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The 1981 Iowa Corn Yield Test Report, District 1

K. E. Ziegler  
_Iowa State University_

A. R. Campbell  
_Iowa State University_

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The 1981 Iowa Corn Yield Test Report, District 1

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

Disciplines
Agriculture | Agronomy and Crop Sciences

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THE 1981 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 sixty-second 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. Entries in tables 1 and 2 are designated by brand name and variety.

1981 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.

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. A widely grown entry was planted on 0.79 percent or more of the corn acreage in the district according to a 1980 survey of Iowa corn growers. Iowa State University entered a maximum of three 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 four-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 1979, 1980, and 1981. Yield in bushels per acre and percentage of moisture, root lodging, stalk lodging, dropped ears, and stand are shown for all entries in 1981 and for those tested in 1979 and 1980 that were in the 1981 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.

1981 Field Data

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

Subsoil moisture for the district was favorable at planting time except in the extreme west where it was low. Rainfall was well below normal in May, above normal in June and August, near normal in July, and below normal in September. Temperatures were below normal in May and July, above normal in June, well below normal in August, and near normal in September. The average district yield was 8 bushels per acre lower than the mean of the five preceding years' averages.

Prepared by K. E. Ziegler, instructor in agronomy, and A. R. Campbell, associate professor of agronomy and secretary of the Iowa Crop Improvement Association.

Cooperative Extension Service
Agriculture and Home Economics Experiment Station,
Iowa Crop Improvement Association, and the
United States Department of Agriculture cooperating
|----------------|---------|------------|------------|------------|----------------|----------------|----------------|-----------------|-----------------|----------------|----------------|----------------|----------------|---------------|---------------|---------------|----------------|----------------|----------------|---------------|----------------|----------------|
### Table A. Field Data

<table>
<thead>
<tr>
<th>Fertilizer applied, lbs</th>
<th>N</th>
<th>P₂O₅</th>
<th>K₂O</th>
<th>N</th>
<th>P₂O₅</th>
<th>K₂O</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>180</td>
<td>81</td>
<td>102</td>
<td>180</td>
<td>81</td>
<td>102</td>
</tr>
<tr>
<td>Preplant</td>
<td>60</td>
<td></td>
<td></td>
<td>60</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>180</td>
<td>81</td>
<td>102</td>
<td>180</td>
<td>81</td>
<td>102</td>
</tr>
</tbody>
</table>

### District 1

#### Designations Identifying Brands in the Yield Test

<table>
<thead>
<tr>
<th>Brand</th>
<th>Variety</th>
<th>Yield 79-81</th>
<th>Yield 80-81</th>
<th>Moisture 79-81</th>
<th>Moisture 80-81</th>
</tr>
</thead>
<tbody>
<tr>
<td>DEKALB</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>PIONEER</td>
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<td>100</td>
<td>100</td>
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<td>100</td>
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<tr>
<td>STAFFER</td>
<td>100</td>
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<td>100</td>
<td>100</td>
<td>100</td>
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<tr>
<td>CARYLAD</td>
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<tr>
<td>CARILL</td>
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<td>100</td>
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<tr>
<td>WATSON</td>
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<td>100</td>
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<tr>
<td>JACOBS</td>
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<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

**Table 2. Averages of 1980-81 and 1979-81 of Varieties Tested in Districts 1-5 for Yields Are 5 Bushels for 79-81 and 10 Bushels for 80-81.**

### 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 1981 Iowa Corn Yield Test Report:
- Pm-660-1-81 District 1
- Pm-660-2-81 District 2
- Pm-660-3-81 District 3
- Pm-660-4-81 District 4
- Pm-660-5-81 District 5
- Pm-660-6-81 District 6
- Pm-660-7-81 District 7

File: Agronomy 1


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