

2024

Professional Dairy Managers of Pennsylvania (PDMP) Corn Silage Hybrid Performance Trial Results



PDMP Corn Silage Hybrid Testing Program 2024



Mid maturity (99-111) day RM silage hybrids in Blair and Centre Counties

Notes: SEE INDIVIDUAL REPORT FOR BACKGROUND DATA

Cooperators: Mill Hill Farms and Penn State Agronomy Research Farm

Brand	Hybrid	Traits ¹	Relative Maturity	Pop. Plants/ac	Dry Matter % ²	Crude Protein %DM	Lignin %DM	Ash %DM	Starch %DM	TFA %DM	NDFom %DM	uNDF 240 hr %DM	NDFD 30 %NDF	IVSD %Starch ³	Fresh Yield tons/ac ⁴	OM Yield tons/ac ⁵	DOM Yield tons/ac ⁶	OMD % ⁷	
99-105 day hybrids																			
Kings Agriseeds	RT 53T49-D2	15	103	34,000	42.3	7.6	2.1	2.6	42.0	2.7	33.4	8.3	61.1	65.2	19.0	6.5	4.3	65.8	
Mid-Atlantic	MA5005DV	15	100	33,917	40.9	7.4	2.1	2.5	41.3	2.6	34.3	8.9	61.0	65.2	18.1	6.2	4.1	65.7	
Growmark FS	INVISION FS 5045P F	35	100	33,750	40.8	7.3	1.9	2.3	46.9	2.8	28.3	7.5	60.4	66.8	18.4	6.3	4.2	66.7	
Rob See Co	Rob See Co RC-5149	33	101	33,417	40.8	7.9	1.9	2.8	42.2	2.7	32.0	7.6	63.4	65.8	16.2	5.5	3.7	66.9	
Revere Seed	0518 VT2P	43	105	34,013	40.3	7.3	2.0	2.3	43.5	2.6	31.7	7.8	61.7	66.1	18.5	6.3	4.2	66.6	
Syngenta NK	E105Z5-D	15	105	34,000	40.1	7.4	2.0	2.6	44.2	2.5	30.9	7.9	59.6	67.0	17.5	6.0	4.0	66.4	
Growmark FS	INVISION FS 5347T F	37	103	33,917	39.6	7.4	2.1	2.5	43.4	2.7	31.4	8.3	60.1	66.2	18.4	6.3	4.1	66.0	
Revere Seed	101-P47	43	101	34,000	39.3	7.3	1.9	2.5	44.0	2.8	31.1	7.3	63.6	66.2	17.7	6.1	4.1	67.3	
Kings Agriseeds	RT 55T79-D1	14	105	33,917	39.0	7.3	1.8	2.5	45.0	2.8	30.8	7.7	62.6	66.2	17.5	6.0	4.0	67.0	
Seed Consultants	SC1055PCE	25	105	34,000	38.5	6.8	1.8	2.4	42.4	2.5	33.7	7.3	65.2	68.0	19.6	6.7	4.6	68.7	
Mid-Atlantic	MA6029PCE	27	102	33,750	37.7	7.2	1.8	2.5	45.5	2.7	30.0	6.7	64.6	67.3	17.2	5.9	4.0	68.2	
Kings Agriseeds	RT 51T86	27	101	34,000	37.3	7.2	1.9	2.5	42.8	2.7	32.5	7.9	62.1	66.2	18.3	6.2	4.2	66.7	
Mid-Atlantic	MA6032PCE	27	103	33,083	37.2	7.4	1.8	2.6	43.7	2.6	32.1	7.8	62.1	67.0	18.6	6.3	4.2	67.2	
Seed Consultants	SC1042Q	28	104	34,000	37.1	7.7	2.0	2.6	42.9	2.7	31.4	7.5	64.0	66.4	18.9	6.4	4.3	67.7	
Dekalb	DKC53-94RIB	32	103	34,000	36.6	7.1	2.0	2.5	39.3	2.4	35.8	8.3	64.1	67.6	18.7	6.4	4.3	68.0	
Channel	203-99SSPRIB	35	103	34,000	36.4	7.1	1.8	2.5	43.6	2.7	31.4	7.5	63.7	67.6	18.1	6.2	4.2	68.0	
Dekalb	DKC105-25RIB	35	105	34,000	36.2	7.6	1.9	2.5	41.3	2.7	31.8	7.9	63.4	66.7	18.7	6.4	4.3	67.5	
Channel	204-54SSPRIB	35	104	34,000	36.0	7.2	2.1	2.5	41.6	2.7	33.2	8.1	62.5	66.7	20.1	6.9	4.6	67.1	
99-105 day means					38.7	7.3	1.9	2.5	43.1	2.7	32.0	7.8	62.5	66.6	18.3	6.3	4.2	67.1	
106-111 day hybrids																			
Seedway	SW 0711SS	32	107	33,667	40.6	7.4	2.0	2.4	43.7	2.8	31.8	7.8	63.0	65.8	18.2	6.2	4.2	66.9	
Seedway	SW 0999SS	32	109	34,000	39.1	7.7	2.0	2.6	40.3	2.7	34.0	8.2	64.3	65.6	17.8	6.1	4.1	67.3	
Dekalb	DKC61-80RIB	32	111	34,000	39.0	7.3	1.9	2.4	43.2	2.6	31.6	7.4	62.4	67.1	19.6	6.7	4.5	67.3	
Rob See Co	Masters Choice MCT	14	110	33,750	38.2	8.0	2.0	3.0	39.0	2.4	33.6	8.5	62.2	66.1	17.1	5.8	3.9	66.8	
Dekalb	DKC110-10RIB	32	110	34,000	38.1	7.4	2.1	2.6	40.8	2.6	33.3	8.6	61.7	66.6	19.4	6.6	4.4	66.8	
Chemgro	6854PCE	27	108	33,982	36.8	7.3	1.9	2.5	42.2	2.6	31.6	7.6	63.8	67.8	20.6	7.0	4.8	68.2	
Seed Consultants	SC1094PCE	25	109	34,000	36.8	7.2	1.9	2.4	43.4	2.6	31.8	7.5	63.4	67.5	19.1	6.5	4.4	67.9	
Growmark FS	INVISION FS 5835V	43	108	34,000	36.4	7.4	2.0	2.5	41.5	2.6	32.7	8.4	61.0	65.6	20.3	6.9	4.6	66.0	
Revere Seed	0918 VT2P	43	109	34,000	36.3	7.1	2.1	2.5	39.9	2.4	33.8	8.4	61.3	67.3	19.3	6.6	4.4	66.8	
Mid-Atlantic	MA6065PCE	27	106	34,000	36.2	8.0	1.9	2.7	44.0	2.7	30.0	7.4	62.4	65.9	15.8	5.4	3.6	66.9	
Channel	210-92SSPRIB	35	110	34,000	36.1	7.4	2.1	2.5	40.6	2.5	32.5	8.2	61.0	67.1	18.7	6.4	4.3	66.8	
Syngenta NK	E110F4-D	15	110	34,000	36.1	7.5	2.0	2.6	41.1	2.6	32.5	8.3	60.9	67.4	18.7	6.4	4.3	67.0	
Chemgro	6959D	14	109	34,000	35.4	7.4	2.0	2.7	38.7	2.5	34.4	8.6	61.8	66.3	18.4	6.3	4.2	66.6	
Seedway	SW 1000SP	32	110	34,000	35.2	7.2	2.1	2.6	39.7	2.5	34.2	8.7	62.5	67.3	19.0	6.5	4.3	67.3	
Chemgro	7054PCE	27	110	34,000	35.1	7.7	2.1	2.8	40.0	2.4	31.9	7.6	62.2	68.0	18.7	6.4	4.3	67.7	
Mid-Atlantic	MA5103D	14	110	34,000	35.1	7.0	1.9	2.6	42.4	2.3	33.9	8.4	60.3	67.9	19.2	6.6	4.4	66.6	
Seed Consultants	SC1105PCE	25	110	34,000	35.0	7.4	2.0	2.7	39.3	2.4	34.6	8.2	63.8	67.5	21.1	7.2	4.9	67.9	
Channel	211-42SSPRIB	35	111	34,000	33.8	7.3	2.2	2.6	37.2	2.4	34.9	8.5	62.2	67.4	19.8	6.7	4.5	67.1	

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Mid maturity (99-111) day RM silage hybrids in Blair and Centre Counties

Notes: SEE INDIVIDUAL REPORT FOR BACKGROUND DATA

Cooperators: Mill Hill Farms and Penn State Agronomy Research Farm

Brand	Hybrid	Traits ¹	Relative Maturity	Pop. Plants/ac	Dry Matter % ²	Crude Protein %DM	Lignin %DM	Ash %DM	Starch %DM	TFA %DM	NDFom %DM	uNDF 240 hr %DM	NDFD 30 %NDF	IVSD %Starch ³	Fresh Yield tons/ac ⁴	OM Yield tons/ac ⁵	DOM Yield tons/ac ⁶	OMD % ⁷
Seed Consultants	SC1112AM	1	111	34,000	33.8	7.6	2.0	2.7	38.4	2.3	34.0	8.1	63.1	67.7	19.5	6.6	4.5	67.9
106-111 day means					37.5	7.4	2.0	2.6	41.9	2.6	32.5	8.0	62.4	66.8	18.6	6.4	4.3	67.1
Overall Mean					37.5	7.4	2.0	2.6	41.9	2.6	32.5	8.0	62.4	66.8	18.6	6.4	4.3	67.1
LSD(0.1)					2.0	0.3	0.2	0.2	2.8	0.2	2.2	0.8	1.9	0.7	NS	NS	0.5	0.9
CV%					5.6	4.0	8.4	9.4	7.0	7.9	7.0	10.8	3.1	1.1	12.7	12.7	13.0	1.4

¹ Traits: See tab " Trait Key" for individual trait designation.

² Dry Matter: Tables are sorted by dry matter. *Avoid making comparisons with hybrids that differ significantly in dry matter.*

³ IVSD: Starch digestibility (% of starch) is analyzed by an NIRS method on samples ground through a 4-mm screen and incubated for 7 hours (IVSD).

⁴ Fresh Yield: Silage yields are expressed on a 35 percent DM basis; all other parameters are expressed on a dry matter basis.

⁵ OM Yield: Silage yield (tons/ac) expressed on an organic matter (OM) basis.

⁶ DOM Yield: Yield of digestible organic matter.

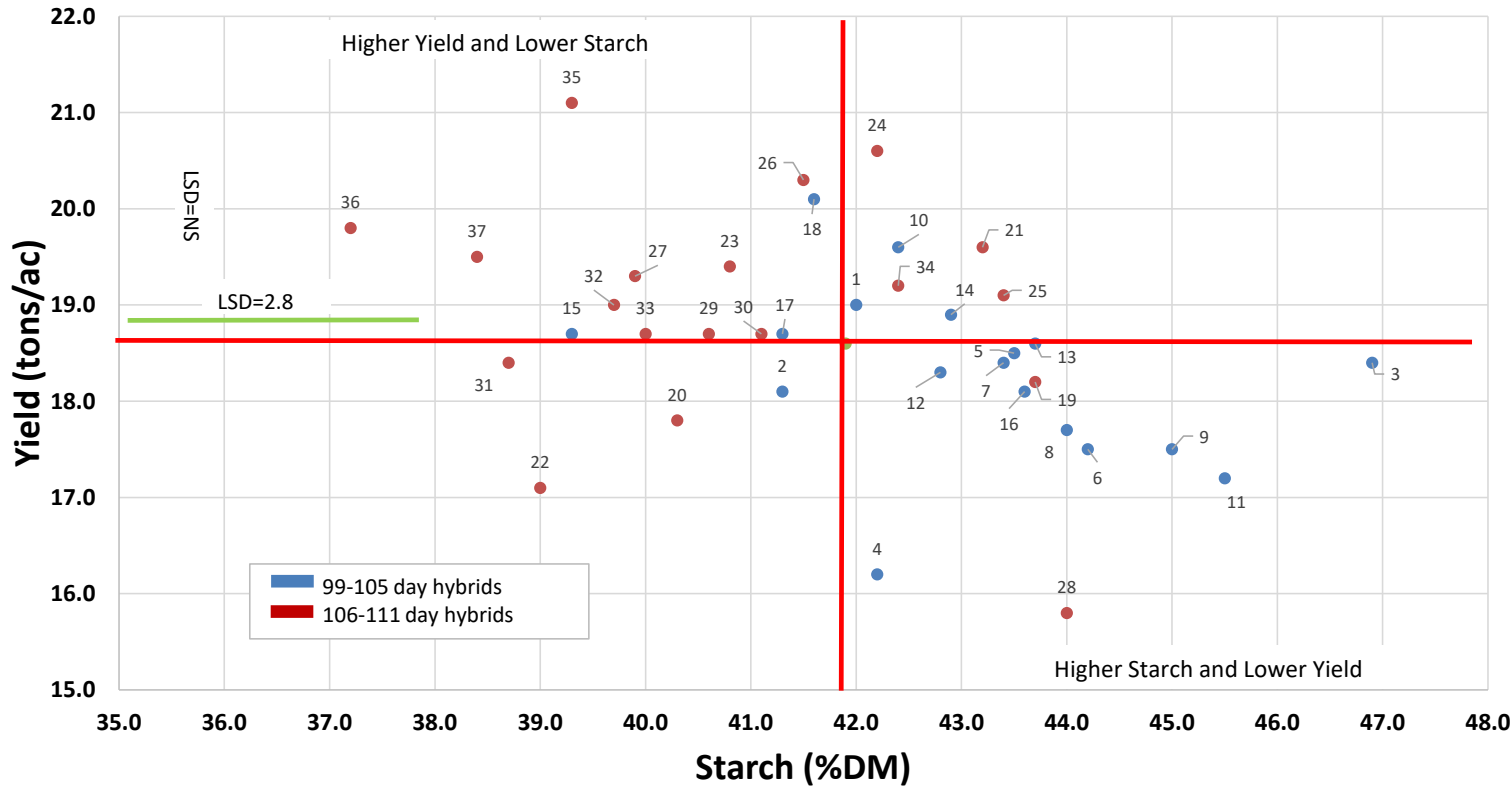
⁷ OMD: Organic Matter Digestibility - Please see "OMD Story" tab for information on how to use this column

NS = Not Significant

Prepared by: Alex Hristov (PSU Animal Sciences), Sergio Francisco (Cargill), Chris Canale (Cargill), Hanna Wells(PSU Plant Science), Dayton Spackman (PSU Plant Science), Cassidy Bumbaugh (PSU Plant Science), Charlie White (PSU Plant Science)

Mid Season Hybrids

Yield (tons/ac) and Starch (%DM)



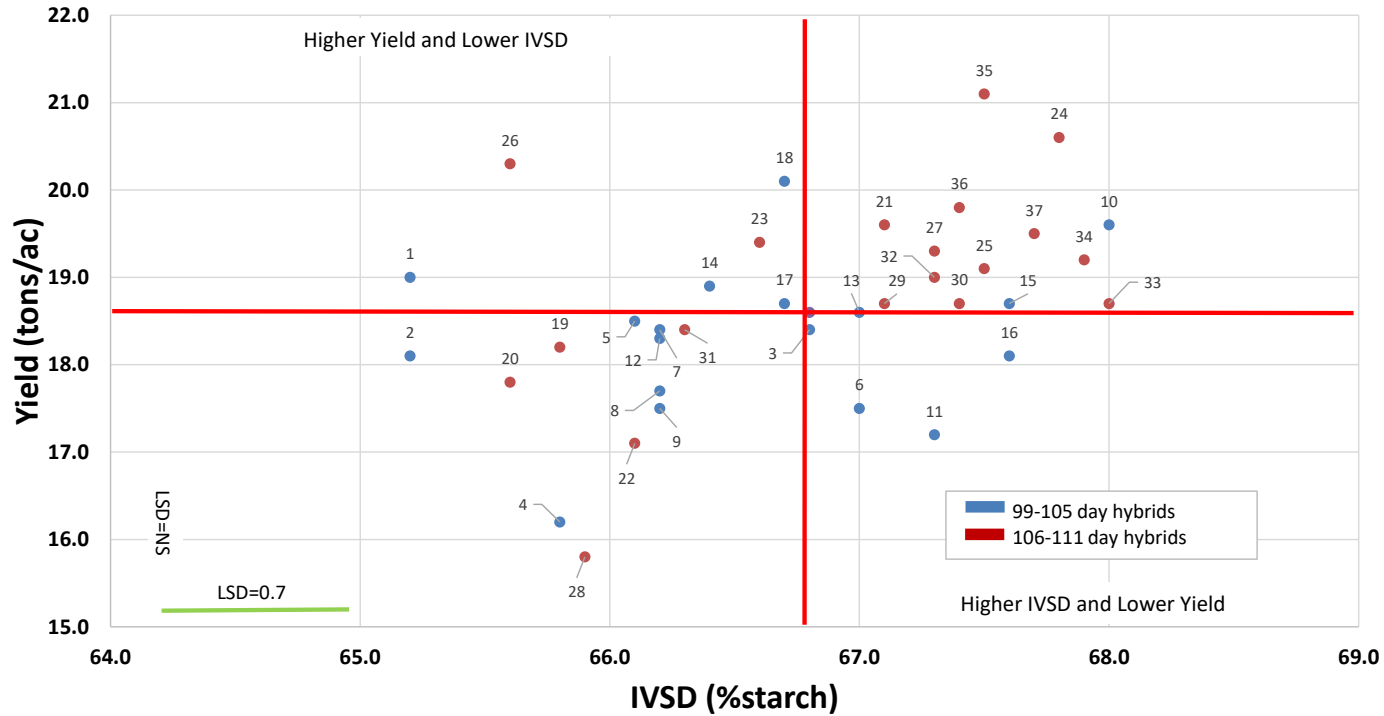
Legend

- 1.) Kings Agriseeds RT 53T49-D2
- 2.) Mid-Atlantic MA5005DV
- 3.) Growmark FS INVISION FS 5045P RIB
- 4.) Rob See Co Rob See Co RC-5149
- 5.) Revere Seed 0518 VT2P
- 6.) Syngenta NK E105Z5-D
- 7.) Growmark FS INVISION FS 5347T RIB
- 8.) Revere Seed 101-P47
- 9.) Kings Agriseeds RT 55T79-D1
- 10.) Seed Consultants SC1055PCE
- 11.) Mid-Atlantic MA6029PCE
- 12.) Kings Agriseeds RT 51T86
- 13.) Mid-Atlantic MA6032PCE
- 14.) Seed Consultants SC1042Q
- 15.) Dekalb DKC53-94RIB
- 16.) Channel 203-99SSPRIB
- 17.) Dekalb DKC105-25RIB
- 18.) Channel 204-54SSPRIB
- 19.) Seedway SW 0711SS
- 20.) Seedway SW 0999SS
- 21.) Dekalb DKC61-80RIB
- 22.) Rob See Co Masters Choice MCT-6014 D
- 23.) Dekalb DKC110-10RIB
- 24.) Chemgro 6854PCE
- 25.) Seed Consultants SC1094PCE
- 26.) Growmark FS INVISION FS 5835V RIB
- 27.) Revere Seed 0918 VT2P
- 28.) Mid-Atlantic MA6065PCE
- 29.) Channel 210-92SSPRIB
- 30.) Syngenta NK E110F4-D
- 31.) Chemgro 6959D
- 32.) Seedway SW 1000SP
- 33.) Chemgro 7054PCE
- 34.) Mid-Atlantic MA5103D
- 35.) Seed Consultants SC1105PCE
- 36.) Channel 211-42SSPRIB
- 37.) Seed Consultants SC1112AM

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

Mid Season Hybrids

Yield (tons/ac) and IVSD (%starch)



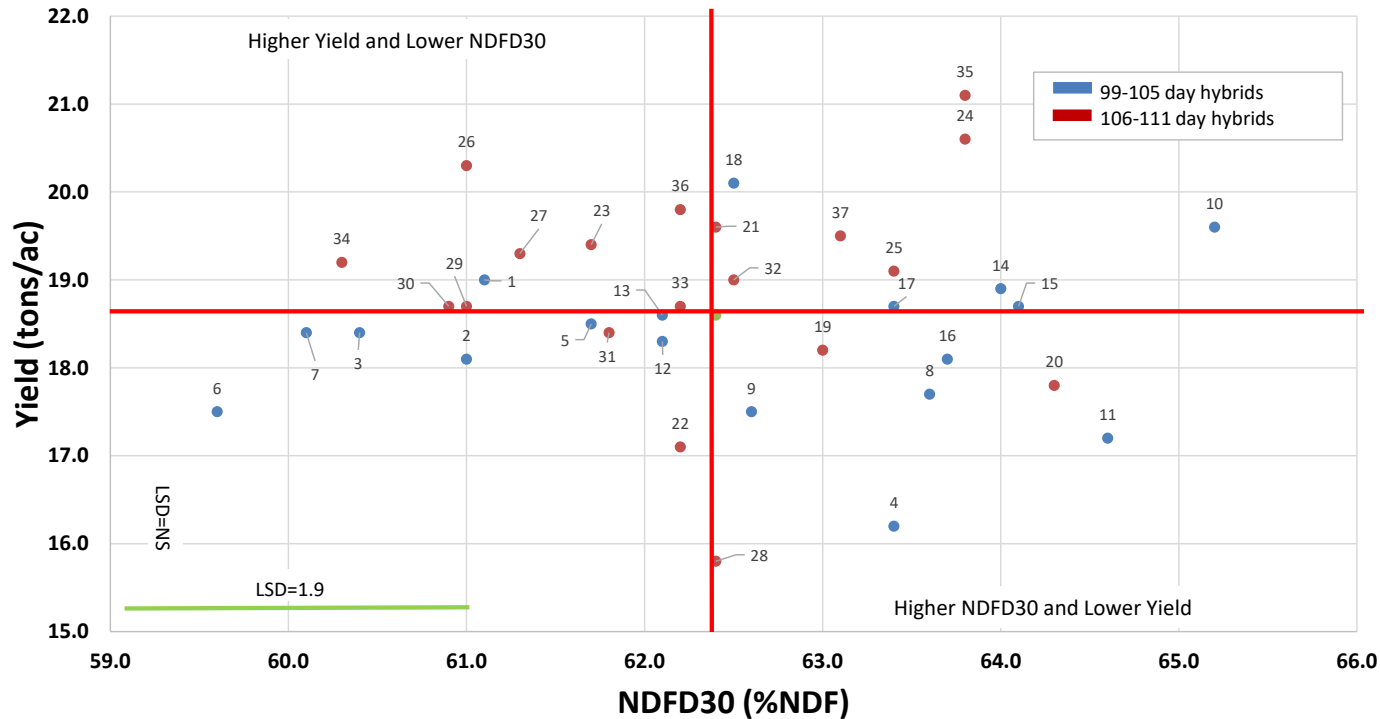
Legend

- 1.) Kings Agriseeds RT 53T49-D2
- 2.) Mid-Atlantic MA5005DV
- 3.) Growmark FS INVISION FS 5045P RIB
- 4.) Rob See Co Rob See Co RC-5149
- 5.) Revere Seed 0518 VT2P
- 6.) Syngenta NK E105Z5-D
- 7.) Growmark FS INVISION FS 5347T RIB
- 8.) Revere Seed 101-P47
- 9.) Kings Agriseeds RT 55T79-D1
- 10.) Seed Consultants SC1055PCE
- 11.) Mid-Atlantic MA6029PCE
- 12.) Kings Agriseeds RT 51T86
- 13.) Mid-Atlantic MA6032PCE
- 14.) Seed Consultants SC1042Q
- 15.) Dekalb DKC53-94RIB
- 16.) Channel 203-99SSPRIB
- 17.) Dekalb DKC105-25RIB
- 18.) Channel 204-54SSPRIB
- 19.) Seedway SW 0711SS
- 20.) Seedway SW 0999SS
- 21.) Dekalb DKC61-80RIB
- 22.) Rob See Co Masters Choice MCT-6014 D
- 23.) Dekalb DKC110-10RIB
- 24.) Chemgro 6854PCE
- 25.) Seed Consultants SC1094PCE
- 26.) Growmark FS INVISION FS 5835V RIB
- 27.) Revere Seed 0918 VT2P
- 28.) Mid-Atlantic MA6065PCE
- 29.) Channel 210-92SSPRIB
- 30.) Syngenta NK E110F4-D
- 31.) Chemgro 6959D
- 32.) Seedway SW 1000SP
- 33.) Chemgro 7054PCE
- 34.) Mid-Atlantic MA5103D
- 35.) Seed Consultants SC1105PCE
- 36.) Channel 211-42SSPRIB
- 37.) Seed Consultants SC1112AM

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

Mid Season Hybrids

Yield (tons/ac) and NDFD30 (%NDF)



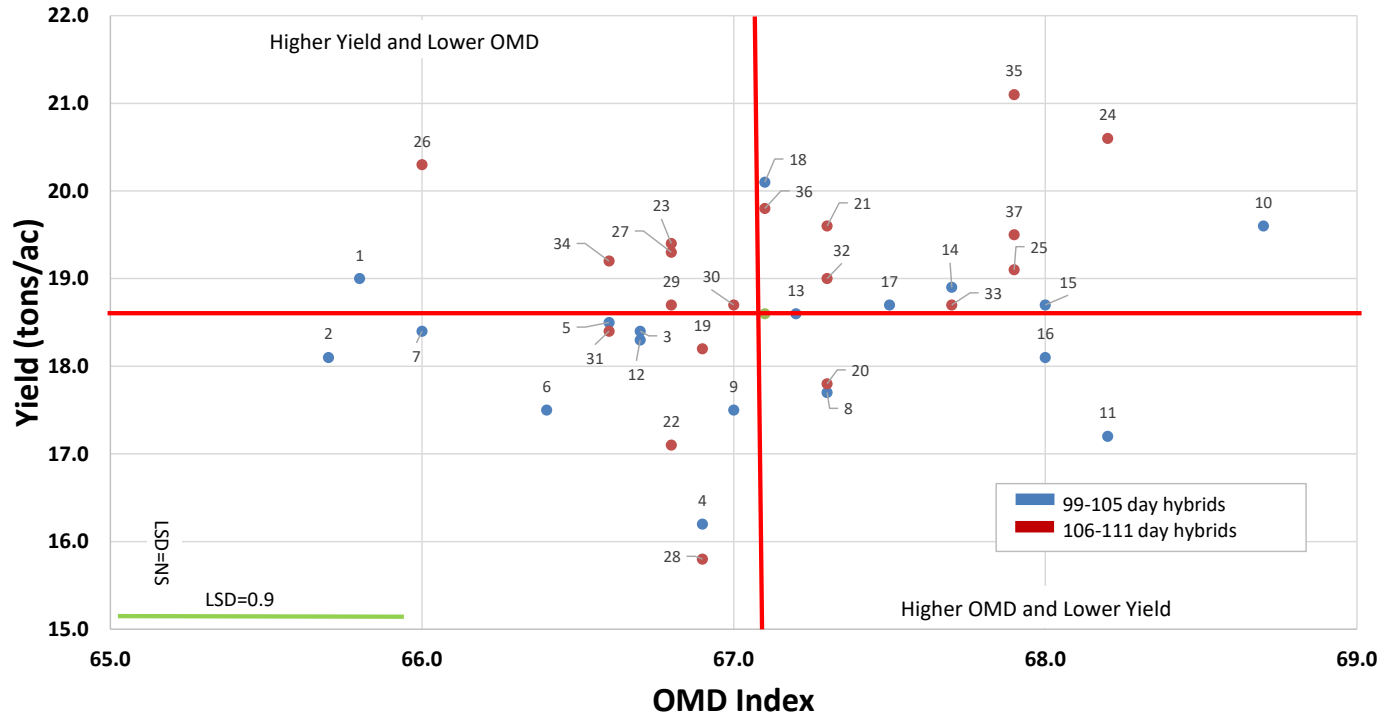
Legend

- 1.) Kings Agriseeds RT 53T49-D2
- 2.) Mid-Atlantic MA5005DV
- 3.) Growmark FS INVISION FS 5045P RIB
- 4.) Rob See Co Rob See Co RC-5149
- 5.) Revere Seed 0518 VT2P
- 6.) Syngenta NK E105Z5-D
- 7.) Growmark FS INVISION FS 5347T RIB
- 8.) Revere Seed 101-P47
- 9.) Kings Agriseeds RT 55T79-D1
- 10.) Seed Consultants SC1055PCE
- 11.) Mid-Atlantic MA6029PCE
- 12.) Kings Agriseeds RT 51T86
- 13.) Mid-Atlantic MA6032PCE
- 14.) Seed Consultants SC1042Q
- 15.) Dekalb DKC53-94RIB
- 16.) Channel 203-99SSPRIB
- 17.) Dekalb DKC105-25RIB
- 18.) Channel 204-54SSPRIB
- 19.) Seedway SW 0711SS
- 20.) Seedway SW 0999SS
- 21.) Dekalb DKC61-80RIB
- 22.) Rob See Co Masters Choice MCT-6014 D
- 23.) Dekalb DKC110-10RIB
- 24.) Chemgro 6854PCE
- 25.) Seed Consultants SC1094PCE
- 26.) Growmark FS INVISION FS 5835V RIB
- 27.) Revere Seed 0918 VT2P
- 28.) Mid-Atlantic MA6065PCE
- 29.) Channel 210-92SSPRIB
- 30.) Syngenta NK E110F4-D
- 31.) Chemgro 6959D
- 32.) Seedway SW 1000SP
- 33.) Chemgro 7054PCE
- 34.) Mid-Atlantic MA5103D
- 35.) Seed Consultants SC1105PCE
- 36.) Channel 211-42SSPRIB
- 37.) Seed Consultants SC1112AM

*How to use this chart: This chart can be used to determine yield (tons/ac) and NDFD30 (%NDF) of corn silage hybrids. The horizontal line represents the NDFD30 mean in this group of data. The vertical line represents the fresh yield mean in this group of data. Each point represents a data point that reflects fresh yield to NDFD30. The number beside the data point can be referenced to the hybrid name located within the legend. The LSD lines represent differences between hybrids that are significantly different at the 0.1 level. These lines can be moved around within the plot of data.

Mid Season Hybrids

Yield (tons/ac) and OMD Index



Legend

- 1.) Kings Agriseeds RT 53T49-D2
- 2.) Mid-Atlantic MA5005DV
- 3.) Growmark FS INVISION FS 5045P RIB
- 4.) Rob See Co Rob See Co RC-5149
- 5.) Revere Seed 0518 VT2P
- 6.) Syngenta NK E105Z5-D
- 7.) Growmark FS INVISION FS 5347T RIB
- 8.) Revere Seed 101-P47
- 9.) Kings Agriseeds RT 55T79-D1
- 10.) Seed Consultants SC1055PCE
- 11.) Mid-Atlantic MA6029PCE
- 12.) Kings Agriseeds RT 51T86
- 13.) Mid-Atlantic MA6032PCE
- 14.) Seed Consultants SC1042Q
- 15.) Dekalb DKC53-94RIB
- 16.) Channel 203-99SSPRIB
- 17.) Dekalb DKC105-25RIB
- 18.) Channel 204-54SSPRIB
- 19.) Seedway SW 0711SS
- 20.) Seedway SW 0999SS
- 21.) Dekalb DKC61-80RIB
- 22.) Rob See Co Masters Choice MCT-6014 D
- 23.) Dekalb DKC110-10RIB
- 24.) Chemgro 6854PCE
- 25.) Seed Consultants SC1094PCE
- 26.) Growmark FS INVISION FS 5835V RIB
- 27.) Revere Seed 0918 VT2P
- 28.) Mid-Atlantic MA6065PCE
- 29.) Channel 210-92SSPRIB
- 30.) Syngenta NK E110F4-D
- 31.) Chemgro 6959D
- 32.) Seedway SW 1000SP
- 33.) Chemgro 7054PCE
- 34.) Mid-Atlantic MA5103D
- 35.) Seed Consultants SC1105PCE
- 36.) Channel 211-42SSPRIB
- 37.) Seed Consultants SC1112AM

*How to use this chart: This chart can be used to determine yield (tons/ac) and the OMD Index of corn silage hybrids. The horizontal line represents the OMD Index mean in this group of data. The vertical line represents the fresh yield mean in this group of data. Each point represents a data point that reflects fresh yield to the OMD Index. The number beside the data point can be referenced to the hybrid name located within the legend. The LSD lines represent differences between hybrids that are significantly different at the 0.1 level. These lines can be moved around within the plot of data.

Handy BT Trait Table - https://www.texasinsects.org/uploads/4/9/3/0/49304017/bttritable_feb_2023.pdf

Trait ID #	Trait packages, listed A-Z = former name if applicable	Bag-Tag code	Toxins in package**** Font type denotes target Caterpillar or rootworm	BCW	CEW	ECB	FAW	SB	SCB	SWCB	TAW	WBC	CRW	Resistance cases for all Bts in package	Non-Bt refuge, cornbelt	Herbicide tolerance
0	Conventional															
1	AcreMax	AM	Cry1Ab - Cry1F	x	x	x	x	x	x	x				CEW FAW WBC	5% in bag	GLY LL
2	AcreMax CRW	AMRW	Cry34Ab1 - Cry35Ab1										x	NCR WCR	10% in bag	GLY LL
3	AcreMax1	AM1	Cry1F - Cry34Ab1 - Cry35Ab1	x		x	x	x	x	x			x	ECB FAW NCR SWCB WBC WCR	10% in bag 20% ECB	GLY LL
4	AcreMax Leptra	AML	Cry1Ab - Cry1F - Vip3A	x	x	x	x	x	x	x	x	x			5% in bag	GLY LL
5	AcreMax TRIsect	AMT	Cry1Ab - Cry1F - mCry3A	x	x	x	x	x	x	x			x	CEW FAW WBC WCR	10% in bag	GLY LL
6	AcreMax Xtra	AMX	Cry1Ab - Cry1F - Cry34Ab1 - Cry35Ab1	x	x	x	x	x	x	x			x	CEW FAW NCR WBC WCR	10% in bag	GLY LL
7	AcreMax Xtreme	AMXT	Cry1Ab - Cry1F - Cry34Ab1 - Cry35Ab1 - mCry3A	x	x	x	x	x	x	x			x	CEW FAW WBC WCR	5% in bag	GLY LL
8	Agrisure 3010	3010	Cry1Ab		x	x				x	x			CEW	20%	GLY LL
9	Agrisure 3000 GT & 3011A	3000GT 3011A	Cry1Ab - mCry3A		x	x				x	x			CEW WCR	20%	GLY LL
10	Agrisure Above = Agrisure 3120EZ	AA	Cry1Ab - Cry1F	x	x	x	x	x	x	x				CEW FAW WBC	5% in bag	GLY LL - check bag
11	Agrisure Total = Agrisure 3122EZ	AT	Cry1Ab - Cry1F - Cry34Ab1 - Cry35Ab1 - mCry3A	x	x	x	x	x	x	x			x	CEW FAW WBC WCR	5% in bag	GLY LL - check bag
12	Agrisure Viptera 3110	3110	Cry1Ab - Vip3A	x	x	x	x	x	x	x	x				20%	GLY LL
13	Agrisure Viptera 3111	3111	Cry1Ab - Vip3A - mCry3A	x	x	x	x	x	x	x	x	x		WCR	20%	GLY LL
14	Duracade = AgrisureDuracade 5122EZ	D	Cry1Ab - Cry1F - eCry3.1Ab - mCry3A	x	x	x	x	x	x	x			x	CEW FAW WBC WCR	5% in bag	GLY LL - check bag
15	Duracade Viptera = AgrisureDuracade 5222EZ	DV	Cry1Ab - Cry1F - Vip3A - eCry3.1Ab - mCry3A	x	x	x	x	x	x	x	x	x		WCR	5% in bag	GLY LL - check bag
16	Duracade Viptera Z3 = AgrisureDuracade 5332EZ	DVZ	Cry1Ab - Cry1A.105 - Cry2Ab2 - Vip3A - eCry3.1Ab - mCry3A	x	x	x	x	x	x	x	x	x		WCR	5% in bag	GLY LL - check bag
17	Herculex I	HXI	Cry1F	x		x	x	x	x	x				ECB FAW SWCB WBC	20%	GLY LL
18	Herculex RW	HXRW	Cry34Ab1 - Cry35Ab1										x	NCR WCR	20%	GLY LL
19	Herculex XTRA	HXX	Cry1F - Cry34Ab1 - Cry35Ab1	x		x	x	x	x	x			x	ECB FAW NCR SWCB WBC WCR	20%	GLY LL
20	Intrasect	YHR	Cry1Ab - Cry1F	x	x	x	x	x	x	x				CEW FAW WBC	5%	GLY LL
21	Intrasect TRIsect	CYHR	Cry1Ab - Cry1F - mCry3A	x	x	x	x	x	x	x			x	CEW FAW WBC WCR	20%	GLY LL
22	Intrasect Xtra	YXR	Cry1Ab - Cry1F - Cry34Ab1 - Cry35Ab1	x	x	x	x	x	x	x			x	CEW FAW NCR WBC WCR	20%	GLY LL
23	Intrasect Xtreme	CYXR	Cry1Ab - Cry1F - Cry34Ab1 - Cry35Ab1 - mCry3A	x	x	x	x	x	x	x			x	CEW FAW WBC WCR	5%	GLY LL
24	Leptra	VYHR	Cry1Ab - Cry1F - Vip3A	x	x	x	x	x	x	x	x	x			5%	GLY LL
25	Powercore	PW	Cry1A.105 - Cry2Ab2 - Cry1F	x	x	x	x	x	x	x				CEW WBC	5%	GLY LL
26	Powercore Refuge Advanced	PWRA	Cry1A.105 - Cry2Ab2 - Cry1F	x	x	x	x	x	x	x				CEW WBC	5% in bag	GLY LL
27	Powercore Enlist Refuge Advanced	PWE	Cry1A.105 - Cry2Ab2 - Cry1F	x	x	x	x	x	x	x				CEW WBC	5% in bag	GLY LL 2,4-D fops
28	QROME	Q	Cry1Ab - Cry1F - Cry34Ab1 - Cry35Ab1 - mCry3A	x	x	x	x	x	x	x			x	CEW FAW WBC WCR	5% in bag	GLY LL
29	SmartStax	SS, SX	Cry1A.105 - Cry2Ab2 - Cry1F - Cry3Bb1 - Cry34Ab1 - Cry35Ab1	x	x	x	x	x	x	x			x	CEW NCR WBC WCR	5%	GLY LL
30	SmartStax Refuge Advanced	SXRA	Cry1A.105 - Cry2Ab2 - Cry1F - Cry3Bb1 - Cry34Ab1 - Cry35Ab1	x	x	x	x	x	x	x			x	CEW NCR WBC WCR	5% in bag	GLY LL
31	SmartStax Enlist	SSE	Cry1A.105 - Cry2Ab2 - Cry1F - Cry3Bb1 - Cry34Ab1 - Cry35Ab1	x	x	x	x	x	x	x			x	CEW NCR WBC WCR	5% in bag	GLY LL 2,4-D fops
32	SmartStax RIB Complete	SS SSRIB	Cry1A.105 - Cry2Ab2 - Cry1F - Cry3Bb1 - Cry34Ab1 - Cry35Ab1	x	x	x	x	x	x	x			x	CEW NCR WBC WCR	5% in bag	GLY LL
33	SmartStax PRO Refuge Advanced	SSPro	Cry1A.105 - Cry2Ab2 - Cry1F - Cry3Bb1 - Cry34Ab1 - Cry35Ab1 - dvSnf7	x	x	x	x	x	x	x			x	CEW WBC	5% in bag	GLY LL
34	SmartStax PRO Enlist Refuge Advanced		Cry1A.105 - Cry2Ab2 - Cry1F - Cry3Bb1 - Cry34Ab1 - Cry35Ab1 - dvSnf7	x	x	x	x	x	x	x			x	CEW WBC	5% in bag	GLY LL 2,4-D fops
35	SmartStax PRO with RNAi Technology	SSPRORIB	Cry1A.105 - Cry2Ab2 - Cry1F - Cry3Bb1 - Cry34Ab1 - Cry35Ab1 - dvSnf7	x	x	x	x	x	x	x			x	CEW WBC	5% in bag	GLY LL
36	Trecepta	TRE,TRC	Cry1A.105 - Cry2Ab2 - Vip3A	x	x	x	x	x	x	x	x	x			5%	GLY
37	Trecepta RIB Complete	TRERIB TRCRIB	Cry1A.105 - Cry2Ab2 - Vip3A	x	x	x	x	x	x	x	x	x			5% in bag	GLY
38	TRIssect	CHR	Cry1F - mCry3A	x		x	x	x	x	x			x	ECB FAW SWCB WBC WCR	20%	GLY LL
39	Viptera = AgrisureViptera 3220EZ	V	Cry1Ab - Cry1F - Vip3A	x	x	x	x	x	x	x	x	x			5% in bag	GLY LL - check bag
40	Viptera Z3 = AgrisureViptera 3330EZ	VZ	Cry1Ab - Cry1A.105 - Cry2Ab2 - Vip3A	x	x	x	x	x	x	x	x	x			5% in bag	GLY LL - check bag
41	Vorceed Enlist	V	Cry1A.105 - Cry2Ab2 - Cry1F - Cry3Bb1 - Cry34Ab1 - Cry35Ab1 - dvSnf7	x	x	x	x	x	x	x			x	CEW NCR WBC	5% in bag	GLY LL 2,4-D fops
42	VT Double PRO	VT2P VT2PRO	Cry1A.105 - Cry2Ab2		x	x	x	x	x	x				CEW	5%	GLY
43	VT2P RIB Complete	VT2PRIB	Cry1A.105 - Cry2Ab2		x	x	x	x	x	x				CEW	5% in bag	GLY
44	VT TriplePRO	VT3P	Cry1A.105 - Cry2Ab2 - Cry3Bb1		x	x	x	x	x	x			x	CEW NCR WCR	20%	GLY
45	VT3P RIB Complete	VT3PRIB	Cry1A.105 - Cry2Ab2 - Cry3Bb1		x	x	x	x	x	x			x	CEW NCR WCR	10% in bag	GLY
46	VT4Pro w/RNAi Tech.	VT4PRO	Cry1A.105 - Cry2Ab2 - Vip3A - Cry3Bb1 - dvSnf7	x	x	x	x	x	x	x	x	x			5% in bag	GLY
47	YieldGard Corn Borer	YGCB	Cry1Ab		x	x				x				CEW	20%	GLY
48	YieldGard Rootworm	YGRW	Cry3Bb1										x	NCR WCR	20%	GLY
49	YieldGard VT Triple	VT3	Cry1Ab - Cry3Bb1		x	x				x			x	CEW NCR WCR	20%	GLY

The OMD Index

The digestibility of nutrients in corn silage is paramount when determining nutritional value. Starch and NDF are responsible for much of the digestible energy in corn silage. In order to give dairy producers and nutritionist a tool to evaluate corn silage hybrids, we developed a new digestibility index, called the Organic Matter Digestibility Index (OMDI or just OMD), and is based on digestibility of protein, fat, NDF, and starch. The sum of which makes up approximately 86-88% of the organic matter in corn silage.

The OMD index represents the digestible portion of silage organic matter and is based on chemical analyses only. It does not predict dry matter intake or milk production, although numerous studies clearly show that digestibility of forage organic matter is directly related to lactation performance of dairy cows. The OMD index does not represent the absolute digestibility of silage organic matter, as this can be reliably determined only in experiments with live animals. But, OMD is representative of the potentially digestible organic matter of the whole plant and can be used to compare silage hybrids. Furthermore, simulation analyses using the Cornell Net Carbohydrate and Protein System (CNCPS v. 6.55; Cornell University, Ithaca, NY) show that OMD correlates reasonably well with model-predicted milk production of dairy cows fed a standard diet containing approx. 40% corn silage (dry matter basis).

How is the OMD Index Used?

Feeding value of corn silage is mostly associated with digestibility of NDF or starch. A long-standing goal of PDMP is to create a single measure of silage nutritive value using several variables associated with digestibility. Traditional variables, crude protein (accounted for fiber-bound nitrogen), NDF, starch, lignin, and fat, are combined with digestibility determinations for NDF (NDFD30*) and starch (IVSD; 7-hour, 1-mm grind). Once combined, these digestibility coefficients sum to predict OMD.

The OMD Index is calculated using the following equation: $OMDI (\%) = \{[(\text{crude protein} - \text{NDICP}) \times 0.89] + (\text{total fatty acids} \times 0.75) + (\text{starch} \times \text{IVSD} \div 100) + [(\text{aNDFom} - \text{lignin}) \times \text{NDFD30} \div 100]\} \div [(\text{crude protein} - \text{NDICP}) + \text{total fatty acids} + \text{starch} + (\text{aNDFom} - \text{lignin})] \times 100$.

Where: OMDI (%) is Organic Matter Digestibility Index; crude protein, total fatty acids, starch, NDICP (NDF-bound crude protein), aNDFom (ash-free basis, amylase-treated NDF), and lignin (ash-free) are expressed as % of corn silage dry matter; 0.89 is assumed (based on literature data) coefficient of digestibility of silage crude protein; 0.75 is assumed (based on literature data) coefficient of digestibility of silage total fatty acids; IVSD is starch digestibility (by NIRS at 7-hour and sample ground through a 4-mm sieve) expressed as % of starch; and NDFD30.

Use of OMDI: The OMD index is intended to represent the digestible portion of silage dry matter and is based on chemical analyses. OMD does not represent the absolute digestibility of silage organic matter, but it is representative of the potentially digestible organic matter and can be used when comparing silage hybrids. **Simply put, the higher the OMD value, the higher the overall expected digestibility of the silage.** OMD reflects the digestibility of key nutrients within the entire plant. Producers without carryover of silage should consider the interaction of OMD and DOM (digestible organic matter yield per acre) as yield of digestible organic matter will be equally as relevant as OMD.

Conclusion

Organic matter digestibility is not a new measure. For years, researchers and nutritionists have used digestibility estimates to formulate rations for dairy cattle. Today, integrating these data is a useful practice to gauge silage value and match hybrid to farm needs. Put simply, OMD measures whole plant digestibility. Emphasis is on digestibility of all main nutrients. In the end, we hope OMD serves to facilitate discussion among producer, seed consultant, and dairy nutritionist as to which hybrids offer the best nutrient value for dairy cows.