

# 2018 *Penn State/PDMP Corn Silage Hybrid Performance Trial Results*

Prepared by Greg W. Roth, James A. Breining, Alan R. Cook, and Jessica A. Williamson (Department of Plant Science).

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 County
Cooperator	Zugstead Farms
Planting Date	May 9, 2018
Soil Type	MeB Mertz Cherty silt loam 3-8 % slope
Herbicides	<b>pre-</b> 2 qts-Roundup <b>post-</b> 2qts - Harness Xtra 5.6L applied 6/5/18
Previous Crop	Corn Silage
Tillage	None
Starter Fertilizer	10.5 gal of 10-34-0
Insecticide	Force 3G
Manure	9000 gal - dairy
Fertilizer	40 units AMS+40 units ESN
Harvest Date	September 7, 2018

### Field Summary:

This was a good yielding location. Two weeks of rain and cooler than average temperatures right after planting didn't seem to hinder emergence. Weed control and fertility levels were adequate. Heavy rain fell from mid-July through most of September. Some denitrification occurred and the yield levels were slightly below expectations.

### Weather Summary:

Month	Precip.	GDD
May	5.22	370
June	5.01	554
July	7.05	735
August	4.82	758
September	1.24	172
Seasonal Total	<b>23.34</b>	<b>2589</b>

Precip. Data:

<http://www.theweathercollector.com/?gclid=Cj0KCQjw6fvdBRCbARIsABGZ-vQL2zIhMnTDKuqmXNfv18X7Hn8ZRJ->

GDD data:

<http://climatesmartfarming.org/tools/csf-growing-degree-day-calculator/>

**Penn State/PDMP Corn Silage Hybrid Testing Program 2018**

**BMR (114-115 day RM) silage hybrids in south central PA**

**Juniata County location**

Notes: SEE BACKGROUND TAB

Cooperator: Zugstead Farms

Brand	Hybrid	Traits*	Dry	Yield	CP	NDF	Lignin	Starch	Ash	Fat <sup>2</sup>	NEL	NDFD			uNDF	Pop.	Relative
			Matter	Tons/								30hr	120hr	240hr	240hr		
			%**	Acre***	%	%	%	%	%	%	Mcal/lb	%NDF	%NDF	%NDF	%NDF		
<b>BMR (114-115 day) RM Silage Hybrids</b>																	
Mycogen	BMR14B96	34	38.7	15.1	8.8	37.5	2.2	35.8	3.5	2.6	0.77	66.6	75.1	78.3	21.7	33,667	114
Mycogen	BMR15B15	34	37.2	19.4	8.2	38.8	2.3	35.8	2.9	2.8	0.77	64.3	77.2	80.5	19.5	34,000	115
		<b>Overall Mean</b>	<b>37.9</b>	<b>17.3</b>	<b>8.5</b>	<b>38.2</b>	<b>2.3</b>	<b>35.8</b>	<b>3.2</b>	<b>2.7</b>	<b>0.77</b>	<b>65.4</b>	<b>76.2</b>	<b>79.4</b>	<b>20.6</b>	<b>33,833</b>	
		<b>LSD(0.1)</b>	<b>6.8</b>	<b>3.5</b>	<b>0.4</b>	<b>9.9</b>	<b>0.9</b>	<b>11.4</b>	<b>0.7</b>	<b>0.7</b>	<b>0.06</b>	<b>5.6</b>	<b>4.9</b>	<b>5.2</b>	<b>5.2</b>	<b>973</b>	
		<b>CV%</b>	<b>7.5</b>	<b>8.5</b>	<b>1.7</b>	<b>10.9</b>	<b>15.8</b>	<b>13.3</b>	<b>9.3</b>	<b>10.1</b>	<b>3.30</b>	<b>3.6</b>	<b>2.7</b>	<b>2.7</b>	<b>10.5</b>	<b>1</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.

<sup>1</sup> - NS = Not Significant , <sup>2</sup> - 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 GT/CB/LL,3010A	Cry1Ab	ECB SWCB	---	GT LL
3	Agrisure 3000 GT, 3011A	Cry1Ab, mCry3A	ECB SWCB	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	GT LL
6	Agrisure 3120 E-Z Refuge	Cry1Ab, Cry1F	BCW ECB FAW SB SWCB	FAW WBC	REFER TO BAG FOR SPECIFIC LETTER CODE: EZO=GT ONLY EZ1= GT LL
7	Agrisure 3122 E-Z Refuge	Cry1Ab,Cry1F, mCry3A, Cry34/35Ab1	BCW ECB FAW SB SWCB	FAW WBC RW	
8	Agrisure Viptera 3220 E-Z Refuge	Cry1Ab, Cry1F, Vip3A	BCW CEW ECB FAW SB SWCB TAW WBC	---	
9	Agrisure Duracade 5122 E-Z Refuge	Cry1Ab, Cry1F, mCry3A, eCry3.1Ab	BCW ECB FAW SB SWCB	FAW WBC RW	
10	Agrisure Duracade 5222 E-Z Refuge	Cry1Ab, Cry1F, Vip3A, mCry3A, eCry3.1Ab	BCW CEW ECB FAW SB SWCB TAW WBC	RW	
<b>Herculex</b>					
11	Herculex 1 (HX1)	Cry1F	BCW ECB FAW SB SWCB	FAW SWCB WBC	LL RR2 (most)
12	Herculex RW (HXRW)	Cry34/35Ab1	---	RW	
13	Herculex Xtra (HXX)	Cry1F, Cry34/35Ab1	BCW ECB FAW SB SWCB	FAW SWCB WBC RW	
<b>Optimum</b>					
14	TRIssect (CHR)	Cry1F, mCry3A	BCW ECB FAW SB SWCB	FAW SWCB WBC RW	LL RR2
15	Intrasect (YHR)	Cry1F, Cry1Ab	BCW ECB FAW SB SWCB	FAW WBC	LL RR2
16	Intrasect TRIssect (CYHR)	Cry1Ab, Cry1F, mCry3A	BCW ECB FAW SB SWCB	FAW WBC RW	LL RR2
17	Leptra (VYHR)	Cry1F, Cry1Ab, Vip3A	BCW CEW ECB FAW SB SWCB TAW WBC	---	LL RR2
18	Intrasect Xtra (YXR)	Cry1F, Cry1Ab, Cry34/35Ab1	BCW ECB FAW SB SWCB	FAW WBC RW	LL RR2
19	Intrasect Xtreme (CYXR)	Cry1F, Cry1Ab, mCry3A, Cry34/35Ab1	BCW ECB FAW SB SWCB	FAW WBC RW	LL RR2
20	AcreMax (AM)	Cry1F, Cry1Ab	BCW ECB FAW SB SWCB	FAW WBC	LL RR2
21	AcreMax CRW (AMRW)	Cry34/35Ab1	---	RW	LL RR2
22	AcreMax1 (AM1)	Cry1F, Cry34/35Ab1	BCW ECB FAW SB SWCB	FAW SWCB WBC RW	LL RR2
23	AcreMax Leptra (AML)	Cry1Ab, Cry1F, Vip3A	BCW ECB FAW SB SWCB TAW WBC CEW	---	LL RR2
24	AcreMax TRIssect (AMT)	Cry1F, Cry1Ab, mCry3A	BCW ECB FAW SB SWCB	FAW WBC RW	LL RR2
25	AcreMax Xtra (AMX)	Cry1F, Cry1Ab, Cry34/35Ab1	BCW ECB FAW SB SWCB	FAW WBC RW	LL RR2
26	AcreMax Xtreme (AMXT)	Cry1F, Cry1Ab, mCry3A, Cry34/35Ab1	BCW ECB FAW SB SWCB	FAW WBC RW	LL RR2
<b>Yieldgard/Genuity</b>					
27	YieldGard CB (YGCB)	Cry1Ab	ECB SWCB	---	RR2
28	YieldGard VT Rootworm	Cry3Bb1	---	RW	RR2
29	YieldGard VT Triple	Cry1Ab, Cry3Bb1	ECB SWCB	RW	RR2
30	Genuity VT Double PRO (or as RIB complete)	Cry1A.105, Cry2Ab2	CEW ECB FAW SB SWCB	CEW	RR2
31	Genuity VT Triple PRO (or as RIB complete)	Cry1A.105, Cry2Ab2, Cry3Bb1	CEW ECB FAW SB SWCB	CEW RW	RR2
32	Genuity SmartStax RIB Complete	Cry1A.105, Cry2Ab2, Cry1F, Cry3Bb1, Cry34/35Ab1	BCW CEW ECB FAW SB SWCB WBC	RW	LL RR2
33	Trecepta (or RIB complete)	Cry1A.105, Cry2Ab2, Vip3A	BCW CEW ECB FAW SB SWCB TAW WBC	---	RR2
<b>Others</b>					
34	Smartstax (or as Refuge Advanced)	Cry1A.105, Cry2Ab2, Cry1F, Cry3Bb1, Cry34/35Ab1	BCW CEW ECB FAW SB SWCB	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				