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: Per	nn State/PDMP Corn Sila	ge Hybrid Evaluation	Trials				
Site:	Bainbridge, PA						
Cooperator	Meadow Vista Dairy						
Planting Date	May 8, 2018						
Soil Type	Lansdale loam, 3 to 8 percent						
Herbicides pre-	2 qt Credit Extra, 3 qt Acuron						
post-	none						
Previous Crop	Corn Silage and Ryelage						
Tillage	None						
Starter Fertilizer	10.5 gal of 10-34-0						
Insecticide	Force 3G						
Manure	9000 gallons dairy						
Fertilizer	None at preplant, 80 units of I	N sidedressed					
Harvest Date	September 6, 2018						
Field Summary:	Bainbridge – Field conditions were good, however, 2 weeks of cool and wet weather 3 day planting caused a few plots to be dropped due to low stand counts. Most plots had very g stand counts and performance was very good at this site.						
Weather Summary:	May 8th-Se						
Month	Precip.	GDD					
Mari		JUU					
May	5.49	381					
June	•						
-	5.49	381					
June	5.49 4.97	381 597					
June July	5.49 4.97 13.55	381 597 764					
June July August	5.49 4.97 13.55 6.59	381 597 764 787					
June July August September	5.49 4.97 13.55 6.59 2.08	381 597 764 787 138 2667	vdBRCbARIsABGZ-				

Penn State/PDMP Corn Silage Hybrid Testing Program 2018 BMR (114-115 day RM) silage hybrids in south central PA Lancaster County location

Notes: SEE BACKGROUND TAB Cooperator: Meadow Vista Dairy



			Dry	Yield									NDFD		uNDF		
			Matter	Tons/	CP	NDF	Lignin	Starch	Ash	Fat ²	NEL	30hr	120hr	240hr	240hr	Pop.	Relative
Brand	Hybrid	Traits*	%**	Acre***	%	%	%	%	%	%	Mcal/lb	%NDF	%NDF	%NDF	%NDF	plants/ac	Maturity
Mycogen	BMR14B96	34	44.1	11.0	8.3	37.4	2.0	37.1	3.2	2.5	0.78	67.2	76.5	79.7	20.3	33,000	114
Mycogen	BMR15B15	34	36.9	19.3	8.1	41.9	2.4	30.5	3.1	2.6	0.76	65.2	75.4	78.6	21.4	32,167	115
		Overall Mean	40.5	15.2	8.2	39.7	2.2	33.8	3.1	2.5	0.77	66.2	75.9	79.2	20.8	32,583	
		LSD(0.1)	4.3	5.2	0.5	12.6	0.5	13.8	0.3	0.6	0.06	1.1	1.0	1.0	1.0	2,710	
		CV%	4.4	14.3	2.5	13.3	10.2	17.1	4.1	10.3	3.33	0.7	0.6	0.6	2.1	3	

^{*} 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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Agrisure GT	Table Key # Conv.	Trait Family Product Conventional	Bt protein(s) None	Marketed for control of: None	Resistance to a Bt protein in the trait package has developed in :	Herbicide tolerant?	
1	RR2	Roundup Ready 2		None None		GT	
2 Agrisure GT/CR/LL/3010A							
3 Agrisure 3000 GT, 3011A						GT	
### Agrisure Viptera 3111			•	ECB SWCB		GT LL	
4 Agrisure Viptera 3110	3	Agrisure 3000 GT, 3011A	Cry1Ab, mCry3A		RW	GT LL	
5 Agrisure Viptera 3112 Cry1Ab, mCry3A, Vip3A SWCB TAW WBC FAW WBC FAW WBC TO FAW WBC	4	Agrisure Viptera 3110	Cry1Ab, Vip3A			GT LL	
Agrisure 3122 F.Z Refuge	5	Agrisure Viptera 3111	Cry1Ab, mCry3A, Vip3A		RW	GT LL	
Agrisure 3122 E	6	Agrisure 3120 E-Z Refuge	Cry1Ab, Cry1F	BCW ECB FAW SB SWCB	FAW WBC		
S Z, Refuge	7	Agrisure 3122 E-Z Refuge		BCW ECB FAW SB SWCB	FAW WBC RW	REFER TO BAG	
Agrisure Duracade 5122 E. Cry1Ab, Cry1F, mCry3A, BCW ECB FAW SB SWCB FAW WBC RW EZ1-C	8	•	Cry1Ab, Cry1F, Vip3A			FOR SPECIFIC LETTER CODE:	
Agrisure Duracade 5222 E. Z. Refuge E. Z. Refuge E. Z. Refuge E. Cry3.1Ab, Cry1F, YiB3A, mCry3A, SWC8 TAW WBC RW		Agrisure Duracade 5122 E-			FAW WBC RW	EZ0=GT ONLY EZ1= GT LL	
Herculex (HX1)	10	Agrisure Duracade 5222 E-	Cry1Ab, Cry1F, Vip3A, mCry3A,		RW	0	
Herculex I (HXI)		Z Refuge					
12							
13 Herculex Xtra (HXX)		' '		BCW ECB FAW SB SWCB	-	LL RR2 (most)	
14 TRISect (CHR)	13	Herculex Xtra (HXX)	Cry1F, Cry34/35Ab1	BCW ECB FAW SB SWCB	FAW SWCB WBC RW	KKZ (IIIOSt)	
15			Optim	um			
16	14	TRIsect (CHR)	Cry1F, mCry3A	BCW ECB FAW SB SWCB	FAW SWCB WBC RW	LL RR2	
17	15	Intrasect (YHR)	Cry1F, Cry1Ab	BCW ECB FAW SB SWCB	FAW WBC	LL RR2	
17	16	Intrasect TRIsect (CYHR)	Cry1Ab, Cry1F, mCry3A	BCW ECB FAW SB SWCB	FAW WBC RW	LL RR2	
19	17	Leptra (VYHR)	Cry1F, Cry1Ab, Vip3A			LL RR2	
19	18	Intrasect Xtra (YXR)	Cry1F, Cry1Ab, Cry34/35Ab1	BCW ECB FAW SB SWCB	FAW WBC RW	LL RR2	
20	19	Intrasect Xtreme (CYXR)		BCW ECB FAW SB SWCB	FAW WBC RW	LL RR2	
21	20	AcreMax (AM)	•	BCW ECB FAW SB SWCB	FAW WBC	LL RR2	
AcreMax1 (AM1) Cry1F, Cry34/35Ab1 BCW ECB FAW SB SWCB FAW SWCB WBC RW LL R	21	AcreMax CRW (AMRW)	Cry34/35Ab1		RW	LL RR2	
AcreMax Leptra (AML) Cry1Ab, Cry1F, Vip3A AcreMax TRisect (AMT) Cry1F, Cry1Ab, mCry3A BCW ECB FAW SB SWCB TAW WBC CEW AcreMax TRisect (AMT) Cry1F, Cry1Ab, mCry3A BCW ECB FAW SB SWCB FAW WBC RW LL R Cry1F, Cry1Ab, mCry3A BCW ECB FAW SB SWCB FAW WBC RW LL R Cry1F, Cry1Ab, mCry3A Cry34/35Ab1 BCW ECB FAW SB SWCB FAW WBC RW LL R Cry1F, Cry1Ab, mCry3A Cry34/35Ab1 BCW ECB FAW SB SWCB FAW WBC RW LL R BCW ECB FAW SB SWCB FAW WBC RW LL R BCW ECB FAW SB SWCB FAW WBC RW LL R RW RR 27 YieldGard CB (YGCB) Cry1Ab, Cry3Bb1 Cry1Ab, Cry3Bb1 Cry1Ab, Cry3Bb1 Cry1Ab, Cry3Bb1 Cry1Ab, Cry3Bb1 Cry1Ab, Cry3Bb1 ECB SWCB RW RR 29 YieldGard VT Triple Cry1Ab, Cry3Bb1 CEW ECB FAW SB SWCB CEW ECB FAW SB SWCB TAW WBC CEW WBC RW LL R SMCB TAW WBC CEW WBC RW LL R CRY1A.105, Cry2Ab2, Cry1F, Cry3A/35Ab1 SWCB SWCB FAW SB SWCB CEW WBC RW LL R CEW ECB FAW SB SWCB CEW WBC RW LL R CEW ECB FAW SB SWCB CEW WBC RW LL R CEW ECB FAW SB SWCB CEW WBC RW LL R CEW ECB FAW SB SWCB CEW WBC RW LL R CEW ECB FAW SB SWCB CEW WBC RW LL R CEW ECB FAW SB SWCB CEW WBC RW LL R CEW ECB FAW SB SWCB CEW WBC RW LL R CEW ECB FAW SB SWCB CEW WBC RW LL R CEW ECB FAW SB SWCB CEW WBC RW LL R CEW ECB FAW SB SWCB CEW WBC RW LL R CEW ECB FAW SB SWCB CEW WBC RW LL R CEW ECB FAW SB SWCB CEW WBC RW LL R CEW ECB FAW SB SWCB CEW WBC RW LL R CEW ECB FAW SB SWCB CEW WBC RW LL R CEW ECB FAW SB SWCB CEW WBC RW LL R CEW ECB FAW SB SWCB CEW WBC RW CEW ECB FAW SB SWCB CEW	22	AcreMax1 (AM1)		BCW ECB FAW SB SWCB	FAW SWCB WBC RW	LL RR2	
24 AcreMax TRIsect (AMT)	23	AcreMax Leptra (AML)				LL RR2	
25 AcreMax Xtra (AMX)	24	AcreMax TRIsect (AMT)	Crv1E, Crv1Ab, mCrv3A		FAW WBC RW	LL RR2	
Cry1F, Cry1Ab, mCry3A, Cry34/35Ab1 BCW ECB FAW SB SWCB FAW WBC RW LL R					+	LL RR2	
YieldGard CB (YGCB) Cry1Ab ECB SWCB FAW WBC RW LL R		rioi entiax rioi a (riinni)		Bev Leb 1700 3B 300 B			
Yieldgard/Genuity27YieldGard CB (YGCB)Cry1AbECB SWCBRR28YieldGard VT RootwormCry3Bb1RWRR29YieldGard VT TripleCry1Ab, Cry3Bb1ECB SWCBRWRR30Genuity VT Double PRO (or as RIB complete)Cry1A.105, Cry2Ab2CEW ECB FAW SB SWCBCEWRR31Genuity VT Triple PRO (or as RIB complete)Cry1A.105, Cry2Ab2, Cry3Bb1CEW ECB FAW SB SWCBCEW RWRR32Genuity SmartStax RIB CompleteCry1A.105, Cry2Ab2, Cry1F, Cry3Bb1, Cry34/35Ab1BCW CEW ECB FAW SB SWCBRWLL R33Trecepta (or RIB complete)Cry1A.105, Cry2Ab2, Vip3ABCW CEW ECB FAW SB SWCBRR34Smartstax (or as Refuge Advanced)Cry1A.105, Cry2Ab2, Cry1F, Cry3Bb1, Cry34/35Ab1BCW CEW ECB FAW SB SWCBRR35Powercore (or Refuge Advanced)Cry1A.105, Cry2Ab2, Cry1F, Cry3B, Cry34/35Ab1BCW ECB FAW SB SWCBCEW WBC RWLL R36QROME (Q)Cry1A.05, Cry2Ab2, Cry1F, Cry3B, Cry34/35Ab1BCW ECB FAW SB SWCBCEW WBC RWLL R36QROME (Q)Cry1A.05, Cry3A/35Ab1BCW ECB FAW SB SWCBFAW WBC RWLL R36QROME (Q)Cry1A.05, Cry3A/35Ab1BCW ECB FAW SB SWCBFAW WBC RWLL R4CEW = Elack cutwormSB = stalk borerGT = glyphosate tolerantLL = Liberty Link, glufosinate tolerant4CEW = Corn earwormSWCB = southern corn borerLL = Liberty Link, glufosinate tolerant4 <td< td=""><td>26</td><td>AcreMax Xtreme (AMXT)</td><td>, , , , , ,</td><td>BCW ECB FAW SB SWCB</td><td>FAW WBC RW</td><td>LL RR2</td></td<>	26	AcreMax Xtreme (AMXT)	, , , , , ,	BCW ECB FAW SB SWCB	FAW WBC RW	LL RR2	
27YieldGard CB (YGCB)Cry1AbECB SWCBRR28YieldGard VT RootwormCry3Bb1RWRR29YieldGard VT TripleCry1Ab, Cry3Bb1ECB SWCBRWRR30Genuity VT Double PRO (or as RIB complete)Cry1A.105, Cry2Ab2CEW ECB FAW SB SWCBCEWRR31Genuity VT Triple PRO (or as RIB complete)Cry1A.105, Cry2Ab2, Cry3Bb1CEW ECB FAW SB SWCBCEW RWRR32Genuity SmartStax RIB CompleteCry1A.105, Cry2Ab2, Cry1F, Cry3Bb1, Cry34/35Ab1BCW CEW ECB FAW SB SWCBRWLL R33Trecepta (or RIB complete)Cry1A.105, Cry2Ab2, Vip3ABCW CEW ECB FAW SB SWCBRR34Smartstax (or as Refuge Advanced)Cry1A.105, Cry2Ab2, Cry1F, Cry3Bb1, Cry34/35Ab1BCW CEW ECB FAW SB SWCBCEW WBC RWLL R35Powercore (or Refuge Advanced)Cry1A.105, Cry2Ab2, Cry1FBCW ECB FAW SB SWCBCEW WBC RWLL R36QROME (Q)Cry1Ab, Cry1F, mCry3A, Cry34/35Ab1BCW ECB FAW SB SWCBCEW WBC RWLL R36QROME (Q)Cry1Ab, Cry1F, mCry3A, Cry34/35Ab1BCW ECB FAW SB SWCBFAW WBC RWLL R36QROME (Q)Cry1Ab, Cry1F, mCry3A, Cry34/35Ab1BCW ECB FAW SB SWCBFAW WBC RWLL R36DEW = black cutwormSB = stalk borerGT = glyphosate tolerantLL = Liberty Link, glufosinate tolerant4ECB = European corn borerTAW = true armywormRR2 = Roundup Ready 2, glyphosate tolerant				Genuity			
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RW = corn rootworm		•	wbc = western bean cutworm				