BLUEGRASS (KENTUCKY): *Poa pratensis* L.
RYEGRASS (PERENNIAL): *Lolium perenne* L.

**CHROMOBACTERIUM SUBTSUGAE (MBI-203) FOR CONTROL OF SOUTHERN MASKED CHAFERS, 2011**

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Southern masked chafer (SMC): *Cyclocephala lurida* Bland

Insecticides were evaluated for control of white grubs on a Kentucky bluegrass/perennial ryegrass fairway at the North Bend Golf Course in North Bend, Nebraska. The turf was maintained at 2.5 inches ht. Treatments were applied on 18 May 2011 to 5 ft by 5 ft plots arranged in RCB design with 5 replications. Liquid products were applied using a CO2 sprayer at 40 psi and applying 174 gpa finished spray. Within 24 h following application, all treatments were irrigated with 0.25 in of water. Formulations were evaluated 24 DAT by removing from each plot three, 8-inch diam turf-soil cores (1.05 ft² total area) to a depth of 3 inches and counting the number of surviving and moribund grubs. Plots were periodically assessed for phytotoxicity. Environmental conditions at the time of treatment were as follows: soil moisture 12.8%; air temp 84°F; soil temp 79°F; relative humidity 72%; wind velocity 10 mph.

Significant differences in numbers of chafers were not detected among treatments during the evaluation (P=0.05), and no treatments provided acceptable (>80%) curative control of white grubs. Regardless, there appears to be a correlation between application rate and percent control for the MBI-203 DF1 treatments. All treatments, except MBI-203 DF1 (2 fl oz/100 ft²), outperformed Dylox 420 SL (6.9 fl oz/1000 ft²), an industry standard insecticide for white grub control. Interestingly, moribund white grubs were found in all treatments of MBI-203 AF1 and MBI-203 DF1. These individuals were not used in the statistical analysis rather included for comparative purposes. No phytotoxicity was observed. This research was supported by industry gifts of products and research funding.
Table 1.

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Rate</th>
<th>Mean SMC 1.05 ft²</th>
<th>% Control</th>
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</thead>
<tbody>
<tr>
<td>MBI-203 AF1</td>
<td>16</td>
<td>2.4 ± 0.9</td>
<td>76.0</td>
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<tr>
<td>MBI-203 DF1</td>
<td>8</td>
<td>3.8 ± 1.1</td>
<td>62.0</td>
</tr>
<tr>
<td>MBI-203 AF1</td>
<td>8</td>
<td>4.8 ± 1.6</td>
<td>52.0</td>
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<tr>
<td>MBI-203 AF1</td>
<td>32</td>
<td>5.0 ± 1.5</td>
<td>50.0</td>
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<tr>
<td>MBI-203 DF1</td>
<td>4</td>
<td>5.0 ± 3.2</td>
<td>50.0</td>
</tr>
<tr>
<td>Dylox 420 SL</td>
<td>6.9</td>
<td>5.6 ± 1.7</td>
<td>44.0</td>
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<tr>
<td>MBI-203 DF1</td>
<td>2</td>
<td>6.6 ± 1.2</td>
<td>34.0</td>
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<tr>
<td>UTC</td>
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<td>10.0 ± 1.3</td>
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