

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

Site:	Bainbridge, PA
Cooperator	Meadow Vista Dairy
Planting Date	May 18, 2019
Soil Type	Lansdale loam, 3 to 8 percent slopes, UaB Ungers loam
Herbicides	pre- Credit Extra 2.25 qt Brawl ATZ 1.8 qt Mesotrione 6 oz Baythroid 1.6 oz
	post-
Previous Crop	Silage
Tillage	None
Starter Fertilizer	10.5 gal - 10-34-0
Insecticide	None
Manure	9000 gallons liquid dairy manure
Fertilizer	90 lbs N injected at sidedress
Harvest Date	9/6/2019

Field Summary: Had some grass pressure at early stages of crop. There was also some minor root lodging caused by rootworm or wind. Overall, this site had extremely fast emergence and corn looked good. Very tall plants and nice ears. Rainfall was adequate during pollination time. It might have ran out of N towards the end of the growing season.

Weather Summary:

Month	Precip.	GDD
May 18th-June 1st	2.88	275
June 1st-July 1st	5.15	596
July 1st- August 1st	3.22	859
August-Sept. 6th	3.41	866
Seasonal Total	14.66	2596

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



Medium-Late maturity (111-120) day RM silage hybrids in Bainbridge, PA

Lancaster County location

Notes: SEE BACKGROUND TAB

Cooperator: Meadow Vista Dairy

Brand	Hybrid	Traits*	Dry Matter %**	Yield Tons/Acre***	CP %DM	NDF %DM	Lignin %DM	Starch		Ash %DM	Fat ³ %DM	NEL Mcal/lb	NDFD				uNDF 240 %DM	Pop. plants/ac	Relative Maturity
								NIR %DM	IVSD ² %Starch				12hr ⁴ %NDF _{DM}	30hr ⁵	120hr	240hr			
Medium-Late (111-115 day) RM Silage Hybrids																			
Seedway LLC	SW6790 GENVT2P (RIB)	31	44.4	23.6	6.8	35.6	2.9	41.3	56.0	3.1	2.5	0.77	28.7	52.8	62.3	65.0	12.5	34,000	112
Prairie Hybrids	7387	Conv.	41.6	22.7	6.9	36.9	2.9	38.7	52.6	3.2	2.5	0.77	29.1	54.9	62.9	65.6	12.7	34,000	112
Channel	211-44STXRIB	34	41.2	23.9	7.2	33.4	2.8	42.6	53.0	2.9	2.8	0.79	31.8	53.6	62.1	64.7	11.8	34,000	111
Agri-Gold	A641-54VT2PRO	34	41.0	21.1	6.8	39.8	3.4	36.5	56.3	3.6	2.5	0.76	25.6	51.9	59.7	62.2	15.1	34,000	111
Mid-Atlantic Seeds, Inc.	MA8150VT3P	32	40.9	21.8	6.7	36.2	2.8	38.3	56.6	3.2	2.5	0.77	22.3	55.3	61.9	64.5	11.9	34,000	115
Dekalb	DKC61-98RIB	31	40.2	22.2	6.8	38.4	3.2	38.4	56.9	2.8	2.5	0.76	28.0	52.8	62.1	64.7	13.5	34,000	111
Dekalb	DKC62-53RIB	31	40.1	24.1	7.1	34.7	2.9	41.6	53.9	2.8	2.8	0.78	26.8	52.1	62.0	64.7	12.3	34,000	112
Growmark FS	FS 63R85SS	34	39.7	24.2	6.9	36.3	3.0	39.6	57.4	2.7	2.6	0.77	27.5	54.6	62.2	65.0	12.7	34,000	113
Dekalb	DK664-25RIB	31	39.7	23.3	7.2	37.5	3.0	37.9	53.0	3.2	2.4	0.76	27.1	54.4	63.4	66.0	12.7	34,000	114
Nutrien Ag Solutions/Dyna-Gro	D55VC80	31	39.6	25.3	6.8	37.2	2.9	37.6	56.9	2.6	2.5	0.77	27.7	51.6	63.4	66.1	12.6	34,000	115
Masters Choice	MCT6363	3	39.1	21.6	6.8	35.5	3.0	39.0	58.4	2.8	2.6	0.77	27.2	52.0	62.8	65.5	13.1	34,000	113
Pioneer	P1442AM	21	39.1	22.8	7.7	34.7	3.1	38.2	47.7	3.4	2.3	0.76	27.9	53.9	62.9	65.6	12.7	34,000	114
Seed Consultants, Inc.	SCS 1158YHR	16	38.9	25.3	7.0	38.2	2.9	37.0	55.6	3.2	2.3	0.75	29.3	54.0	64.3	65.6	13.2	34,000	115
Chemgro Seeds	7399D4Z	10	38.3	25.7	7.0	39.1	3.2	36.9	56.9	3.2	2.2	0.75	26.2	54.1	62.0	64.6	13.8	34,000	113
Syngenta	NK1573-3000GT	3	38.2	23.5	7.3	35.0	2.9	38.8	55.7	3.4	2.4	0.77	28.1	53.9	62.4	65.1	12.2	34,000	115
Growmark FS	FS 65R87SS	34	38.1	22.3	6.9	34.9	3.1	40.8	52.4	2.9	2.7	0.78	29.6	53.7	59.8	62.6	13.1	34,000	115
LG Seeds	LG5643VT2RIB	31	37.8	26.8	6.8	38.9	3.3	36.2	54.0	3.0	2.3	0.75	24.3	52.1	61.0	63.7	14.2	34,000	114
Syngenta	NK1205-120	6	37.7	23.8	7.4	36.1	2.9	38.2	54.8	3.2	2.4	0.77	28.3	53.8	61.6	64.2	13.0	34,000	112
Seed Consultants, Inc.	SCS 1125YHR	16	37.6	25.4	7.2	35.1	2.9	38.5	57.8	3.3	2.5	0.77	28.6	54.2	61.7	64.4	12.6	34,000	112
Pioneer	P1422AMXT	27	37.5	22.6	7.1	39.2	3.3	33.7	52.9	3.4	2.3	0.75	27.3	51.0	61.7	64.4	13.9	34,000	114
Local Seeds	LC1586 TC	33	37.5	23.0	7.1	36.2	3.3	37.5	49.0	3.2	2.5	0.75	28.9	50.7	60.6	63.2	12.8	34,000	115
Mycogen	2580Q	36	37.5	25.8	7.2	33.8	2.6	40.5	56.1	3.2	2.7	0.79	29.5	55.5	64.9	67.6	11.0	34,000	115
Mid-Atlantic Seeds, Inc.	MA8128	31	37.3	22.1	6.7	37.6	2.9	37.9	56.2	3.0	2.5	0.77	26.4	54.3	64.2	67.0	12.5	34,000	112
Mycogen	2499AM	23	37.1	25.3	7.3	35.8	2.7	37.9	56.9	2.7	2.4	0.78	26.1	56.1	65.7	68.5	11.3	34,000	114
Prairie Hybrids	8290	Conv.	37.0	25.0	7.4	36.0	2.9	37.1	51.7	3.2	2.8	0.78	27.7	56.0	62.9	65.6	12.4	34,000	114
Channel	213-93STXRIB	34	36.8	23.3	7.2	36.7	3.0	37.3	58.4	3.0	2.5	0.77	29.6	54.1	63.0	65.7	12.6	34,000	113
Local Seeds	ZS1487	Conv.	36.6	25.4	6.4	40.5	3.3	35.1	56.2	3.5	2.1	0.74	23.6	52.2	62.3	65.0	14.2	34,000	114
Masters Choice	MCT6552	4	36.5	25.0	7.2	34.7	2.9	38.1	51.5	3.0	2.5	0.77	27.7	53.8	61.3	64.1	12.5	34,000	115
Local Seeds	LC1349 SSXRIB	31	36.1	23.6	7.3	39.2	3.4	34.0	51.5	3.5	2.2	0.74	27.5	50.8	58.4	60.9	15.3	34,000	113
Agri-Gold	A641-06STXRIB	34	35.9	24.2	7.4	37.2	2.9	36.4	54.2	3.2	2.6	0.77	26.4	54.0	63.9	66.7	12.5	34,000	111
Mid-Atlantic Seeds, Inc.	MA8141	31	35.8	24.9	7.3	35.2	3.0	38.5	57.2	3.1	2.4	0.77	26.7	55.3	62.3	64.9	12.4	34,000	114
Mycogen	TMF14R77	34	34.5	22.5	7.1	39.5	3.2	31.4	59.4	3.4	2.1	0.75	26.8	53.0	60.4	63.0	14.6	34,000	114
Prairie Hybrids	8759	Conv.	34.0	24.2	6.6	39.0	3.1	36.3	62.2	3.2	2.1	0.75	24.9	48.4	61.9	64.6	13.8	34,000	114
Mycogen	BMR15B15	34	33.9	21.2	7.3	44.2	2.6	25.2	51.5	3.6	1.8	0.73	35.2	64.0	72.5	75.6	10.8	34,000	115
111-115 day means			38.2	23.8	7.1	37.0	3.0	37.4	55.0	3.1	2.4	0.76	27.6	53.7	62.5	65.2	12.9	34,000	
Late (116-120) day RM Silage Hybrids																			
Dekalb	DKC67-44RIB	31	42.0	23.8	6.9	38.1	3.2	38.6	60.8	2.9	2.5	0.76	28.6	52.6	60.6	63.4	14.0	34,000	117
Mid-Atlantic Seeds, Inc.	MA5166GT3VIP	5	40.0	23.3	7.2	37.4	2.9	37.8	51.5	2.9	2.3	0.76	29.4	58.6	64.6	67.4	12.2	34,000	116
Local Seeds	LC1688 SSXRIB	34	39.1	23.6	6.8	36.8	3.1	39.6	57.5	3.0	2.6	0.77	27.9	52.0	60.8	63.4	13.4	34,000	116
Local Seeds	LC1776 VT2P	31	38.7	25.9	7.1	35.8	3.0	39.6	52.9	2.6	2.7	0.78	31.4	55.8	61.7	64.4	12.8	34,000	117
Dekalb	DKC68-69RIB	31	38.5	25.8	7.1	38.4	3.2	35.7	53.0	2.9	2.4	0.76	29.9	54.3	60.9	63.5	14.0	34,000	118
Agri-Gold	A6652STXRIB	34	38.4	24.3	7.1	39.0	3.2	37.8	55.3	3.1	2.3	0.75	30.0	52.6	62.1	64.7	13.8	34,000	116
LG Seeds	LG66C32VT2PRO	31	38.3	25.3	7.2	37.3	3.4	37.4	51.1	3.1	2.7	0.76	28.9	50.3	56.4	59.4	15.2	34,000	116
Seed Consultants, Inc.	SCS 1188AM	21	38.2	25.5	7.2	37.4	3.2	37.1	53.9	3.2	2.5	0.76	29.3	53.8	62.0	64.6	13.3	34,000	118
Chemgro Seeds	7658G3	3	38.0	23.3	6.8	39.3	3	36.7	56	3	2.3	0.76	28.1	55.2	64.1	66.8	13.1	34,000	116
Chemgro Seeds	7789RSX	34	37.9	24.5	6.9	36.9	3.1	38.6	50.3	3.0	2.5	0.77	28.1	54.1	61.1	63.7	13.4	34,000	117
Chemgro Seeds	7799DSZ	11	37.8	22.8	7.0	38.7	3.2	33.9	55.8	3.2	2.0	0.75	30.0	54.5	61.4	64.0	13.9	34,000	117
Syngenta	NK1808-3111	5	37.6	25.7	7.0	39.8	3.2	33.1	55.7	3.0	2.2	0.75	30.8	55.8	61.9	64.6	14.1	34,000	118
Agri-Gold	A647-46VT2PRO	34	37.4	26.8	7.2	35.5	3.1	39.0	52.4	2.9	2.6	0.77	28.5	52.1	59.8	62.5	13.4	34,000	117
Seed Consultants, Inc.	SCS 1168YHR	16	37.0	27.0	7.2	38.9	3.2	34.7	58.7	3.5	2.4	0.75	27.8	52.5	62.8	65.6	13.5	34,000	116
Blue River Organic Seed	74B75	Conv.	37.0	25.7	6.3	39.4	3.2	35.5	58.5	3.3	2.1	0.74	25.2	51.2	61.3	63.9	14.3	34,000	116
Seedway LLC	SW8109 3000GT	3	36.2	23.8	7.0	38.8	3.1	33.3	51.9	3.1	2.1	0.76	29.7	54.7	62.5	65.1	13.6	34,000	117
Masters Choice	MCT6653	3	35.7	24.3	7.2	41.0	3.3	30.7	50.6	3.2	2.1	0.74	31.3	56.7	60.9	63.5	14.9	34,000	116
Growmark FS	FS 6797X RIB	34	35.3	25.8	7.8	36.3	2.9	36.7	52.2	3.1	2.5	0.77	29.2	54.5	62.1	64.8	12.8	34,000	117
Pioneer	P1847AMXT	27	34.9	26.6	7.2	34.9	2.8	38.8	48.0	3.2	2.6	0.78	29.4	53.5	65.2	68.0	11.2	34,000	118
Mycogen	TMF16S87	34	33.2	25.2	7.0	41.0	3.6	31.5	61.9	3.5	2.1	0.73	28.2	49.8	57.9	60.4	16.3	34,000	116
116-120 day means			37.6	25.0	7.1	38.0	3.1	36.3	54.4	3.1	2.4	0.76	29.1	53.7	61.5	64.2	13.7	34,000	
Overall Mean			37.9	24.2	7.1	37.4	3.1	37.0	54.8	3.1									

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: E20=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				