Multiple Sites of Action Are Important for Managing Herbicide Resistance

Benefits of Using Multiple Sites of Action

- Multiple sites of action means superior efficacy and resistance management

USDA/ARS and University of Illinois Research on Glyphosate-Resistant Waterhemp

- Data set: 105 Illinois fields and more than 500 site-years of herbicide application records
- Results: A field in which 2.5 modes of action (MOA) per application were used was 83 times less likely to select glyphosate resistant waterhemp within 4-6 years than a field in which only 1.5 MOA per application were used
  - Status herbicide has two sites of action, dicamba (group 4 herbicide) and diflufenzopyr (group 19 herbicide)
  - Dicamba disrupts normal plant growth by imitating natural auxin hormones
  - Diflufenzopyr (DFFP) is an auxin transport inhibitor which synergizes dicamba by locking concentrations of dicamba at the growing points
  - Group 27 herbicides (e.g., Armez® herbicide and Callisto® herbicide) are tank mix partners that provide another site of action for grass and broadleaf control in corn

Status herbicide is a great tank mix herbicide for fast burndown of large broadleaf weeds

Status® Herbicide Burns Down Large Weeds

A total of 5 sites of action

Status Herbicide (5 oz/A)

Untreated Check

Product Label Comparison

<table>
<thead>
<tr>
<th>Product</th>
<th>Controls Weeds Bigger than 6 Inches*</th>
<th>Speed of Control**</th>
<th>Controls HPPD Resistant Weeds</th>
<th>Max. Crop Rotational Interval*</th>
<th># Sites of Action**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Status® Herbicide</td>
<td>Yes</td>
<td>Faster</td>
<td>Yes</td>
<td>4 months</td>
<td>2</td>
</tr>
<tr>
<td>Callisto</td>
<td>No</td>
<td>Slower</td>
<td>No</td>
<td>18 months***</td>
<td>1</td>
</tr>
<tr>
<td>Resicore®</td>
<td>No</td>
<td>Slower</td>
<td>Limited</td>
<td>18 months***</td>
<td>2</td>
</tr>
<tr>
<td>DiFlexx®</td>
<td>No</td>
<td>Slower</td>
<td>Yes</td>
<td>180 days</td>
<td>1</td>
</tr>
<tr>
<td>DiFlexx Duo</td>
<td>No</td>
<td>Slower</td>
<td>Yes</td>
<td>18 months†</td>
<td>2</td>
</tr>
</tbody>
</table>

*Source: Product labels. **For emerged broadleaf weeds. ***Includes dry beans, sugar beets and other rotational crops. †Includes some varieties of dry beans, sunflowers and other rotational crops (sugar beets and some dry beans have rainfall requirement).

Status Herbicide does the Heavy Lifting on Broadleaf Weeds

Status herbicide + Callisto (mesotrione)  
Callisto (mesotrione)

2018 BASF greenhouse trial, 22 days after treatment. Status herbicide 5 fl oz/A + Callisto (mesotrione 3 fl oz/A). Note: 3 sites of action. Callisto (mesotrione 3 fl oz/A). Note: one site of action. Weeds (left to right): Palmer amaranth, velvetleaf, and kochia.

Avoid Costly Resprays with Status Herbicide

Corn Yields – Timing of Weed Removal

Use the minimum Status herbicide rate of 5 oz/A for:
- Weeds taller than 6 inches
- Weeds resistant to a tank mix partner
- Perennial weeds
- Weeds not controlled by tank mix partner

To learn more about crop protection products from BASF, visit www.agproducts.basf.us