HERBICIDE ROTATION INTERVALS (PLANT-BACK RESTRICTIONS) AND COVER CROP ISSUES; REVISITED

POM-EQI APRIL 11 2016
PROPOSED ISSUE PAPER

- Expand the summary and conclusions from the April 2015 discussion

- Use language that:
  - Will be consistent from product to product, crop to crop
  - Useful to USDA and EPA regarding use of herbicides in terminating cover crops
  - Prohibit the use of cover crops for food or feed
Here’s my take on expanding on the conclusions from my September 2015 talk.
CONCLUSIONS; EXPANDED

- Define cover crops as nonfood, require this description on labels
  - Make it illegal to feed cover crops to livestock or as food for humans
  - This would address concerns about illegal residues in food or feed
Differentiate between **guidelines** for rotational intervals for cover crops (by plant type sensitive to carryover) and specify **restrictions** for rotated food/feed crops (illegal residues)

- Update PR notice 2000-5 (1) regarding mandatory and advisory label language
- Add a section to the Label Review Manual (2) on cover crop language

(1) EPA 2000e, PRN 2000-5: Guidance for Mandatory and Advisory Labeling Statements
(2) EPA 2014j, Label Review Manual
CONCLUSIONS; EXPANDED

- Encourage bioassays on labels
- Bioassays provide growers specific information regarding effects of herbicides on cover crop growth
- Parameters include: rates, plowing habits, method, soil; temperature, pH, soil type, water; rainfall, irrigation
### Standardize Regions of the Country

<table>
<thead>
<tr>
<th>Definition of regions</th>
<th># Products</th>
</tr>
</thead>
<tbody>
<tr>
<td>States</td>
<td>8</td>
</tr>
<tr>
<td>States with subdivision</td>
<td>4</td>
</tr>
<tr>
<td>National regions</td>
<td>2</td>
</tr>
<tr>
<td>Mississippi River and Rocky Mountains</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>16</strong></td>
</tr>
</tbody>
</table>
CROP ROTATION & COVER CROPS

All cover crops are rotational crops; Not all rotational crops are cover crops

- Crop rotation and cover crops are encouraged as good agricultural practices
- EPA; Encourages crop rotation to reduce herbicide resistance (1)
- USDA; Provides cost share assistance for cover crops (2)

(1) EPA 2014j, Label Review Manual
(2) USDA 2015b, 2015 Cover Crops, Crop Insurance, Cover Crops and NRCS Cover Crop Termination Guidelines, FAQs
HERBICIDES

The cover crop may be terminated by natural causes such as frost, or intentionally terminated through chemical application, crimping, rolling, tillage, or cutting \(^1\)

48\% of cover crops from the SARE-CTIC 2014 survey were terminated with herbicides \(^2\)

\(^1\) USDA 2014a, NRCS Cover Crop Termination Guidelines; Sept 2014 Volume 3

\(^2\) SARE and CTIC 2014, REPORT; A synopsis of the information collected during the 2013-2014 cover crop survey. 2013-2014 COVER CROP SURVEY
TERMINATION GUIDELINES

California is in USDA Zone 1; Late Spring to Fall seeded cover crops in Zone 1 must be terminated at or within 35 Days after planting (of primary crop) but before plant emergence.

Maine is in USDA Zone 4; Cover crops in Zone 4 must be terminated at or within 5 Days after planting (of primary crop) but before plant emergence

(1) USDA 2014a, NRCS Cover Crop Termination Guidelines; Sept 2014 Volume 3
Pesticide Directions for Use

Sites must be on the pesticide label (40CFR156.10) (1)

“Any limitations or restrictions on use to prevent unreasonable adverse effects such as:
(A) Pre-harvest intervals
(B) Rotational Intervals
(C) Warnings for use on particular crops.” (2)

(1) 40CFR156.10 § (h) (2) (iii)
(2) EPA 2014j, Label Review Manual
SUMMARY AND CONCLUSIONS

- Define cover crops as nonfood, require this description on labels
- Differentiate between **guidelines** for rotational intervals for cover crops (by plant type sensitive to carryover) and **restrictions** for rotated food/feed crops (illegal residues)
  - Update PR notice 2000-5 (1) regarding mandatory and advisory label language
  - Add a section to the Label Review Manual (2) on cover crop language
- Encourage bioassays as a means of assuring growers that their cover crops will grow
- Standardize regions of the country; listing states with or without subdivisions

(1) EPA 2000e, PRN 2000-5: Guidance for Mandatory and Advisory Labeling Statements
(2) EPA 2014j, Label Review Manual