Common windgrass control in winter wheat

Christy Sprague
Michigan State University
Common windgrass
*Aperia spica-venti* L.

- Winter annual
  - Emergence pattern coincides with winter wheat
  - Growth is similar to winter wheat
- Historically…..
  - Limited options for management
  - POST plant incorporated Treflan
- Newer selective herbicide options
Common windgrass distribution
Evaluate options for management of windgrass

<table>
<thead>
<tr>
<th>PRE</th>
<th>FALL (EPOS) – Nov. 5 – Wheat Feeke’s 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zidua (1.5 oz)</td>
<td>PowerFlex HL (2 oz) + NIS + AMS</td>
</tr>
<tr>
<td>Zidua (3 oz)</td>
<td>Osprey (4.75 oz) + NIS + AMS</td>
</tr>
<tr>
<td>Treflan (1 pt)</td>
<td>Axial XL (16.4 fl oz)</td>
</tr>
<tr>
<td>Prowl H₂O* (2 pt)</td>
<td>Puma (10.6 fl oz)</td>
</tr>
<tr>
<td></td>
<td>PowerFlex HL + Huskie + NIS + AMS</td>
</tr>
<tr>
<td></td>
<td>Osprey + Huskie + NIS + AMS</td>
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</tbody>
</table>

* 1-leaf wheat
Evaluate options for management of windgrass - *Spring*

**Wheat (Feeke’s 4) - Windgrass (3” tall)**

<table>
<thead>
<tr>
<th>Option 1</th>
<th>Option 2</th>
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<tr>
<td>PowerFlex HL (2 oz) + NIS + AMS</td>
<td>PowerFlex HL + Huskie + NIS + AMS</td>
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<td>Osprey (4.75 oz) + NIS + AMS</td>
<td>Osprey + Huskie + NIS + AMS</td>
</tr>
<tr>
<td>Axial XL (16.4 fl oz)</td>
<td>PowerFlex HL + Affinity BroadSpec + NIS + AMS</td>
</tr>
<tr>
<td>Axial Star (16.4 fl oz)</td>
<td>Osprey + Affinity BroadSpec + NIS + AMS</td>
</tr>
<tr>
<td>Puma (10.6 fl oz)</td>
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</tr>
</tbody>
</table>
Late-season control of windgrass from PRE applications

- Zidua (1.5 oz)
- Zidua (3 oz)
- Treflan
- Prowl H2O

Control (%)
Late-season control of windgrass from **FALL (EPOS)** applications

![Graph showing control percentages for different products: PowerFlex HL, Osprey, Axial XL, and Puma. The graph indicates that PowerFlex HL and Osprey have significantly higher control percentages compared to Axial XL and Puma.](graph.png)
Late-season control of windgrass from *SPRING* applications

![Bar chart showing control percentages for different products.](chart.png)

- PowerFlex HL: a
- Osprey: a
- Axial XL: ab
- Axial Star: b
- Puma: c

Note: Treflan (PRE) is indicated by an arrow pointing downwards.
Slower kill from spring applications

- June (1 MAT)
- July (2 MAT)

**Control (%)**

<table>
<thead>
<tr>
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<th>PowerFlex HL</th>
<th>Osprey</th>
<th>PowerFlex HL</th>
<th>Osprey</th>
</tr>
</thead>
<tbody>
<tr>
<td>June</td>
<td>a (96%)</td>
<td>b (88%)</td>
<td>a (98%)</td>
<td>a (99%)</td>
</tr>
<tr>
<td>July</td>
<td>a (92%)</td>
<td>c (64%)</td>
<td>a (98%)</td>
<td>a (99%)</td>
</tr>
</tbody>
</table>

*Note: Data points marked with different letters (a, b, c) indicate significant differences.*
Summary

- Current PRE herbicides are not adequate for windgrass control
- Spring applications of Axial XL or Axial Star provided good control of windgrass
- Spring and Fall applications of PowerFlex HL and Osprey were excellent on windgrass
  - Spring applications provided slower kill (yield???)
  - Tank-mixtures with Huskie or Affinity BroadSpec did not reduce windgrass control
  - Fall tank-mixtures did not control summer annual weeds
Recommendations for common windgrass control

- PowerFlex HL (2 oz/A) or Osprey (4.75 oz/A) applied in Fall or Spring should be used to control common windgrass

  - **Fall applications:**
    - Should be made after windgrass emergence (early to mid-November)
    - An additional spring application will be needed to control summer annual weeds

  - **Spring applications:**
    - Slower kill may impact wheat yield from windgrass competition