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The 1985 Iowa Corn Yield Test Report, District 3

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Iowa State University

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The 1985 Iowa Corn Yield Test Report, District 3

Abstract
Results of the Iowa Corn Yield Test are published to aid Iowa farmers in selecting corn varieties. This is the sixty-sixth consecutive year for the test.

Disciplines
Agriculture | Agronomy and Crop Sciences
THE 1985 IOWA CORN YIELD TEST
REPORT

District 3

Results of the Iowa Corn Yield Test are published to aid Iowa farmers in selecting corn hybrids. This is the sixty-sixth consecutive year for the test.

The presentation of data for the hybrids tested does not imply approval or endorsement by the authors or by the agencies sponsoring or conducting the test. Entries in tables 1, 2, and 3 are designated by brand name and variety.

1985 Procedure

Producers of corn seed and Iowa State University were eligible to enter varieties in the Iowa Corn Yield Test. Each producer was allowed a maximum of six entries per district. All entries had to be available in a quantity of at least 10 bushels of seed.

Two hundred sixty-four entries were evaluated in this district—132 in the early to medium maturity test and 132 in the medium to late maturity test. Fifteen of the entries determined to be widely grown were entered by Iowa State University and were planted in both the early and the late test. In June, on even numbered years, approximately 21,000 survey cards are mailed in the state. Recipients of these cards are determined by a random drawing of names from landowners listed in the county plat books. Based on the survey results, the 15 hybrids grown on the most acres in the district are classified as widely grown for that district. The widely grown hybrids(*) in this report were determined by the 1984 survey. Iowa State University entered a maximum of three widely grown hybrids of any given brand. These entries were given priority over the remaining 234 entries made by seed producers.

Each entry was replicated four times in four-row plots at a planting rate of 28,000 kernels per acre at each location. All locations were machine-planted. The center two rows of each plot were harvested with a corn combine. No gleanings or dropped ears were included in yield data. A moisture determination was made from each plot, and yields were corrected to 15.5 percent moisture for shelled corn.

How Information Is Presented

The data presented are averages of two locations in 1983 and three locations in 1984 and 1985. Yields in bushels per acre and percentage of moisture, root lodging, stalk lodging, dropped ears, and stand are shown for all entries in 1985 and for those tested in 1983 and 1984 that were in the 1985 test. Because of the large number of entries in the district, the test was split into two experiments based on maturity of the hybrids entered. Table 1 reports the average yields of hybrids entered in the early to medium maturity experiment and table 2 reports the average yields of hybrids entered in the medium to late maturity experiment. Both experiments were treated similarly.

Interpretation of Results

Yield differences due to variation in soil, fertility, moisture availability, insect infestation, and diseases, plus any variation due to planting and harvesting techniques, are identified through statistical analysis. The LSD values shown in tables 1, 2, and 3 represent, in bushels per acre, the amounts of yield variation that could be due to variations in the factors just mentioned. In comparing varieties, yield differences greater than the LSD value can be attributed to genetic differences in the yield potential of these varieties; yield differences less than the LSD value are not statistically different and could have been due to other factors.

Grain moistures shown in tables 1, 2, and 3 are indicators of maturity and natural drying rate. Maturity of varieties entered generally ranged from early to full season. Yield comparisons should be made among varieties of similar maturity in the same test. Hybrid comparisons between table 1 and table 2 can be made only when using the average of the widely grown hybrids listed at the bottom of each table. The difference between these two values indicates the yield difference between the two tests. This difference must be added to or subtracted from the yield of the appropriate hybrid when making comparisons between tables.

It is important to select varieties having stable performance over a range of environmental conditions. High yields for two or more consecutive years indicate stable performance. Supplemental yield and agronomic information about specific varieties may be obtained from your seed corn dealers and from neighbors who have grown these varieties.

Prepared by K. E. Ziegler, instructor in agronomy.

Cooperative Extension Service, Agriculture and Home Economics Experiment Station, Iowa Crop Improvement Association, and the United States Department of Agriculture cooperating

Cooperative Extension Service
Iowa State University
Ames, Iowa 50011

Pm-660-3-85 | December 1985
### Table 1: Average Performance of Single to Medium Maturity Hybrids Tested in Districts

<table>
<thead>
<tr>
<th>HYBRID</th>
<th>YIELD (Bu/AC)</th>
<th>MOISTURE %</th>
<th>lodging %</th>
<th>lodging %</th>
<th>EARS/AC</th>
<th>STAND %</th>
</tr>
</thead>
<tbody>
<tr>
<td>MONITOR</td>
<td>195</td>
<td>195</td>
<td>195</td>
<td>35</td>
<td>35</td>
<td>35</td>
</tr>
<tr>
<td>PAYCO</td>
<td>196</td>
<td>196</td>
<td>196</td>
<td>35</td>
<td>35</td>
<td>35</td>
</tr>
<tr>
<td>HERITAGE</td>
<td>197</td>
<td>197</td>
<td>197</td>
<td>35</td>
<td>35</td>
<td>35</td>
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</table>

### Table 2: Average Performance of Medium to Late Maturity Hybrids Tested in Districts

<table>
<thead>
<tr>
<th>HYBRID</th>
<th>YIELD (Bu/AC)</th>
<th>MOISTURE %</th>
<th>lodging %</th>
<th>lodging %</th>
<th>EARS/AC</th>
<th>STAND %</th>
</tr>
</thead>
<tbody>
<tr>
<td>MONITOR</td>
<td>195</td>
<td>195</td>
<td>195</td>
<td>35</td>
<td>35</td>
<td>35</td>
</tr>
<tr>
<td>PAYCO</td>
<td>196</td>
<td>196</td>
<td>196</td>
<td>35</td>
<td>35</td>
<td>35</td>
</tr>
<tr>
<td>HERITAGE</td>
<td>197</td>
<td>197</td>
<td>197</td>
<td>35</td>
<td>35</td>
<td>35</td>
</tr>
</tbody>
</table>
### TABLE 3.

<table>
<thead>
<tr>
<th>BRAND</th>
<th>VARIETY</th>
<th>CROSS</th>
<th>FIELDS</th>
<th>1981 TO 1983</th>
<th>1985</th>
<th>1987</th>
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</thead>
<tbody>
<tr>
<td>ENSOR</td>
<td>CROPPED</td>
<td>SX</td>
<td>135</td>
<td>16.7</td>
<td>17.4</td>
<td>16.7</td>
</tr>
<tr>
<td>NORTHUP KING</td>
<td>CROPPED</td>
<td>SX</td>
<td>135</td>
<td>16.7</td>
<td>17.4</td>
<td>16.7</td>
</tr>
<tr>
<td>SUPERCROST</td>
<td>SX</td>
<td>135</td>
<td>16.7</td>
<td>17.4</td>
<td>16.7</td>
<td>16.7</td>
</tr>
<tr>
<td>AMERICAN MILLER</td>
<td>SX</td>
<td>135</td>
<td>16.7</td>
<td>17.4</td>
<td>16.7</td>
<td>16.7</td>
</tr>
<tr>
<td>FEDERAL</td>
<td>SX</td>
<td>135</td>
<td>16.7</td>
<td>17.4</td>
<td>16.7</td>
<td>16.7</td>
</tr>
<tr>
<td>MACH-1</td>
<td>SX</td>
<td>135</td>
<td>16.7</td>
<td>17.4</td>
<td>16.7</td>
<td>16.7</td>
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<tr>
<td>IMPERIAL</td>
<td>SX</td>
<td>135</td>
<td>16.7</td>
<td>17.4</td>
<td>16.7</td>
<td>16.7</td>
</tr>
<tr>
<td>STAUFFER</td>
<td>SX</td>
<td>135</td>
<td>16.7</td>
<td>17.4</td>
<td>16.7</td>
<td>16.7</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>YIELD</th>
<th>MOIST PCT.</th>
<th>LEADING PCT.</th>
<th>LEADING PCT.</th>
<th>EARLY PCT.</th>
<th>STAND PCT.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1700</td>
<td>83</td>
<td>84</td>
<td>83</td>
<td>83</td>
<td>83</td>
</tr>
<tr>
<td>1700</td>
<td>83</td>
<td>84</td>
<td>83</td>
<td>83</td>
<td>83</td>
</tr>
<tr>
<td>1700</td>
<td>83</td>
<td>84</td>
<td>83</td>
<td>83</td>
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</tbody>
</table>
### Table A. Field Data

<table>
<thead>
<tr>
<th>Designations Identifying Brands in the Yield Test</th>
<th>Bertram Farm</th>
<th>Broghammer Farm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Renalds Farm</td>
<td>Tama silt loam</td>
<td>Kenyon loam</td>
</tr>
<tr>
<td>Nicollet loam</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fertilizer applied, lb.</td>
<td>N</td>
<td>P₂O₅</td>
</tr>
<tr>
<td>Plowdown</td>
<td>111 (Fall)</td>
<td></td>
</tr>
<tr>
<td>Preplant</td>
<td>39</td>
<td>100</td>
</tr>
<tr>
<td>Preemergence</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Side-dress</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Starter</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>150</td>
<td>100</td>
</tr>
<tr>
<td>1984 crop</td>
<td>Soybeans</td>
<td></td>
</tr>
<tr>
<td>Row width</td>
<td>30 inches</td>
<td></td>
</tr>
<tr>
<td>Planting date</td>
<td>May 6</td>
<td></td>
</tr>
<tr>
<td>Harvest date</td>
<td>Oct. 29-31</td>
<td></td>
</tr>
</tbody>
</table>

### 1985 Field Data

The District 3 test was conducted on farms operated by Joe Reigelsberger near Rolfe in Pocahontas County, by Richard Bertram near Holland in Grundy County, and James Broghammer near Ryan in Delaware county. Field data are presented in table A. SubRoleId moisture for the district was favorable at planting time. Rainfall was well below normal in May and June. In July the Pocahontas and Delaware County locations received well below normal rainfall while the Grundy County location received above normal rainfall. In August rainfall was near normal for the district. Temperatures were well above normal in April, well below normal in June and August, below normal in July, and variable in May and September being warm early in the month and cool later. The average district yield was 23 bushels per acre above the mean of the five preceding years' averages.

### District 3

**Designations Identifying Brands in the Yield Test**

- **AGRIPRO**
- **AMERICANAC**
- **AMES BEST**
- **APGROW/O'S GOLD**
- **ARGILL**
- **CPS**
- **CHALLENGER**
- **COOP**
- **CORNELIUS**
- **CROWN**
- **DAIRYLAND**
- **DEKALB**
- **EK PREMIUM**
- **ENO**
- **FARMACY**
- **FEDERAL**
- **FS**
- **FUNK**
- **GOLDEN HARVEST**
- **HAWKEYE HYBRID**
- **HENKEL**
- **HERMANN**
- **HOBART**
- **HOEGEMEYER**
- **HUGHES**
- **IACQUES**
- **KALENBERG**
- **KRUGER**
- **LEADER**
- **LYNKS**
- **MCCURDY**
- **MIDDLECOOP**
- **MCALLISTER**
- **MIDDLEMANN**
- **MIDDLEKOOP**
- **MCALISTER**
- **MCCURDY**
- **MIDDLECOOP**
- **MIDDLEMANN**
- **MIDDLEKOOP**
- **MCALISTER**
- **MCCURDY**
- **MIDDLECOOP**
- **MIDDLEMANN**
- **MIDDLEKOOP**

### Other Reports

Separate reports for variety performance are available for the district shown in figure 1. These publications are available at your county extension office or from Publications Distribution. Printing and Publications Building, Iowa State University, Ames, Iowa 50011.

**The 1985 Iowa Corn Yield Test Report**

- Pm-660-1-85 District 1
- Pm-660-2-85 District 2
- Pm-660-3-85 District 3
- Pm-660-4-85 District 4

**File: Agronomy 1**


*All** and justice for all

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