Trumpetcreeper and Horsenettle Control in Bermudagrass and Fescue Hay

L. S. Warren, T. W. Gannon and F. H. Yelverton
North Carolina State University
Trumpetcreeper

Chachalis and Reddy 2000; Shaw et al. 1991

Perennial deciduous woody vine

Persists by woody rootcrowsns and can spread by seed

Commonly in fence rows and spreads into fields

Cow-itch vine
Horsenettle

Anderson 1999; Ilnicki et al. 1962

Perennial broadleaf weed

Root system extensive (1.3 m laterally from tap root in upper 45 cm soil)

Root system deep (up to 2 m)

Large storage capacity of carbohydrate reserves
One of the 10 most troublesome pasture weeds in most southern states

Poisonous Plants of the Southeast
Toxic alkaloid – solanine

Berries most toxic part – especially mature

Poisonous to livestock and humans

Acute or chronic symptoms
Pasture Broadleaf Herbicides in NC

Hybrid bermuda, Tall fescue, Orchardgrass
(Before 2000)

- Weedar 64: 2,4-D amine
- Banvel: Dicamba
- Weedmaster: 2,4-D amine + dicamba
- Crossbow: 2,4-D ester + triclopyr ester
- Ally: Metsulfuron
Pasture Broadleaf Herbicides in NC

Hybrid bermuda, Tall fescue, Orchardgrass

2000 Remedy Triclopyr ester
2000 Redeem R&P Triclopyr + clopyralid
2001 Grazon P+D Picloram + 2,4-D amine
Research Objectives

To compare Remedy, Redeem R&P and Grazon P+D against pasture broadleaf standards for...

Efficacy and longevity of perennial broadleaf weed control (plots to be rated in 2003)

Tolerance of bermudagrass and tall fescue
Procedures

Trumpetcreeper location: Bladen County bermudagrass pasture in southeastern NC

• 6 x 15 feet plot size 4 replicates
• Treatments applied with XR 11002VS nozzles, 42 psi, 20 gpa, 4 nozzle boom
• Trumpetcreeper size: 3 inches to 15 inch vines and 3 per ft2 on May 23 app. date
Procedures

Trumpetcreeper treatments included:

<table>
<thead>
<tr>
<th>Product</th>
<th>Application Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ally</td>
<td>0.5 oz/A + 0.25% NIS</td>
</tr>
<tr>
<td>Grazon P+D</td>
<td>2 pt/A + 0.25% NIS</td>
</tr>
<tr>
<td>Redeem R&amp;P</td>
<td>2 pt/A + 0.25% NIS</td>
</tr>
<tr>
<td>Remedy</td>
<td>2 pt/A + 0.25% NIS</td>
</tr>
<tr>
<td>Weedar 64</td>
<td>2 pt/A + 0.25% NIS</td>
</tr>
<tr>
<td>Weedmaster</td>
<td>2 pt/A + 0.25% NIS</td>
</tr>
<tr>
<td>Non treated check</td>
<td></td>
</tr>
</tbody>
</table>
Trumpetcreeper Control

% Control

Grazon P+D 2 pt
Redeem R&P 2 pt
Remedy 2 pt
Weedar 64 2 pt
Weedmaster 2 pt

6-Jun 3-Jul 17-Jul
10.5 16.8 19.4 LSD ( P = .05)

2 wk            6 wk            8 wk (after May 23 application)
Weedmaster (Jul 3: 6 WAT) Check
Trumpetcreeper Control

22-Aug
13 wk (after May 23 application)

LSD (P = .05) = 19.7
Bermudagrass injury symptoms were not observed at any time following application.
Procedures

Horsenettle location #1: Wayne County bermudagrass pasture in southeastern NC

- 12 x 12 feet plot size  4 replicates
- Treatments applied with XR 11002VS nozzles, 40 psi, 20 gpa, 4 nozzle boom
- Horsenettle size: 2 to 6 inches tall, 4 to 6 leaves and 2 per ft² on Jun 7 app. date
Procedures

Horsenettle location #2: Wayne County bermudagrass pasture in southeastern NC

- 6 x 15 feet plot size  3 replicates
- Treatments applied with XR 8002VS nozzles, 27 psi, 20 gpa, 4 nozzle boom
- Horsenettle stage: early bloom up to 15 inches tall and 2 per ft² on Jun 28 app. date
Procedures

Horsenettle location #3: Alamance County tall fescue pasture in piedmont of NC

- 6 x 15 feet plot size  4 replicates
- Treatments applied with XR 8002VS nozzles, 32 psi, 20 gpa, 4 nozzle boom
- Horsenettle stage: 4 to 12 inches tall, 4 leaves to flowering 1 to 9 per yd² on Jun 12 app. date
# Procedures

Horsenettle treatments included:

<table>
<thead>
<tr>
<th>Product</th>
<th>Rate</th>
<th>Concentration</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ally</td>
<td>0.5 oz/A</td>
<td>0.25% NIS</td>
<td>(#1)</td>
</tr>
<tr>
<td>Grazon P+D</td>
<td>2 pt/A</td>
<td>0.25% NIS</td>
<td>(#1,2,3)</td>
</tr>
<tr>
<td>Redeem R&amp;P</td>
<td>2 pt/A</td>
<td>0.25% NIS</td>
<td>(#1,2,3)</td>
</tr>
<tr>
<td>Remedy</td>
<td>2 pt/A</td>
<td>0.25% NIS</td>
<td>(#1,2)</td>
</tr>
<tr>
<td>Weedar 64</td>
<td>2 pt/A</td>
<td>0.25% NIS</td>
<td>(#1,2,3)</td>
</tr>
<tr>
<td>Weedmaster</td>
<td>2 pt/A</td>
<td>0.25% NIS</td>
<td>(#1,2,3)</td>
</tr>
<tr>
<td>Non treated check</td>
<td></td>
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</table>
## Horsenettle Control
### 4 to 5 Weeks After Treatment

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Location 1</th>
<th>Location 2</th>
<th>Location 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>5 WAT</td>
<td>4 WAT</td>
<td>4 WAT</td>
</tr>
<tr>
<td>Ally 0.5 oz</td>
<td>76 b</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Grazon P+D 2 pt</td>
<td>100 a</td>
<td>68 a</td>
<td>78 a</td>
</tr>
<tr>
<td>Redeem R&amp;P 2 pt</td>
<td>96 a</td>
<td>58 abc</td>
<td>49 b</td>
</tr>
<tr>
<td>Remedy 2 pt</td>
<td>91 ab</td>
<td>78 a</td>
<td>-</td>
</tr>
<tr>
<td>Weedar 64 2 pt</td>
<td>88 ab</td>
<td>32 cd</td>
<td>48 b</td>
</tr>
<tr>
<td>Weedmaster 2 pt</td>
<td>91 ab</td>
<td>27 de</td>
<td>25 b</td>
</tr>
<tr>
<td>LSD (P = .05)</td>
<td>14.8</td>
<td>29.6</td>
<td>21.0</td>
</tr>
</tbody>
</table>
## Horsenettle Control
### 8 to 11 Weeks After Treatment

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Location 1</th>
<th>Location 2</th>
<th>Location 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>11 WAT</td>
<td>11 WAT</td>
<td>8 WAT</td>
</tr>
<tr>
<td>Ally 0.5 oz</td>
<td>86 ab</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Grazon P+D 2 pt</td>
<td>99 a</td>
<td>100 a</td>
<td>100 a</td>
</tr>
<tr>
<td>Redeem R&amp;P 2 pt</td>
<td>93 ab</td>
<td>96 ab</td>
<td>89 ab</td>
</tr>
<tr>
<td>Remedy 2 pt</td>
<td>91 ab</td>
<td>98 a</td>
<td>-</td>
</tr>
<tr>
<td>Weedar 64 2 pt</td>
<td>90 ab</td>
<td>95 ab</td>
<td>54 cd</td>
</tr>
<tr>
<td>Weedmaster 2 pt</td>
<td>93 ab</td>
<td>98 a</td>
<td>65 bc</td>
</tr>
<tr>
<td>LSD (P = .05)</td>
<td>21.1</td>
<td>6.5</td>
<td>22.9</td>
</tr>
</tbody>
</table>
Redeem R&P (Jul 1: 3 WAT) Check
Horsenettle Locations

Bermudagrass and tall fescue injury symptoms were not observed at any time following applications.
Summary

Trumpetcreeper data:
Weedar 64, Weedmaster and Grazon P+D at 2 pt/A each, provided good to excellent (78 to 94%) season-long control with little regrowth.

Remedy at 2 pt/A provided 70% control, which was greater than 2 pt/A of Redeem R&P (18%), which was greater than 0.5 oz/A of Ally (0%).
Summary

Horsenettle data:

2 to 6 inch tall plants – Location 1: All treatments except Ally at 0.5 oz/A provided excellent (88 to 100%) control 5 WAT with all treatments displaying excellent control by 11 WAT.

Early bloom plants – Location 2: Grazon P+D and Remedy at 2 pt/A each, displayed better control at 4 WAT than Weedar 64 and Weedmaster at 2 pt/A each.
Summary

Horsenettle data:

Early bloom plants – Location 2: By 11 WAT, all treatments provided excellent control (95 to 100%).

Early bloom plants – Location 3: At 4 WAT, 2 pt/A of Grazon P+D provided the best control (78%). By 8 WAT, Grazon P+D and Redeem R&P at 2 pt/A each, provided greater control than Weedar 64 at 2 pt/A.