Corn Tests Report

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hybrids and calculated for moisture, yield, and erect plants. Data such as plant height, ear height, and leaf disease ratings were taken in the field. Disease ratings were based on a scale of 0.5 to 5.0, progressing from little or no disease to premature death. Silage results are given as actual field yield in tons per acre, calculated on the basis of 65 percent moisture, tons of dry matter per acre, and percentage of water in the plant.

Growing conditions

At most locations, soil moisture and temperature were above normal early in the season. Except for the Lycoming location, planted April 29, the others were planted during the second and third weeks of May. The Lycoming County site had adequate moisture throughout the growing season, but other locations had droughty periods during June, July, and early August. The Blair and Clinton County sites suffered the most. Heat units during the summer were near normal, but September and October were on the cool side with higher than normal amounts of precipitation, thus delaying grain dry-down and harvesting. Grain moisture was higher than normal at some locations, particularly for the Centre and Clinton County tests. Harvesting in these zones began in mid-October but was not completed until mid-November.

Diseases, insects and other pests

The incidence and severity of diseases varied throughout this zone. Gray leaf spot was observed at all sites, but did not cause a significant problem because it started late in the season.

Tests at the Rock Springs Centre County locations were inoculated with fungi causing northern leaf blight (NLB) and northern leaf spot (NLS). Ratings made for the combined leaf disease levels are reported in Tables 1 and 2. Some stalk and ear rot was observed, particularly in the Blair and Clinton County tests.

Corn borer damage was observed in tests at all locations. Ear drop was common. Bird and deer damage was most severe at the Lycoming site. Some bird and animal damage was observed at the other locations.

(Maturity Zone 3) 1993 results

Interpretation of results

Least significant differences (LSD) is the tool used to determine if two average values are actually different statistically. The difference between two hybrids must exceed the LSD value to be considered significantly different. Example for yield: LSD = 8.1 Bu/A; Hybrid X = 120.0 Bu/A; Hybrid Y = 105.0 Bu/A; 120.0 - 105 = 15.0 Bu/A difference. Since the difference between Hybrid X and Y (15.0 Bu/A), exceeded the LSD (8.1 Bu/A), hybrid X was higher yielding due to hybrid superiority and not simply as a result of uncontrolled environmental factors.

ADVANCED ENTRIES

Table 1 Late medium season hybrid performances (Maturity Zone 3) Combined Penn State Commercial Advanced Entries (average of six locations) Data under Location Means indicate counties where values were obtained

BRAND-HYBRID	PERCENT-OF-CHECKS H_2O	PERCENT-OF-CHECKS YIELD	PERCENT-OF-CHECKS ERECT	%H_2O GRAIN	BU/A GRAIN	% ERECT	HEIGHT (IN) PLANT	HEIGHT (IN) EAR	LEAF DISEASE RATING
HY PERFORMER HSP9408	93 1	82 4	99 0	25 3	98 0	95 0	89 7	36 4	2 0
HALSEY H2110	93 0	85 4	101 4	25 3	101 7	97 3	80 8	39 2	2 0
PIONEER 3394	93 4	103 0	101 2	25 4	122 6	97 1	83 1	37 5	1 3
DOEBLER S 66XP	94 9	97 6	100 2	25 8	116 2	96 2	84 4	32 1	1 6
DOEBLER S 73XP	95 8	109 1	99 5	26 1	129 8	95 5	89 2	42 1	1 9
GREENLAND GL262	96 9	98 4	100 8	26 3	117 1	96 8	90 3	42 3	1 8
HALSEY H1115A	97 3	93 5	97 5	26 4	111 3	93 5	87 1	40 9	1 6
PIONEER 3295	97 3	100 8	97 6	26 5	120 0	93 7	82 9	38 9	1 3
MUNCY CHIEF XA777	99 7	90 7	96 8	27 1	108 0	92 9	79 7	40 0	2 0
FUNK S G-4543	99 8	99 3	99 2	27 1	118 2	95 2	86 7	38 9	2 0
AGWAY AG 710	100 5	96 0	101 5	27 3	114 2	97 4	82 5	39 8	1 3
HARDY HB6407	100 5	101 9	99 0	27 3	121 3	95 0	88 9	36 1	2 0
DEKALB DK623	100 4	103 1	100 8	27 3	122 7	96 8	83 4	38 2	1 9
PIONEER 3293	100 5	111 4	101 8	27 3	132 5	97 7	85 9	43 7	1 2
DOEBLER'S 69XP	100 8	96 8	101 8	27 4	115 2	97 7	82 5	38 6	1 0
ICI 8326	101 2	105 9	98 9	27 6	126 0	94 9	87 5	44 3	2 2
CARGILL 8127	102 1	96 0	101 0	27 7	114 2	97 0	95 0	44 8	1 5
DOEBLER S 75X	103 0	100 0	99 2	28 0	119 0	95 2	85 4	41 7	2 0
WETSEL PX115	103 4	104 6	99 8	28 1	124 5	95 8	82 6	41 5	2 0
AGWAY AG 797	104 2	103 8	101 5	28 3	123 5	97 4	93 2	49 7	2 0
DEKALB DK646	104 0	108 4	100 9	28 3	129 0	96 8	95 0	42 0	1 4
CARGILL 7997	104 0	113 2	101 2	28 3	134 7	97 1	89 0	43 3	1 2

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