

# **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 maturity (85-103 day RM) silage hybrids

### Combined Hybrid performance across Bradford and Centre County

Notes: The preplant nitrogen application had diminished by grain fill time at Rock Springs and yields were a little lower than desired. There was moderate bear damage at Lance Shedden's trial. Fertility and rainfall were adequate this year at both locations. The Cambria location was excluded from the combined data due to variability between reps.

Cooperators: Lance Shedden and PSU Agronomy Farm

Brand	Hybrid	Traits*	Dry Matter		Yield Tons/ Acre***	CP %DM	NDF %DM	Lignin %DM	Starch %DM	Ash %DM	Fat <sup>2</sup> %DM	NEL Mcal/lb	NDFD				uNDF 240 %DM	Pop. plants/ac	Relative Maturity
			%**	%**									12hr	30hr	120hr	240hr			
<b>Very Early (85-94 day) RM Silage Hybrids</b>																			
Masters Choice	MCT3891	1	42.6	15.3	7.3	35.2	2.5	40.5	2.8	2.6	0.79	30.7	57.6	64.9	67.7	11.4	29,925	88	
Growmark FS	FS 4095X RIB	34	41.2	18.1	6.3	31.8	2.4	45.1	2.6	2.6	0.80	30.2	58.2	66.6	69.4	9.8	33,083	90	
Pioneer	P9377AMXT	27	41.0	18.6	7.0	34.1	2.5	42.3	2.9	2.5	0.79	30.5	57.4	65.9	68.7	10.7	32,250	93	
Hubner	H6038RCSS	34	40.6	17.2	6.7	32.5	2.5	43.4	2.9	2.8	0.80	30.0	57.0	65.8	68.6	10.2	33,723	89	
Local Seeds	AV4994 AM	21	39.6	18.7	6.9	33.2	2.4	42.5	3.0	2.7	0.79	30.8	58.3	67.5	70.4	9.8	33,182	94	
Local Seeds	LC9278 SXRIB	34	39.5	18.1	6.7	34.0	2.6	42.5	2.8	2.8	0.79	30.9	57.2	66.4	69.3	10.5	33,500	92	
LG Seeds	LG44C27VT2RIB	31	38.0	20.4	6.4	36.2	2.7	40.4	2.9	2.5	0.78	30.6	56.4	66.4	69.3	11.1	34,000	94	
Channel	192-98STXRIB	34	36.6	18.7	7.6	34.1	2.7	40.5	3.0	2.8	0.79	29.1	56.0	63.7	66.4	11.5	33,920	92	
<b>85-94 day means</b>			<b>39.9</b>	<b>18.1</b>	<b>6.9</b>	<b>33.9</b>	<b>2.5</b>	<b>42.2</b>	<b>2.9</b>	<b>2.7</b>	<b>0.79</b>	<b>30.3</b>	<b>57.3</b>	<b>65.9</b>	<b>68.7</b>	<b>10.6</b>	<b>32,948</b>		
<b>Early (95-103 day) RM Silage Hybrids</b>																			
Masters Choice	MCT4572	4	41.2	18.1	6.6	32.8	2.4	44.0	2.7	2.7	0.80	31.3	57.9	66.5	69.3	10.1	32,601	95	
Local Seeds	LC9888 VT2PRIB	31	40.4	18.8	6.6	32.3	2.5	44.4	2.7	2.8	0.80	29.9	56.8	64.6	67.3	10.6	33,000	98	
Hubner	H6124RCSS	34	40.4	18.0	6.6	33.7	2.5	42.5	2.7	2.7	0.79	30.6	57.3	66.2	69.1	10.5	33,750	96	
Dekalb	DKC45-07RIB	34	40.3	18.4	7.2	31.8	2.3	44.0	3.0	2.7	0.80	30.7	58.2	67.4	70.3	9.4	33,610	95	
Dekalb	DKC47-55RIB	31	39.9	20.9	6.5	34.2	2.5	42.2	2.7	2.7	0.79	31.5	58.1	67.0	69.8	10.4	33,500	97	
Mycogen	TMF2Q419	34	39.7	18.6	6.6	34.9	2.6	41.0	2.9	2.7	0.79	33.5	58.5	68.3	71.2	10.0	33,560	96	
Channel	199-11STXRIB	34	39.5	21.4	6.4	33.4	2.5	42.8	2.8	2.8	0.80	30.8	57.7	66.3	69.2	10.3	33,000	99	
Chemgro Seeds	5909RSX	34	38.0	19.6	6.2	34.5	2.6	40.5	2.7	2.6	0.79	29.8	56.8	65.3	68.1	11.1	32,790	99	
Seedway LLC	SV4000 GENSS (RIB)	34	38.0	19.3	6.7	33.7	2.5	41.5	2.8	2.6	0.79	31.4	58.3	67.1	69.9	10.2	32,917	98	
Hubner	H6172RCSS	34	37.8	20.6	6.9	34.8	2.6	40.6	2.9	2.4	0.78	29.5	57.0	65.7	69.3	10.8	33,167	98	
Growmark FS	FS 5090X RIB	34	37.8	19.8	6.8	33.3	2.4	41.5	2.9	2.6	0.79	30.7	58.0	67.0	69.9	10.1	32,917	100	
Local Seeds	ZS9796 3220EZ	8	37.7	20.3	6.8	32.5	2.6	43.1	2.9	2.7	0.79	28.6	55.3	63.7	66.4	10.9	33,750	97	
Seed Consultants, Inc.	SCS 978AMXT	27	37.7	17.7	6.9	34.0	2.5	41.2	3.0	2.6	0.79	30.9	58.1	67.5	70.4	10.1	33,750	97	
Agri-Gold	A632-07STX	34	37.5	20.4	6.4	34.3	2.5	40.9	2.6	2.7	0.80	32.0	58.5	67.6	70.5	10.2	33,500	102	
LG Seeds	LG51C48VT2PRO	31	37.2	20.4	6.5	34.2	2.4	40.8	2.6	2.7	0.80	32.6	59.4	68.4	71.3	9.8	33,417	101	
Pioneer	P9998AMXT	27	36.5	17.5	6.7	33.4	2.5	41.8	3.0	2.7	0.79	29.7	57.3	65.9	68.7	10.5	32,417	99	
Agri-Gold	A6267STXRIB	34	35.8	21.3	6.6	35.4	2.7	38.8	3.0	2.5	0.78	29.6	57.2	65.4	68.2	11.3	33,417	102	
Dekalb	DKC53-27RIB	34	35.6	18.4	6.6	34.5	2.5	39.6	2.8	2.5	0.79	32.2	58.3	66.5	69.3	10.6	33,750	103	
Mycogen	TMF01R87	34	34.9	21.2	6.3	39.6	2.7	34.6	2.8	2.4	0.77	31.6	58.1	66.7	69.6	12.1	33,667	101	
Pioneer	P0242AMXT	27	34.8	17.5	6.4	34.3	2.4	40.8	3.0	2.3	0.78	30.8	58.2	68.6	71.5	9.8	30,583	102	
Blue River Organic Seed	48G35	Conv.	34.8	18.7	6.5	36.8	2.6	37.2	3.1	2.5	0.77	30.9	57.6	67.1	70.0	11.1	33,417	102	
Seed Consultants, Inc.	SCS 1018YHR	16	34.6	21.3	6.8	33.8	2.2	41.0	2.9	2.6	0.79	33.8	61.1	71.5	74.6	8.7	33,500	101	
Seed Consultants, Inc.	EX-SC 105YHR	21	32.6	19.5	7.0	35.2	2.3	37.8	3.1	2.4	0.78	32.3	60.4	69.4	72.4	9.7	32,917	104	
<b>95-103 day means</b>			<b>37.5</b>	<b>19.5</b>	<b>6.6</b>	<b>34.2</b>	<b>2.5</b>	<b>41.0</b>	<b>2.9</b>	<b>2.6</b>	<b>0.79</b>	<b>31.1</b>	<b>58.0</b>	<b>66.9</b>	<b>69.8</b>	<b>10.3</b>	<b>33,169</b>		
<b>Overall Mean</b>			<b>38.1</b>	<b>19.1</b>	<b>6.7</b>	<b>34.1</b>	<b>2.5</b>	<b>41.3</b>	<b>2.9</b>	<b>2.6</b>	<b>0.79</b>	<b>30.9</b>	<b>57.8</b>	<b>66.7</b>	<b>69.6</b>	<b>10.4</b>	<b>33,112</b>		
<b>LSD(0.1)</b>			<b>2.5</b>	<b>2.7</b>	<b>0.6</b>	<b>2.8</b>	<b>0.3</b>	<b>3.9</b>	<b>0.3</b>	<b>0.2</b>	<b>0.02</b>	<b>1.5</b>	<b>1.8</b>	<b>2.1</b>	<b>2.2</b>	<b>1.4</b>	<b>1,510</b>		
<b>CV%</b>			<b>4.9</b>	<b>10.5</b>	<b>6.1</b>	<b>6.1</b>	<b>7.6</b>	<b>7.0</b>	<b>8.2</b>	<b>6.2</b>	<b>1.74</b>	<b>3.5</b>	<b>2.3</b>	<b>2.3</b>	<b>2.4</b>	<b>10.2</b>	<b>3</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				