

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:	Juniata Co., PA
Cooperator	Dan Zug
Planting Date	5/24/2019
Soil Type	MeB Mertz Cherty silt loam 3-8% slope
Herbicides	pre- Burndown with roundup 2 qt/ac
	post- 2 qt harness extra, 1 pt NIS, Harness Extra, NIS, Status, UAN, Impact
Previous Crop	Corn Silage
Tillage	None
Starter Fertilizer	10.5 gal - 10-34-0
Insecticide	Force 3G
Manure	9000 gal dairy manure spring 2019
Fertilizer	100# N liquid 30%
Harvest Date	9/18/2019

Field Summary:

There was some variation in N deficiencies throughout plots; might be manure related. Good looking plots overall. Was very grassy earlier in the season as well as lacking in N. The appropriate application was performed. Rainfall was adequate during pollination time. Omitted rep 2 from this location due to too much variation.

Weather Summary:

Month	Precip.	GDD
May 24th- June 1st	1.66	153
June 1st-July 1st	2.95	525
July 1st- August 1st	3.82	798
August 1st-September 18	4.18	966
Seasonal Total	12.61	2442

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 Mifflintown, PA



Juniata County location

Notes: SEE BACKGROUND TAB

Cooperator: Dan Zug

Brand	Hybrid	Traits*	Dry Matter							NDFD				uNDF %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	
Medium-late (111-115) RM Silage Hybrids																			
Dekalb	DKC61-98RIB	31	47.8	18.5	7.3	32.2	2.5	47.0	2.5	2.8	0.80	33.3	56.8	64.4	67.9	10.4	33,333	111	
Mid-Atlantic Seeds, Inc.	MA8128VT2P	31	46.8	19.9	6.6	33.6	2.5	45.6	2.5	2.8	0.80	31.8	58.4	67.0	69.9	10.2	34,000	112	
Dekalb	DKC64-25RIB	31	46.7	19.8	6.7	34.6	2.5	43.9	2.3	2.8	0.80	33.6	57.0	67.2	70.4	10.3	33,500	114	
Chemgro Seeds	7399D4Z	10	45.6	20.5	6.7	34.7	2.6	44.4	2.5	2.4	0.78	31.4	57.2	66.7	69.6	10.6	33,333	113	
Local Seeds	LC1586 TC	33	45.6	21.4	7.1	27.5	2.2	51.0	2.4	2.9	0.82	30.1	57.0	66.4	69.3	8.5	33,333	115	
Dekalb	DKC62-53RIB	31	44.5	18.9	7.3	32.1	2.4	47.2	2.3	2.9	0.80	31.7	57.7	65.8	68.7	10.1	33,167	112	
Prairie Hybrids	7387	Conv.	43.5	15.6	7.5	33.6	2.5	43.9	2.9	2.8	0.79	32.4	57.4	65.3	68.2	10.7	34,000	112	
Local Seeds	LC1349 SXXRIB	31	43.4	19.2	7.0	32.2	2.5	45.9	2.8	2.8	0.80	29.1	56.1	65.1	67.8	10.4	32,333	113	
Pioneer	P1442AM	21	43.4	18.9	7.7	33.6	2.6	43.6	3.0	2.7	0.79	30.6	56.2	66.0	68.8	10.5	34,000	114	
Seedway LLC	SW6790 GENVT2P (RIB)	31	42.9	19.5	7.3	32.5	2.5	45.3	2.6	2.9	0.80	31.4	57.4	66.5	69.3	10.0	32,667	112	
Growmark FS	FS 65R87SS	34	42.3	19.1	7.1	31.1	2.7	47.0	2.6	3.0	0.80	29.3	54.8	62.1	65.5	10.8	34,000	115	
Mid-Atlantic Seeds, Inc.	MA8141DGV2P	31	42.2	21.7	6.8	30.9	2.3	45.4	2.5	2.7	0.80	31.1	57.0	65.4	68.2	9.9	33,000	114	
Channel	211-44STXRIB	34	42.1	19.7	7.3	33.2	2.5	44.0	2.6	2.7	0.78	31.8	57.8	65.8	68.6	10.4	33,167	111	
LG Seeds	LG5643VT2RIB	31	42	21.3	7.1	33.7	2.7	44.0	2.5	2.7	0.78	29.9	54.8	62.4	65.2	11.8	33,000	114	
Channel	213-93STXRIB	34	41.6	19.3	7.4	32.9	2.5	43.2	2.8	2.6	0.80	30.6	57.5	66.0	68.9	10.3	33,000	113	
Prairie Hybrids	8759	Conv.	41.3	17.4	6.7	34.6	2.5	42.7	3.1	2.4	0.78	30.5	55.9	65.6	68.4	10.9	32,000	114	
Nutrien Ag Solutions/Dyna-Gro	D55VC80	31	41.3	20.5	7.9	33.1	2.4	42.2	2.7	2.8	0.80	31.0	58.8	66.4	69.2	10.2	32,833	115	
Pioneer	P1422AMXT	27	41.2	22.0	7.6	32.3	2.4	43.2	2.8	2.8	0.80	32.4	59.6	67.5	70.3	9.6	34,000	114	
Syngenta	NK1205-3120	6	40.7	19.0	7.0	34.4	2.5	42.7	2.9	2.6	0.78	30.5	56.2	64.0	67.3	11.3	34,000	112	
Agri-Gold	A641-54VT2PRO	34	40.2	18.1	7.1	33.7	2.7	43.2	2.8	2.9	0.79	29.1	55.0	63.4	66.2	11.4	33,500	111	
Mid-Atlantic Seeds, Inc.	MA8150VT3P	32	40.1	20.2	6.9	32.0	2.4	45.2	2.7	3.0	0.80	30.6	58.0	66.4	69.3	9.8	32,833	115	
Growmark FS	FS 63R85SS	34	39.9	18.8	7.8	33.4	2.6	42.3	3.0	2.8	0.79	28.6	56.1	64.1	66.8	11.1	33,500	113	
Mycogen	2499AM	23	39.7	19.0	6.9	34.9	2.5	42.1	2.5	2.4	0.78	33.7	58.3	67.9	70.8	10.2	33,167	114	
Masters Choice	MCT6363	3	39.5	17.6	7.4	31.9	2.5	43.6	2.6	2.9	0.80	30.4	56.3	64.9	67.6	10.4	29,167	113	
Prairie Hybrids	8290	Conv.	39.2	18.4	7.8	32.2	2.3	42.7	2.7	3.0	0.80	32.0	59.5	66.5	69.3	9.9	31,667	114	
Syngenta	NK1573-3000GT	3	39.1	19.0	7.4	32.5	2.5	43.8	2.8	2.6	0.80	31.5	57.6	66.3	69.2	10.0	34,000	115	
Agri-Gold	A641-06STXRIB	34	38.9	18.7	7.8	35.4	2.5	40.5	2.7	2.7	0.79	32.4	59.5	67.0	69.9	10.7	34,000	111	
Local Seeds	ZS1487	Conv.	38.5	20.4	7.1	36.9	2.8	40.3	3.3	2.3	0.76	29.5	54.5	64.9	67.7	12.0	32,000	114	
Masters Choice	MCT6552	4	37.6	19.1	7.5	32.8	2.7	43.3	3.1	2.8	0.78	29.0	54.3	62.5	65.4	11.4	33,167	115	
Seed Consultants, Inc.	SCS 1158YHR	16	37.5	19.3	7.4	34.3	2.5	41.9	2.9	2.6	0.78	30.8	57.8	66.5	69.3	10.5	33,000	115	
Seed Consultants, Inc.	SCS 1125YHR	16	37	16.1	7.7	32.4	2.4	42.1	3.0	2.6	0.80	32.0	57.5	67.1	69.9	9.8	33,333	112	
Mycogen	2580Q	36	35.9	21.2	8.2	31.5	2.5	42.3	3.2	3.0	0.80	30.9	56.3	64.7	67.5	10.3	34,000	115	
Mycogen	BMR15B15	34	35.2	18.6	7.1	37.7	2.3	37.3	3.0	2.3	0.78	35.5	62.5	72.8	75.9	8.8	34,000	115	
Mycogen	TMF14R77	34	32.7	20.2	7.5	37.9	2.7	35.2	3.4	2.3	0.76	30.3	55.5	65.8	68.6	11.9	31,000	114	
			111-115 day mean	41.1	19.3	7.3	33.3	2.5	43.5	2.8	2.7	0.79	31.1	57.1	65.8	68.7	10.4	33,088	
Late (116-120) RM Silage Hybrids																			
Dekalb	DKC68-69RIB	31	42.8	21.6	6.8	33.8	2.6	42.5	2.4	2.7	0.79	30.5	57.3	63.4	66.6	11.4	34,000	118	
Agri-Gold	A6652STXRIB	34	41.6	21.0	7.2	34.7	2.4	42.8	2.8	2.5	0.78	33.1	60.3	70.2	73.2	9.5	34,000	116	
Dekalb	DKC67-44RIB	31	41.5	19.1	7.0	32.2	2.4	45.0	2.8	2.9	0.80	30.5	58.3	66.4	69.4	9.9	33,667	117	
Growmark FS	FS 6797X RIB	34	40.7	20.1	7.3	37.3	2.8	38.8	2.7	2.5	0.78	31.4	57.5	64.5	67.4	12.2	34,000	117	
Agri-Gold	A647-46VT2PRO	34	40.6	20.6	7.4	35.4	2.7	41.1	2.7	2.4	0.78	28.6	56.3	64.9	67.7	11.5	33,667	117	
Seed Consultants, Inc.	SCS 1188AM	21	40.5	18.2	7.7	34.6	2.6	41.4	2.8	2.7	0.78	32.1	57.3	64.5	67.5	11.2	33,500	118	
Local Seeds	LC1688 SXXRIB	34	39.5	21.0	7.5	33.5	2.6	42.1	2.5	2.8	0.80	30.4	57.2	63.7	66.4	11.3	33,333	116	
Seedway LLC	SW8109 3000GT	3	39.5	21.6	7.1	32.4	2.3	43.8	2.6	2.3	0.80	30.6	58.4	66.2	69.1	10.1	32,333	117	
Chemgro Seeds	7658G3	3	39.2	19.8	7.3	35.7	2.5	40.6	2.8	2.6	0.78	32.1	58.4	66.1	68.9	11.2	31,167	116	
Pioneer	P1847AMXT	27	38.8	22.1	7.4	32.1	2.4	43.3	2.9	3.0	0.80	32.3	58.6	67.2	70.1	9.6	34,000	118	
Local Seeds	LC1776 VT2P	31	38.7	21.0	7.7	36.0	2.7	38.8	2.9	2.7	0.78	30.6	57.9	65.1	67.9	11.6	34,000	117	
Chemgro Seeds	7789RSX	34	38.7	22.2	7.4	33.8	2.4	42.3	2.6	2.6	0.79	32.2	59.5	66.0	68.8	10.5	33,500	117	
Seed Consultants, Inc.	SCS 1168YHR	16	38.2	17.2	7.1	35.9	2.7	40.4	3.0	2.6	0.78	30.4	56.5	65.4	68.2	11.5	33,333	116	
Masters Choice	MCT6653	3	38.2	19.3	7.7	33.7	2.6	42.2	2.8	2.6	0.79	31.5	59.1	66.4	69.3	10.4	33,000	116	
LG Seeds	LG66C32VT2PRO	31	37.5	18.3	7.5	35.4	3.0	40.0	2.9	2.7	0.78	28.3	53.3	61.3	64.4	12.7	34,000	116	
Blue River Organic Seed	74B75	Conv.	37.3	18.3	7.3	36.5	2.7	39.9	3.1	2.2	0.76	31.1	56.4	65.9	68.7	11.4	33,333	116	
Chemgro Seeds	7799D5Z	11	36.6	19.4	7.1	36.0	2.6	38.7	2.8	2.2	0.77	31.6	58.3	66.3	69.1	11.2	34,000	117	
Syngenta	NK1808-3111	5	36.5	21.9	7.5	36.1	2.7	38.3	2.6	2.5	0.78	31.8	58.4	64.4	67.2	11.8	34,000	118	
Mycogen	TMF16S87	34	36.2	19.8	7.4	35.1	2.7	38.6	2.7	2.7	0.78	29.5	55.6	61.9	64.5	12.5	32,667	116	
Mid-Atlantic Seeds, Inc.	MA5166GT3VIP	5	35.9	23.1	7.4	35.1	2.6	38.8	2.7	2.4	0.78	31.5	57.7	64.9	67.7	11.4	33,667	116	
			116-120 day mean	38.9	20.3	7.3	34.8	2.6	41.0	2.8	2.6	0.78	31.0	57.6	65.2	68.1	11.1	33,458	
			Overall Mean	40.2	19.7	7.3	33.8	2.5	42.5	2.8	2.7	0.79	31.1	57.3	65.6	68.4	10.7		
			LSD(0.1)	****	2.9	****	****	****	****	****	****	****	****	****	****	****	****	****	
			CV%	****	10.8	****	****	****	****	****	****	****	****	****	****	****	****	****	

* 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

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 E21= 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				