

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:	Landisville, PA - Field YS
Cooperator	Landisville SEARC
Planting Date	May 3, 2018
Soil Type	Hagerstown silt loam, 0 to 3 percent slopes
Herbicides	pre- 1qt-Credit 41 + 1qt - Atrazine + 4oz - Callisto + 1.5pt - Dual Magnum post- 3oz - Status on 6/18
Previous Crop	Soybeans
Tillage	None
Starter Fertilizer	10.5 gal - 10-34-0
Insecticide	None
Manure	None
Fertilizer	180 units 32% UAN on 6/10
Harvest Date	August 23, 2018

Field Summary:

The trials at Landisville were very consistent this year. Planting occurred in early May and emergence was very good. Fertility levels and weed control were also very good. Despite the persistent rain from mid-July through harvest, yield levels were very good.

Weather Summary:

May 3-August 23

Month	Precip. (inches)	GDD
May	5.15	442
June	4.82	585
July	9.73	743
August	11.79	565
Seasonal Total	31.49	2335

Precip. Data:

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

GDD data:

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

Penn State/PDMP Corn Silage Hybrid Testing Program 2018

Early-medium maturity (99-110 RM) silage hybrids in South Central PA

Lancaster County location

Notes: SEE BACKGROUND TAB

Cooperator: Landisville Research Station



Brand	Hybrid	Traits*	Dry Matter									NDFD			uNDF	Pop. plants/ac	Relative Maturity
			Matter %**	Yield Tons/Acre***	CP %	NDF %	Lignin %	Starch %	Ash %	Fat ² %	NEL Mcal/lb	30hr %NDF	120hr %NDF	240hr %NDF	240hr %NDF		
Early (99-104 day) RM Silage Hybrids																	
Local Seed Co.	LC0488SSX	32	37.4	14.9	7.9	35.7	2.5	38.1	2.6	2.9	0.79	60.5	68.7	70.3	29.7	33,167	104
Hubner	H6225RCSS	32	36.7	14.8	7.8	36.8	2.5	38.0	2.6	2.8	0.78	60.7	71.0	72.4	27.6	34,000	102
Doebler's PA Hybrids	4115AMXT	26	36.2	13.4	7.4	38.6	2.7	36.4	2.8	2.4	0.76	58.1	68.4	69.9	30.1	32,500	104
Masters Choice	MCT 5375	7	36.0	14.9	8.5	34.8	2.7	36.4	2.8	2.8	0.78	57.3	64.4	66.0	34.0	33,333	103
Doebler's PA Hybrids	3916GRQ	3	35.8	14.0	8.2	35.4	2.7	38.1	2.7	2.8	0.78	56.7	64.0	66.5	33.6	33,333	99
Masters Choice	MCT 4934	5	35.4	11.1	8.4	35.8	2.5	34.5	2.8	2.6	0.78	59.0	67.5	68.8	31.2	31,667	99
Hubner	H6219RCSS	32	34.9	15.5	8.0	40.3	2.9	31.7	3.0	2.7	0.76	58.8	66.5	68.2	31.8	34,000	99
Hubner	H6257RCSS	32	34.4	14.1	8.2	35.7	2.3	36.6	2.9	3.1	0.79	62.5	70.0	71.4	28.6	33,000	104
Doebler's PA Hybrids	4219AM	20	33.7	15.5	8.1	35.6	2.4	37.5	2.7	2.8	0.79	61.1	71.2	72.7	27.3	33,907	102
Doebler's PA Hybrids	4318AMXT	26	33.6	18.1	8.5	33.6	2.5	38.0	2.8	2.8	0.79	57.7	66.0	67.6	32.4	34,000	103
99-104 day means			35.4	14.6	8.1	36.2	2.6	36.5	2.8	2.8	0.78	59.2	67.8	69.4	30.6	33,291	
Medium (105-110 day) RM Silage Hybrids																	
Local Seed Co.	LC0877VT2P	30	37.3	18.0	7.9	33.2	2.2	42.0	2.3	3.0	0.81	62.3	70.4	72.0	28.0	34,000	108
Agrigold	A636-56STXRIB	32	36.5	15.1	8.0	34.6	2.6	39.3	2.8	2.9	0.79	59.0	67.9	69.5	30.5	34,000	106
Mid-Atlantic	MA9063	Conv.	36.0	15.9	8.4	35.6	2.7	37.9	2.8	3.0	0.78	58.3	66.0	67.8	32.2	33,333	106
Agrigold	A638-94STX	32	35.4	16.3	8.0	32.9	2.3	40.7	2.6	3.1	0.80	61.7	69.8	71.4	28.6	33,500	108
Dupont Pioneer	P0789AMXT	26	35.1	18.4	8.8	36.0	2.4	34.4	2.8	2.7	0.78	61.2	68.6	70.0	30.0	34,000	107
Mid-Atlantic	MA8074	30	35.1	17.3	7.9	34.5	2.2	39.5	2.7	2.8	0.79	62.0	71.6	73.1	26.9	34,000	107
Agrigold	A635-54STX	32	34.8	14.8	7.9	40.9	2.9	32.6	3.0	3.0	0.76	60.7	68.6	70.4	29.6	34,000	105
Local Seed Co.	LC0657 SSXRIB	32	34.7	16.6	8.5	37.8	2.8	34.8	3.0	2.5	0.76	58.0	66.0	67.5	32.5	32,167	106
Mid-Atlantic	MA9086	Conv.	34.6	14.3	8.1	36.9	2.8	35.2	2.7	3.0	0.78	57.8	65.0	66.9	33.1	33,500	108
Augusta	Augusta 4858	2	34.4	16.3	8.3	34.4	2.4	38.9	2.9	3.1	0.79	60.6	68.6	70.2	29.8	32,667	108
Agrigold	A640-77STXRIB	32	34.1	16.5	8.4	33.9	2.4	37.9	2.8	3.3	0.80	61.2	68.4	70.1	29.9	34,000	110
Augusta	Augusta 2756	3	33.9	17.7	7.7	39.1	2.7	37.9	2.8	2.6	0.78	56.9	66.2	67.8	32.2	34,000	106
Doebler's PA Hybrids	4717AMX	25	33.5	17.0	8.7	36.1	2.5	34.4	2.8	2.8	0.78	61.0	68.7	70.1	29.9	33,167	107
Masters Choice	MC 5790	Conv.	33.1	17.2	8.9	36.5	2.5	33.0	2.8	3.0	0.78	60.1	66.5	67.9	32.1	32,167	107
Doebler's PA Hybrids	4919AM	20	33.0	16.7	8.3	38.5	2.5	33.5	2.6	2.5	0.77	61.4	70.2	71.6	28.4	33,167	109
Dupont Pioneer	P0843AM	20	32.9	15.6	8.0	34.7	2.3	37.8	2.9	2.7	0.79	61.3	71.7	73.2	26.8	33,500	108
Augusta	Augusta 4759	5	32.4	16.4	8.2	36.7	2.3	34.8	2.8	2.6	0.78	61.7	70.7	72.2	27.8	32,833	109
Dupont Pioneer	P0977AM	20	32.2	15.6	8.6	35.7	2.4	34.7	3.1	3.0	0.79	61.6	70.3	71.8	28.2	34,000	109
Chemgro	Chemgro 6859V3	5	32.2	16.5	8.2	36.0	2.4	36.8	2.8	2.7	0.78	61.1	70.0	71.4	28.6	32,833	108
Mycogen	TMF2H708	34	31.7	17.2	8.1	37.4	2.6	34.3	2.9	2.7	0.77	60.5	69.4	70.8	29.2	33,333	109
Mycogen	MY09B16	35	31.6	16.9	7.8	39.3	2.6	30.8	3.0	2.7	0.77	59.9	69.2	70.6	29.4	32,000	105
Channel	209-15STXRIB	32	31.5	18.1	8.5	34.6	2.4	37.2	2.6	3.0	0.79	60.4	68.1	69.5	30.5	32,833	109
Doebler's PA Hybrids	5018AM	20	30.9	17.1	8.0	35.7	2.3	35.5	2.9	2.7	0.78	61.2	71.0	72.5	27.5	33,333	110
Channel	210-98STXRIB	32	30.9	15.3	8.1	40.8	2.8	29.5	2.7	2.6	0.76	60.9	67.8	69.3	30.7	33,500	110
Augusta	Augusta 4959	4	30.3	18.9	8.3	41.4	3.2	30.5	3.4	2.7	0.75	55.5	64.4	65.9	34.1	34,000	109
105-110 day means			33.5	16.6	8.2	36.5	2.5	35.8	2.8	2.8	0.78	60.3	68.6	70.1	29.9	33,353	
Overall Mean			34.1	16.1	8.2	36.5	2.5	36.0	2.8	2.8	0.78	60.0	68.4	69.9	30.1	33,335	
LSD(0.1)			3.1	3.1	0.4	4.4	0.4	6.3	0.4	0.3	0.03	3.0	3.1	3.0	3.0	1,340	
CV%			6.7	14.2	3.7	8.8	11.5	12.9	11.2	8.7	2.87	3.6	3.3	3.2	7.4	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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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: 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	
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	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
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				