Canada Thistle and Horsenettle Control in Cool-Season Pastures

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Abstract
The purpose of this study was to evaluate herbicides for Canada thistle and horsenettle control in a cool-season pasture.

Keywords
Agronomy

Disciplines
Agricultural Science | Agriculture | Agronomy and Crop Sciences

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Canada Thistle and Horsenettle Control in Cool-Season Pastures

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Introduction
The purpose of this study was to evaluate herbicides for Canada thistle and horsenettle control in a cool-season pasture.

Materials and Methods
A randomized complete block design with four replications was used. Herbicides were applied in 20 gallons of water/acre. Visual estimates of percentage weed control were made three times following treatment. These observations are compared with an untreated control and made on a 0–100 rating scale (0% = no control; 100% = complete control).

Herbicide treatments were applied on July 2, 2001, to a grass pasture mixture of orchard, smooth brome, and Kentucky blue. Grasses were 6–12 inches tall. Canada thistle was 4–24 inches tall with numerous leaves. Growth stage was vegetative to reproductive. Horsenettle was 4–12 inches tall with numerous leaves.

Results and Discussion
Summarized in Table 1 are the results of the study. Grazon P+D, Redeem R&P, Hi-Dep and Banvel provided good to excellent Canada thistle control when observed on July 26 and August 23, twenty-four and forty-seven days after treatment, respectively. On September 28, Grazon P+D and Banvel at 2 pints/acre continued to give 91% or better control. Weedone LV4 did not effectively control Canada thistle when observed on September 28. Horsenettle control was 90% or better with Grazon P+D and Banvel on the three evaluation dates. No other herbicide gave acceptable control of this species.

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Rate</th>
<th>Appl time</th>
<th>Canada thistle</th>
<th>Horsenettle</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Product/acre</td>
<td>July 26</td>
<td>Aug 23</td>
</tr>
<tr>
<td>Control</td>
<td>–</td>
<td>–</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Grazon P+D 2.5SL + NIS</td>
<td>2.0 pt + 0.25 % v/v POST</td>
<td>96</td>
<td>92</td>
<td>91</td>
</tr>
<tr>
<td>Grazon P+D 2.5SL + NIS</td>
<td>3.0 pt + 0.25 % v/v POST</td>
<td>98</td>
<td>93</td>
<td>91</td>
</tr>
<tr>
<td>Redeem R&amp;P 3SL + NIS</td>
<td>1.5 pt + 0.25 % v/v POST</td>
<td>96</td>
<td>88</td>
<td>81</td>
</tr>
<tr>
<td>Redeem R&amp;P 3SL + NIS</td>
<td>2.0 pt + 0.25 % v/v POST</td>
<td>98</td>
<td>92</td>
<td>89</td>
</tr>
<tr>
<td>Weedone LV4 3.8EC + NIS</td>
<td>2.0 pt + 0.25 % v/v POST</td>
<td>78</td>
<td>76</td>
<td>69</td>
</tr>
<tr>
<td>Hi-Dep 3.8 SL + NIS</td>
<td>2.0 pt + 0.25 % v/v POST</td>
<td>93</td>
<td>86</td>
<td>81</td>
</tr>
<tr>
<td>Banvel 4SL + NIS</td>
<td>2.0 pt + 0.25 % v/v POST</td>
<td>97</td>
<td>95</td>
<td>93</td>
</tr>
<tr>
<td>Banvel 4SL + NIS</td>
<td>4.0 pt + 0.25 % v/v POST</td>
<td>98</td>
<td>92</td>
<td>86</td>
</tr>
</tbody>
</table>

LSD (0.05) 26 10 14 13 30 30

* NIS = Activator 90, a nonionic surfactant penetrant from Loveland Industries.