**Evaluation of herbicide combinations and application timings for weed management in no-tillage corn, Calumet, Iowa, 1997.** Owen, Micheal D.K., James F. Lux, Damian D. Franzenburg, and Kevin W. Adam. The purpose of this study was to evaluate various herbicide treatments for weed efficacy and crop phytotoxicity in no-tillage corn production systems. The soil was a Galva, Primghar silty clay loam with a pH 6.0 and 5.0% organic matter. The experimental design was a randomized complete block with three replications and plots were 10 by 25 ft. The 1996 crop was soybeans. Fertilization included 120 lb/A actual N, applied as ammonium nitrate. Crop residue on the soil surface was 75% at planting. ‘Pioneer hybrid 3583’ corn was planted 1.5 inches deep on May 10, at 27,700 seeds/A in 30 inch rows. April rainfall included: 1.75, 0.19, 0.30, 0.18, and 0.19 inches on April 6, 20, 21, 22, and 30, respectively. Total rainfall for April was 2.61 inches. May rainfall included: 0.62, 0.25, 0.20, 0.35, 1.08, and 0.47 inches on May 2, 3, 7, 8, 25, and 28, respectively. Total rainfall for May was 2.10 inches. June rainfall included: 0.03, 0.52, 0.17, 0.01, 0.58, 1.42, 0.02, 0.01, 0.21, 0.36, 0.03, and 1.21 inches on June 6, 12, 18, 19, 20, 21, 22, 23, 24, 25, 29, and 30 respectively. Total rainfall for June was 4.57 inches. July rainfall included: 0.60 inches and 2.12 inches from July 1 through 15 and 16 through 31, respectively. Rainfall total for August was 2.08 inches. Application information is listed below:

<table>
<thead>
<tr>
<th>Date</th>
<th>Treatment</th>
<th>April 25</th>
<th>May 10</th>
<th>June 13</th>
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<td></td>
<td>EPP</td>
<td>PRE</td>
<td>POST</td>
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<tr>
<td>psi</td>
<td>30</td>
<td>30</td>
<td>30</td>
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</tr>
<tr>
<td>nozzle</td>
<td>11002</td>
<td>11002</td>
<td>11002</td>
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</tr>
<tr>
<td>Temperature (C)</td>
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</tr>
<tr>
<td>air</td>
<td>6</td>
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<td>28</td>
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<td>soil (4 inch)</td>
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<td>Soil moisture</td>
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<tr>
<td>Wind (mph)</td>
<td>2-3 W</td>
<td>15-20 SW</td>
<td>5-8 N</td>
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</tr>
<tr>
<td>Sky</td>
<td>cloudy</td>
<td>cloudy</td>
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<tr>
<td>Relative humidity (%)</td>
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<td>29</td>
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<td>-</td>
<td>-</td>
<td>V2-3</td>
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</tr>
<tr>
<td>leaf no.</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>height (inch)</td>
<td>-</td>
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<td>2-4</td>
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</tr>
<tr>
<td>Giant foxtail</td>
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<td>25</td>
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<tr>
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<td>3-4, 0-1 tiller</td>
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<tr>
<td>height (inch)</td>
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<td>0.25</td>
<td>2-4</td>
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</tr>
<tr>
<td>infestation (ft²)</td>
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<td>2-3</td>
<td>1</td>
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<tr>
<td>Common lambsquarters</td>
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<td>multi.</td>
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</tr>
<tr>
<td>leaf no.</td>
<td>-</td>
<td>2-4</td>
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<tr>
<td>height (inch)</td>
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<td>0.5-3</td>
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<td>infestation (ft²)</td>
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<td>1</td>
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<tr>
<td>Pennsylvania smartweed</td>
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<td></td>
<td>multi.</td>
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<tr>
<td>leaf no.</td>
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<td>-</td>
<td>multi.</td>
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<tr>
<td>height (inch)</td>
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<td>infestation (ft²)</td>
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No effect on corn stand attributable to herbicide treatment was observed. The postemergence application of Accent plus Buctril resulted in 10% corn injury when noted on July 1. Most early preplant (EPP) and preemergence
(PRE) herbicide treatments provided acceptable control of giant foxtail on June 13, however, only several continued to provide control when evaluated on July 1. On July 1, common lambsquarters and Pennsylvania smartweed control was excellent with nearly all treatments evaluated. (Dept. of Agronomy, Iowa State University, Ames)
<table>
<thead>
<tr>
<th>TRT/COMPOUND NUM TESTED</th>
<th>DOSAGE RATE</th>
<th>UNIT</th>
<th>17.5 FT</th>
<th>25 FT</th>
<th>SETA CON %</th>
<th>CHEAL CON %</th>
<th>POLY CON %</th>
<th>RYE CON %</th>
<th>07/01 CON %</th>
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<td>93</td>
<td>95</td>
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<tr>
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<td>98</td>
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<tr>
<td>11A FRONTIER 6.0 L (EC) E TOUCHDOWN BTU 5 (SL) C W28N</td>
<td>2.50</td>
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# TRIAL # US 060/97/01 000 01 : CCN 1

## DATA MEAN

EVALUATION OF HERBICIDE COMBINATIONS AND APPLICATION TIMINGS FOR WHEAT MANAGEMENT IN NO-FIVIALGE CORN.

<table>
<thead>
<tr>
<th>TRT COMPOUND</th>
<th>NUM TESTED</th>
<th>DOSAGE RATE</th>
<th>ZEAMD 17.5 FT</th>
<th>SETYA CON %</th>
<th>CHEAL CON %</th>
<th>POLPY CON %</th>
<th>SEAMD FIT %</th>
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<td>D ECHTHOL 7%</td>
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<td>ZIAMD CON %</td>
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## DATA MEAN

**TITLE:** EVALUATION OF HERBICIDE COMBINATIONS AND APPLICATION TIMINGS FOR WEED MANAGEMENT IN NO-TILLAGE CORN.

**PROJECT TYPE:** HERBICIDE

**LOCATION:** COLUMET, IA

**RESEARCHED BY:** IOWA STATE UNIVERSITY

**PLOT SIZE:** 10 FT WIDE X 25 FT LONG

**CREATED:** 04/23/97

**REVISED:** 12/19/97

**COMPLETED:** N

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## TRIAL # US 060/97/01 000 01 : CCN 1

### DATA MEAN

**TITLE:** EVALUATION OF HERBICIDE COMBINATIONS AND APPLICATION TIMINGS FOR WEED MANAGEMENT IN NO-TILLAGE CORN.

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**TIMING CODES**

- 00 = Untreated Timing
- 01 = Early Pre
- 02 = Pre
- 03 = Post