

## Pennsylvania Commercial Hybrid Corn Tests Report

College of Agricultural Sciences Cooperative Extension

# Late Medium-season hybrids (Maturity Zone 3) 1993 results

Tests of commercially available corn hybrids are conducted annually at several locations in each of the four maturity zones in Pennsylvania to provide farmers, seed producers, county extension agents, and other interested persons with information about hybrid performance. This report includes both the grain and silage results from the 1993 season.

Tables 1 and 2 contain the combined results for all locations in this zone, except as noted. Those in Table 1 are for the advanced hybrids tested previously for at least one year, and those in Table 2 are for new hybrid entries. New entries are tested for at least one year before being included in the advanced tests. A two-year summary of results for hybrids tested in both 1992 and 1993 growing seasons is given in Table 3. The results for hybrids entered in the silage performance test are given in Table 4.

#### **Procedures**

This testing program was available to any producer of hybrid

## **Corn Tests Report**

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#### Cooperators and locations

Early medium-season hybrids were evaluated with the cooperation of the following persons: Craig Richards, Columbia County; Curt Rakestraw, Lycoming County; Harold Foertsch, Butler County; Bill Hoagland, Mercer County; and Penn State farms, Centre County.

#### **ADVANCED ENTRIES**

Tible 1 Early (Figure 5) is nington, performances. Millurity Zore 2) Committed Pron State Commercial Advanced Entries in Frage. If for Incohors: Data under Location Means indicate nounties where values very obtained.

								-	LEAF
BRAND HYBRID	PERCENT OF CHECKS		° <sub>°</sub> H <sub>2</sub> O	BU A	۰,	HEIGHT (IN)		DISEASE	
	H <sub>2</sub> O	TIELD	ERECT	GRAIN	GRAIN	ERECT	PLANT	EAR	RATING
PIONEER 3733	92 2	90 9	100 9	23 2	1192	98 2	84 4	39 8	22
DOEBLER S 57XPA	92 8	93 8	99 3	23 4	122 9	96 6	80 0	36 5	2 1
MUNCY CHIEF ESX560	93 3	718	<del>9</del> 6 1	23 5	94 1	93 5	82 9	38 0	24
HALSEY H296	93 3	82 8	100 2	23 5	108 6	975	84 4	38 5	27
DEKALB DK524	94 2	977	95 2	23 7	128 1	92 6	95 0	47 0	2 5
HY PERFORMER HS9330	94 4	83 9	101 2	23 8	1100	98 4	82 9	39 1	26
PIONEER 3540	94 9	90 8	102 1	23 9	1190	99 4	915	44 7	22
DOEBLER S 58XP	95 4	81 7	98 1	24 0	107 1	95 5	808	42 7	26
HARDY HB6500	96 2	87 4	101 2	24 3	1146	98 5	84 7	35 0	20
MUNCY CHIEF XA4550	97 6	84 4	99 9	24 6	1106	97 1	77 4	35 7	28
NORTHRUP KING N4545	97 6	99 1	101 6	24 6	129 9	98 8	89 5	42 5	2 5
PIONEER 3527	97.3	101 5	102 0	24 6	133 1	99 3	96 4	46 2	18
MUNCY CHIEF XA4492	98 0	68 4	99 9	24 7	89 7	97 2	79 0	30 9	29
DOEBLER S 62XP	98 7	112 1	98 6	24 9	146 9	95 9	93 1	421	23
EASTLAND E599	1016	100 6	100 9	25 6	131 8	98 2	84 7	33 8	15
JACQUES 6970	102 0	96 6	100 8	25 7	126 6	98 1	79 4	39 2	14
NC+ 4275	102 1	96 5	101 1	25 8	126 5	98 3	84 8	39 4	1.8
DOEBLER S 65X	102 6	95 2	98 6	25 9	124 8	95 9	85 2	410	22
DOEBLER S 66XP	103 8	102 3	100 9	26 2	134 2	98 2	89 4	41 0	18
FUNK S G 4472	104 3	101 0	100 7	26 3	132 4	98 0	86 9	39 7	27
CARGILL 6269	104 2	104 9	101 5	26 3	137 6	98 8	85 1	38 8	13
HYTEST HT512	106 0	105 2	97 7	26 7	137 9	95 0	88 5	43 8	20
WETSEL PX108	105 8	108 1	100 0	26 7	141 8	97 3	96 3	46 4	14
HALSEY H1105A	106 2	84 6	98 7	26 8	1108	96 0	86 5	35 5	2 1
DOEBLER S 64XP	106 3	101 7	100 1	26 8	133 3	97 4	85 0	39 0	16
GRIES GSF5106	106 6	84 1	100 3	26 9	1102	97 6	84 3	40 9	24
EASTLAND E652	106 8	90 1	99 4	26 9	118 2	96 8	88 8	40 8	25
ICI 8513	106 7	103 3	101 6	26 9	135 4	98 8	87 1	38 5	20
AGWAY AG 658	107 5	102 0	99 7	27 1	133 7	97 0	83 4	37 2	17
NC+ 4616	108 0	105 1	101 7	27 2	137 8	98 9	88 3	42 4	2 1
GRIES GSF6110	108 6	100 B	100 4	27 4	132 2	97 7	84 3	37 5	21
MUNCY CHIEF XA560	1103	90 7	100 1	27 8	118 9	97 4	84 8	35 5	16
MUNCY CHIEF XA5560	111 7	93 5	102 0	28 1	122 6	99 3	90 0	39 1	14
HYTEST HT536	112 7	85 3	101 8	28 4	111 8	99 0	83 7	35 9	22
SCHLESSMAN SX661	1135	103 8	102 4	28 6	136 1	99 6	85 4	43 4	13
GRIES GSF6112	115 4	)1 1	101 6	29 1	1194	98 8	69 9	45 4	10
MEANS	102 5	94 3	100 2	25 8	123 6	97 5	86 2	39 8	2 1
LSD ( 05)	4 1	86	20	1 0	113	19	6 1	5 3	0 6
LOCATION MEANS									
Centre	94 2	109 1	100 B	23 7	143 1	98 1	86 2	39 8	
Lycoming	1016	95 5	101 5	25 6	125 1	98 8			
Mercer	1123	93 2	101 2	28 3	122 1	98 5			
Centre	101 B	79 3	97 4	25 6	103 9	94 7			21

#### NEW ENTRIES

The Early medium selson hybrid performances (Maturity Zone ∠). Combined Penn Stale Commercial New Entries (average of platform Dilital and if Localion Mc instindicate counties where values were obtained.

BRAND HYBRID	PERCENT OF CHECKS			*aH2O	BU A		HEIGHT (IN)		LEAF DISEASE
	H <sub>2</sub> D	YIELD	ERECT	GRAIN	GRAIN	ERECT	PLANT	EAR	RATING
HY PERFORMER HS9299	92 5	81 9	99 3	23 4	98 0	96 7	75 7	33 8	23
HY PERFORMER HY9334	92 6	87 0	976	23 4	104 2	95 0	81.0	38 1	19
TERRA TR1050	92 6	100 2	98 9	23 4	120 0	96 4	83 0	39 0	20
DEKALB DK524	92.8	913	96 6	23 5	109.3	94.2	90 7	44 7	20
CARGILL X4304	93 1	82 8	99 3	23 6	99 1	96 7	87 0	40.9	20
NORTHRUP KING N4545	94 7	96 7	100 4	23 9	115 7	97.8	86 3	360	21
NORTHRUP KING N5901	95 5	1102	100 4	24 2	132 0	97.8	86 7	42 0	
FUNK S G 4394	95 7	115 2	101 5	24.2	138 0	98 8	94 0	42 1	25
PIONEER 3525	96.6	113 3	100 0	24 4	135 6	974			23
DOEBLER S 55XP	98 8	94 7	100 3	25 0	113 4	97 6	94 3 88 7	44 5 <b>42</b> 4	19 24

seed corn. For the grain tests, hybrids were planted in paired-row plots of 1/500 of an acre. Each row was overplanted—34 kernels per row, and thinned to a standard count of 48 plants per plot when the corn was 12-18 inches tall. The final population was 24,000 plants per acre. Silage plots were 1/1,000 acre in size, consisting of one row overplanted to 38 kernels and thinned to a final population of 28,000 plants per acre. All entries were replicated three times in each test.

Test plots were planted with modified mechanical planters. Grain-test plots were harvested with a self-propelled combine equipped with electronic instrumentation for determining weight and moisture. Silage plots were harvested with a forage harvester. Grain yields are reported as bushels per acre while grain moisture and erect plants are reported as percentages. Shelled grain yields were standardized at 15.5 percent grain moisture. Percentage of checks for each hybrid was based on the mean of five check

(Turn to Page 14)

### (Maturity Zone 2) 1993 results

EASTLAND E591A	98 8	97 1	100 8	25 0	116 3	98 1	87 7	40 5	19
NORTHRUP KING N5220	98 8	1013	100 7	25 0	121 2	98 0	87 0	39 4	19
AGWAY AG 578	99 7	103 9	98 8	25 2	124 4	96 2	90 7	44 3	2 1
PIONEER 3527	99 5	108 3	102 0	25 2	1297	99 4	95 O	42 7	19
DOEBLER S 65XA	99 8	99 4	99 5	25 3	1190	96 9	89 0	42 2	22
AGRI GENE AG5660	99 8	108 5	99 1	25 3	129 8	96 5	84 0	46 3	12
CARGILL 6677	100 4	108 8	99 1	25 4	130 2	96 4	99 3	47 6	19
CFS W5559	100 8	92 3	100 2	25 5	1105	97 6	79 3	38 7	16
AGRI GENE AG6383	101 4	111 4	98 2	25 7	133 3	95 7	92 0	44 6	16
DEKALB DK580	102 9	103 1	99 7	26 0	123 4	97 0	87 3	417	18
JACQUES EXP3010	103 1	106 B	99 6	26 1	127 8	97 0	86 0	42 3	18
AGWAY AG EXP 622	103 3	1190	100 8	26 1	142 4	98 2	94 7	47 7	17
CFS W5767	103 6	80 6	98 9	26 2	96 5	96 4	79 7	38 6	24
ICI 8501	103 6	110 1	100 7	26 2	131 8	98 1	97 3	45 3	18
DOEBLER S 66XP	104 4	106 7	99 5	26 4	127 7	97 0	89 3	42 3	16
FUNK S G-4472	104 9	99 5	101 2	26 5	119 1	98 6	84 7	38 4	22
NC+ 4521	104 8	106 9	98 7	26 5	127 9	96 1	93 0	45 3	16
GREENLAND GL223	104 9	1136	100 8	26 5	135 9	98: 1	95 3	42 5	15
ASGROW RX707	105 3	1139	99 7	26 6	136 3	97 0	93 0	40 5	20
GREENLAND GL211	106 2	105 2	99 5	26 9	125 9	96 9	93 3	42 9	13
AGWAY AG EXP 631	106 6	106 0	99 2	27 0	126 8	96 6	94 0	43 8	12
DOEBLER'S 64XP	107 3	102 6	99 6	27 2	122 9	97 0	85 3	40 3	21
AGWAY AG 626	107 5	106 0	99 8	27 2	126 9	97 2	92 7	41 2	22
PRAIRIE STREAM SX412	109 2	100 9	98 9	27 6	120 8	96 3	101 0	49 2	14
ANDERSONS PSX405	1145	101 5	101 5	29 0	121 5	98 9	86 3	39 3	12
NC+ 5037	1148	109 9	102 0	29 0	131 5	99 3	88 0	44 0	1 1
MEANS	101 4	102 7	99 8	25 7	122 9	97 2	89 2	42 1	18
LSD ( 05)	3 7	8 3	19	09	100	18	6 1	6 1	06
LOCATION MEANS									
Centre	94 1	121 5	100 7	238	145 4	98 1	89 2	42 1	
Lycoming	101 2	102 4	101 2	25 6	122 6	98 6			
Mercer	108 4	97 6	101 0	27 4	1168	98 4			
Centre	101 9	89 3	96 3	25 8	107 0	93 8			18

#### TWO-YEAR AVERAGE PERFORMANCE

Table 3 Early medium season hybrids mean performance 1992 1993 (Maturity Zone 2)

(Maturity Zone 2)	(6 2)					
	PERC	ENT-OF C	HECKS	%H <sub>2</sub> O	BU/A	%
BRAND-HYBRID	H <sub>2</sub> O	YIELD	ERECT	GRAIN	GRAIN	ERECT
HY PERFORMER HS9330	89 3	87 1	99 3	24 1	1117	94 0
DOEBLER'S 58XP	90 9	86 0	96 3	24 5	1103	91 2
HALSEY H296	92 6	82 1	99 9	<b>25 Q</b>	105 2	94 6
DEKALB DK524	93 3	97 1	95 8	25 2	124 5	90 7
PIONEER 3733	93 7	92 4	100 4	25 3	1184	95 1
DOEBELR S 57XP	96 3	938	97 9	26 0	120 2	92 7
HARDY HB6500	97 4	88 7	102 2	26 3	1137	96 8
PIONEER 3527	97 8	102 9	103 5	26 4	131 9	98 0
NORTHRUP KING N4545	97 8	98 6	100 5	26 4	126 4	95 2
DOEBELR S 65X	101 1	96 9	99 0	27 3	124 2	938
JACQUES 6970	101 9	98 4	97 5	27 5	126 2	92 3
DOEBLER S 62XP	102 6	107 9	96 6	27 7	138 3	915
HALSEY H1105A	102 6	88 1	96 2	27 7	1129	91 1
NC+ 4275	103 3	101 1	100 8	27 9	129 6	95 5
EASTLAND E599	103 3	98 0	102 6	27 9	125 7	97 2
HYTEST HT512	103 7	106 9	96 9	28 0	137 0	91 7
CARGILL 6269	103 7	106 0	101 5	28 0	135 9	96 1
DOEBLER S 64XP	104 1	103 4	101 4	26 1	132 6	<b>96 0</b>
FUNK'S G-4472	105 6	101 2	99 8	26 5	129 8	94 5
GRIES GSF 5106	105 6	91 2	100 3	28 5	1169	<b>9</b> 5 0
DOEBLER'S 66XP	106 3	104 0	99 2	28 7	133 3	93 9
ICI 8513	106 3	101 7	100 0	28 7	130 4	94 7
NC+ 4616	107 0	102 5	98 3	28 9	131 4	93 1
AGWAY AG-658	107 4	100 3	99 9	29 0	128 6	94 6
HYTEST HT536	108 1	95 9	100 4	29 2	123 0	95 1
GRIES GSF 6110	108 9	103 7	99 3	29 4	132 9	94 0
SCHLESSMAN SX661	111 1	101 4	97 9	30 O	130 0	92.7
GRIES GSF 6112	1130	90 5	99 7	30 5	1160	94 4
MEANS	101 9	97 4	99 4	27 5	124 9	94 1
LSD ( 05)	39	77	33	10	99	30

Results of the tests for short season, early medium season, late medium season and late season hybrids are available as separate reports from county offices of Penn State Cooperative Extension.

Members of the county based extension staff assisted in conducting these tests. Their efforts were essential to the successful completion of the trials, and were greatly appreciated.

This report represents the combined efforts of extension, research, and service personnel in the Departments of Agronomy and Plant Pathology (M.W. Johnson, R.L. Williams, and J. E. Ayers)

The tables in this report may be reproduced only in their entirety

#### SILAGE ENTRIES

Table 4 Silage performance of early medium season hybrids (Maturity Zone ≥)

	AIELD	%H <sub>2</sub> O	DRY MAT
SRAND-HYBRID	(T/A)	PLANT	PLANT(T/A
DOEBLER S 69XP	24 6	70 4	86
AGWAY AG 626	24 9	64 7	87
DEKALB DK588	25 1	62 8	88
HY PERFORMER			
HY9334	26 0	56 9	9 1
AGWAY AG 723	26 4	65 3	9 2
CARGILL SX269	26 4	64 7	93
DOEBLER'S 75XMOD2	26 8	65 6	9 4
GREENLAND GL262	26 6	64 8	94
PIONEER 3527	28 2	66 8	99
HYTEST HT525	28 5	62 B	100
WETSEL S120	28 6	63 4	100
PIONEER 3394	2 <del>9</del> 8	64 7	10 4
MEANS	26 9	64 4	9 4
LSD ( 05)	53	40	19

Where trade names appear no discrimination is intended and in endorsement by Penn State Cooperative Extensions amplied

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