Nufarm Herbicides –
Control of Bird’s Foot Trefoil

D. S. Gardner and E. R. Horner
Dept. Of Horticulture and Crop Science, The Ohio State University

INTRODUCTION
Bird’s Foot Trefoil (Lotus corniculata) is an important forage crop. However, it is becoming more prevalent in managed turfgrass environments, such as commercial landscapes and home lawns. The purpose of this study was to determine the efficacy of three herbicides, 4-Speed XT, Cool Power, and Escalade 2 on bird’s foot trefoil in managed turfgrass.

MATERIALS AND METHODS
The study was conducted at The Ohio Turfgrass Foundation Research and Education Center at The Ohio State University in Columbus, Ohio. The site of the experiment was an area of Kentucky bluegrass/perennial ryegrass with a heavy infestation (~60%) of bird’s foot trefoil.

Individual treatment plots were 3 x 4 ft and there were 4 treatments including 3 herbicide treatments and 1 control (Table 1). The experimental design was a randomized complete block with 3 replications. A backpack carbon dioxide sprayer equipped with 6503 nozzles with a spray pressure of 40 psi was used to apply the herbicides. They were applied with the equivalent of 2 gal H₂O/1000 ft². Treatments were applied on July 10, 2012.

Data were collected 0, 7, 14, 28, and 35 days after application of treatments (DAT). Data were collected as estimates of percentage cover of bird’s foot trefoil. Estimates collected at 14 and 28 DAT are the average of two raters. Turf phytotoxicity (1 to 9 scale with 1=no injury, 5=much chlorosis, 6=some necrosis and 9=dead) was assessed on all dates. The data were analyzed using the General Linear Models procedure of SAS. The percent cover data were converted by calculating percent control within individual treatment plots based on the percent cover data at day 0 and was calculated as 1-(day x % cover / Day 0 percent cover). Fishers protected LSD was conducted on the percent control data.

RESULTS AND DISCUSSION
No phytotoxicity due to herbicide application was observed on the turfgrass on any date (Data not shown). Bird’s foot trefoil increased in coverage in the untreated controls by 47% (from 42% to 58% cover) during the trial.

At 7 DAT, best control (18%) was with 4-Speed XT (Table 1). At 14 DAT control in plots treated with 4-Speed XT increased to 96%. However, because of variability, the other tested products were statistically similar. By 28 and 35 DAT all tested products resulted in 100% control.
In summary, 4-Speed XT provided more rapid initial control of bird’s foot trefoil. However, all tested products were quite effective by the end of trial.

### Table 1. Bird’s foot trefoil control following application of Nufarm herbicides at Columbus, Ohio. All products were applied July 10, 2012.

<table>
<thead>
<tr>
<th>Product (amount/Acre)</th>
<th>7</th>
<th>14</th>
<th>28</th>
<th>35</th>
</tr>
</thead>
<tbody>
<tr>
<td>Untreated</td>
<td>-6b‡</td>
<td>-15b</td>
<td>-35b</td>
<td>-47b</td>
</tr>
<tr>
<td>4-Speed XT (3.5 pints)</td>
<td>18a</td>
<td>96a</td>
<td>100a</td>
<td>100a</td>
</tr>
<tr>
<td>Cool Power (3 pints)</td>
<td>0b</td>
<td>75a</td>
<td>100a</td>
<td>100a</td>
</tr>
<tr>
<td>Escalade 2 (2.5 pints)</td>
<td>3ab</td>
<td>75a</td>
<td>100a</td>
<td>100a</td>
</tr>
</tbody>
</table>

LSD\(_{0.05}\) 17 47 22 29

† Percent Control calculated as 1 - (day x % cover / day 0 % cover).
‡ Means followed by the same letter are not significantly different (P=0.05) according to Fisher’s Protected LSD test.