

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/PDMP Corn Silage Hybrid Testing Program 2019
Early-medium maturity (98-110 day RM) silage hybrids in South Central PA
Combined hybrid performance over Lancaster and Chester County



Notes: Both sites had extremely fast emergence with very tall plants and nice ears. Rainfall was adequate during pollination time and weed control and optimum fertility aided in robust yields.

Cooperators: Meadow Vista Dairy and Walmoore-Holsteins, Inc.

Brand	Hybrid	Traits*	Dry Matter		Yield		CP %DM	NDF %DM	Lignin %DM	Starch %DM	Ash %DM	Fat ² %DM	NEL Mcal/lb	NDFD				uNDF 240 %DM	Pop. plants/ac	Relative Maturity
			%**	Acre***	Tons/ Acre***	%DM								12hr	30hr	120hr	240hr			
Early (98-104 day) RM Silage Hybrids																				
Mid-Atlantic Seeds, Inc.	MA8017VT2P	31	38.5	20.0	6.8	33.9	2.6	41.2	2.8	2.5	0.78	31.0	56.9	67.0	69.9	10.6	33,417	101		
Mid-Atlantic Seeds, Inc.	MA7002HDDR	RR2	35.7	19.7	8.0	39.3	3.0	30.9	3.2	2.3	0.76	30.1	55.5	63.8	66.6	13.2	32,667	100		
Seed Consultants, Inc.	EX-SC 105YHR	21	34.7	21.3	7.4	35.4	2.6	37.5	3.0	2.3	0.78	31.7	58.9	68.1	71.0	10.7	33,667	104		
Local Seeds	LC0297 SXRIB	34	34.5	22.9	7.1	36.3	2.7	38.8	3.1	2.5	0.77	31.4	57.1	67.2	70.1	10.9	33,917	102		
98-104 day means			35.8	21.0	7.3	36.2	2.7	37.1	3.0	2.4	0.77	31.1	57.1	66.5	69.4	11.3	33,417			
Medium (105-110 day) RM Silage Hybrids																				
LG Seeds	LG5525VT2RIB	31	38.6	21.5	6.6	35.1	2.6	41.4	2.7	2.7	0.79	32.1	58.5	68.7	71.6	10.0	33,083	105		
Agri-Gold	A636-56STXRIB	34	36.4	20.9	7.0	34.7	2.6	39.8	2.8	2.5	0.78	31.7	58.3	68.3	71.2	10.0	33,833	106		
Local Seeds	LC0657 SXRIB	34	35.9	20.2	7.5	35.2	2.9	39.5	2.9	2.4	0.77	29.1	53.9	63.1	65.8	12.1	34,000	106		
Local Seeds	LC0877 VT2PRIB	31	34.9	21.9	7.3	37.7	2.7	35.2	3.0	2.3	0.77	31.8	57.0	67.3	70.2	11.4	33,417	108		
Prairie Hybrids	5787	Conv.	34.8	21.1	7.2	32.2	2.5	42.0	2.9	2.5	0.79	30.6	57.0	67.6	70.5	9.5	34,000	108		
Agri-Gold	A638-74VT2RIB	31	34.3	22.7	7.2	40.4	3.1	33.7	3.2	2.2	0.75	30.3	54.7	64.9	67.7	13.1	33,667	108		
Mid-Atlantic Seeds, Inc.	MA8074VT2P	31	34.3	21.6	7.4	36.8	2.7	38.0	3.0	2.4	0.77	31.5	56.6	66.9	69.8	11.2	33,833	107		
Agri-Gold	A640-77STXRIB	34	34.2	23.4	7.2	33.9	2.5	38.3	2.8	2.5	0.79	31.4	58.4	67.3	70.2	10.1	34,000	110		
LG Seeds	LG5590VT2RIB	31	33.9	23.1	6.9	38.2	2.9	35.3	2.8	2.3	0.76	30.8	55.9	65.9	68.7	12.0	33,583	109		
Agri-Gold	A639-41STXRIB	34	33.8	20.5	7.5	36.2	2.8	36.6	2.9	2.2	0.77	30.1	56.1	65.3	68.1	11.6	34,000	109		
Seed Consultants, Inc.	EX-SC 110YHR	21	33.6	25.1	7.6	36.4	2.7	35.3	3.3	2.3	0.77	30.9	57.8	66.9	69.8	11.0	33,929	108		
Seed Consultants, Inc.	SCS 1069YHR	16	33.5	22.6	7.4	34.8	2.4	38.9	2.8	2.4	0.78	32.5	59.2	69.1	72.1	9.7	33,417	106		
Pioneer	P0843AM	21	33.1	22.9	7.6	35.8	2.5	37.3	3.1	2.3	0.78	32.8	59.5	69.5	72.4	9.9	34,000	108		
Masters Choice	MCT5790	Conv.	33.0	19.9	7.7	36.6	2.8	34.7	2.8	2.5	0.78	30.0	56.4	64.0	66.8	12.2	33,583	107		
Pioneer	P0789AMXT	27	32.6	22.3	7.3	40.1	3.1	32.0	3.2	2.1	0.75	29.0	55.1	64.8	67.5	13.1	33,750	107		
Mycogen	TMF2H708	34	32.4	22.3	7.2	40.5	3.1	31.9	3.0	2.0	0.74	28.0	54.7	65.3	68.1	13.0	33,750	109		
Agri-Gold	A636-11VT2RO	31	32.3	21.5	7.5	37.5	2.8	34.4	3.0	2.2	0.77	30.8	56.5	64.8	67.5	12.2	34,000	106		
Pioneer	P1089AMXT	27	32.0	23.3	7.5	36.3	2.6	34.7	3.2	2.2	0.77	31.6	58.1	68.2	71.1	10.5	33,833	110		
Blue River Organic Seed	62G22	Conv.	31.9	22.0	7.1	37.2	2.7	37.0	2.9	2.6	0.78	30.8	55.0	64.1	66.8	12.4	34,000	110		
Channel	209-15STXRIB	34	31.6	23.8	7.9	35.7	2.6	37.3	3.0	2.4	0.78	32.3	58.7	67.9	70.8	10.5	33,500	109		
Channel	210-98STXRIB	34	31.5	20.8	7.5	40.0	2.8	31.2	2.9	2.0	0.76	30.7	59.1	66.6	69.5	12.2	33,500	110		
Mycogen	2098Q	36	31.1	22.9	7.4	36.5	2.6	34.7	3.2	2.1	0.77	31.6	57.4	68.3	71.2	10.6	33,583	110		
Seed Consultants, Inc.	SCS 1087YHR	16	30.6	22.2	7.6	37.4	2.5	33.0	3.2	2.0	0.77	32.7	60.5	70.2	73.2	10.1	33,333	108		
Mid-Atlantic Seeds, Inc.	MA7084HDDR	RR2	30.6	17.5	7.9	39.8	3.0	29.4	3.2	2.1	0.75	29.0	55.6	63.6	66.3	13.5	33,583	108		
Agri-Gold	A639-70STX	34	30.6	21.3	7.7	37.0	2.7	36.7	3.0	2.4	0.77	32.5	58.1	67.8	70.6	11.4	33,583	109		
105-110 day means			33.3	21.9	7.4	36.9	2.7	35.9	3.0	2.3	0.77	31.0	57.1	66.6	69.5	11.3	33,710			
Overall Mean			33.6	21.8	7.4	36.8	2.7	36.1	3.0	2.3	0.77	31.0	57.1	66.6	69.5	11.3				
LSD(0.1)			2.7	3.0	0.5	2.9	0.3	3.9	0.4	0.2	0.02	2.3	2.7	3.1	3.2	1.8				
CV%			5.9	10.2	4.6	5.9	8.4	8.0	9.2	7.8	1.94	5.4	3.5	3.4	3.4	11.9				

* 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 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: 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				