The 1987 Iowa Corn Yield Test Report, District 5

K.E. Ziegler

Iowa State University

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The 1987 Iowa Corn Yield Test Report, District 5

Abstract
Results of the Iowa Corn Yield Test are published to aid Iowa farmers in selecting corn hybrids. This is the sixty-eighth 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 and 2 are designated by brand name and variety.

Disciplines
Agriculture

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THE 1987 IOWA CORN YIELD TEST REPORT

District 5

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1987 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 twenty-five entries were evaluated in this district. Fifteen of the entries determined to be widely grown were entered by Iowa State University. 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 land owners 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 1986 survey. Iowa State University entered a maximum of three widely grown hybrids of any given brand. These entries were given priority over the remaining 210 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 three locations in 1985, 1986, and 1987. Yield in bushels per acre and percentage of moisture, root lodging, stalk lodging, dropped ears, and stand are shown for all entries tested in 1987 and for those tested in 1985 and 1986 that were in the 1987 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.

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-660-5-87 | December 1987
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Table 2. Averages of 1986-87 and 1985-86 of varieties tested in district 5. LGD for yieals are 4 bushels for 86-87 and 6 bushels for 86-87.
Table A. Field Data

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<thead>
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<th>Fertilizer applied, lb.</th>
<th>Gardner Farm</th>
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<tr>
<td></td>
<td>N</td>
<td>P₂O₅</td>
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<tr>
<td>Plowdown</td>
<td>31</td>
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<tr>
<td>Preplant</td>
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<td>140</td>
</tr>
<tr>
<td>TOTAL</td>
<td>151</td>
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</table>

1987 Field Data

The District 5 test was conducted on farms operated by Don Gardner near Ogden in Boone County, Curtis Fernae near Grinnell in Poweshiek County, and Dick Elijah near Clarence in Cedar County. The Poweshiek County location was not harvested because of an excess of plot to plot variability across the testing area.

Soil moisture for the district was favorable at planting time. Rainfall was well below normal in April and June, near normal in September, and well above normal in August. The average district yield was 14 bushels per acre above the mean of the five preceding years’ averages.

Other Reports

Separate reports for variety performance are available for each 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. Also, an IBM compatible diskette containing this data in a Lotus 1-2-3 spreadsheet along with a hybrid selection program is available from Extension Software Services, Inc., Ames, Iowa 50011. The 1987 Iowa Corn Yield Test Report:

Pm-660-1-87 District 1
Pm-660-2-87 District 2
Pm-660-3-87 District 3
Pm-660-4-87 District 4
Pm-660-5-87 District 5
Pm-660-6-87 District 6
Pm-660-7-87 District 7

File: Agronomy 1

*Companies with one or more widely grown entries made by Iowa State University.