12-1-1979

The 1979 Iowa Corn Yield Test Report, District 1

Kenneth E. Ziegler
Iowa State University

C. D. Hutchcroft
Iowa State University

Follow this and additional works at: http://lib.dr.iastate.edu/cornyield
Part of the Agriculture Commons, and the Agronomy and Crop Sciences Commons

Recommended Citation
http://lib.dr.iastate.edu/cornyield/65

This Report is brought to you for free and open access by the Extension and Experiment Station Publications at Iowa State University Digital Repository. It has been accepted for inclusion in Iowa Corn Yield Tests by an authorized administrator of Iowa State University Digital Repository. For more information, please contact digirep@iastate.edu.
The 1979 Iowa Corn Yield Test Report, District 1

Abstract
Results of the Iowa Corn Yield Test are published to sixtieth consecutive year for the test.

Disciplines
Agriculture | Agronomy and Crop Sciences

This report is available at Iowa State University Digital Repository: http://lib.dr.iastate.edu/cornyield/65
THE 1979 IOWA CORN YIELD TEST REPORT

District 1

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

The presentation of data for the varieties tested does not imply approval or endorsement by the authors or by the agencies sponsoring or conducting the test. Iowa State University approves the reproduction of any table in this report only if no portion is deleted and if the order of the data is not rearranged. Entries in tables 1 and 2 are designated by brand name and variety.

1979 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 nine entries per district. All entries had to be available in a quantity of at least 10 bushels of seed.

One hundred thirty-two entries were compared in this test. Fifteen of them were determined to be widely grown and were entered by Iowa State University. Entries were considered widely grown if they were planted on 0.75 per cent or more of the corn acreage in the district according to a 1978 survey of Iowa corn growers. Iowa State University entered a maximum of five widely grown varieties of any given brand. These entries were given priority over the remaining 117 entries made by seed producers.

Each entry was replicated four times in 4-row plots at a planting rate of 21,500 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 1977, 1978 and 1979. Yield in bushels per acre and percentage of moisture, root lodging, stalk lodging, dropped ears, and stand are shown for all entries in 1979 and for those tested in 1977 and 1978 that were in the 1979 test.

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 and 2 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 and 2 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.

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.


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-660-1-79 | December 1979
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SUPER CROSA 75015</td>
<td>XE</td>
<td>125</td>
<td>212</td>
<td>221</td>
<td>6</td>
<td>1</td>
<td>7</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>99</td>
<td></td>
</tr>
<tr>
<td>CROSA 75016</td>
<td>WE</td>
<td>127</td>
<td>211</td>
<td>221</td>
<td>6</td>
<td>1</td>
<td>7</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>99</td>
<td></td>
</tr>
<tr>
<td>TDIPI</td>
<td>SK</td>
<td>124</td>
<td>210</td>
<td>221</td>
<td>6</td>
<td>1</td>
<td>7</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>99</td>
<td></td>
</tr>
<tr>
<td>COGOLD</td>
<td>SK</td>
<td>131</td>
<td>216</td>
<td>223</td>
<td>10</td>
<td>0</td>
<td>7</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>99</td>
<td></td>
</tr>
<tr>
<td>CODIL</td>
<td>GS</td>
<td>140</td>
<td>229</td>
<td>239</td>
<td>14</td>
<td>0</td>
<td>7</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>99</td>
<td></td>
</tr>
<tr>
<td>LUMI</td>
<td>GS</td>
<td>140</td>
<td>230</td>
<td>239</td>
<td>14</td>
<td>0</td>
<td>7</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>99</td>
<td></td>
</tr>
<tr>
<td>HOP</td>
<td>GS</td>
<td>121</td>
<td>202</td>
<td>211</td>
<td>6</td>
<td>1</td>
<td>7</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>99</td>
<td></td>
</tr>
<tr>
<td>TDIPI</td>
<td>XE</td>
<td>120</td>
<td>213</td>
<td>224</td>
<td>6</td>
<td>1</td>
<td>7</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>99</td>
<td></td>
</tr>
<tr>
<td>SE2</td>
<td>SK</td>
<td>140</td>
<td>215</td>
<td>226</td>
<td>14</td>
<td>0</td>
<td>7</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>99</td>
<td></td>
</tr>
<tr>
<td>CROSA 75016</td>
<td>WE</td>
<td>127</td>
<td>211</td>
<td>221</td>
<td>6</td>
<td>1</td>
<td>7</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>99</td>
<td></td>
</tr>
<tr>
<td>TDIPI</td>
<td>SK</td>
<td>124</td>
<td>210</td>
<td>221</td>
<td>6</td>
<td>1</td>
<td>7</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>99</td>
<td></td>
</tr>
<tr>
<td>COGOLD</td>
<td>SK</td>
<td>131</td>
<td>216</td>
<td>223</td>
<td>10</td>
<td>0</td>
<td>7</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>99</td>
<td></td>
</tr>
<tr>
<td>CODIL</td>
<td>GS</td>
<td>140</td>
<td>229</td>
<td>239</td>
<td>14</td>
<td>0</td>
<td>7</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>99</td>
<td></td>
</tr>
<tr>
<td>LUMI</td>
<td>GS</td>
<td>140</td>
<td>230</td>
<td>239</td>
<td>14</td>
<td>0</td>
<td>7</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>99</td>
<td></td>
</tr>
<tr>
<td>HOP</td>
<td>GS</td>
<td>121</td>
<td>202</td>
<td>211</td>
<td>6</td>
<td>1</td>
<td>7</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>99</td>
<td></td>
</tr>
</tbody>
</table>

AVERAGE OF ALL Entries: 120.7 143.9 162.1 27.1 21.5 24.1 28.7 34.6 36.9 29.3 31.2 32.1 34.6 37.9 40.0 47.3 49.7 55.5 56.2 58.4 58.4 61.8

Ax = Single cross, Ax = Modified single cross, Ax = 3-way cross.
### 1979 Field Data

The District 1 test was conducted on farms operated by William Morris near Sheldon in Sioux County and by Curtis Jones near Rossie in Clay County. The field data are presented in table A.

Subsoil moisture for the district was favorable at planting time. Rainfall was below normal in May and June, near normal in July and September, and well above normal in August. Temperatures were below normal in May and August, near normal in June and July, and above normal in September. Yields were above normal in the district.

#### Table A. Field Data

<table>
<thead>
<tr>
<th>Fertilizer applied, lbs.</th>
<th>Morris Farm</th>
<th>Jones Farm</th>
<th>Primghar silty clay loam</th>
</tr>
</thead>
<tbody>
<tr>
<td>N P₂O₅ K₂O</td>
<td>N P₂O₅ K₂O</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plowdown</td>
<td>18 46 60</td>
<td>20 50 60</td>
<td>—</td>
</tr>
<tr>
<td>Preplant</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Postplant</td>
<td>100</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>TOTAL</td>
<td>118 46 60</td>
<td>160 50 60</td>
<td>—</td>
</tr>
</tbody>
</table>

1978 Crop Soybeans Soybeans
Row Width 30 inches 30 inches
Planting date May 17 May 17
Harvest date Nov. 6 & 7 Oct. 23 & 24

### District 1

Designations Identifying Brands in the Yield Test

- **ACCO**
- **Agriseed**
- **Ames Best**
- **Asgrow**
- **Bleney**
- **Cargill**
- **Cenex**
- **CFS**
- **Clay County**
- **Coop**
- **Corn King**
- **DeKalb**
- **Embro**
- **Eau Claire**
- **Federal**
- **Fontanelle**
- **F.S.**
- **Funk**
- **Golden Harvest**
- **Hori**
- **Jorban**
- **Kaltenberg**
- **Low**
- **Lyk**
- **McCurdy**
- **Mellowdent**
- **Migro**
- **NC+**
- **Northrup King**
- **O's Gold**
- **Pacific Oilseeds**
- **PAG**
- **Pfister**
- **Pioneer**
- **Prairie Valley**
- **Pride**
- **S & R**
- **Super Crop**
- **Tall Corn**
- **Tyron**
- **USS**
- **Vike**
- **Wilson**
- **Wintersett**
- **YW Hybrids**

### OTHER REPORTS

Separate reports for variety performance are available for each district shown in fig. 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 1979 Iowa Corn Yield Test Report:

- **Pm-660-1-79 District 1**
- **Pm-660-2-79 District 2**
- **Pm-660-3-79 District 3**
- **Pm-660-4-79 District 4**

File: Agronomy 1

And justice for all

Programs and activities of Cooperative Extension Service are available to all potential clientele without regard to race, color, sex or national origin. Anyone who feels discriminated against should send a complaint within 180 days to the Secretary of Agriculture, Washington, D.C. 20250.