

# **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**



Medium maturity (100-111 day RM) silage hybrids in Central PA

Combined Hybrid performance across Bedford, Blair, and Centre Counties

Notes: Weed, disease, and insect pressure were low at all three locations. Rainfall was adequate during pollination time and stand performance were good. Corn plants were tall and ears were girthy. Microbes might have immobilized the available N as they broke down the carbon from the previous rye crop at Penn England.

Cooperators: Kulp Family Dairy, Penn-England Farms, and Dan Ulmer

Brand	Hybrid	Traits*	Dry Matter		Yield		CP %DM	NDF %DM	Lignin %DM	Starch %DM	Ash %DM	Fat <sup>2</sup> %DM	NEL Mcal/lb	NDFD				uNDF %DM	Pop. plants/ac	Relative Maturity
			%**	Acre***	12hr	30hr								120hr	240hr					
<b>Early (100-104) RM Silage Hybrids</b>																				
Syngenta	NK0472-3120	6	45.0	18.6	7.0	37.2	3.0	40.3	2.8	2.8	0.77	30.1	54.4	62.6	65.7	12.8	34,000	104		
Chemgro Seeds	6295RDP	31	42.1	20.5	6.5	34.0	2.5	42.2	2.9	2.6	0.79	31.8	57.4	67.6	70.5	10.1	32,833	102		
Growmark FS	FS 53R85SS	34	40.8	20.5	6.7	34.0	2.6	42.1	2.7	2.7	0.79	31.3	57.4	66.4	69.3	10.5	34,000	103		
Local Seeds	LC0488 SXXRIB	34	40.6	21.4	6.2	34.0	2.5	43.4	2.4	2.7	0.79	31.5	56.5	66.0	69.0	10.6	33,603	104		
LG Seeds	LG51C48VT2PRO	31	40.3	20.9	6.7	35.0	2.6	41.5	2.6	2.7	0.79	31.3	57.5	66.3	69.3	10.8	33,833	101		
Seed Consultants, Inc.	SCS 1018YHR	16	39.0	21.1	6.6	34.2	2.3	42.4	2.8	2.6	0.79	33.7	60.8	71.2	74.2	9.4	33,889	101		
Syngenta	NK0440-3122	7	38.2	20.3	6.6	37.0	2.7	39.3	2.7	2.4	0.77	31.1	56.6	65.4	68.4	11.7	33,722	104		
Blue River Organic Seed	51T59	Conv.	37.8	20.0	6.4	36.1	2.7	40.4	2.7	2.6	0.78	31.6	55.5	65.7	68.7	11.3	33,778	103		
Seed Consultants, Inc.	EX-SC 105YHR	21	37.1	20.0	6.9	34.3	2.4	41.2	2.8	2.5	0.79	32.8	59.3	69.4	72.4	9.5	33,056	104		
<b>100-104 day means</b>			<b>40.1</b>	<b>20.4</b>	<b>6.6</b>	<b>35.1</b>	<b>2.6</b>	<b>41.4</b>	<b>2.7</b>	<b>2.6</b>	<b>0.78</b>	<b>31.7</b>	<b>57.3</b>	<b>66.7</b>	<b>69.7</b>	<b>10.7</b>	<b>33,635</b>			
<b>Medium (105-111) RM Silage Hybrids</b>																				
LG Seeds	LG5525VT2RIB	31	42.1	19.9	6.3	35.4	2.6	42.2	2.5	2.7	0.79	31.7	57.6	66.5	69.4	10.8	34,000	105		
Local Seeds	LC0657 SXXRIB	34	40.5	19.5	7.0	34.5	2.7	41.8	2.7	2.5	0.78	29.7	55.2	63.6	66.8	11.2	33,833	106		
Syngenta	NK0968-3000GT	3	40.1	21.1	6.7	35.2	2.7	41.4	2.7	2.5	0.78	30.9	56.8	64.9	67.8	11.4	33,743	109		
Dekalb	DKC55-37RIB	34	39.9	19.9	6.9	36.1	2.7	39.0	3.0	2.5	0.77	30.0	56.7	65.2	67.9	11.4	33,751	105		
Dekalb	DKC55-85RIB	31	39.5	19.4	6.7	34.0	2.4	42.9	2.5	2.7	0.80	32.9	58.9	67.0	70.7	10.0	33,778	105		
Prairie Hybrids	5787	Conv.	39.3	20.1	6.4	34.3	2.6	41.6	2.7	2.5	0.79	30.8	56.6	65.5	68.3	10.9	34,000	108		
Local Seeds	LC0877 VT2PRIB	31	38.8	19.9	6.8	36.7	2.6	39.0	2.8	2.5	0.78	32.7	58.4	67.2	70.3	10.9	33,706	108		
Seedway LLC	SW5440 GENSS (RIB)	34	38.6	19.8	6.8	35.9	2.8	38.7	2.7	2.6	0.78	30.3	55.7	64.2	67.1	11.8	33,696	105		
Channel	211-44STXRIB	34	38.1	21.3	6.5	35.6	2.7	40.6	2.6	2.6	0.78	31.1	57.1	65.0	68.0	11.4	33,833	111		
Seedway LLC	SW6540 GENVT2P (RIB)	31	38.0	20.3	6.8	33.8	2.5	41.4	2.7	2.8	0.80	31.5	58.4	66.1	69.1	10.5	33,778	107		
Channel	209-15STXRIB	34	38.0	20.4	7.0	33.5	2.4	42.6	2.6	2.7	0.80	33.0	59.0	67.9	70.8	10.0	34,000	109		
Dekalb	DKC59-82RIB	31	37.8	21.3	6.6	34.5	2.7	41.4	2.7	2.6	0.78	30.0	56.2	64.6	67.7	11.4	34,000	109		
Local Seeds	LCX07-90	Conv.	37.8	20.5	6.6	37.3	3.0	37.8	2.6	2.5	0.77	28.3	53.7	62.2	65.2	13.0	33,667	107		
Chemgro Seeds	6859V3	5	37.7	20.4	6.6	36.7	2.5	38.3	2.7	2.4	0.78	33.0	58.2	67.1	70.0	11.1	33,806	108		
Prairie Hybrids	5200	Conv.	37.6	21.1	6.7	34.4	2.5	41.0	2.7	2.5	0.79	32.8	58.9	67.9	70.8	10.3	33,667	108		
Dekalb	DKC59-07RIB	34	37.4	21.0	6.5	35.8	2.6	39.4	2.6	2.6	0.79	31.5	57.8	66.1	69.0	11.1	34,000	109		
Growmark FS	FS 5699X RIB	34	37.4	19.5	6.7	36.8	2.7	37.8	2.7	2.6	0.78	30.4	55.9	64.3	67.1	12.2	31,889	105		
Syngenta	NK0886-3110	6	37.3	19.1	6.8	34.4	2.6	40.8	2.9	2.6	0.78	30.7	57.1	65.2	68.2	10.7	34,000	108		
Pioneer	P0789AMXT	27	37.2	22.1	6.5	36.9	2.8	38.8	2.8	2.4	0.76	30.1	55.4	65.2	68.0	11.9	33,833	107		
Local Seeds	ZS1098 3330EZ	9	37.1	20.6	7.1	37.4	2.7	37.4	2.8	2.3	0.77	31.8	57.3	65.2	68.1	12.0	33,463	110		
Seed Consultants, Inc.	EX-SC 110YHR	21	37.1	19.8	6.8	36.4	2.6	36.3	3.0	2.4	0.78	32.0	58.4	66.8	69.7	10.9	31,242	108		
Growmark FS	FS 6199X RIB	34	36.9	19.3	6.5	35.4	2.6	40.1	2.6	2.6	0.78	30.8	57.7	65.2	68.0	11.3	33,611	110		
Prairie Hybrids	5447	Conv.	36.8	19.5	7.0	36.1	2.6	38.2	2.7	2.5	0.78	31.6	57.7	66.0	68.8	11.3	33,833	109		
Masters Choice	MCT5790	Conv.	36.8	20.1	7.1	35.5	2.5	39.7	2.8	2.5	0.78	32.0	57.7	66.3	69.2	11.0	33,778	107		
Pioneer	P0843AM	21	36.6	20.0	6.9	35.6	2.5	39.4	2.7	2.5	0.78	32.9	58.2	67.8	70.7	10.4	33,667	108		
Nutrien Ag Solutions/Dyna-Gro	D495S70	34	36.5	19.7	6.7	34.7	2.6	40.2	2.6	2.7	0.79	30.8	57.8	65.1	67.9	11.2	33,722	109		
Mycogen	2098Q	36	36.5	21.0	6.7	36.9	2.6	38.1	2.7	2.4	0.77	32.3	57.5	67.9	70.8	10.8	33,778	110		
Pioneer	P1089AMXT	27	36.1	20.9	6.9	35.7	2.5	37.7	3.0	2.3	0.78	32.3	58.6	68.0	71.0	10.4	34,000	110		
Channel	210-98STXRIB	34	35.6	19.7	6.6	37.2	2.6	37.4	2.6	2.4	0.78	31.7	58.3	66.3	69.1	11.4	33,611	110		
Blue River Organic Seed	62G22	Conv.	35.2	22.0	6.7	36.2	2.7	38.0	2.8	2.7	0.78	30.6	55.5	64.3	67.1	12.0	34,000	110		
Seed Consultants, Inc.	SCS 1069YHR	16	35.1	19.7	6.9	35.1	2.5	40.1	2.9	2.6	0.79	31.7	57.5	67.0	69.9	10.6	33,973	106		
Seed Consultants, Inc.	SCS 1087YHR	16	34.5	19.9	6.6	37.6	2.6	37.0	2.6	2.2	0.77	32.5	58.7	68.1	71.0	11.0	33,889	108		
Mycogen	TMF2H708	34	33.6	19.4	6.8	41.6	3.1	31.4	3.0	2.0	0.74	29.5	56.2	64.6	67.3	13.6	32,584	109		
<b>105-111 day means</b>			<b>37.5</b>	<b>20.2</b>	<b>6.7</b>	<b>35.9</b>	<b>2.6</b>	<b>39.3</b>	<b>2.7</b>	<b>2.5</b>	<b>0.78</b>	<b>31.3</b>	<b>57.3</b>	<b>65.9</b>	<b>68.8</b>	<b>11.2</b>	<b>33,640</b>			
<b>Overall Mean</b>			<b>38.1</b>	<b>20.3</b>	<b>6.7</b>	<b>35.7</b>	<b>2.6</b>	<b>39.8</b>	<b>2.7</b>	<b>2.5</b>	<b>0.78</b>	<b>31.4</b>	<b>57.3</b>	<b>66.1</b>	<b>69.0</b>	<b>11.1</b>				
<b>LSD(0.1)</b>			<b>2.6</b>	<b>2.2</b>	<b>0.5</b>	<b>2.8</b>	<b>0.3</b>	<b>3.8</b>	<b>0.4</b>	<b>0.2</b>	<b>0.02</b>	<b>2.1</b>	<b>2.0</b>	<b>2.5</b>	<b>2.6</b>	<b>1.6</b>				
<b>CV%</b>			<b>5.2</b>	<b>8.0</b>	<b>5.1</b>	<b>5.9</b>	<b>7.8</b>	<b>7.1</b>	<b>10.8</b>	<b>6.5</b>	<b>1.8</b>	<b>4.8</b>	<b>2.6</b>	<b>2.8</b>	<b>2.8</b>	<b>10.4</b>				

\* 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
<b>Agrisure</b>					
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	
<b>Herculex</b>					
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	
<b>Optimum</b>					
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
<b>Yieldgard/Genuity</b>					
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
<b>Others</b>					
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
	<b>BCW</b> = black cutworm	<b>SB</b> = stalk borer	<b>GT</b> = glyphosate tolerant		
	<b>CEW</b> = corn earworm	<b>SWCB</b> = southern corn borer	<b>LL</b> = Liberty Link, glufosinate tolerant		
	<b>ECB</b> = European corn borer	<b>TAW</b> = true armyworm	<b>RR2</b> = Roundup Ready 2, glyphosate tolerant		
	<b>FAW</b> = fall armyworm	<b>WBC</b> = western bean cutworm			
	<b>RW</b> = corn rootworm				