – Tebuconazole + Pyraclostrobin
  • CoPack (Headline SBR)
  • Premix (Headline STAR)
  • “Replaces” Pristine
**Actions**

- **Third product amendment filed March, 2005**
  - Cyproconazole (Alto)
  - Cyproconazole + Azoxystrobin (Quadris Xtra)
  - Metconazole (Caramba)
  - Metconazole + Pyraclostrobin
    - Headline-Caramba CoPack
    - Operetta premix
  - Flusilazole (Punch)
  - Flusilazole + Famoxadone (Charisma)
  - Prothioconazole (JAU 6476 - ProLine)
  - Flutriafol (Topguard formerly referred to as Impact)
Actions

• Fourth amendment filed June 12, 2006
  – Trifloxystrobin + Tebuconazole (Absolute)
Export Concerns

- USDA worked with EPA - Early publication of temporary tolerances
  - USDA Ag Marketing Service will establish International Maximum Residue Levels (MRLs) or agreements.
  - Allows EPA ample time to assist.
  - Intended to satisfy US trading partners.

- USDA Ag Marketing Service – Pesticide Data Program (AMS-PDP)
  - 300 samples between from Oct. 1 and Dec. 31, 2005
    - 2% (six samples) showed barely detectable residues.
    - Only pyraclostrobin was detected (Section 3 product).
## Section 18/3 Progress

- Initial submissions

<table>
<thead>
<tr>
<th>Product Trade Name(s)</th>
<th>Section 18 expiration date</th>
<th>Anticipated Section 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laredo</td>
<td>Nov 10, 2007</td>
<td>Mar 2007*</td>
</tr>
<tr>
<td><strong>Folicur (other trade names followed)</strong></td>
<td>Nov 10, 2007</td>
<td>Mar 2007*</td>
</tr>
<tr>
<td>Tilt, PropiMax, Bumper</td>
<td>Nov 10, 2007</td>
<td>Soybean use granted Nov 2006 – Section 3 forthcoming</td>
</tr>
<tr>
<td>Domark</td>
<td>Mar 1, 2008</td>
<td>Feb 2007*</td>
</tr>
<tr>
<td>Stratego</td>
<td>Nov 10, 2007</td>
<td>Dec 2006*</td>
</tr>
</tbody>
</table>

*Based on PRIA agreement – Pesticide Registration Improvement Act of 2003
## Section 18/3 Progress

- Later product amendments

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<tr>
<td>Quilt</td>
<td>Nov 10, 2007</td>
<td>Mar 2007</td>
</tr>
<tr>
<td>Headline SBR (tebuconazole/pyraclostrobin co-pack)</td>
<td>Nov 10, 2007</td>
<td>Not determined</td>
</tr>
<tr>
<td>Headline STAR (tebuconazole/pyraclostrobin premix)</td>
<td>withdrawn</td>
<td></td>
</tr>
</tbody>
</table>

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# Section 18/3 Progress

- Later product amendments

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<th>Product Trade Name</th>
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<tbody>
<tr>
<td>Alto</td>
<td>Mar 31, 2009</td>
<td>Submitted</td>
</tr>
<tr>
<td>Quadris Extra</td>
<td>Mar 31, 2009</td>
<td>Submitted</td>
</tr>
<tr>
<td>Caramba</td>
<td>Apr 19, 2009</td>
<td>Submitted</td>
</tr>
<tr>
<td>Headline-Caramba Co-Pack</td>
<td>Apr 19, 2009</td>
<td>Submitted</td>
</tr>
<tr>
<td>Operetta (name will be different)</td>
<td>withdrawn</td>
<td>Submitted</td>
</tr>
<tr>
<td>(tebuconazole/pyraclostrobin premix)</td>
<td></td>
<td></td>
</tr>
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# Section 18/3 Progress

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<tr>
<td>Punch</td>
<td>Action expected soon</td>
<td>To be submitted in January 2007</td>
</tr>
<tr>
<td>Charisma</td>
<td>Action expected soon</td>
<td>To be submitted in January 2007</td>
</tr>
<tr>
<td>ProLine</td>
<td>In flux – request for reactivation filed Feb 15, 2006</td>
<td>May 2008</td>
</tr>
<tr>
<td>Flutriafol</td>
<td>In final stages of label language</td>
<td>To be submitted in January 2007</td>
</tr>
<tr>
<td>Absolute</td>
<td>n/a</td>
<td>Tied to tebuconazole</td>
</tr>
</tbody>
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Use Suggestions

• Section 18 issuance provided products with potential to producers.
• Use guidelines will evolve.
• Produce efficacy in US environments are not clearly known.
• Product performance variable under varying disease pressure not completely known.
• Preferred products will sort out in the marketplace.
Progress/Outcome Summary

• Section 18
  – Action on all submissions will be completed by 2007 growing season
  – Remaining products are in final stages of completion

• Section 3
  – All products submitted or ready for submission
  – First Section 3 labels impending
Possible Issue/Concern

• Section 18 to Section 3 transition
  – Situation
    • Product is in storage with Section 18 labels
    • Section 3 labels may not match
  – Questions
    • Will there be supplemental labels to bridge the differences?
    • What are the regulatory/enforcement implications?
  – For specific progress on Section 18s, see: