### FIELD EXPERIMENT HISTORY

**Expt. Number:** 9589  
**Year:** 1995  
**Title:** Managing Corn Seed Decay and Seedling Blight in Reduced Tillage Systems  
**Personnel:** J.G. Lauer, J.R. Meyer, K.D. Hudelson  
**Location:** Arlington Research Station, Arlington, WI  
**Supported by:** Gustafson, Inc., Hatch Project 1890

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### FIELD INFORMATION

- **Field:** 338  
- **Soil Type:** Plano Silt Loam  
- **Soil Test Results:**  
  - Test Date: 4/95  
  - pH: 7.0  
  - P (ppm): 50  
  - K (ppm): 105  
  - OM (%): 4.0  
- **Fertilizer:**  
  - 25-Apr 100 lbs/a 6-24-24 starter  
  - 25-Apr 150 lbs N/a 28-0-0  
- **Tillage Operations:** None  
- **Previous Crop:** Corn  
- **Irrigation:** None

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### EXPERIMENTAL PROCEDURE

- **Exp. Design:** RCB Split-Split Plot  
- **Replicates:** 6  
- **Variables:**  
  - A: Tillage, B: Seed Quality, C: Seed Treatment  
  - Seed Treatments:  
    - Captan 400  
    - Captan 400 + Apron  
    - Captan 400 + Apron + Raxil  
    - Captan 400 + Apron + Gaucho  
    - Captan 400 + Apron + Baytan  
    - Maxim + Apron  
    - Untreated Control  
  - Rates (oz F.P./CWT):  
    - 1.76 fl oz  
    - 1.76 fl oz + 0.1 fl oz  
    - 1.76 fl oz + 20 ppm + 20 ppm  
    - 1.76 fl oz + 0.1 fl oz + 1.0 fl oz  
    - 1.76 fl oz + 0.1 fl oz + 0.25 fl oz  
    - 25 ppm + 20 ppm  
- **Area Planted:** 10' x 30'  
- **Area Harvested:** 5.0' x 25'  
- **Row Spacing:** 30"  
- **Hybrid/Variety:** Pioneer 3556 (Poor Seedling Vigor)  
  - Pioneer 3475 (Average Seedling Vigor)  
- **Planting Date:** 25-Apr  
- **Planting Equip:** JD 7000 Planter w/ 3 coulters  
- **Planting Rate:** 32,000 seeds/acre  
- **Harvesting Date:** 5,6-Oct  
- **Harvesting Equip:** Gleaner Plot Combine

#### Insecticide

- **Date:** 25-Apr  
- **Material:** Lorsban  
- **Rate:** 8 oz/1000 ft  
- **Method:** Planter

#### Herbicides

- **1-May:** Bladex  
- **Rate:** 2 qts/a  
- **Method:** Pre-emerge

- **1-May:** Lasso  
- **Rate:** 2 qts/a  
- **Method:** Pre-emerge

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**Results:** Table E-36.
<table>
<thead>
<tr>
<th>Tillage</th>
<th>Seeding Vigor</th>
<th>Seed Treatment</th>
<th>Days After Planting</th>
<th>Root and Plant Ratings - 35 Days after Planting</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>24 27 29 31 35 41</td>
<td>Whole Plant Harvest Population Final Breaked Moist Yield</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Plant Dry WI Population Emerg Stalls Moist Yield</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>% Emergence</td>
<td>Leaf Collars</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>% Emergence</td>
<td>cm</td>
</tr>
<tr>
<td>No-Till</td>
<td>Poor</td>
<td>Captan</td>
<td>17.5 37.1 44.3 48.5 50.6 57.7</td>
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</tr>
<tr>
<td></td>
<td>Poor</td>
<td>Captan+Apron</td>
<td>25.6 52.4 60.8 61.3 63.4 65.9</td>
<td>1.1</td>
</tr>
<tr>
<td></td>
<td>Poor</td>
<td>Captan+Apson+Baytan</td>
<td>25.3 48.6 57.6 58.4 62.2 64.1</td>
<td>1.2</td>
</tr>
<tr>
<td></td>
<td>Poor</td>
<td>Captan+Apson+Gaucho</td>
<td>19.3 41.5 48.3 52.8 56.6 58.4</td>
<td>1.0</td>
</tr>
<tr>
<td></td>
<td>Poor</td>
<td>Captan+Apson+Raxil</td>
<td>26.4 57.3 66.1 67.1 71.8 74.2</td>
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</tr>
<tr>
<td></td>
<td>Poor</td>
<td>Captan+Apson+Rhaxil</td>
<td>14.9 38.3 46.3 49.6 52.6 56.4</td>
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<tr>
<td></td>
<td>Poor</td>
<td>Captan+Apson+Raxil</td>
<td>25.8 50.5 60.9 61.9 65.6 68.7</td>
<td>1.2</td>
</tr>
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<td></td>
<td>Poor</td>
<td>Captan+Apson+Raxil</td>
<td>12.8 31.0 36.1 39.9 46.1 50.1</td>
<td>0.8</td>
</tr>
<tr>
<td></td>
<td>Poor</td>
<td>Captan+Apson+Raxil</td>
<td>23.9 47.1 55.0 55.7 61.7 67.4</td>
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<td>28.8 58.9 66.5 67.7 69.3 72.9</td>
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<td>Captan+Apson+Raxil</td>
<td>11.5 32.4 38.9 41.0 44.0 48.9</td>
<td>0.9</td>
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<tr>
<td></td>
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<td>Captan+Apson+Raxil</td>
<td>20.6 45.2 51.1 52.6 55.3 58.7</td>
<td>1.0</td>
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</table>
## Table E-36. Corn Seed Decay and Seedling Blight in Reduced Tillage Systems

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<thead>
<tr>
<th>Tillage</th>
<th>Seeding Vigor</th>
<th>Seed Treatment</th>
<th>Days After Planting</th>
<th>Total Harvestable Plant</th>
<th>Final Harvest</th>
<th>Dry Weight</th>
<th>Population</th>
<th>Emergence</th>
<th>Moist</th>
<th>Yield</th>
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</thead>
<tbody>
<tr>
<td>No-Till</td>
<td>Average</td>
<td>Captain</td>
<td>0.0</td>
<td>1.0</td>
<td>20.5</td>
<td>1.6</td>
<td>1.8</td>
<td>1.8</td>
<td>1.6</td>
<td>2.2</td>
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<tr>
<td>Zone-Till</td>
<td>Average</td>
<td>Captain</td>
<td>0.0</td>
<td>1.0</td>
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</tbody>
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### Notes:

1. Kernel rot with 1=deterioration 2=no deterioration
2. Root discoloration with 1=none, 2=trace, 3=light, 4=moderate, and 5=severe
3. Longevity of primary root with 1=living, 2=blighted, 3=dead or pruned