Zoysiagrass Cultivar Tolerance to Mesotrione: Vegetative Cultivars

Trial ID: HerbTol 03-06 Vege          Study Director: Evans & Bennett
Location: Griffin                       Investigator: Clint Waltz

General Trial Information
Investigator: Clint Waltz               Title: Asst. Professor
Affiliation: C&SS - UGA                 E-mail: CWaltz@UGA.edu
Postal Code: 30223-1797

Trial Location
City: Griffin                           Trial Status: Complete
State/Prov.: Georgia                    Trial Reliability: Excellent
Postal Code: 30223-1797                  Initiation Date: 19/Jul/2006
Country: USA                             Planned Completion Date: 15/Sep/2006

Crop Description
Crop 1: ZOYJA Zoysia japonica          Lawngass, Japanese
Variety:                                Description: Established
BBCH Scale: BGRM                        Planting Date: 23/Jul/1996
Planting Method: TRANSPLANTED - HAND    Rate, Unit: __________

Site and Design
Plot Width, Unit: 3 FT                  Site Type: TURF - RESEARCH
Plot Length, Unit: 7 FT                  Tillage Type: 4.5” HOC_________
Replications: 3                        Study Design: Split-Plot
Soil Description

% Sand: 66  % OM: ______
% Silt: 16  pH: 6.05  Texture: Sandy Loam
% Clay: 18  CEC: ______  Soil Name: _______________________
Fert. Level: 4lb N/1000ft2__________________

Additional Measured Elements

<table>
<thead>
<tr>
<th>Element</th>
<th>Quantity</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium</td>
<td>1318</td>
<td>lbs/acre</td>
</tr>
<tr>
<td>Potassium</td>
<td>220</td>
<td>lbs/acre</td>
</tr>
<tr>
<td>Magnesium</td>
<td>174</td>
<td>lbs/acre</td>
</tr>
<tr>
<td>Manganese</td>
<td>87.56</td>
<td>lbs/acre</td>
</tr>
<tr>
<td>Phosphorus</td>
<td>32.07</td>
<td>lbs/acre</td>
</tr>
<tr>
<td>Zinc</td>
<td>6.95</td>
<td>lbs/acre</td>
</tr>
</tbody>
</table>

Application Description

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Application Date:</td>
<td>19/Jul/2006</td>
</tr>
<tr>
<td>Time of Day:</td>
<td>3:00 PM</td>
</tr>
<tr>
<td>Application Method:</td>
<td>Spray</td>
</tr>
<tr>
<td>Application Timing:</td>
<td>Post</td>
</tr>
<tr>
<td>Application Placement:</td>
<td>Topical</td>
</tr>
<tr>
<td>Applied By:</td>
<td>CB</td>
</tr>
<tr>
<td>Air Temperature, Unit:</td>
<td>98 F</td>
</tr>
<tr>
<td>% Relative Humidity:</td>
<td>55.21</td>
</tr>
<tr>
<td>Wind Velocity, Unit:</td>
<td>4.4 MPH</td>
</tr>
<tr>
<td>Dew Presence (Y/N):</td>
<td>N</td>
</tr>
<tr>
<td>Water Hardness:</td>
<td>.</td>
</tr>
<tr>
<td>Soil Temperature, Unit:</td>
<td>88.3 F</td>
</tr>
<tr>
<td>Soil Moisture:</td>
<td>.</td>
</tr>
<tr>
<td>% Cloud Cover:</td>
<td>0</td>
</tr>
</tbody>
</table>

Crop Stage At Each Application

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crop 1 Code, BBCH Scale:</td>
<td>ZOYJA BGRM</td>
</tr>
<tr>
<td>Stage Scale Used:</td>
<td>BBCH</td>
</tr>
<tr>
<td>Stage Majority, Percent:</td>
<td></td>
</tr>
<tr>
<td>Stage Minimum, Percent:</td>
<td></td>
</tr>
<tr>
<td>Stage Maximum, Percent:</td>
<td></td>
</tr>
<tr>
<td>Diameter, Unit:</td>
<td></td>
</tr>
<tr>
<td>Height, Unit:</td>
<td></td>
</tr>
<tr>
<td>Height Minimum, Maximum:</td>
<td></td>
</tr>
</tbody>
</table>

Equipment Comment:

DGCI = Dark Green Color Index
# Zoysiagrass Cultivar Tolerance to Mesotrione: Vegetative Cultivars

**Trial ID:** HerbTol 03-06 Vege  
**Study Director:** Evans & Bennett  
**Location:** Griffin  
**Investigator:** Clint Waltz

<table>
<thead>
<tr>
<th>Crop Code</th>
<th>Rating Date</th>
<th>Rating Data Type</th>
<th>Rating Unit</th>
<th>Days After Last Appli.</th>
<th>Trt-Eval Interval</th>
<th>Treatment</th>
<th>Other</th>
<th>Other</th>
<th>Rate</th>
<th>Rate Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 DALZ 9601</td>
<td>26 Jul/2006</td>
<td>DIT</td>
<td>DGCI</td>
<td>7</td>
<td>7 DA-A</td>
<td>0.25 lb ai/a</td>
<td>0.515 f-i</td>
<td>0.479 b-f</td>
<td>0.533 c-g</td>
<td>0.558 c</td>
</tr>
<tr>
<td>2 DALZ 9601</td>
<td>3 Aug/2006</td>
<td>DIT</td>
<td>DGCI</td>
<td>15</td>
<td>15 DA-A</td>
<td>0.25 lb ai/a</td>
<td>0.512 f-i</td>
<td>0.437 jk</td>
<td>0.505 ghi</td>
<td>0.483 d-g</td>
</tr>
<tr>
<td>3 J-14</td>
<td>9 Aug/2006</td>
<td>DIT</td>
<td>DGCI</td>
<td>21</td>
<td>21 DA-A</td>
<td>0.25 lb ai/a</td>
<td>0.541 b-f</td>
<td>0.506 a</td>
<td>0.554 a-d</td>
<td>0.560 bc</td>
</tr>
<tr>
<td>4 J-14</td>
<td>18 Aug/2006</td>
<td>DIT</td>
<td>DGCI</td>
<td>28</td>
<td>28 DA-A</td>
<td>0.25 lb ai/a</td>
<td>0.519 fgh</td>
<td>0.451 g-j</td>
<td>0.535 c-g</td>
<td>0.491 d</td>
</tr>
<tr>
<td>5 Miyako</td>
<td>26 Aug/2006</td>
<td>DIT</td>
<td>DGCI</td>
<td>35</td>
<td>35 DA-A</td>
<td>0.25 lb ai/a</td>
<td>0.486 ijk</td>
<td>0.487 a-d</td>
<td>0.552 a-d</td>
<td>0.557 c</td>
</tr>
<tr>
<td>6 Miyako</td>
<td>2 Sep/2006</td>
<td>DIT</td>
<td>DGCI</td>
<td>3 DA-A</td>
<td>3 DA-A</td>
<td>0.25 lb ai/a</td>
<td>0.467 k</td>
<td>0.441 ijk</td>
<td>0.521 e-h</td>
<td>0.465 fg</td>
</tr>
<tr>
<td>7 HT-210</td>
<td>2 Sep/2006</td>
<td>DIT</td>
<td>DGCI</td>
<td>20</td>
<td>20 DA-A</td>
<td>0.25 lb ai/a</td>
<td>0.517 fgh</td>
<td>0.469 d-h</td>
<td>0.545 b-f</td>
<td>0.489 de</td>
</tr>
<tr>
<td>8 HT-210</td>
<td>8 Sep/2006</td>
<td>DIT</td>
<td>DGCI</td>
<td>19</td>
<td>19 DA-A</td>
<td>0.25 lb ai/a</td>
<td>0.503 g-j</td>
<td>0.495 abc</td>
<td>0.561 abc</td>
<td>0.567 abc</td>
</tr>
<tr>
<td>9 DeAnza</td>
<td>15 Sep/2006</td>
<td>DIT</td>
<td>DGCI</td>
<td>18</td>
<td>18 DA-A</td>
<td>0.25 lb ai/a</td>
<td>0.505 g-j</td>
<td>0.463 d-i</td>
<td>0.515 f-i</td>
<td>0.464 g</td>
</tr>
<tr>
<td>10 DeAnza</td>
<td>2 Sep/2006</td>
<td>DIT</td>
<td>DGCI</td>
<td>17</td>
<td>17 DA-A</td>
<td>0.25 lb ai/a</td>
<td>0.521 fgh</td>
<td>0.464 d-i</td>
<td>0.554 a-d</td>
<td>0.564 abc</td>
</tr>
<tr>
<td>11 Victoria</td>
<td>5 Sep/2006</td>
<td>DIT</td>
<td>DGCI</td>
<td>16</td>
<td>16 DA-A</td>
<td>0.25 lb ai/a</td>
<td>0.516 f-i</td>
<td>0.418 k</td>
<td>0.499 hi</td>
<td>0.486 d-g</td>
</tr>
<tr>
<td>12 Victoria</td>
<td>12 Sep/2006</td>
<td>DIT</td>
<td>DGCI</td>
<td>15</td>
<td>15 DA-A</td>
<td>0.25 lb ai/a</td>
<td>0.493 h-k</td>
<td>0.481 a-e</td>
<td>0.576 a</td>
<td>0.583 ab</td>
</tr>
<tr>
<td>13 El Toro</td>
<td>2 Sep/2006</td>
<td>DIT</td>
<td>DGCI</td>
<td>14</td>
<td>14 DA-A</td>
<td>0.25 lb ai/a</td>
<td>0.479 jk</td>
<td>0.450 g-j</td>
<td>0.545 b-f</td>
<td>0.475 d-g</td>
</tr>
<tr>
<td>14 El Toro</td>
<td>19 Sep/2006</td>
<td>DIT</td>
<td>DGCI</td>
<td>13</td>
<td>13 DA-A</td>
<td>0.25 lb ai/a</td>
<td>0.536 c-f</td>
<td>0.479 b-f</td>
<td>0.554 a-d</td>
<td>0.555 c</td>
</tr>
<tr>
<td>15 JaMur</td>
<td>26 Sep/2006</td>
<td>DIT</td>
<td>DGCI</td>
<td>12</td>
<td>12 DA-A</td>
<td>0.25 lb ai/a</td>
<td>0.529 efg</td>
<td>0.459 e-j</td>
<td>0.529 d-h</td>
<td>0.466 efg</td>
</tr>
<tr>
<td>16 JaMur</td>
<td>2 Sep/2006</td>
<td>DIT</td>
<td>DGCI</td>
<td>11</td>
<td>11 DA-A</td>
<td>0.25 lb ai/a</td>
<td>0.566 abc</td>
<td>0.481 a-e</td>
<td>0.547 a-e</td>
<td>0.564 abc</td>
</tr>
<tr>
<td>17 Zeon</td>
<td>9 Sep/2006</td>
<td>DIT</td>
<td>DGCI</td>
<td>10</td>
<td>10 DA-A</td>
<td>0.25 lb ai/a</td>
<td>0.553 a-e</td>
<td>0.454 fj</td>
<td>0.506 ghi</td>
<td>0.489 de</td>
</tr>
<tr>
<td>18 Zeon</td>
<td>16 Sep/2006</td>
<td>DIT</td>
<td>DGCI</td>
<td>9</td>
<td>9 DA-A</td>
<td>0.25 lb ai/a</td>
<td>0.562 a-d</td>
<td>0.485 a-d</td>
<td>0.554 a-d</td>
<td>0.583 a</td>
</tr>
<tr>
<td>19 Meyer</td>
<td>2 Sep/2006</td>
<td>DIT</td>
<td>DGCI</td>
<td>8</td>
<td>8 DA-A</td>
<td>0.25 lb ai/a</td>
<td>0.528 efg</td>
<td>0.470 c-h</td>
<td>0.542 b-f</td>
<td>0.488 def</td>
</tr>
</tbody>
</table>
| 20 Meyer | 9 Sep/2006 | DIT | DGCI | 7 | 7 DA-A | 0.25 lb ai/a | 0.576 a | 0.469 d-h | 0.551 a-e | 0.558 c | 0.558 ab | 0.548 a-e | 0.574 a | 0.554 Tgh
<table>
<thead>
<tr>
<th>Crop Code</th>
<th>ZOYJA</th>
<th>ZOYJA</th>
<th>ZOYJA</th>
<th>ZOYJA</th>
<th>ZOYJA</th>
<th>ZOYJA</th>
<th>ZOYJA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rating Data Type</td>
<td>DIT</td>
<td>DIT</td>
<td>DIT</td>
<td>DIT</td>
<td>DIT</td>
<td>DIT</td>
<td>DIT</td>
</tr>
<tr>
<td>Rating Unit</td>
<td>DGCI</td>
<td>DGCI</td>
<td>DGCI</td>
<td>DGCI</td>
<td>DGCI</td>
<td>DGCI</td>
<td>DGCI</td>
</tr>
<tr>
<td>Assessed By</td>
<td>SB</td>
<td>SB</td>
<td>SB</td>
<td>SB</td>
<td>SB</td>
<td>SB</td>
<td>CB</td>
</tr>
<tr>
<td>Days After Last Appl.</td>
<td>7</td>
<td>15</td>
<td>7</td>
<td>15</td>
<td>22</td>
<td>28</td>
<td>35</td>
</tr>
<tr>
<td>Trt-Eval Interval</td>
<td>7 DA-A</td>
<td>15 DA-A</td>
<td>21 DA-A</td>
<td>30 DA-A</td>
<td>38 DA-A</td>
<td>45 DA-A</td>
<td>51 DA-A</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Trt No.</th>
<th>Treatment</th>
<th>Rate</th>
<th>Rate Unit</th>
<th>Other</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>22</td>
<td>Emerald</td>
<td>0.570 ab</td>
<td>0.445 hij</td>
<td>0.491 i</td>
<td>0.467 efg</td>
</tr>
<tr>
<td></td>
<td>Mesotrione</td>
<td>0.25 lb ai/a</td>
<td>0.25 % v/v</td>
<td>0.534 d-g</td>
<td>0.471 c-g</td>
</tr>
<tr>
<td>23</td>
<td>Seashore Paspalum</td>
<td>0.495 h-k</td>
<td>0.446 g-j</td>
<td>0.534 c-g</td>
<td>0.476 d-g</td>
</tr>
<tr>
<td>NIS</td>
<td>Mesotrione</td>
<td>0.25 lb ai/a</td>
<td>0.25 % v/v</td>
<td>0.495 h-k</td>
<td>0.446 g-j</td>
</tr>
</tbody>
</table>

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean separations are based on the complete error term.