

2018 Penn State/PDMP Corn Silage Hybrid Performance Trial Results

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Produced in cooperation with the Professional Dairy Managers of Pennsylvania (PDMP).

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Production Details: Penn State/PDMP Corn Silage Hybrid Evaluation Trials

Site:	Blair County
Cooperator	Penn England Farms
Planting Date	May 24, 2018
Soil Type	HuB Hublersburg Cherty silt loam 3-8% slope
Herbicides	pre- 44oz-Abundit Edge + .5qt Unison + .25qt. Vision + 2qt/100 Dynamic + 3qt/100 Accuquest post- 5.5oz Corteva + 1qt Atrazine + 2oz Sultrus + 1pt Grounded
Previous Crop	Corn Silage
Tillage	None
Starter Fertilizer	10.5 gal of 10-34-0
Insecticide	Force 3G
Manure	6000 gal dairy) 12.2-11.3-20.7-2.6S/1000gal.
Fertilizer	None
Harvest Date	September 21, 2018

Field Summary:

Planting at this site was delayed due to 2 weeks of cool and wet weather through mid-May. Planting was done on May 24. Conditions improved and despite heavy rainfall throughout the late summer months, performance was very good.

Weather Summary:		
May 24-September 21		
Month	Precip. (inches)	GDD
May	0.96	179
June	5.72	488
July	8.55	832
August	7.84	398
September	8.07	519
Seasonal Total	31.14	2416

Precip. Data: http://www.theweathercollector.com/?gclid=Cj0KCQjw6fvdBRCbARIsABGZ-vQLZzlhMnTDKuqmXNfv18X7Hn8ZRJ-ODNorInY8e_E0ce0WZ66HgZMaAtcVEALw_wcB
GDD data: <http://climatesmartfarming.org/tools/csf-growing-degree-day-calculator/>

Penn State/PDMP Corn Silage Hybrid Testing Program 2018



Medium maturity (99-110 day RM) silage hybrids in (Central) PA

(Blair) County location

Notes: SEE BACKGROUND TAB

Cooperator: (Penn England Farm)

Brand	Hybrid	Traits*	Dry	Yield	CP	NDF	Lignin	Starch	Ash	Fat ²	NEL	NDFD			uNDF	Pop.	Relative
			Matter	Tons/								30hr	120hr	240hr	240hr		
			%**	Acre***	%	%	%	%	%	%	Mcal/lb	%NDF	%NDF	%NDF	%NDF		
Early (99-104) RM Silage Hybrids																	
Hubner	H6257RCSS	32	48.2	16.9	7.1	35.0	2.8	44.6	2.4	2.9	0.79	55.3	63.4	66.9	33.1	33,333	104
Masters Choice	MCT 5375	7	46.7	17.4	6.9	37.3	3.2	41.3	2.5	3.0	0.77	52.1	61.1	64.4	35.6	31,000	103
Hubner	H6219RCSS	32	45.6	16.0	6.5	40.7	3.5	38.3	2.4	2.6	0.75	49.5	58.9	62.3	37.7	32,833	99
Doebler's PA Hybrids	4018AMXT	26	45.6	16.9	6.3	39.4	3.0	40.0	2.8	2.6	0.76	54.2	65.1	67.9	32.1	32,167	100
Doebler's PA Hybrids	4115AMXT	26	44.7	16.0	6.8	38.3	3.1	40.3	3.0	2.5	0.76	52.3	63.6	66.3	33.7	32,000	101
Hubner	H6225RCSS	32	44.5	16.8	6.5	40.4	3.3	39.7	2.5	2.4	0.75	51.8	60.7	63.8	36.2	31,333	102
Local Seed Co.	LC0488SSX	32	44.4	17.3	6.8	38.4	3.3	39.6	2.7	2.7	0.76	50.7	58.5	61.5	38.5	30,500	104
Doebler's PA Hybrids	4219AM	20	43.5	17.4	7.1	34.7	2.8	42.6	3.0	2.9	0.78	53.9	63.3	66.0	34.0	32,000	102
Doebler's PA Hybrids	4318AMXT	26	38.3	16.5	7.1	41.4	3.6	35.5	3.0	2.4	0.73	47.8	57.8	60.4	39.6	32,667	103
99-104 day means			44.6	16.8	6.8	38.4	3.2	40.2	2.7	2.7	0.76	51.9	61.4	64.4	35.6	31,981	
Medium (105-110) RM Silage Hybrids																	
Growmark FS	FS 56R71SS	32	50.13	16.89	7.1	33.4	2.83	46.53	2.33	2.9	0.79	53.7	62.2	66.4	33.6	32667	106
Augusta	Augusta 4959	4	48.4	17.9	6.8	38.0	3.2	41.4	2.9	3.0	0.76	52.1	61.1	64.2	35.8	33167	109
Dekalb	DKC55-21RIB	30	48.0	15.3	6.7	40.5	3.6	39.0	2.8	2.7	0.75	47.7	58.2	61.7	38.3	31667	105
Dekalb	DKC57-75RIB	32	47.2	17.0	6.8	36.9	3.0	45.3	2.7	3.1	0.77	54.2	63.8	68.6	31.4	31167	107
Local Seed Co.	LC0877VT2P	30	46.7	16.7	6.8	38.8	3.0	40.0	3.0	2.4	0.75	52.3	62.7	65.6	34.4	32000	108
Syngenta	NK0968-3111	5	46.5	16.9	7.2	34.4	2.8	44.3	2.6	2.6	0.79	52.6	63.6	66.3	33.7	31667	109
CPS Dynagro	D49VC70	30	45.7	18.1	6.8	34.1	2.8	44.8	2.5	3.1	0.79	55.2	63.2	66.1	33.9	30833	109
Dekalb	DKC60-88RIB	30	45.7	14.6	6.5	40.6	3.6	39.2	2.7	2.4	0.74	48.4	58.5	61.6	38.4	29667	110
Local Seed Co.	LC0657 S5XRIB	30	45.3	14.0	7.0	36.4	3.1	43.2	2.7	2.6	0.76	50.6	58.3	60.9	39.1	24666****	106
Growmark FS	FS 60R76VT2P	30	45.2	18.4	6.5	39.3	3.3	40.7	2.4	2.7	0.76	52.4	62.7	66.0	34.0	33333	110
Prairie Hybrids	4718	Conv.	44.6	14.5	6.3	38.7	3.1	40.6	2.8	2.6	0.76	50.6	60.6	63.2	36.8	31167	106
Chemgro	Chemgro 7095RDP	30	44.5	18.4	6.8	36.3	3.0	42.4	2.5	2.7	0.77	52.9	61.9	65.4	34.6	32667	110
Augusta	Augusta 4858	2	44.1	15.6	7.2	37.3	3.1	40.9	3.2	2.9	0.76	52.5	61.7	64.8	35.2	33574	108
Seedway	SW5440	32	43.6	16.6	6.8	40.4	3.4	38.8	2.9	2.7	0.75	48.7	59.3	62.2	37.8	31333	105
Channel	207-90STXRIB	32	43.6	16.6	6.5	39.2	3.1	38.8	2.7	2.6	0.76	53.5	61.1	64.4	35.6	32833	107
Masters Choice	MC 5790	Conv.	43.3	16.1	7.0	41.7	3.3	35.9	2.9	2.7	0.75	51.0	59.3	61.9	38.1	30333	107
Dupont Pioneer	P0977AM	20	43.2	18.1	7.2	35.5	3.0	42.8	2.9	2.9	0.77	53.1	62.4	65.2	34.8	32333	109
Syngenta	NK0886-3010	2	42.6	16.0	7.3	39.2	3.4	38.5	3.2	2.8	0.75	49.3	59.0	61.9	38.1	32167	108
Mycogen	TMF09S97	34	42.0	17.0	6.6	48.2	3.9	30.6	2.9	2.3	0.7	49.0	59.8	62.5	37.5	31667	109
Dekalb	DKC59-07RIB	32	41.7	17.9	7.1	38.4	3.2	38.0	2.8	2.9	0.76	53.1	61.8	64.5	35.5	32167	109
Augusta	Augusta 4759	5	41.6	17.85	6.77	38.5	2.88	40	2.7	2.7	0.77	54.5	63.8	66.6	33.4	31167	109
Doebler's PA Hybrids	4919AM	20	41.4	17.3	6.8	38.7	3.0	39.8	2.3	2.4	0.76	52.3	60.7	64.0	36.0	33000	109
Dupont Pioneer	P0843AM	20	41.3	16.1	7.1	35.4	2.7	42.6	2.5	2.9	0.78	54.8	63.2	66.1	33.9	31333	108
Doebler's PA Hybrids	4717AMX	25	40.9	15.9	7.0	40.8	3.4	36.3	2.6	2.7	0.75	50.9	59.4	62.6	37.4	29167	107
Prairie Hybrids	5200	Conv.	40.9	17.4	6.6	42.7	3.4	35.2	3.0	2.6	0.74	52.5	63.1	65.8	34.2	31667	108
Dupont Pioneer	P0789AMXT	26	40.7	18.3	6.6	43.8	3.9	34.7	3.2	2.6	0.72	46.5	57.1	60.4	39.6	32000	107
Growmark FS	FS 55R25SS	32	40.6	15.9	6.8	40.4	3.4	38.1	2.8	2.8	0.75	51.4	60.9	63.9	36.1	31167	105
Augusta	Augusta 4860	8	40.5	15.8	7.0	40.1	3.1	37.7	2.7	2.4	0.75	52.8	61.4	64.1	35.9	31167	110
Channel	206-11STXRIB	32	40.3	16.8	7.1	38.8	3.1	37.6	2.8	2.9	0.76	53.2	60.7	63.6	36.4	31833	106
Dekalb	DKC58-08RIB	30	40.3	16.9	6.8	42.4	3.7	35.0	2.9	2.7	0.73	47.7	58.3	61.6	38.4	30500	108
Mycogen	MY09B16	35	40.3	17.2	6.4	42.6	3.5	35.0	3.0	2.5	0.73	48.9	59.1	61.7	38.3	31667	105
Mycogen	TMF2H708	34	39.9	17.2	7.2	41.7	3.5	35.7	2.9	2.3	0.74	50.1	61.7	63.4	36.6	33333	109
Chemgro	Chemgro 6859V3	5	39.1	18.2	6.6	42.3	3.3	34.2	3.2	2.6	0.74	51.1	62.1	64.8	35.2	31667	108
Growmark FS	FS 58R47VT2P	30	39.1	17.9	7.0	40.3	3.6	36.7	2.8	2.7	0.74	48.6	61.7	61.7	38.3	32667	108
Doebler's PA Hybrids	5018AM	20	36.5	17.9	6.8	41.6	3.2	35.4	3.0	2.3	0.74	52.9	65.3	68.1	31.9	32333	110
Channel	210-98STXRIB	32	35.4	18.6	6.7	42.9	3.5	33.2	2.9	2.9	0.74	52.2	62.7	65.4	34.6	31667	110
105-110 day means			42.8	16.9	6.8	39.5	3.2	38.9	2.8	2.7	0.75	51.5	61.2	64.1	35.9	31595	
Overall Mean			43.0	16.9	6.9	39.4	3.3	38.9	2.8	2.7	0.75	51.4	61.1	64.1	36.0	31838.0	
LSD(0.1)			4.2	2.2	0.5	6.2	0.6	6.8	0.6	0.4	0.04	4.9	3.6	3.9	3.9	2438.3	
CV%			7.2	9.5	5.1	11.6	14.3	12.8	15.1	11.4	4.2	7.1	4.4	4.5	8.0	5.6	

* See tab " Trait Key" for individual trait designation.

**Tables are sorted by dry matter. Avoid making comparisons with hybrids that differ significantly in dry matter.

*** Silage yields are expressed on a 35 percent DM basis; all other parameters are expressed on a dry matter basis. CP=crude protein, NDF= neutral detergent fiber,

NEL=net energy for lactation, and NDFD=neutral detergent fiber digestibility.

****Two of the three reps for this variety had low populations.

¹ - NS = Not Significant, ² - Fat = Total Fatty Acids

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Table Key #	Trait Family Product	Bt protein(s)	Marketed for control of:	Resistance to a Bt protein in the trait package has developed in :	Herbicide tolerant?
Conv.	Conventional	None	None	---	No
RR2	Roundup Ready 2	None	None	---	GT
Agrisure					
1	Agrisure GT	None	None	---	GT
2	Agrisure GT/CB/LL,3010A	Cry1Ab	ECB SWCB	---	GT LL
3	Agrisure 3000 GT, 3011A	Cry1Ab, mCry3A	ECB SWCB	RW	GT LL
4	Agrisure Viptera 3110	Cry1Ab, Vip3A	BCW CEW ECB FAW SB SWCB TAW WBC	---	GT LL
5	Agrisure Viptera 3111	Cry1Ab, mCry3A, Vip3A	BCW CEW ECB FAW SB SWCB TAW WBC	RW	GT LL
6	Agrisure 3120 E-Z Refuge	Cry1Ab, Cry1F	BCW ECB FAW SB SWCB	FAW WBC	REFER TO BAG FOR SPECIFIC LETTER CODE: EZO=GT ONLY EZ1= GT LL
7	Agrisure 3122 E-Z Refuge	Cry1Ab,Cry1F, mCry3A, Cry34/35Ab1	BCW ECB FAW SB SWCB	FAW WBC RW	
8	Agrisure Viptera 3220 E-Z Refuge	Cry1Ab, Cry1F, Vip3A	BCW CEW ECB FAW SB SWCB TAW WBC	---	
9	Agrisure Duracade 5122 E-Z Refuge	Cry1Ab, Cry1F, mCry3A, eCry3.1Ab	BCW ECB FAW SB SWCB	FAW WBC RW	
10	Agrisure Duracade 5222 E-Z Refuge	Cry1Ab, Cry1F, Vip3A, mCry3A, eCry3.1Ab	BCW CEW ECB FAW SB SWCB TAW WBC	RW	
Herculex					
11	Herculex 1 (HX1)	Cry1F	BCW ECB FAW SB SWCB	FAW SWCB WBC	LL RR2 (most)
12	Herculex RW (HXRW)	Cry34/35Ab1	---	RW	
13	Herculex Xtra (HXX)	Cry1F, Cry34/35Ab1	BCW ECB FAW SB SWCB	FAW SWCB WBC RW	
Optimum					
14	TRIssect (CHR)	Cry1F, mCry3A	BCW ECB FAW SB SWCB	FAW SWCB WBC RW	LL RR2
15	Intrasect (YHR)	Cry1F, Cry1Ab	BCW ECB FAW SB SWCB	FAW WBC	LL RR2
16	Intrasect TRIssect (CYHR)	Cry1Ab, Cry1F, mCry3A	BCW ECB FAW SB SWCB	FAW WBC RW	LL RR2
17	Leptra (VYHR)	Cry1F, Cry1Ab, Vip3A	BCW CEW ECB FAW SB SWCB TAW WBC	---	LL RR2
18	Intrasect Xtra (YXR)	Cry1F, Cry1Ab, Cry34/35Ab1	BCW ECB FAW SB SWCB	FAW WBC RW	LL RR2
19	Intrasect Xtreme (CYXR)	Cry1F, Cry1Ab, mCry3A, Cry34/35Ab1	BCW ECB FAW SB SWCB	FAW WBC RW	LL RR2
20	AcreMax (AM)	Cry1F, Cry1Ab	BCW ECB FAW SB SWCB	FAW WBC	LL RR2
21	AcreMax CRW (AMRW)	Cry34/35Ab1	---	RW	LL RR2
22	AcreMax1 (AM1)	Cry1F, Cry34/35Ab1	BCW ECB FAW SB SWCB	FAW SWCB WBC RW	LL RR2
23	AcreMax Leptra (AML)	Cry1Ab, Cry1F, Vip3A	BCW ECB FAW SB SWCB TAW WBC CEW	---	LL RR2
24	AcreMax TRIssect (AMT)	Cry1F, Cry1Ab, mCry3A	BCW ECB FAW SB SWCB	FAW WBC RW	LL RR2
25	AcreMax Xtra (AMX)	Cry1F, Cry1Ab, Cry34/35Ab1	BCW ECB FAW SB SWCB	FAW WBC RW	LL RR2
26	AcreMax Xtreme (AMXT)	Cry1F, Cry1Ab, mCry3A, Cry34/35Ab1	BCW ECB FAW SB SWCB	FAW WBC RW	LL RR2
Yieldgard/Genuity					
27	YieldGard CB (YGCB)	Cry1Ab	ECB SWCB	---	RR2
28	YieldGard VT Rootworm	Cry3Bb1	---	RW	RR2
29	YieldGard VT Triple	Cry1Ab, Cry3Bb1	ECB SWCB	RW	RR2
30	Genuity VT Double PRO (or as RIB complete)	Cry1A.105, Cry2Ab2	CEW ECB FAW SB SWCB	CEW	RR2
31	Genuity VT Triple PRO (or as RIB complete)	Cry1A.105, Cry2Ab2, Cry3Bb1	CEW ECB FAW SB SWCB	CEW RW	RR2
32	Genuity SmartStax RIB Complete	Cry1A.105, Cry2Ab2, Cry1F, Cry3Bb1, Cry34/35Ab1	BCW CEW ECB FAW SB SWCB WBC	RW	LL RR2
33	Trecepta (or RIB complete)	Cry1A.105, Cry2Ab2,Vip3A	BCW CEW ECB FAW SB SWCB TAW WBC	---	RR2
Others					
34	Smartstax (or as Refuge Advanced)	Cry1A.105, Cry2Ab2, Cry1F, Cry3Bb1, Cry34/35Ab1	BCW CEW ECB FAW SB SWCB	CEW WBC RW	LL RR2
35	Powercore (or Refuge Advanced)	Cry1A.105, Cry2Ab2, Cry1F	BCW ECB FAW SB SWCB CEW	CEW WBC	LL RR2
36	QROME (Q)	Cry1Ab, Cry1F, mCry3A, Cry34/35Ab1	BCW ECB FAW SB SWCB	FAW WBC RW	LL RR2
	BCW = black cutworm	SB = stalk borer	GT = glyphosate tolerant		
	CEW = corn earworm	SWCB = southern corn borer	LL = Liberty Link, glufosinate tolerant		
	ECB = European corn borer	TAW = true armyworm	RR2 = Roundup Ready 2, glyphosate tolerant		
	FAW = fall armyworm	WBC = western bean cutworm			
	RW = corn rootworm				