2018 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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Production Details: Penn State/PDMP Corn Silage Hybrid Evaluation Trials	
Site:	Bedford County
Cooperator	Kulp Family Dairy
Planting Date	May 24, 2018
Soil Type	HuB Hublersburg Cherty silt loam 3-8% slope
Herbicides pre-	None
post-	1oz.- Impact + AMS+ COC applied 6/29
Previous Crop	corn silage + rye cover
Tillage	None
Starter Fertilizer	10.5 gal - 10-34-0
Insecticide	Force 3G
Manure	Dairy Liquid 6600 gal/acre 14.1N 8.26 P 20.3K lbs/1000 gal
Fertilizer	0 preplant. 80 lbs N with first pass
	75 lbs N sidedressed
Harvest Date	October 3, 2018

Field Summary:	This location was planted on May 24. Overall performance was very good. A few plots were discarded due to wet soils and compaction, but most plots were very good. Excessive rainfall delayed harvest for several weeks. Harvesting was done on October 3.

Weather Summary:	May 24-October 3	
Month	**Precip.(inches)**	**GDD**
May	1.36	178
June	6.32	525
July	5.58	673
August	5.84	726
September	13.26	560
October	0.38	40
Seasonal Total	**32.74**	**2702**

Precip. Data:	http://www.theweathercollector.com/?gclid=Cj0KCQjw6fvdBRCbARIsABGZ-vQL2zIhMnTDKuqmXNfv18X7Hn8ZRJ-0DNorlnY8e_E0ce0WZ66HgZMaAtcVEALw_wcB
GDD data:	http://climatesmartfarming.org/tools/csf-growing-degree-day-calculator/

Penn State/PDMP Corn Silage Hybrid Testing Program 2018

Medium maturity (99-110 day RM) silage hybrids in (Central) PA

(Bedford) County location

Notes: SEE BACKGROUND TAB

Cooperator: (Kulp Family Dairy)

Brand	Hybrid	Traits*	Dry Matter %**	Yield Tons/ Acre***	CP %	NDF %	Lignin %	Starch %	Ash %	Fat[2] %	NEL Mcal/lb	NDFD 30hr %NDF	NDFD 120hr %NDF	NDFD 240hr %NDF	uNDF 240hr %NDF	Pop. plants/ac	Relative Maturity
Early (99-104) RM Silage Hybrids																	
Doebler's PA Hybrids	4115AMXT	26	56.4	16.7	7.1	31.4	2.5	49.3	2.6	2.5	0.79	55.3	66.1	68.9	31.1	31,667	101
Local Seed Co.	LC0488SSX	32	52.1	12.6	6.5	32.4	2.7	49.4	1.9	2.6	0.79	54.0	60.5	63.6	36.4	31,000	104
Doebler's PA Hybrids	4018AMXT	26	48.9	17.7	7.0	33.1	2.6	46.7	2.8	2.9	0.79	56.2	66.1	68.9	31.1	33,667	100
Masters Choice	MCT 5375	7	48.0	16.4	7.2	33.2	2.8	47.0	2.4	2.7	0.79	52.3	59.9	62.8	37.2	34,000	103
Hubner	H6219RCSS	32	47.9	13.9	6.9	37.0	3.3	42.7	2.7	2.6	0.76	48.9	57.7	61.0	39.0	33,333	99
Hubner	H6225RCSS	32	47.9	15.0	6.8	38.4	3.5	42.6	2.8	2.3	0.74	47.9	57.5	61.1	38.9	32,500	102
Hubner	H6257RCSS	32	46.7	15.3	7.1	34.5	2.9	44.6	2.4	3.0	0.79	52.7	60.2	63.6	36.4	33,852	104
Doebler's PA Hybrids	4219AM	20	43.9	17.5	7.3	35.8	3.0	41.3	2.7	2.6	0.77	52.5	63.3	66.1	33.9	33,500	102
Doebler's PA Hybrids	4318AMXT	26	41.6	17.9	7.2	34.3	3.0	45.1	2.8	2.5	0.78	51.3	58.0	64.4	35.6	32,333	103
		99-104 day means	**48.2**	**15.9**	**7.0**	**34.5**	**2.9**	**45.4**	**2.6**	**2.6**	**0.78**	**52.3**	**61.0**	**64.5**	**35.5**	**32,872**	
Medium (105-110) RM Silage Hybrids																	
Syngenta	NK0886-3010	2	54.0	14.2	7.1	32.6	2.7	47.4	2.5	2.5	0.79	53.2	61.7	65.5	34.5	31500	108
Dekalb	DKC57-75RIB	32	51.3	13.8	7.2	34.2	3.0	45.9	2.9	2.6	0.77	50.8	60.6	63.4	36.6	34000	107
Augusta	Augusta 4959	4	51.2	16.4	7.2	35.8	2.9	44.1	2.8	2.5	0.76	53.1	61.0	64.3	35.7	33500	109
Channel	206-11STXRIB	32	51.0	15.6	7.5	32.7	2.7	46.8	2.4	2.9	0.79	54.5	62.6	65.4	34.6	32500	106
Local Seed Co.	LC0657 SSXRIB	30	51.0	13.8	7.4	35.1	3.2	44.6	2.7	2.5	0.76	49.4	57.6	60.1	39.9	29500	106
Augusta	Augusta 4860	8	51.0	15.1	7.4	31.7	2.3	49.3	2.0	2.5	0.8	57.5	64.1	67.0	33.0	34000	110
Dekalb	DKC55-21RIB	30	50.7	15.6	7.0	34.2	2.8	46.2	2.6	2.6	0.78	52.9	61.4	65.4	34.6	32833	105
Local Seed Co.	LC0877VT2P	30	50.1	15.8	6.9	32.5	2.5	47.0	2.4	2.6	0.79	55.6	64.7	67.8	32.2	34000	108
Augusta	Augusta 4858	2	50.0	15.6	7.7	33.2	3.0	46.3	2.8	2.8	0.78	51.0	59.4	62.9	37.1	32500	108
Mycogen	TMF09S97	34	49.6	17.3	7.1	37.7	3.2	41.3	2.7	2.6	0.76	50.7	60.5	63.9	36.1	33000	109
Growmark FS	FS 56R71SS	32	48.6	15.1	7.6	34.9	3.3	44.6	3.0	2.7	0.77	49.2	58.5	61.8	38.2	33116	106
Prairie Hybrids	4718	Conv.	48.5	12.9	6.7	34.1	3.0	46.5	2.8	2.4	0.79	52.9	57.6	61.0	39.0	33000	106
CPS Dynagro	D49VC70	30	48.5	18.5	7.3	32.3	2.7	45.9	2.7	3.0	0.79	53.7	62.6	65.6	34.4	33500	109
Dekalb	DKC60-88RIB	30	47.9	17.6	7.1	36.0	3.0	44.0	2.6	2.6	0.77	52.8	61.5	65.1	34.9	32833	110
Growmark FS	FS 60R76VT2P	30	47.9	19.8	6.7	35.0	2.9	44.7	2.5	2.6	0.78	51.7	62.7	66.1	33.9	33500	110
Seedway	SW5440	32	47.1	15.4	7.1	33.8	3.0	46.7	2.6	2.7	0.78	50.0	58.0	61.8	38.2	33000	105
Dupont Pioneer	P0789AMXT	26	47.1	20.9	7.3	32.8	2.9	46.3	2.5	2.8	0.79	52.4	62.1	65.4	34.6	33000	107
Doebler's PA Hybrids	4919AM	20	47.0	15.6	6.8	40.1	3.4	39.9	2.9	2.3	0.74	49.5	60.7	63.3	36.7	32000	109
Mycogen	MY09B16	35	47.0	17.4	7.1	33.2	2.9	46.6	2.4	3.0	0.79	52.3	60.8	63.8	36.2	34000	105
Channel	207-90STXRIB	32	47.0	17.0	7.3	36.9	2.9	41.5	2.5	2.7	0.77	54.8	63.2	66.4	33.6	32500	107
Dekalb	DKC58-08RIB	30	46.9	18.3	7.03	30.7	2.7	48.1	2.6	2.9	0.8	54.2	63.9	67.3	32.7	32333	108
Dupont Pioneer	P0843AM	20	46.6	18.2	7.4	34.0	2.7	45.0	2.4	2.8	0.79	54.7	63.8	66.8	33.2	32167	108
Masters Choice	MC 5790	Conv.	45.9	17.9	7.6	34.1	2.7	43.8	2.6	2.8	0.79	54.8	63.0	66.3	33.7	31833	107
Dekalb	DKC59-07RIB	32	43.9	16.0	7.3	31.3	2.7	48.1	2.8	3.1	0.8	54.1	62.7	65.7	34.3	33000	109
Growmark FS	FS 55R25SS	32	43.8	17.9	7.1	32.4	2.7	47.8	2.4	2.8	0.79	53.7	63.3	66.3	33.7	32167	105
Augusta	Augusta 4759	5	43.8	18.4	6.9	35.8	2.8	43.5	2.7	2.6	0.77	54.0	64.4	67.1	32.9	33667	109
Doebler's PA Hybrids	4717AMX	25	43.3	18.3	7.3	36.4	3.2	42.1	2.6	2.7	0.77	50.4	60.5	63.8	36.2	30500	107
Chemgro	Chemgro 6859V3	5	42.3	17.8	6.8	37.4	2.9	40.6	2.4	2.7	0.77	54.4	64.4	67.2	32.8	34000	108
Chemgro	Chemgro 7095RDP	30	42.3	18.6	7.2	36.5	3.2	42.4	2.7	2.6	0.76	50.5	60.7	64.0	36.0	33500	110
Growmark FS	FS 58R47VT2P	30	42.0	20.7	7.6	34.4	2.9	43.9	2.9	2.9	0.78	54.1	63.7	66.5	33.5	33500	108
Syngenta	NK0968-3111	5	41.8	16.1	7.5	39.0	3.4	39.7	3.2	2.5	0.74	49.5	59.2	61.9	38.1	32667	109
Dupont Pioneer	P0977AM	20	41.6	20.2	7.1	35.7	3.0	42.6	2.8	2.7	0.77	52.5	62.7	65.4	34.6	34000	109
Prairie Hybrids	5200	Conv.	41.4	18.0	7.5	36.9	3.1	40.2	2.6	2.8	0.77	52.5	62.0	64.8	35.2	32500	108
Mycogen	TMF2H708	34	41.4	17.7	7.0	41.8	3.7	37.1	3.0	2.4	0.73	46.4	58.9	61.5	38.5	32167	109
Doebler's PA Hybrids	5018AM	20	40.6	19.0	7.3	37.5	3.0	40.1	2.7	2.5	0.76	53.4	64.4	67.2	32.8	32500	110
Channel	210-98STXRIB	32	39.3	21.9	7.4	36.0	3.2	43.1	2.8	2.9	0.77	51.0	59.8	63.2	36.8	33667	110
		105-110 day means	**46.5**	**17.2**	**7.2**	**35.0**	**2.9**	**44.3**	**2.6**	**2.7**	**0.78**	**52.5**	**61.6**	**64.8**	**35.3**	**32832**	
		Overall Mean	**46.8**	**16.9**	**7.2**	**34.9**	**2.9**	**44.5**	**2.6**	**2.66**	**0.78**	**52.4**	**61.51**	**64.70**	**35**	**32840**	
		LSD(0.1)	**4.6**	**2.8**	**0.4**	**4.7**	**0.5**	**5.4**	**0.5**	**0.35**	**0.03**	**4.5**	**4.53**	**4.58**	**5**	**1768**	
		CV%	**7.2**	**12.3**	**4.5**	**10.0**	**13.3**	**9.0**	**12.6**	**9.72**	**2.92**	**6.3**	**5.42**	**5.22**	**10**	**4**	

* 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 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: EZ0=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	
Herculex					
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	
Optimum					
14	TRIsect (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 TRIsect (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 TRIsect (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
Yieldgard/Genuity					
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
Others					
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
	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				

Source: https://www.texasinsects.org/bt-corn-trait-table.html