

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:	Bellefonte, PA
Cooperator	Dan Ulmer
Planting Date	May 9, 2018
Soil Type	HaA Hagerstown silt loam 0-3% slope
Herbicides	pre- None
	post- 3qts - Lexar on 5/18/18
Previous Crop	Soybeans
Tillage	None
Starter Fertilizer	10.5 gal - 10-34-0
Insecticide	Force 3G
Manure	None
Fertilizer	100# UAN (30%) 6/15/18
Harvest Date	September 19, 2018

Field Summary:

This field was planted on May 9. Despite cool and wet weather for 2 weeks soon after planting, this field emerged very well, and performance was very consistent throughout the growing season.

Weather Summary:	May 9-September 19	
Month	Precip.	GDD
May	3.47	395
June	6.27	517
July	9.39	685
August	7.83	716
September	7.61	368
Seasonal Total	34.57	2681

Precip. Data: <http://www.theweathercollector.com/?gclid=Cj0KCQjw6fvdBRCbARIsABGZ-vQL2zihMnTDKuqmXNfv18X7Hn8ZRJ->
GDD data: <http://climatesmartfarming.org/tools/csf-growing-degree-day-calculator/>

Penn State/PDMP Corn Silage Hybrid Testing Program 2018

Medium maturity (99-104 RM) silage hybrids in (Central) PA

(Centre) County location

Notes: SEE BACKGROUND TAB

Cooperator: (Ulmer Farms)

Brand	Hybrid	Traits*	Dry Matter					Yield		Starch			NDFD			uNDF	Pop. plants/ac	Relative Maturity
			%**	Tons/Acre***	CP %	NDF %	Lignin %	NIR %	IVSD ² %	Ash %	Fat ³ %	NEL Mcal/lb	30hr %NDF	120hr %NDF	240hr %NDF			
Early (99-104 day) RM Silage Hybrids																		
Hubner	H6257RCSS	32	49.2	22.5	6.5	32.1	2.4	46.6	51.2	2.3	3.1	0.81	57.8	65.3	68.9	31.1	34,000	104
Doebler's PA Hybrids	4115AMXT	26	46.8	23.5	6.9	36.9	2.8	39.3	55.1	2.7	2.6	0.77	55.3	63.9	66.6	33.4	33,167	101
Masters Choice	MCT 5375	7	46.8	22.5	7.4	33.7	2.8	42.2	53.6	2.5	3.0	0.79	54.6	66.7	69.5	30.5	33,500	103
Hubner	H6219RCSS	32	44.6	20.7	7.7	37.2	3.1	38.1	56.6	2.9	3.0	0.77	54.0	59.7	62.8	37.2	33,500	99
Doebler's PA Hybrids	4318AMXT	26	43.2	22.4	7.5	35.4	2.9	39.9	55.3	2.7	2.5	0.77	53.7	61.7	64.3	35.7	34,000	103
Doebler's PA Hybrids	4018AMXT	26	43.1	21.2	6.7	38.6	2.9	36.6	59.9	2.8	2.7	0.77	56.7	64.3	67.1	32.9	34,000	100
Local Seed Co.	LC0488SSX	32	42.5	19.5	6.8	40.2	3.4	34.3	56.1	2.7	2.8	0.75	51.7	58.6	61.4	38.6	32,667	104
Doebler's PA Hybrids	4219AM	20	41.5	20.8	7.1	39.7	3.1	34.1	57.7	2.8	2.6	0.75	53.2	60.3	62.8	37.2	34,000	102
Hubner	H6225RCSS	32	38.8	19.0	6.8	43.2	3.8	31.9	62.5	2.9	2.4	0.72	47.0	57.3	60.3	39.7	34,000	102
99-104 day means			44.1	21.3	7.0	37.5	3.0	38.1	56.4	2.7	2.8	0.77	53.8	62.0	64.9	35.1	33,648	

Medium (105-110) RM Silage Hybrids																		
Local Seed Co.	LC0657 SSXRIB	30	50.6	22.4	7.3	37.0	3.1	40.9	53.9	2.5	2.6	0.76	53.3	60.2	63.9	36.1	33,167	106
Growmark FS	FS 56R71SS	32	48.2	23.4	7.1	36.3	3.0	41.3	56.3	2.6	2.6	0.77	53.6	61.1	64.3	35.7	34,000	106
Dekalb	DKC55-21RIB	30	47.6	23.5	7.2	32.5	2.7	45.6	57.0	2.3	3.0	0.80	55.0	63.2	66.5	33.5	34,000	105
Seedway	SW5440	32	47.1	23.6	7.1	37.1	2.9	39.8	56.8	2.5	3.0	0.78	55.3	61.9	65.3	34.7	34,000	105
Local Seed Co.	LC0877VT2P	30	46.8	23.1	6.9	36.9	2.8	40.5	64.2	2.5	2.8	0.77	55.5	63.0	66.1	33.9	34,000	108
Prairie Hybrids	4718	Conv.	44.9	19.9	6.2	38.3	3.1	39.3	58.3	2.8	2.8	0.76	52.2	59.7	62.7	37.3	33,333	106
Dupont Pioneer	P0843AM	20	44.7	24.9	7.2	31.6	2.3	46.1	49.8	2.5	3.1	0.81	58.1	66.0	68.8	31.2	34,000	108
Doebler's PA Hybrids	4717AMX	25	44.3	22.9	7.3	33.7	2.7	42.4	50.5	2.6	3.0	0.79	55.8	63.3	66.1	33.9	31,167	107
Chemgro	Chemgro 7095RDP	30	44.2	23.3	7.3	35.4	2.8	40.4	57.6	2.8	2.7	0.78	55.2	63.2	66.1	33.9	33,500	110
Dekalb	DKC58-08RIB	30	43.7	21.6	6.6	37.9	3.0	38.2	58.9	2.6	2.6	0.76	54.3	62.2	65.7	34.3	34,000	108
Channel	207-90STXRIB	32	43.4	22.1	7.0	40.8	3.1	36.0	55.2	2.8	2.4	0.75	54.6	61.8	64.5	35.5	34,000	107
Dekalb	DKC60-88RIB	30	43.2	23.0	6.7	37.7	3.3	39.4	54.1	2.9	2.8	0.76	51.5	59.3	62.6	37.4	34,000	110
Augusta	Augusta 4759	5	43.1	24.1	7.2	34.8	2.5	41.0	63.0	2.5	2.8	0.79	57.3	64.7	67.6	32.4	34,000	109
Dekalb	DKC59-07RIB	32	42.5	22.0	6.7	34.8	2.9	41.7	54.7	2.5	3.2	0.79	55.4	61.9	64.7	35.3	32,833	109
Syngenta	NK0968-3111	5	42.3	23.4	7.2	34.1	2.8	42.4	59.1	2.8	2.9	0.78	54.2	61.9	64.8	35.2	34,000	109
Dekalb	DKC57-75RIB	32	42.2	21.2	6.8	37.6	3.0	38.0	61.2	2.8	3.2	0.77	54.6	60.9	63.8	36.2	34,000	107
Growmark FS	FS 60R76VT2P	30	41.8	22.7	6.7	34.6	2.9	43.4	57.7	2.7	2.9	0.78	52.7	61.9	64.6	35.4	34,000	110
Dupont Pioneer	P0789AMXT	26	41.7	23.9	7.5	39.1	3.2	34.9	59.4	2.9	3.1	0.76	53.4	59.7	62.6	37.4	34,000	107
Mycogen	MY09B16	35	41.0	23.6	7.3	38.8	3.1	34.9	56.9	2.8	2.9	0.76	54.2	61.4	64.1	35.9	33,311	105
Dupont Pioneer	P0977AM	20	41.0	24.4	7.1	38.2	3.1	36.1	52.2	3.3	2.5	0.75	53.0	62.3	64.9	35.1	33,333	109
Doebler's PA Hybrids	4919AM	20	40.9	23.1	6.8	35.9	2.7	40.7	59.0	2.4	2.3	0.77	54.8	63.5	66.4	33.6	34,000	109
Mycogen	TMF09S97	34	40.7	22.1	7.5	41.1	3.5	33.4	58.2	2.7	2.7	0.75	51.3	58.0	60.7	39.3	34,000	109
Augusta	Augusta 4858	2	40.6	19.9	6.9	36.9	3.1	39.5	55.4	3.1	2.9	0.77	52.1	60.1	63.0	37.0	33,167	108
Chemgro	Chemgro 6859V3	5	39.6	21.5	7.0	38.5	2.9	35.8	59.1	2.8	2.8	0.77	54.6	62.5	65.2	34.8	33,333	108
Masters Choice	MC 5790	Conv.	39.5	19.6	7.3	38.4	3.1	35.5	52.2	3.0	2.7	0.76	53.8	60.4	63.0	37.0	32,500	107
CPS Dynagro	D49VC70	30	38.9	22.7	6.9	38.5	3.2	37.0	56.5	2.8	2.7	0.76	53.4	60.3	63.1	36.9	33,667	109
Syngenta	NK0886-3010	2	38.8	20.6	7.3	38.9	3.3	36.0	50.9	3.0	2.7	0.76	54.8	61.9	64.9	35.1	32,833	108
Growmark FS	FS 58R47VT2P	30	38.7	20.8	7.1	43.8	3.6	31.2	57.9	3.1	2.5	0.72	51.0	59.5	62.3	37.8	33,936	108
Doebler's PA Hybrids	5018AM	20	38.2	25.7	7.5	36.0	2.7	39.8	56.1	2.6	2.6	0.77	56.9	64.8	67.5	32.5	34,000	110
Prairie Hybrids	5200	Conv.	37.9	22.6	7.5	39.9	3.2	34.0	55.6	3.1	2.5	0.75	54.0	60.7	63.3	36.7	33,964	108
Growmark FS	FS 55R25SS	32	37.9	20.6	7.1	41.5	3.6	33.7	54.9	2.8	2.4	0.73	46.8	58.0	60.5	39.5	34,000	105
Channel	206-11STXRIB	32	37.5	20.5	7.2	41.0	3.2	32.3	58.7	3.1	2.4	0.75	55.6	63.1	65.7	34.3	33,333	106
Channel	210-98STXRIB	32	37.23	22.61	7.5	38.1	2.86	37.37	52.01	2.88	2.7	0.77	56.5	64.63	67.4	32.6	32,333	110
Augusta	Augusta 4959	4	36.8	20.8	7.2	45.6	3.7	27.8	55.4	3.3	2.9	0.72	52.7	61.2	63.9	36.1	32,833	109
Mycogen	TMF2H708	34	36.0	20.4	7.0	43.0	3.8	31.1	60.9	3.1	2.5	0.73	47.0	57.3	59.8	40.2	33,500	109
Augusta	Augusta 4860	8	35.6	20.1	6.9	41.2	3.1	34.1	64.6	2.8	2.5	0.75	53.7	61.8	64.4	35.6	34,000	110
105-110 day means			41.6	22.3	7.1	37.9	3.0	37.8	56.8	2.8	2.7	0.76	53.8	61.6	64.5	35.5	33,557	

Overall Mean			42.1	22.1	7.1	37.8	3.0	37.9	56.7	2.8	2.7	0.76	53.8	61.7	64.5	35.5	33,575	
LSD(0.1)			5.0	2.6	0.4	6.3	0.6	8.1	3.8	0.4	0.4	0.04	3.9	3.6	3.7	3.7	977	
CV%			8.8	8.7	4.6	12.3	14.5	15.8	4.9	11.4	9.8	3.9	5.3	4.3	4.2	7.7	2	

* 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.

¹ - NS = Not Significant, ²-IVSD = In Vitro Starch Digestibility 4 hr incubation, 1 mm grind as a % of Starch, ³- 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				