

2019 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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Penn State College of Agricultural Sciences research, extension, and resident education programs are funded in part by Pennsylvania counties, the Commonwealth of Pennsylvania, and the U.S. Department of Agriculture.

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

Site:	Loretto, PA
Cooperator	Vale Wood Farms
Planting Date	6/4/2019
Soil Type	Cavode silt loam, 3 to 8 percent slopes
Herbicides	pre- 1 quart abundant edge, 1.25 oz resolve Q, 2 qt cinch atz post-
Previous Crop	Grass
Tillage	None
Starter Fertilizer	10.5 gal - 10-34-0
Insecticide	Force 3G
Manure	None
Fertilizer	200# of N
Harvest Date	10/1/2019

Field Summary:

This location got planted a little later than desired. Had some grass pressure and could have used some more nitrogen. Yields were a little lower than expected. It was the last location of the season to be chopped for silage.

Weather Summary:

Month	Precip.	GDD
June 4th-July 1st	4.37	384
July 1st-August 1st	4.71	626
August 1st-September 1st	3.45	508
September 1st-October 1st	1.89	369
Seasonal Total	14.42	1887

Precip. Data:

<https://www.accuweather.com/>

GDD data:

<http://climatesmartfarming.org/tools/csf-growing-degree-day-calculator/>

Penn State/PDMP Corn Silage Hybrid Testing Program 2019



Early maturity (85-103 day RM) silage hybrids in Loretto, PA

Cambria County location

Notes: SEE BACKGROUND TAB

Cooperator: Valewood Farms

Brand	Hybrid	Traits*	Dry Matter		Yield							NDFD				uNDF 240 %DM	Pop. plants/ac	Relative Maturity
			%**	Tons/ Acre***	CP %DM	NDF %DM	Lignin %DM	Starch %DM	Ash %DM	Fat ² %DM	NEL Mcal/lb	12hr	30hr	120hr	240hr			
Very Early (85-94 day) RM Silage Hybrids																		
Masters Choice	MCT3891	1	40.3	14.9	5.5	36.9	2.6	39.9	2.1	2.4	0.78	32.0	56.8	63.9	67.1	12.1	32,121	88
Hubner	H6038RCSS	34	40.0	15.6	5.8	33.0	2.4	44.0	2.1	2.7	0.80	31.9	57.9	65.7	68.8	10.3	32,333	89
Pioneer	P9377AMXT	27	38.3	14.8	5.6	35.1	2.6	41.9	2.3	2.2	0.78	31.6	56.6	65.4	68.4	11.1	30,333	93
Local Seeds	LC9278 SXRIB	34	38.2	16.5	5.7	36.8	2.7	40.4	2.3	2.5	0.78	32.3	57.3	65.2	68.6	11.5	34,000	92
Growmark FS	FS 4095X RIB	34	37.0	15.3	5.8	35.4	2.5	39.8	2.3	2.3	0.78	31.8	59.1	66.6	69.4	10.9	34,000	90
Channel	192-98STXRIB	34	37.0	14.9	5.8	36.4	2.7	39.2	2.1	2.5	0.78	31.4	57.1	63.0	66.6	12.2	33,000	92
LG Seeds	LG44C27VT2RIB	31	36.7	16.7	5.5	36.9	2.6	39.8	2.4	2.4	0.78	33.5	59.0	67.6	70.5	10.9	32,000	94
Local Seeds	AV4994 AM	21	35.5	14.0	5.3	38.1	2.6	37.8	2.4	2.2	0.77	34.1	59.1	67.9	70.8	11.2	32,167	94
85-94 day means			37.9	15.3	5.6	36.1	2.6	40.4	2.3	2.4	0.78	32.3	57.9	65.7	68.8	11.3	32,494	
Early (95-103 day) RM Silage Hybrids																		
Hubner	H6124RCSS	34	38.4	14.4	5.7	35.7	2.5	40.6	2.0	2.4	0.79	34.2	58.7	67.1	70.0	10.7	32,667	96
Dekalb	DKC47-55RIB	31	38.4	18.1	5.5	36.6	2.7	40.5	2.1	2.5	0.78	32.3	57.6	65.2	68.2	11.6	34,000	97
Channel	199-11STXRIB	34	38.3	17.9	5.1	37.0	2.7	40.1	2.0	2.5	0.78	32.8	57.5	66.1	69.4	11.3	33,764	99
Agri-Gold	A6267STXRIB	34	38.2	18.2	5.8	34.1	2.5	42.3	2.0	2.4	0.79	32.7	59.3	67.9	70.8	10.0	33,500	102
Agri-Gold	A632-07STX	34	37.7	18.0	5.6	37.7	2.7	39.4	1.8	2.5	0.78	33.8	57.8	65.4	68.8	11.8	33,333	102
Seedway LLC	SW4000 GENSS (RIB)	34	37.4	17.9	5.8	36.0	2.6	38.9	2.2	2.5	0.78	32.2	59.2	66.1	68.9	11.2	32,500	98
Hubner	H6172RCSS	34	37.1	15.7	5.5	39.4	3.0	36.3	2.0	2.2	0.77	30.5	57.2	63.8	67.0	13.0	33,333	98
Mycogen	TMF2Q419	34	36.5	15.8	5.3	37.5	2.5	38.5	2.2	2.4	0.78	33.8	59.0	66.9	69.9	11.3	32,833	96
Seed Consultants, Inc.	SCS 978AMXT	27	36.5	12.9	5.5	36.1	2.5	39.2	2.3	2.5	0.79	33.3	59.2	66.7	69.5	11.0	33,167	97
Growmark FS	FS 5090X RIB	34	36.3	17.5	5.6	36.9	2.6	38.4	2.1	2.3	0.78	32.1	57.5	64.9	67.7	11.9	33,333	100
Dekalb	DKC45-07RIB	34	36.0	12.8	5.4	36.7	2.5	38.5	2.4	2.5	0.78	34.0	59.2	67.4	70.4	10.9	32,833	95
Chemgro Seeds	5909RSX	34	36.0	15.4	5.1	39.5	3.1	35.9	2.0	2.4	0.77	30.6	54.4	62.1	65.4	13.7	33,167	99
Local Seeds	ZS9796 3220EZ	8	35.9	15.4	5.6	36.2	2.6	37.9	2.2	2.3	0.78	30.4	56.7	64.9	67.8	11.6	28,348	97
Masters Choice	MCT4572	4	35.7	14.4	5.4	39.0	2.8	36.7	2.3	2.3	0.77	30.7	56.5	63.3	66.6	13.0	32,500	95
Local Seeds	LC9888 VT2PRIB	31	35.7	15.2	5.6	38.1	2.9	37.1	2.4	2.4	0.77	30.2	55.9	63.0	66.0	13.0	33,167	98
Dekalb	DKC53-27RIB	34	35.6	16.7	5.8	35.8	2.6	38.8	2.5	2.4	0.78	32.3	57.0	64.8	67.7	11.6	34,000	103
Pioneer	P0242AMXT	27	34.9	15.5	5.8	39.3	2.8	37.8	2.3	2.3	0.76	31.1	57.9	64.7	67.8	12.7	30,500	102
Pioneer	P9998AMXT	27	34.4	15.4	5.9	36.8	2.6	37.5	2.3	2.3	0.78	33.4	58.3	66.4	69.3	11.3	33,000	99
Mycogen	TMF01R87	34	34.4	15.4	5.1	40.0	2.6	35.2	1.8	2.2	0.77	33.8	60.6	67.8	70.9	11.6	33,787	101
Seed Consultants, Inc.	EX-SC 105YHR	21	34.2	16.1	5.2	38.0	2.5	36.9	2.1	2.2	0.78	35.1	60.4	69.0	72.0	10.7	31,833	104
LG Seeds	LG51C48 VT2PRO	31	33.7	16.4	5.0	38.3	2.7	34.8	2.2	2.2	0.77	33.0	58.4	65.8	68.6	12.0	32,500	101
Blue River Organic Seed	48G35	Conv.	33.6	13.8	5.5	41.1	2.9	33.8	2.2	2.3	0.76	31.9	56.9	64.6	67.8	13.2	33,333	102
Seed Consultants, Inc.	SCS 1018YHR	16	32.2	14.1	5.4	40.2	2.5	36.4	2.3	2.1	0.77	35.4	62.3	69.8	72.9	10.9	34,000	101
95-103 day means			36.0	15.8	5.5	37.7	2.7	37.9	2.2	2.4	0.78	32.6	58.2	65.8	68.8	11.7	32,843	
Overall Mean			36.5	15.7	5.5	37.2	2.6	38.5	2.2	2.4	0.78	32.5	58.1	65.8	68.8	11.6		
LSD(0.1)			2.5	NS¹	NS¹	2.7	0.2	3.7	0.3	0.2	0.02	2.0	2.0	2.2	2.1	1.4		
CV%			5.0	15.5****	7.5	5.3	6.1	7.1	10.6	6.4	1.45	4.5	2.5	2.5	2.2	8.7		

* 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,

****There was an extreme amount of variation at this location which resulted in a higher than desired CV. Cambria data will not be included in the combined G0/1 data.

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

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 3010 & 3010A	Cry1Ab	ECB SWCB	---	GT LL
3	Agrisure 3000 GT, 3011A	Cry1Ab, mCry3A	ECB SWCB RW	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	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 RW	FAW WBC RW	
8	Agrisure Viptera 3220 E-Z Refuge	Cry1Ab, Cry1F, Vip3A	BCW CEW ECB FAW SB SWCB TAW WBC	---	
9	Agrisure Viptera 3330 E-Z Refuge	CryAb, Vip3A, Cry1A.105+CryAb2	BCW CEW ECB FAW SB SWCB TAW WBC	---	
10	Agrisure Duracade 5122 E-Z Refuge	Cry1Ab, Cry1F, mCry3A, eCry3.1Ab	BCW ECB FAW SB SWCB RW	FAW WBC RW	
11	Agrisure Duracade 5222 E-Z Refuge	Cry1Ab, Cry1F, Vip3A, mCry3A, eCry3.1Ab	BCW CEW ECB FAW SB SWCB TAW WBC RW	RW	
Herculex					
12	Herculex 1 (HX1)	Cry1F	BCW ECB FAW SB SWCB	ECB FAW SWCB WBC	LL RR2 (most)
13	Herculex RW (HXRW)	Cry34/35Ab1	RW	RW	
14	Herculex XTRA (HXX)	Cry1F, Cry34/35Ab1	BCW ECB FAW SB SWCB RW	FAW SWCB WBC RW	
Optimum					
15	TRIssect (CHR)	Cry1F, mCry3A	BCW ECB FAW SB SWCB RW	ECB FAW SWCB WBC RW	LL RR2
16	Intrasect (YHR)	Cry1F, Cry1Ab	BCW ECB FAW SB SWCB	FAW WBC	LL RR2
17	Intrasect TRIssect (CYHR)	Cry1Ab, Cry1F, mCry3A	BCW ECB FAW SB SWCB RW	FAW WBC RW	LL RR2
18	Leptra (VYHR)	Cry1F, Cry1Ab, Vip3A	BCW CEW ECB FAW SB SWCB TAW WBC	---	LL RR2
19	Intrasect Xtra (YXR)	Cry1F, Cry1Ab, Cry34/35Ab1	BCW ECB FAW SB SWCB RW	FAW WBC RW	LL RR2
20	Intrasect Xtreme (CYXR)	Cry1F, Cry1Ab, mCry3A, Cry34/35Ab1	BCW ECB FAW SB SWCB RW	FAW WBC RW	LL RR2
21	AcreMax (AM)	Cry1F, Cry1Ab	BCW ECB FAW SB SWCB	FAW WBC	LL RR2
22	AcreMax CRW (AMRW)	Cry34/35Ab1	RW	RW	LL RR2
23	AcreMax1 (AM1)	Cry1F, Cry34/35Ab1	BCW ECB FAW SB SWCB RW	FAW SWCB WBC RW	LL RR2
24	AcreMax Leptra (AML)	Cry1Ab, Cry1F, Vip3A	BCW ECB FAW SB SWCB TAW WBC CEW	---	LL RR2
25	AcreMax TRIssect (AMT)	Cry1F, Cry1Ab, mCry3A	BCW ECB FAW SB SWCB RW	FAW WBC RW	LL RR2
26	AcreMax Xtra (AMX)	Cry1F, Cry1Ab, Cry34/35Ab1	BCW ECB FAW SB SWCB RW	FAW WBC RW	LL RR2
27	AcreMax Xtreme (AMXT)	Cry1F, Cry1Ab, mCry3A, Cry34/35Ab1	BCW ECB FAW SB SWCB RW	FAW WBC RW	LL RR2
Yieldgard/Genuity					
28	YieldGard CB (YGCB)	Cry1Ab	ECB SWCB	---	RR2
29	YieldGard VT Rootworm (YGRW)	Cry3Bb1	RW	RW	RR2
30	YieldGard VT Triple	Cry1Ab, Cry3Bb1	ECB SWCB RW	RW	RR2
31	VT Double PRO VT Double PRO RIB complete	Cry1A.105, Cry2Ab2	CEW ECB FAW SB SWCB	CEW	RR2
32	VT Triple PRO VT Triple PRO RIB complete	Cry1A.105, Cry2Ab2, Cry3Bb1	CEW ECB FAW SB SWCB RW	CEW RW	RR2
33	Trecepta (or RIB complete)	Cry1A.105, Cry2Ab2,Vip3A	BCW CEW ECB FAW SB SWCB TAW WBC	---	RR2
Others					
34	Smartstax Smartstax Refuge Advanced Smartstax RIB Complete	Cry1A.105, Cry2Ab2, Cry1F, Cry3Bb1, Cry34/35Ab1	BCW CEW ECB FAW SB SWCB RW	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				

Source: <https://www.texasinsects.org/bt-corn-trait-table.html>