

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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Penn State/PDMP Corn Silage Hybrid Testing Program 2018
Early-medium maturity (99-110 day RM) silage hybrids in south central PA
Combined data in Lancaster County



Notes: Meadow Vista Dairy had very good stand counts and performance was very good. Despite the persistent rain in Landisville from mid-July through harvest, yield levels were very good.

Cooperators: Meadow Vista Dairy and Landisville Research Station

Brand	Hybrid	Traits*	Dry Matter										NDFD			uNDF	Pop. plants/ac	Relative Maturity
			%**	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																		
Doebler's PA Hybrids	3916GRQ	3	37.9	14.6	8.0	34.7	2.7	38.5	2.9	2.8	0.78	57.3	65.1	67.1	32.9	33,083	99	
Masters Choice	MCT 4934	5	37.0	13.4	8.2	36.0	2.5	35.4	3.0	2.6	0.78	59.0	67.9	69.3	30.7	31,417	99	
Hubner	H6225RCSS	32	36.7	15.1	7.6	39.2	2.6	35.1	2.9	2.7	0.76	60.2	70.2	71.7	28.3	34,000	102	
Local Seed Co.	LC0488SSX	32	36.2	14.9	7.6	37.6	2.7	36.1	2.8	2.8	0.77	59.3	67.8	69.3	30.7	33,583	104	
Doebler's PA Hybrids	4115AMXT	26	35.5	14.7	7.3	38.5	2.6	35.7	3.1	2.5	0.76	59.7	70.2	71.8	28.2	32,583	104	
Hubner	H6219RCSS	32	35.3	15.8	7.8	39.2	2.9	34.2	3.2	2.8	0.76	58.1	66.6	68.2	31.8	34,000	99	
Masters Choice	MCT 5375	7	35.1	14.7	8.0	35.8	2.6	36.2	2.9	2.8	0.78	57.8	66.2	67.8	32.2	33,083	103	
Doebler's PA Hybrids	4318AMXT	26	35.0	19.1	8.2	33.5	2.5	39.0	2.9	2.7	0.79	58.8	68.1	69.7	30.3	33,833	103	
Doebler's PA Hybrids	4219AM	20	34.4	16.9	7.9	35.6	2.3	37.9	3.0	2.8	0.78	61.8	71.9	73.4	26.6	33,620	102	
Hubner	H6257RCSS	32	33.8	15.7	8.0	36.2	2.4	36.1	3.1	3.0	0.78	61.4	69.4	70.8	29.3	32,750	104	
99-104 day means			35.7	15.5	7.8	36.6	2.6	36.4	3.0	2.8	0.77	59.3	68.3	69.9	30.1	33,195		
Medium (105-110 day) RM Silage Hybrids																		
Agrigold	A636-56STXRIB	32	37.2	15.5	7.7	35.2	2.5	38.8	2.9	2.9	0.78	59.8	68.8	70.3	29.7	34,000	106	
Local Seed Co.	LC0877VT2P	30	36.7	17.8	7.7	34.5	2.2	40.4	2.6	2.9	0.80	62.1	70.6	72.2	27.8	33,417	108	
Agrigold	A635-54STX	32	36.6	16.4	7.4	39.9	2.8	34.5	3.0	3.0	0.76	60.9	69.6	71.2	28.8	34,000	105	
Mid-Atlantic	MA9063	Conv.	36.2	16.3	7.9	35.7	2.6	38.5	2.8	2.9	0.78	58.8	67.0	68.6	31.5	32,167	106	
Mid-Atlantic	MA8074	30	36.0	19.0	7.9	34.5	2.2	39.5	2.8	2.8	0.79	62.3	71.8	73.4	26.6	32,750	107	
Dupont Pioneer	P0789AMXT	26	35.7	19.1	8.3	34.8	2.4	37.2	2.9	2.9	0.78	61.5	69.6	71.1	28.9	33,333	107	
Local Seed Co.	LC0657 SXRIB	32	35.2	16.5	8.1	37.4	2.8	35.5	3.1	2.6	0.76	57.6	66.4	67.8	32.2	31,500	106	
Mid-Atlantic	MA9086	Conv.	35.0	16.8	7.9	37.3	2.7	35.1	2.9	2.8	0.78	59.7	66.7	68.4	31.7	33,750	108	
Augusta	Augusta 2756	3	34.9	17.6	7.6	36.7	2.6	38.6	3.0	2.7	0.78	58.3	68.1	69.7	30.4	34,000	106	
Agrigold	A638-94STX	32	34.5	16.9	7.9	34.3	2.4	39.2	2.9	3.1	0.79	61.0	69.2	70.7	29.3	33,750	108	
Augusta	Augusta 4858	2	34.0	15.6	8.0	35.2	2.5	37.9	3.1	3.0	0.79	60.4	68.5	70.0	30.0	32,673	108	
Doebler's PA Hybrids	4717AMX	25	33.8	16.9	8.2	35.9	2.5	35.8	3.0	2.9	0.78	61.7	69.3	70.7	29.3	32,167	107	
Agrigold	A640-77STXRIB	32	33.5	17.8	8.0	35.1	2.5	37.1	3.0	3.2	0.79	60.0	68.0	69.5	30.5	33,500	110	
Chemgro	Chemgro 6859V3	5	33.4	16.9	7.7	36.1	2.4	37.3	2.9	2.7	0.78	61.2	70.0	71.4	28.6	33,083	108	
Dupont Pioneer	P0843AM	20	33.2	19.1	8.0	35.3	2.3	37.0	3.1	2.7	0.78	62.3	72.3	73.9	26.1	33,750	108	
Augusta	Augusta 4759	5	33.0	17.3	7.9	38.0	2.4	34.1	3.0	2.6	0.77	61.7	70.5	72.0	28.1	33,417	109	
Doebler's PA Hybrids	4919AM	20	32.9	16.2	7.9	37.5	2.4	35.2	2.8	2.5	0.77	61.3	71.0	72.5	27.6	32,833	109	
Masters Choice	MC 5790	Conv.	32.4	15.8	8.4	36.5	2.5	33.7	3.1	2.9	0.78	59.8	67.8	69.3	30.7	32,000	107	
Mycogen	MY09B16	35	31.9	17.8	7.5	39.0	2.7	31.8	3.1	2.7	0.76	59.3	68.6	69.9	30.1	31,667	105	
Dupont Pioneer	P0977AM	20	31.7	16.9	8.2	36.5	2.6	34.0	3.4	2.8	0.77	59.6	69.1	70.7	29.3	33,667	109	
Mycogen	TMF2H708	34	31.7	17.5	7.9	38.0	2.6	34.1	3.1	2.8	0.76	59.3	69.2	70.6	29.4	32,917	109	
Doebler's PA Hybrids	5018AM	20	30.7	17.4	7.6	37.4	2.4	34.5	3.0	2.6	0.77	61.1	70.8	72.3	27.7	33,667	110	
Channel	210-98STXRIB	32	30.4	17.1	7.9	40.0	2.7	30.4	3.0	2.6	0.76	60.7	68.0	69.5	30.6	33,750	110	
Channel	209-15STXRIB	32	30.0	17.6	8.3	37.6	2.6	33.8	3.1	2.9	0.77	59.8	67.7	69.1	30.9	32,750	109	
Augusta	Augusta 4959	4	29.8	18.2	8.2	41.5	3.1	29.7	3.6	2.8	0.75	56.8	65.6	67.0	33.0	33,938	109	
105-110 day means			33.6	17.2	7.9	36.8	2.5	35.7	3.0	2.8	0.78	60.3	69.0	70.5	29.5	33,138		
Overall Mean			34.2	16.7	7.9	36.7	2.5	35.9	3.0	2.8	0.77	60.0	68.8	70.3	29.7	33,154		
LSD(0.1)			3.5	3.1	0.5	4.2	0.4	5.9	0.4	0.3	0.03	3.3	3.2	3.2	3.2	1,638		
CV%			7.6	13.9	4.3	8.4	11.3	12.2	10.0	8.2	2.71	4.0	3.4	3.4	8.0	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,

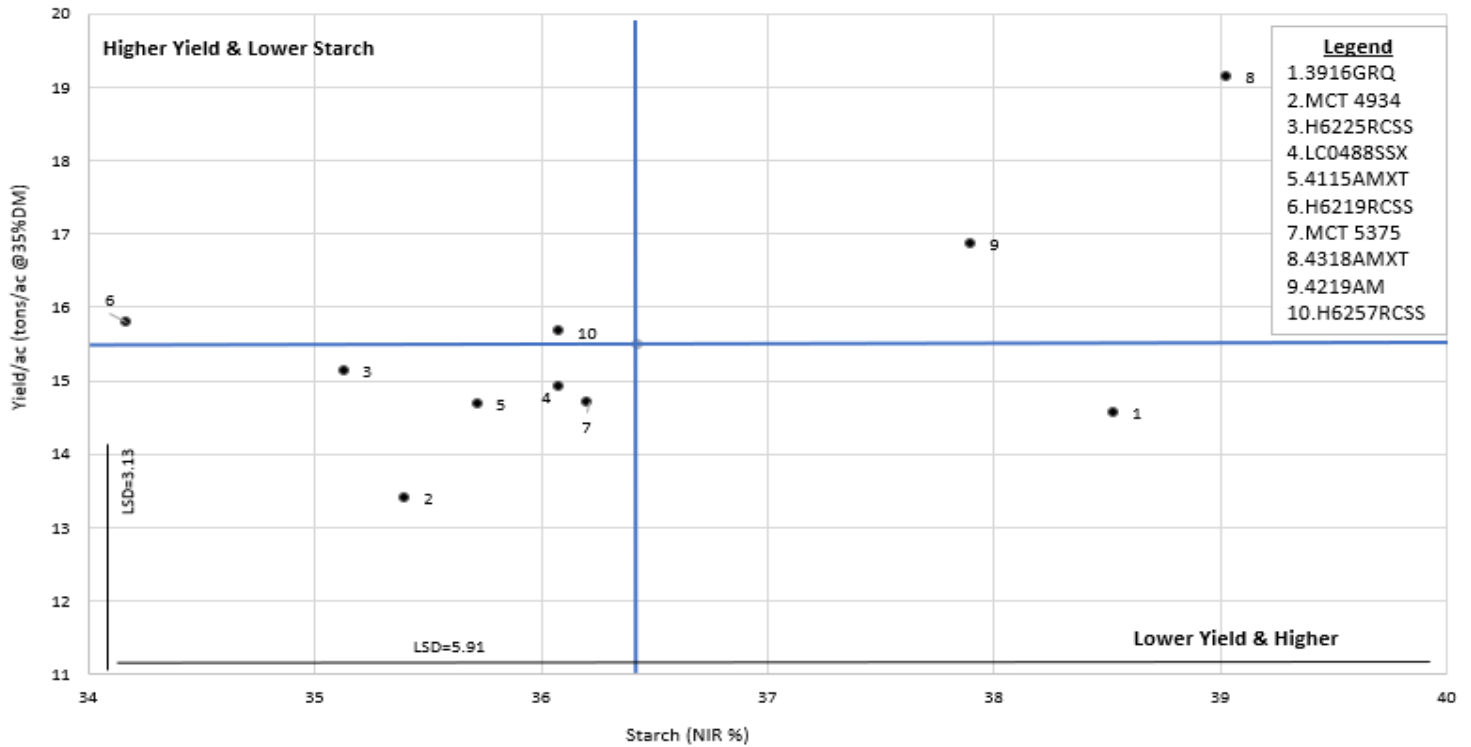
NEL=net energy for lactation, and NDFD=neutral detergent fiber digestibility.

¹ - NS = Not Significant , ² - Fat = Total Fatty Acids

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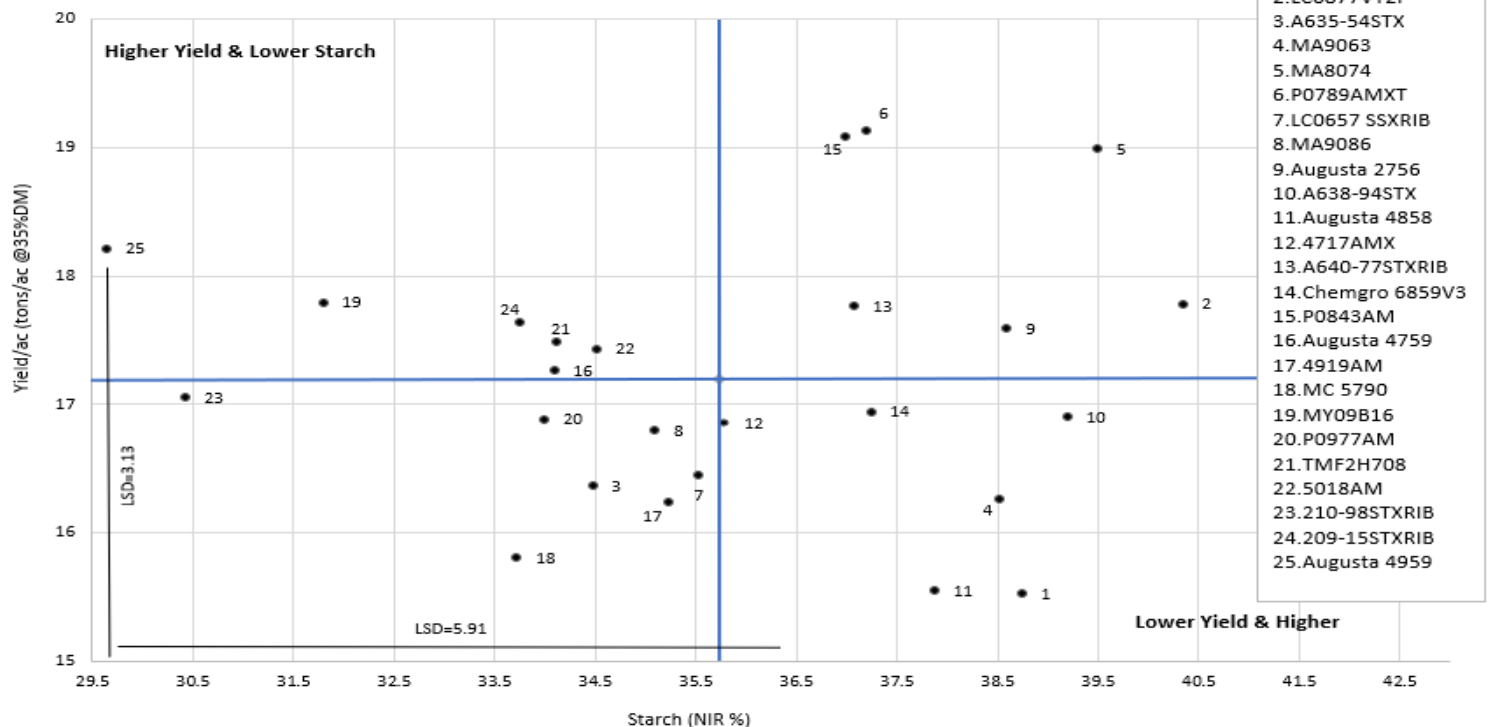
Table Key #	Trait Family Product	Bt protein(s)	Marketed for control of:	Resistance to a Bt protein in the trait package has developed in :	Herbicide tolerant?
Conv.	Conventional	None	None	---	No
RR2	Roundup Ready 2	None	None	---	GT
Agrisure					
1	Agrisure GT	None	None	---	GT
2	Agrisure GT/CB/LL,3010A	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: 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				

Early (99-104 day) RM Silage Hybrids Yield and Starch (NIR %)



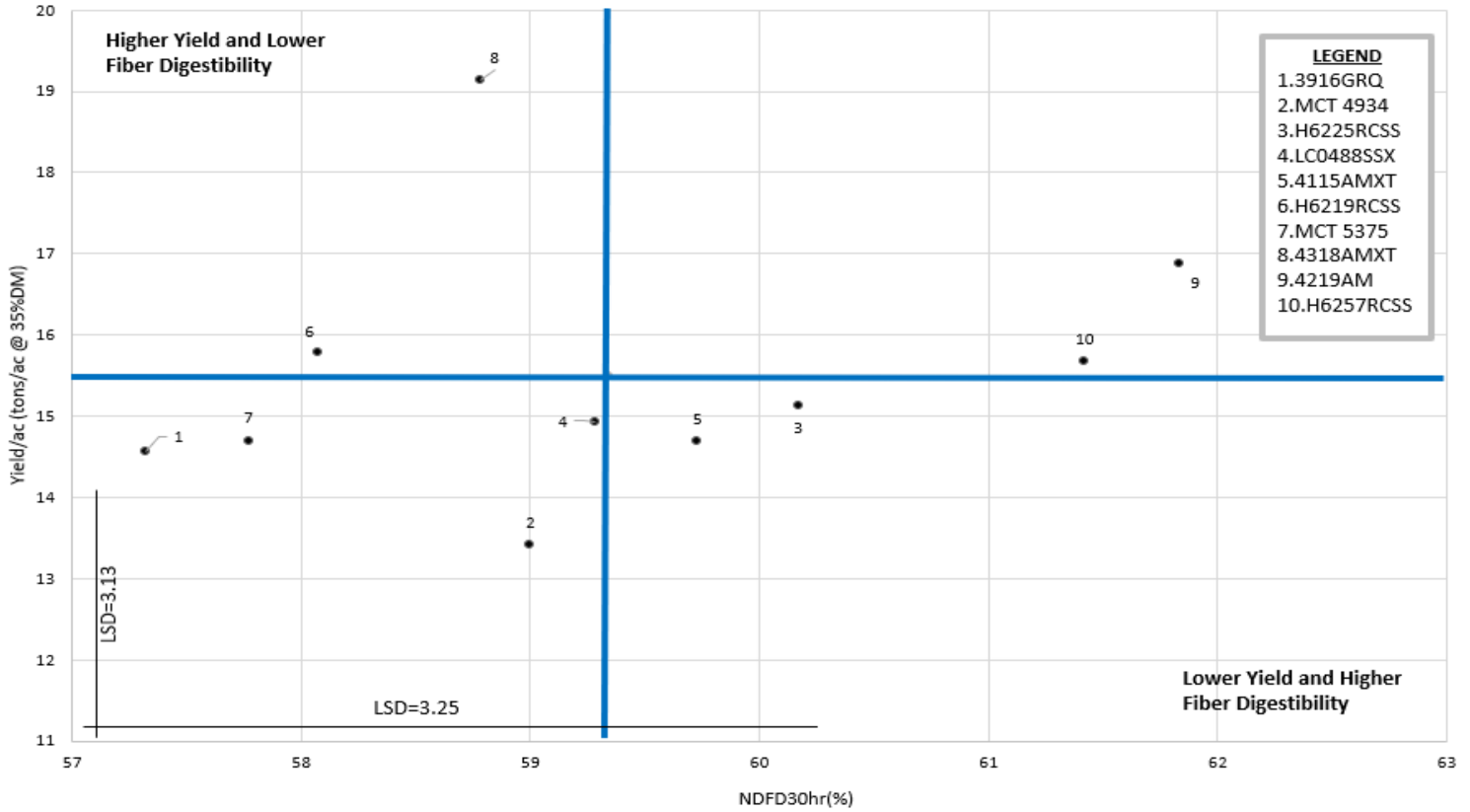
* How to use this chart: This chart can be used to determine yield (tons/ac) and Starch (NIR%) of corn silage hybrids. The horizontal line represents the Starch (NIR %) mean in this group of data. The vertical line represents the YIELD mean in this group of data. Each point represents a data point that reflects dry matter yield in tons to Starch (NIR%). The number beside the data point can be referenced to the hybrid name located within the Legend. The LSD lines represent the differences between hybrids that are significantly different at the 0.1 level.

Mid (105-110 day) RM Silage Hybrids Yield and Starch (NIR %)



* How to use this chart: This chart can be used to determine yield (tons/ac) and Starch (NIR%) of corn silage hybrids. The horizontal line represents the Starch (NIR %) mean in this group of data. The vertical line represents the YIELD mean in this group of data. Each point represents a data point that reflects dry matter yield in tons to Starch (NIR%). The number beside the data point can be referenced to the hybrid name located within the Legend. The LSD lines represent the differences between hybrids that are significantly different at the 0.1 level.

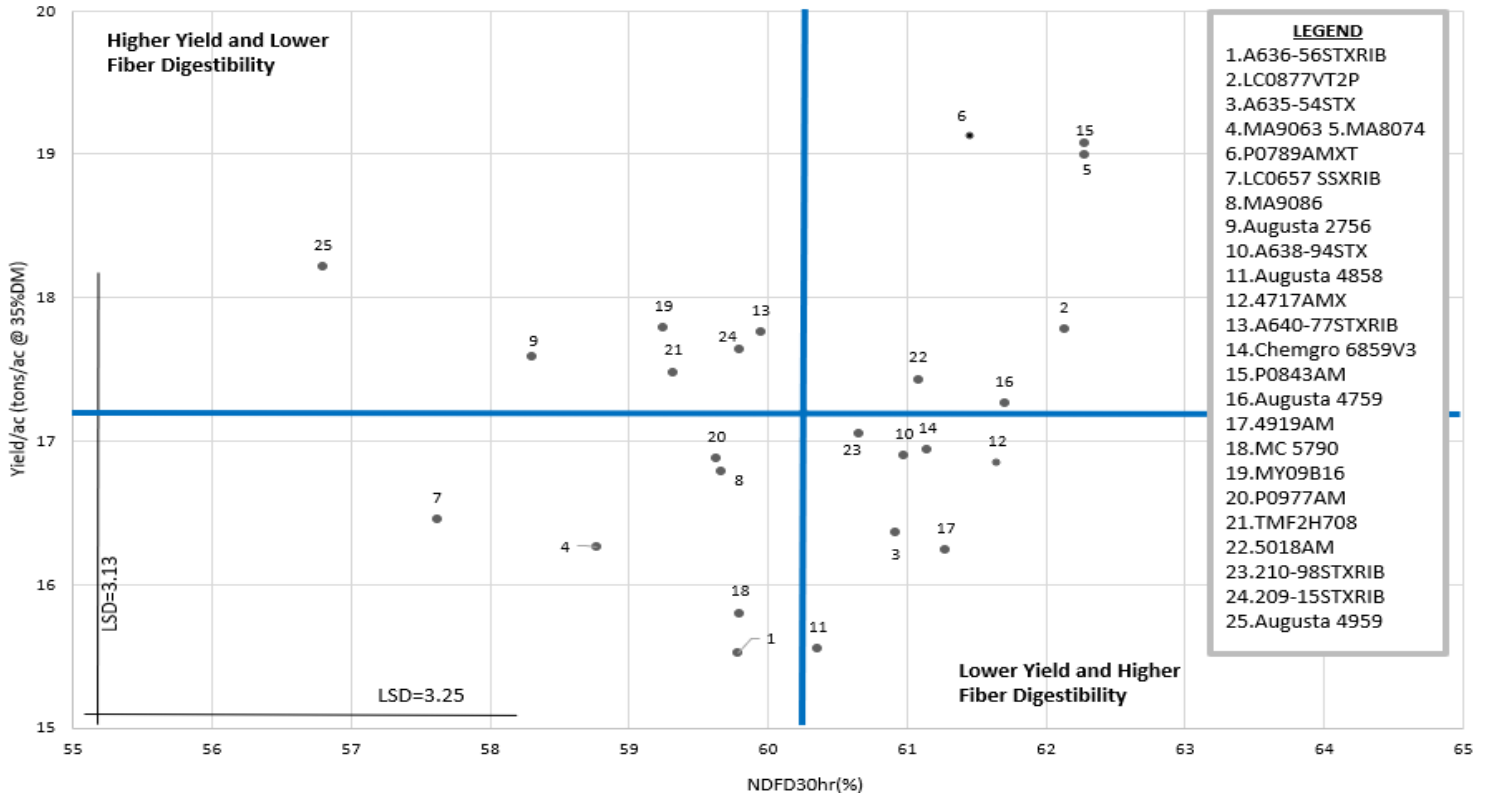
Early (99-104 day) RM Silage Hybrids Yield and NDFD30hr(%)



* How to use this chart: This chart can be used to determine yield (tons/ac) and NDFD30(%) of corn silage hybrids. The horizontal line represents NDFD30 mean in this group of data. The vertical line represents the YIELD mean in this group of data. Each point represents a data point that reflects yield to NDFD30. The number beside the data point can be referenced to the hybrid name located within the Legend.

The LSD lines represent the differences between hybrids that are significantly different at the 0.1 level.

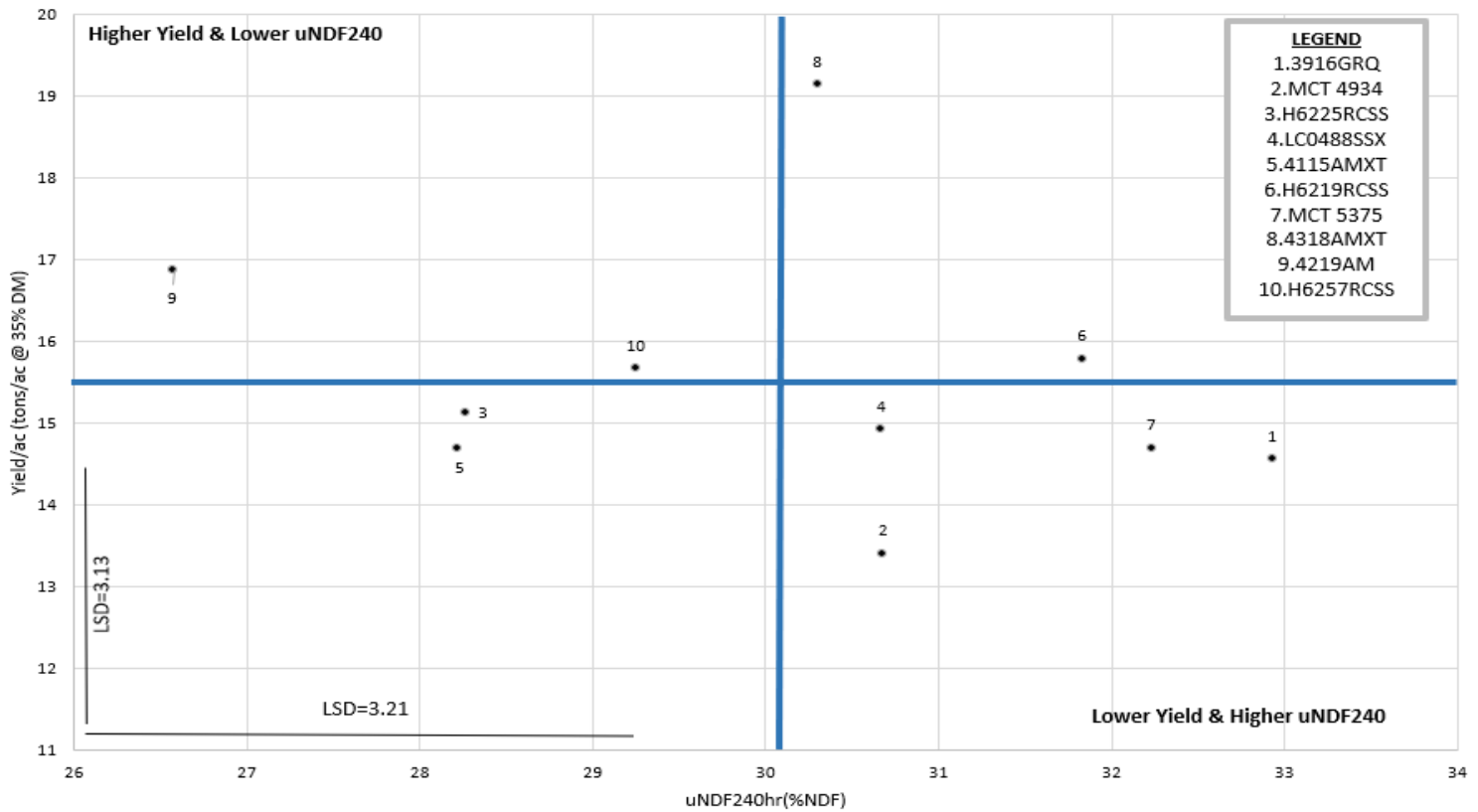
Mid (105-110 day) RM Silage Hybrids Yield and NDFD30hr(%)



* How to use this chart: This chart can be used to determine yield (tons/ac) and NDFD30(%) of corn silage hybrids. The horizontal line represents NDFD30 mean in this group of data. The vertical line represents the YIELD mean in this group of data. Each point represents a data point that reflects yield to NDFD30. The number beside the data point can be referenced to the hybrid name located within the Legend.

The LSD lines represent the differences between hybrids that are significantly different at the 0.1 level.

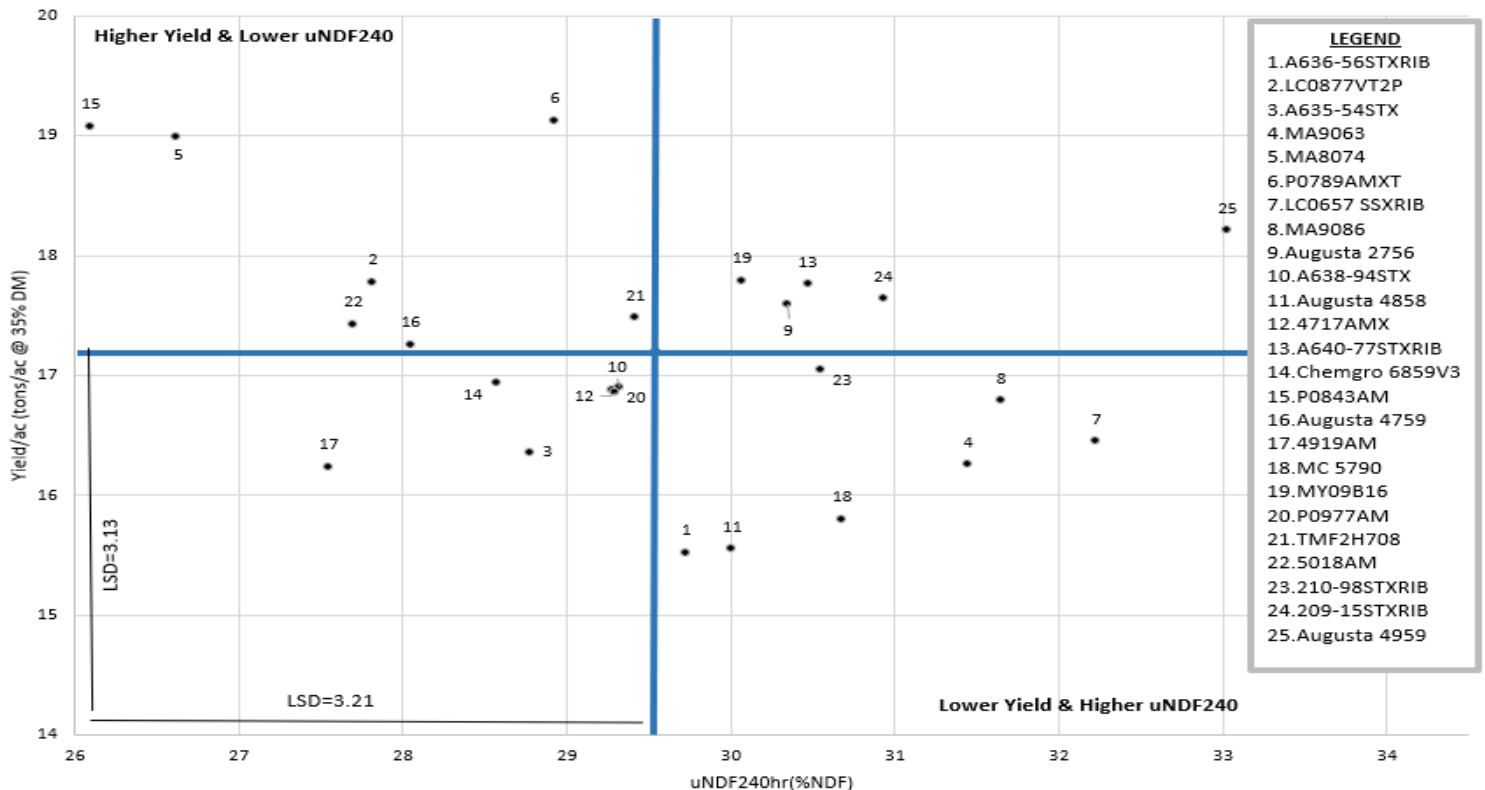
Early (99-104 day) RM Silage Hybrids Yield and uNDF240hr(%NDF)



* How to use this chart: This chart can be used to determine yield (tons/ac) and NDFD30(%) of corn silage hybrids. The horizontal line represents NDFD30 mean in this group of data. The vertical line represents the YIELD mean in this group of data. Each point represents a data point that reflects yield to NDFD30. The number beside the data point can be referenced to the hybrid name located within the Legend.

The LSD lines represent the differences between hybrids that are significantly different at the 0.1 level.

Mid (105-110 day) RM Silage Hybrids Yield and uNDF240hr(%NDF)



* How to use this chart: This chart can be used to determine yield (tons/ac) and uNDF240hr(%NDF) of corn silage hybrids. The horizontal line represents the uNDF240 mean in this group of data. The vertical line represents the YIELD mean in this group of data. Each point represents a data point that reflects dry matter yield in tons to uNDF240. The number beside the data point can be referenced to the hybrid name located within the Legend.

The LSD lines represent the differences between hybrids that are significantly different at the 0.1 level.