

Corn Tests Report

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Diseases, insects and other pests

Because of the drier summer, leaf diseases were slow to develop even where plants were inoculated. Gray leaf spot was found on susceptible plants at all locations but was less severe than in several previous years. Ratings were made for the entries at one Franklin County location and are reported in Tables 1 and 2.

Tests at the Lancaster location were inoculated with the pathogens causing northern leaf blight (NLB) and northern leaf spot (NLS), but disease levels were too low to rate. Some stalk rot was noted at all locations but was most noticeable at the Lehigh and Cumberland County locations.

Corn borer infestation was noted at all locations but was not as severe as in past years. Some ear drop was apparent. Animal damage was insignificant at these locations.

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 season hybrid performances (Maturity Zone 4) Combined Penn State Commercial Advanced Entries (average of five locations) Data under Location Means indicate counties where values were obtained

BRAND-HYBRID	PERCENT-OF-CHECKS			%H ₂ O GRAIN	BU/A GRAIN	% ERECT	HEIGHT (IN)		GLS RATING
	H ₂ O	YIELD	ERECT				PLANT	EAR	
PIONEER 3293	95.3	94.7	100.3	25.3	149.6	97.4	91.8	47.5	1.6
HY PERFORMER HS9773	96.5	91.4	93.6	25.7	144.3	90.9	98.5	54.9	2.4
CARGILL 8127	96.7	95.1	99.6	25.7	150.1	96.7	96.0	49.8	1.6
TERRA TR1145	97.2	96.8	101.3	25.8	152.6	98.4	93.6	42.8	1.3
GREENLAND GL345	97.0	104.1	99.8	25.8	164.3	96.9	94.9	46.8	1.2
HY PERFORMER HS9843	97.8	100.1	100.3	26.0	158.0	97.4	92.7	52.3	1.4
FUNK'S G-4626	98.2	93.0	99.6	26.1	146.7	96.7	95.6	49.6	1.6
HYTEST HTX7748	97.9	101.9	100.3	26.1	161.0	97.4	91.2	50.5	1.5
DOEBLER'S 75X2	98.4	100.5	99.3	26.2	158.7	96.4	93.3	50.6	1.0
DOEBLER'S 82XP	98.5	101.9	100.8	26.2	161.0	97.9	92.5	49.0	1.1
GREENLAND GL270	99.1	94.7	100.4	26.3	149.5	97.5	90.6	49.7	0.9
ASGROW RX897	98.8	100.5	100.3	26.3	158.7	97.4	97.2	55.0	1.2

(Maturity Zone 4) 1993 results

HARDY HB8334	99.2	97.6	100.9	26.4	154.1	97.9	90.3	51.8	1.0
AGWAY AG 824	99.8	97.6	99.5	26.5	154.2	96.6	90.8	49.4	0.9
DOEBLER'S 84XP	100.0	98.0	99.3	26.6	154.7	96.4	91.4	48.1	1.5
EASTLAND E799	100.9	98.2	100.8	26.8	155.0	97.9	92.4	49.4	2.3
PIONEER 3140	100.8	110.6	100.9	26.8	174.6	98.0	97.8	54.7	0.8
DOEBLER'S 87XP	101.2	94.2	101.5	26.9	148.8	96.6	93.0	42.9	0.6
HYTEST HT7728	102.2	94.5	100.2	27.2	149.2	97.3	88.8	49.4	1.0
MUNCY CHIEF XA7790	102.9	87.1	99.7	27.3	137.4	96.8	91.1	48.2	2.1
NORTHRUP KING N8727	103.3	107.2	100.7	27.5	169.4	97.8	102.2	47.2	1.8
FUNK'S G-4672	103.8	99.5	100.4	27.6	157.1	97.5	94.2	49.7	1.0
FUNK'S G-4671	104.1	98.7	101.6	27.7	155.7	98.7	101.4	56.5	1.0
JACQUES 9220	104.8	107.9	97.8	27.9	170.5	95.0	95.8	57.8	0.6
CARGILL 9027	107.6	104.2	99.7	28.6	164.5	96.9	99.9	50.6	0.8

MEANS	100.1	98.8	99.9	26.6	156.0	97.1	94.3	50.2	1.3
LSD (.05)	3.1	8.4	2.1	0.8	13.3	2.0	5.0	5.1	0.7

LOCATION MEANS									
Lehigh	93.2	101.7	99.4	24.8	162.0	96.6	94.3	50.2	
Franklin	106.0	97.0	99.5	28.2	154.5	96.8			
Franklin	103.5	92.0	101.7	27.5	146.5	98.6			1.3
Cumberland	105.2	88.0	99.0	28.0	140.2	96.1			
Berks	92.5	115.3	100.1	24.8	176.8	97.2			

NEW ENTRIES

Table 2 Late-season hybrid performances (Maturity Zone 4) Combined Penn State Commercial New Entries (average of five locations) Data under Location Means indicate counties where values were obtained

BRAND-HYBRID	PERCENT-OF-CHECKS			%H ₂ O GRAIN	BU/A GRAIN	% ERECT	HEIGHT (IN)		GLS RATING
	H ₂ O	YIELD	ERECT				PLANT	EAR	
FUNK'S G-4473	90.9	93.1	98.3	24.2	156.3	95.5	98.4	50.3	1.2
HY PERFORMER HS9502	93.8	91.0	99.2	24.9	152.9	96.3	84.9	44.8	1.3
HY PERFORMER HY9610	96.0	100.4	99.8	25.5	188.7	96.9	88.5	48.2	1.2
EASTLAND E780	96.3	98.0	100.3	25.6	164.7	97.4	93.6	50.1	1.3
HORST S74X	96.6	86.6	100.5	25.7	145.5	97.6	90.1	47.6	1.3
FUNK'S G-4626	96.5	93.4	99.0	25.7	156.9	96.2	103.9	51.8	1.7
ICI 8285	96.6	97.8	100.0	25.7	164.4	97.1	92.2	49.8	2.0
CARGILL 8127	97.2	98.6	99.4	25.9	165.7	96.5	101.1	55.2	1.4
HALSEY H2118	97.9	95.0	101.6	26.0	159.6	96.6	88.3	45.1	2.1
CARGILL 8327	97.8	97.3	100.2	26.0	163.5	97.3	90.1	49.6	1.4
PRAIRIE STREAM SX556	97.9	98.3	101.0	26.0	165.1	98.0	92.2	44.0	1.5
PRAIRIE STREAM SX704	98.2	93.2	99.3	26.1	156.6	96.4	88.0	47.8	1.5
EASTLAND E799	97.9	97.8	100.4	26.1	164.3	97.4	95.2	48.6	2.4
HALSEY H1120	97.9	99.1	98.5	26.1	166.5	95.6	88.4	45.1	1.5
HY PERFORMER HS9848	98.5	97.8	99.8	26.2	164.3	96.8	90.1	48.6	0.8
DOEBLER'S 84XP	99.2	99.0	99.5	26.4	166.3	96.6	93.4	46.0	1.5
JACQUES 8240	100.1	94.8	100.9	26.6	159.3	98.0	91.5	45.9	1.4
PIONEER 3140	100.1	105.8	101.6	26.6	177.7	98.6	96.8	50.9	0.8
MUNCY CHIEF XA7786	100.7	88.8	99.1	26.8	148.1	96.2	93.4	48.7	1.8
AGWAY AG 828	100.9	93.8	101.1	26.8	157.6	96.1	88.9	44.2	1.0
FUNK'S G-4584	100.8	103.0	98.5	26.8	173.1	96.7	98.9	49.8	0.7
MUNCY CHIEF XA8280	102.4	95.0	101.1	27.2	159.5	98.2	87.8	45.6	1.2
ASGROW RX896	102.4	96.0	101.3	27.2	161.3	98.3	91.8	49.6	1.0
PIONEER 3192	103.9	99.5	100.0	27.6	167.2	97.1	95.6	45.0	1.0
NORTHRUP KING N8727	104.2	102.1	100.4	27.7	171.5	97.5	98.3	45.0	1.7

MEANS	98.6	96.6	100.1	26.2	162.3	97.2	92.8	47.8	1.4
LSD (.05)	3.4	7.2	1.7	0.9	12.1	1.7	6.5	4.8	0.7

LOCATION MEANS									
Lehigh	96.2	91.6	99.9	25.6	153.9	97.0	92.8	47.8	
Franklin	103.9	95.7	100.5	27.6	160.7	97.6			
Franklin	100.8	94.8	102.3	26.8	159.2	99.3			1.4
Cumberland	102.2	90.0	99.3	27.2	151.3	96.4			
Berks	89.8	110.9	98.4	23.9	186.3	96.5			

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WARNING, ALL SILO OWNERS

Check your silo now for rotten staves. If you have been using your silo for 10 to 15 years for either corn silage or haylage, it is time to SHOTCRETE.

RESURFACES INTERIORS:

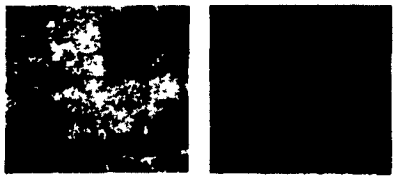
- Coats the silo's interior
- Protects feed in storage
- Durable, tough, acid-resistant
- Increases useful life
- Economical



Before The silo's interior with plaster damaged and stave exposed. After The surface is reconditioned, and a new, thick tough surface will protect stored feed.

REPAIRS HOLES:

- Repairs even large holes
- Up to twice the strength of the original stave
- Rapid application
- Durable surface



Before A hole is worn completely through the silo wall. After With the hole repaired by Shotcrete and a new surface applied the silo is ready for years of use.

EXTENDS USEFUL LIFE:

- Support for old foundations
- Special repairs can be made quickly and economically
- Little or no forming needed
- Stronger than the original



Before The bottom part of the staves are completely worn away. After The Shotcrete System repairs and replaces the missing structure.

Shotcrete is also good for repairing stone walls

When you think your silo is beyond repair
THINK OF SHOTCRETE!

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