Effect of seed treatments with an experimental plant growth regulator on soybean seedling emergence, vigor, and yield, Crawfordsville, Iowa, 1998. Owen, Micheal D.K., James F. Lux, Damian D. Franzenburg, and Kevin W. Adam. The purpose of this study was to evaluate a seed treatment for crop phytotoxicity and yield in glyphosate resistant soybeans. The plant growth regulator was applied as a treatment on the soybean seed. The soil was a silty clay loam with a pH 5.95 and 4.5% organic matter. The experimental design was a Latin square with four replications and plots were 10 by 40 ft. The 1997 crop was corn. Tillage included a fall chisel plow and a spring field cultivation. Crop residue on the soil surface was 11% at planting. Soybeans were planted 1.5 inches deep on May 13, at 150,000 seeds/A in 30-inch rows. May rainfall included: 1.24, 0.02, 0.45, 0.04, 0.25, 0.29, 0.42, 0.36, and 0.15 inches on May 1, 3, 7, 8, 12, 21, 22, 24, and 29, respectively. Total rainfall for May was 3.22 inches. June rainfall included: 0.19, 0.1, 1.48, 0.26, 0.02, 0.21, 0.01, 0.8, 0.36, 0.03, 0.06, 0.71, 0.95, 0.02, 0.14, and 1.23 inches on June 4, 5, 8, 9, 10, 11, 12, 14, 15, 16, 17, 18, 20, 22, 28, and 29, respectively. Total rainfall for June was 6.57 inches. July rainfall included: 3.05 inches and 0.49 inches from July 1 through 15 and 16 through 31, respectively. Rainfall total for August was 2.02 inches.

The experiment was kept weed free. There were no consistent trends in differences between treatments for stand counts, plant heights or yield when observed on the various dates. Most treatment differences were insignificant. (Dept. of Agronomy, Iowa State University, Ames)
# TRIAL # US 096/98/01 001 IA : WST 1

## DATA MEAN

**TITLE:** EFFECTS OF SEED TREATMENTS WITH AN EXPERIMENTAL PLANT GROWTH REGULATOR ON SOYBEAN SEEDLING EMERGENCE, VIGOR AND YIELD.

**CREATED:** 04/27/98  
**REVISED:** 11/20/98  
**COMPLETED:** N

**PROJECT TYPE:** HERBICIDE  
**LOCATION:** CRAWFORDSVILLE, IA  
**DESIGN:** LATIN SQUARE DESIGN  
**PLOT SIZE:** 10.00 FT WIDE X 40.00 FT LONG  
**RESEARCHED BY:** IOWA STATE UNIVERSITY

### TREATMENT COMPOUNDS

<table>
<thead>
<tr>
<th>TPT</th>
<th>COMPOUND</th>
<th>DOSAGE</th>
<th>UNIT</th>
<th>SAT</th>
<th>05/21/98</th>
<th>05/28/98</th>
<th>06/03/98</th>
</tr>
</thead>
<tbody>
<tr>
<td>1A</td>
<td>UNTREATED CHECK</td>
<td>0.00</td>
<td>NA</td>
<td>0</td>
<td>62</td>
<td>68</td>
<td>68</td>
</tr>
<tr>
<td>2A</td>
<td>STX 198</td>
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<td>58</td>
<td>63</td>
<td>66</td>
<td>3</td>
</tr>
<tr>
<td>3A</td>
<td>STX 298</td>
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<td></td>
<td>59</td>
<td>66</td>
<td>64</td>
<td>4</td>
</tr>
<tr>
<td>4A</td>
<td>STX 398</td>
<td>0</td>
<td></td>
<td>56</td>
<td>61</td>
<td>64</td>
<td>3</td>
</tr>
</tbody>
</table>

**LSD (0.05):**  
| 0.19 | 10.43 | 0.706 | 4.91 | 0.499 |

**STANDARD DEVIATION:**  
| 4.58 | 5.44  | 0.484 | 4.43 | 0.331 |
TRIAL # US 096/98/01 001 IA : WST 1

DATA MEAN

TITLE: EFFECTS OF SEED TREATMENTS WITH AN EXPERIMENTAL PLANT GROWTH REGULATOR ON SOYBEAN SEEDLING EMERGENCE, VIGOR AND YIELD.
CREATED: 04/27/98
REVISED: 11/20/98
COMPLETED: N
PROJECT TYPE: HERBICIDE
PROJECT#1:
LOCATION: CRAWFORDSVILLE, IA
RESEARCHED BY: IOWA STATE UNIVERSITY
DESIGN: LATIN SQUARE DESIGN
PLOT SIZE: 10.00 FT WIDE X 40.00 FT LONG
REPS: 04

<table>
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<tr>
<th>TRT COMPOUND</th>
<th>DOSAGE RATE</th>
<th>HT (IN) UNIT TM 06/12/98</th>
<th>HT (IN) UNIT TM 06/18/98</th>
<th>BU/A YIELD 10/14/98</th>
</tr>
</thead>
<tbody>
<tr>
<td>1A UNTREATED CHECK</td>
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<td>NA</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>2A STX 198</td>
<td>0</td>
<td>4</td>
<td>6</td>
<td>59</td>
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<tr>
<td>3A STX 298</td>
<td>0</td>
<td>4</td>
<td>5</td>
<td>61</td>
</tr>
<tr>
<td>4A STX 398</td>
<td>0</td>
<td>4</td>
<td>5</td>
<td>60</td>
</tr>
</tbody>
</table>

LSD (0.05) 0.00 0.661 3.28
STANDARD DEVIATION 0.00 0.527 3.85

H#| CUSTOM#1| CUSTOM#2| EV.DATE| S#| TYP| SPECIE| STAGE| RAW| PART| SYM| METH| CONF| BASIS| C.M| CTRT| SS| NOTE |
01| GLXMA| 3 METERS| 05/21/98| 01| P| GLXMA| 10| RAW| ALL| STD| NUM| ---| 1.00 PL| NO| 0001| 0| N |
02| GLXMA| 3 METERS| 05/28/98| 01| P| GLXMA| RAW| ALL| STD| CM| ---| 3.00 PL| NO| 0001| 0| N |
03| GLXMA| HT (CM)| 05/28/98| 01| P| GLXMA| RAW| ALL| HT| CM| ---| 1.00 PL| NO| 0001| 0| N |
04| GLXMA| 3 METERS| 06/03/98| 01| P| GLXMA| 12| RAW| ALL| STD| NUM| ---| 1.00 PL| NO| 0001| 0| N |
05| GLXMA| HT IN| 06/03/98| 01| P| GLXMA| 12| RAW| ALL| HT| IN| ---| 1.00 PL| NO| 0001| 0| N |
06| GLXMA| HT (IN)| 06/12/98| 01| P| GLXMA| RAW| ALL| HT| IN| ---| 1.00 PL| NO| 0001| 0| N |
07| GLXMA| HT (IN)| 06/18/98| 01| P| GLXMA| RAW| ALL| HT| IN| ---| 1.00 PL| NO| 0001| 0| N |
10| YIELD| BU/A| 10/14/98| 01| P| GLXMA| RAW| ALL| YLD| BU| ---| 1.00 PL| MCC| 0001| 0| N |

* STAGE CODE
10 - COTYLEDONS COMPLETELY UNFOLDED
12 - 2 LEAVES (UNIFOLIATE FIRST LEAF PAIR) UNFOLDED, 1 NODE

* MULTI COLUMN CALCULATIONS
US 096/98/01 001 IA --- 10 -- ((08RAW))/((37*10)/43560))/(60/((100-(09RAW))/(100-13)))