Northern New York Agricultural Development Program
2018 Project Final Report

Commercial Corn Hybrid Evaluation for Silage and Grain in Northern New York

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Cooperating Farms/Producers:

- St. Lawrence County: Jon Greenwood, Greenwood Dairy, Madrid, NY
- Clinton County: William H. Miner Agricultural Research Institute, Chazy, NY
- Essex County: Cornell University Agricultural Experiment Station, Willsboro Research Farm, Willsboro, NY

Background:

Corn is the primary row crop grown in northern New York (NNY), harvested from about 144,000 acres when averaged over the past five years. About 65% of this total was harvested as silage and 35% as grain. The dairy industry and ethanol production facilities both contribute to strong demand for corn silage and grain in NNY. As the seed industry continues to introduce new corn hybrids to the market, evaluation of these hybrids in growing conditions representative of northern NY is critical to assisting growers in selecting hybrids best suited to their environment and needs.

The importance of corn silage as a high yielding, high quality feed for dairy cattle continues to increase as dairy farmers look to optimize feed value from available acreage. A focus on silage-specific corns by the seed industry has also increased the offering to producers and increased the need for independent evaluation of a broad suite of yield, adaptation, and quality traits to determine their merit in feeding programs.

The critical importance of corn silage to producers prompted the re-instatement of the Commercial Corn Silage Hybrid Trials in 2016. The 2016 program, which introduced an improved forage quality evaluation, was met with enthusiasm from many producers and industry representatives, leading to growth in the hybrid entries that were tested in the 2017 season and an expanded set of silage testing locations (including collaborative sites in Vermont, in environments similar to those of NNY). A similar program was conducted in 2018.

Corn grain is a valuable NNY commodity in its own right, but also a major contributor to any hybrid's silage yield and quality. Seed companies typically test hybrids in grain evaluation trials as a first step in determining what is worth marketing in the region and what might merit further evaluation for silage yield and quality. Thus, commercial hybrid grain yield evaluations continue to provide information of importance in NNY.

Methods:

Commercial corn hybrids for silage were planted at Cornell's Willsboro Research Farm in Essex County (80 to 95 day hybrids) and at the Greenwood Farm in St. Lawrence County (96 to 110 day hybrids).

Grain hybrid trials (79 to 89 day hybrids) were planted at both the Greenwood Farm in St. Lawrence County and at the W.H. Miner Institute in Clinton County.

Hybrid entries were solicited from seed companies doing business in New York and the Northeast. Hybrids were machine planted in three replications at each site using a randomized complete block design. Individual plots consisted of two (grain) or four (silage) rows, 17.5' long at 30" spacing. Plantings were done on 8-9 May 2018 in Madrid (silage and grain), 24 May 2018 in Willsboro (silage only), and 30 May 2018 in Chazy (grain only). Silage hybrids were planted at 34,000 plants/acre. Grain hybrids were over-planted and thinned to 30,000 plants/acre. Hybrids were evaluated in June for emergence. Electric fencing was erected as needed to

minimize wildlife damage to the plots. Cross-planted corn was seeded in alleyways at Chazy for the same reason.

For both silage trials, the center two rows of four-row silage plots were harvested with a two-row plot harvester equipped with a weighing system, and timed to come as close to 35% whole plant dry matter as possible.

The Willsboro trial was harvested on 14 September 2018 (average 35.0% dry matter) and the Madrid trial on 12 September 2018 (average 32.9% dry matter).

Forage samples from each plot were sent to Cumberland Valley Analytical Laboratory for NIR analysis to determine crude protein (CP), starch, lignin, ash, total fatty acids (TFA), ash-corrected neutral detergent fiber (aNDFom), neutral detergent fiber (NDF) digestibility (NDFD; 12, 30, 120, 240 hr), and undigested NDF (uNDFom; 240 hr).

Results were used in a CNCPS 7.0 analysis in which the analytical values were applied to a typical New York higher corn silage-based diet (forage ~ 60% of diet DM; corn silage at ~ 70% of forage DM). Diet was formulated by Tom Overton, Mike Van Amburgh, and Michael Dineen. Since samples did not undergo fermentation, feed library values were assigned for soluble protein, ammonia, volatile fatty acids, and 7-hr starch digestibility values. CNCPS 7.0 predictions were conducted initially by replacing the base corn silage in the diet at the sme DM amount. Subsequently, dry matter intake of the entire ration was adjusted based on the first limiting rumen factor (rumen aNDFom pool size or rumen uNDFom pool size) and predicted milk production was calculated. This approach accounts for differences in dry matter intake potential of the total ration based on individual hybrid traits and is a more biologically robust approach than comparing hybrids on a constant dry matter intake basis.

For corn grain trials, no significant pest pressure was observed at either site this year so leaf disease ratings were not possible.

Plots at Madrid were harvested with a combine equipped with weigh buckets and moisture meter (26 October 2018). Harvest was done by hand at Chazy (26 October 2018). Immediately before harvest, the number of stalks broken (or lodged) below the ear was counted and expressed as a portion of the total number of plants in the plot (% stalk lodging). Plants leaning over from the base at more than a 45 degree angle were counted as root-lodged, and expressed as a proportion of the total number of plants (% root lodging).

Yield data from both sites included grain weight per plot and grain moisture at harvest. Yields were calculated at 15.5% grain moisture and used to calculate yield:moisture (Y:M) ratio for each hybrid. Y:M ratio measures hybrid efficiency in producing high yield under short-season conditions. Hybrids that show high yields and earlier maturity (lower grain moistures) have higher Y:M ratios.

We use three statistics to evaluate the quality of grain yield data from these trials. The coefficient

of variation (CV) is a measure of the uncontrolled variability due to differences in the soil, microclimate, fertility, etc. Grain yield CVs below 12 are excellent and those between 12 and 15 are acceptable. Grain moisture CVs below 5 are excellent. The least significant difference (LSD) is computed at the 5% level of probability. If a difference between two hybrids is larger than the LSD listed for the trial, then the odds are at least 95 to 5 (or 19 to 1) that there is true varietal difference between the hybrids, or, as the statisticians say, the difference between the two hybrids is significant.

As a cautionary note, growers should choose hybrids based on multi-year and multi-location data whenever possible, since any hybrid can have a "banner year" or "banner environment" but not necessarily hold up over different locations and growing seasons.

Results:

Crop performance in 2018 was generally good. Early season weather was dryer than normal at most New York sites, leading to concerns about drought stress. However, rainfall returned to more normal values around flowering time at most locations, which led to good crop performance through the pollination and grain fill periods.

For corn silage hybrids, specific genetically engineered and specialty traits present in each hybrid are noted in the results tables using a "trait code" as detailed below and in Table 1. Most of these are genetically engineered traits. Hybrids listed with trait code 1 (conventional) and 48 (floury leafy) are the only ones that are not genetically engineered. To determine exactly which insect resistance genes (Bt genes) and herbicide tolerance genes have been built into the genetically engineered hybrids, refer to the "Handy Bt Trait Table" from Michigan State University at: https://lubbock.tamu.edu/files/2018/11/BtTraitTableNov2018.pdf.

Agronomic, quality, and predicted milk yield and dry matter intake results for 85 to 95 day silage hybrids at Willsboro are shown in Table 2. Graphical results comparing crop silage yield and predicted milk yield (both as a percentage of the plot mean) are shown in Figure 1 for this data. In interpreting this graph, note that the upper right quadrant includes those hybrids with above average crop yield and above average milk yield. The lower left quadrant would be hybrids that were below average for both parameters. The earlier-maturing portion of these hybrids are plotted in green (86 to 92 day) while the later maturing group (93 to 95 day) are in blue.

Results for 96 to 110 day silage hybrids at Madrid are shown in Table 3 and graphical results comparing percentage of the plot mean for crop silage yield vs. predicted milk yield are shown in Figure 2a (96 to 102 day hybrids) and Figure 2b (103 to 110 day hybrids.)

Corn hybrid grain trial results averaged over both Chazy and Madrid locations are shown in Table 4. Individual location results from Chazy are in Table 5 and those from Madrid are in Table 6. Data quality was good and grain yields from both sites were very good.

NOTE: Tables and Figures should not be reproduced if any portion is omitted or if data order is changed.

Table 1. Trait codes.

Trait Code	Trait
1	Conventional
2	Roundup Ready (RR), Roundup Ready 2 (RR2)
3	AcreMax (AM)
4	AcreMax CRW (AMRW)
5	AcreMax1 (AM1)
6	AcreMax Leptra (AML)
7	AcreMax TRIsect (AMT)
8	AcreMax Xtra (AMX)
9	AcreMax Xtreme (AMXT)
10	Agrisure GT
11	Agrisure GT/RW
12	Agrisure 3010
13	Agrisure 3010A
14	Agrisure 3000GT
15	Agrisure 3011A
16	Agrisure Viptera 3110 and 3110A
17	Agrisure Viptera 3111
18	Agrisure3120 EZ Refuge
19	Agrisure3122 EZ Refuge
20	Agrisure Viptera 3220 EZ Refuge
21	Agrisure Duracade 5122 EZ Refuge
22	Agrisure Duracade 5222 EZ Refuge
23	Herculex I (HXI)
24	Herculex RW (HXRW)
25	Herculex XTRA (HXX)
26	Intrasect (YHR)
27	Intrasect TRIsect (CYHR)
28	Intrasect Xtra (YXR)
29	Intrasect Xtreme (CYXR)
30	Leptra (VYHR)
31	Powercore
32	Powercore Refuge Advanced
33	QROME (Q)
34	SmartStax
35	Smartstax Refuge Advanced
36	SmartStax RIB Complete
37	SmartStax Enlist
38	Trecepta
39	Trecepta RIB Complete
40	TRIsect (CHR)
41	VT Double PRO
42	VT Double PRO RIB Complete
43	VT Triple PRO
44	VT Triple PRO RIB Complete
45	Yieldgard Corn Borer (YGCB)
46	Yieldgard Rootworm (YGRW)
47	Yieldgard VT Triple
48	Floury Leafy

Conclusions/Outcomes/Impacts:

Silage Evaluation: Willsboro

Silage yields at Willsboro averaged 18.4 t/acre for the 80-95 day hybrids tested (Table 2). Yield differences were not significant with individual hybrids ranging only from 16.5 to 20.4 tons/acre. Variation in dry matter percent was significant (range 32.2% to 38.5%), but the trial mean was 35.0% – exactly what our target was for harvest timing! Variation was significant for many quality parameters as well, but not for most of the NDF-related parameters. Finally, there was significant variation in predictions for dry matter intake and allowable milk yield, with the latter ranging from 103 to almost 125 lbs/day.

Figure 1 shows which hybrids were above average for crop yield (top half) and predicted milk (right half), with three 86 to 92 day and two 93 to 95 day hybrids falling in the upper right quadrant where both crop yield and predicted milk were above average. Note that the points plotted in this figure are percentage of the overall trial mean, without any measure of error to indicate whether they differ significantly one from another. Least significance difference (LSD) values at the bottom left of the graph indicate that crop yields were statistically the same for all hybrids in this trial. Predicted milk did vary significantly among the hybrids, but none were significantly higher than the trial mean for predicted milk.

Silage Evaluation: Madrid

Madrid silage data for 96 to 110 day hybrids (Table 3) showed significant variation for all traits measured. This trial had excellent yield (average of 28.5 tons/acre with individual hybrids as high as 31.5 tons/acre). Overall mean dry matter was 32.9% – close to our target for harvest timing. As could be expected, the hybrids with earlier relative maturity values had a bit higher dry matter and those in the later relative maturity group had a bit lower dry matter at harvest.

Figure 2 plots hybrids according to their mean silage yield and mean predicted milk, with those hybrids that were above the mean for both parameters in the upper right quadrant of the figure. Among the earlier relative maturity group (96 to 102 day, Figure 2a), six hybrids were in this upper right quandrant, but least significant difference (LSD) values reveal that none were significantly greater than the overall mean for crop yield or for predicted milk. For the later relative maturity group (103 to 110 day, Figure 2b), ten hybrids fell in the upper right quadrant of the figure. Although none were significantly higher than the trial mean for crop yield, one was significantly above the mean for predicted milk (#35, Viking O.51-04GS).

While several forage quality parameters are important, fiber digestibility continues to be a key focus of assessing corn silage. Undigested neutral detergent fiber at 240 hrs (uNDF240) as well as the rate of digestion assessed using the measurement of NDF digestibility at multiple time points are key to understanding the value of corn silage in a total ration for lactating cows. The amount a cow can consume (her dry matter intake) is strongly correlated to milk-producing potential and a lower uNDF240 value is an indicator that the cow will be able to consume more of the forage.

In addition to analyzing fiber digestibility values, these regional trials allow the further study of

apparent interactions between the growing environment and fiber digestibility of the corn plant. On-going evaluation of hybrids with the Cornell Net Carbohydrate and Protein Synthesis (CNCPS) model, where each hybrid in the testing program is entered into a standardized lactating cow feed ration, allows for the evaluation of the effect of fiber digestibility and other key forage quality parameters on expected animal performance with a diet containing that hybrid.

Grain Evaluation: Chazy and Madrid

Grain hybrid trials at Chazy and Madrid were both excellent and had very good coefficients of variation for yield and for grain moisture, indicating high data quality from both sites. Consequently, results are presented first as means over both testing locations, since multi-environment data is always a better indicator of potential performance than single site data.

Early maturity (79 to 89 day) grain hybrid results for the combined locations are presented in Table 4, arranged from lowest to highest grain moisture at harvest (i.e., earliest maturity at the top of the table and latest at the bottom). Both yield and grain moisture varied significantly between locations, and highly significantly among hybrids.

There were also highly significant location x hybrid interactions, reflecting the generally large differences we observed in 2018 for hybrid performance from one site to another. This is probably due in part to the weather differences between sites. Conditions at Chazy were at or above average for growing degree days and below average for precipitation every month from May through September. Overall precipitation for the growing season was only 61% of long-term average. At Madrid, although growing degree days were a bit above average for several months, conditions were cooler than normal in June and October and precipitation was below long-term averages only in June and July. Overall season precipitation at Madrid was 85% of long-term average values. Even with this variation in hybrid performance between sites, the multi-site data is a good indicator of which hybrids were solid performers in both conditions – a reflection of ability to do well despite year-to-year weather variation that is bound to occur.

Values for over-location means ranged up to 240 bu/acre for yield, and grain moistures shows a large range from 17.7% to 26.0%. As would be expected, later maturity hybrids tended to have higher yield potential (they can take advantage of more growing degree days, especially in a season where heat accumulation tends to be above average). The yield:moisture (Y:M) ratio provides an indication of hybrid efficiency in producing high yield under short-season conditions. **This ratio is one of the best guides to choosing a hybrid with excellent yield potential and appropriate maturity.** The absolute value of the Y:M ratio is not as important as the relative values of the hybrids tested. High Y:M ratio values for some of the earlier-maturing hybrids indicate that there were high-yielding hybrids among them as well. Based on this ratio, FS39R71VP2, MCT3323 3000GT, and 40R58 were all more than one standard deviation above the mean, indicating that they fell in the top 16% of the values for this trait. All of these hybrids were in the later half of the maturity range. For growers with a shorter available growing season, some of the earlier hybrids with high yields and good Y:M ratios would also be good choices.

As a reminder, **growers should choose hybrids based on multi-year and multi-location data whenever possible**, since any hybrid can have a "banner environment" but not necessarily hold up as strongly over a range of different locations and growing seasons. That said, individual location results are presented in Table 5 for Chazy and Table 6 for Madrid. Both sites had statistically significant variation for grain yield and grain moisture at harvest. Again, the yield:moisture ratio is a good guide to choosing hybrids with excellent yield potential and appropriate maturity. Based on this ratio, a number of the earlier maturing hybrids stood out at Chazy, where warm and dry conditions may have favored those hybrids that could fill grain quickly with whatever soil moisture was available. Longer-season hybrids tended to have the best yield:moisture ratios at Madrid, where precipitation was relatively more abundant throughout the season and temperatures were more typical.

The data in this report will be incorporated into hybrid performance tables in the upcoming Cornell Guide for Integrated Field Crop Management, which provides the multi-year data summary that is the best guide to choosing hybrids. The hybrids specifically noted in this report are examples only, based on data from only two sites and one year. Growers will need to choose hybrids based on performance across multiple sites and/or years, and based on the mix of traits that best fits their individual operations and needs.

Outreach:

Results from 2018 NNYADP silage evaluations, and results from other sites in New York and Vermont, are available via the New York and Vermont Corn Silage Hybrid Trials – 2018 report and on the web at:

https://scs.cals.cornell.edu/sites/scs.cals.cornell.edu/files/shared/documents/NY_VT%20Corn%20Silage%20Hybrid%20Evaluation%20Report_11.29.2018a.pdf

NNYADP grain trial results will be incorporated into the multi-year tables of recommended hybrids in the 2020 Cornell Guide for Integrated Field Crop Management (published by Cornell University in fall 2019). Results of 2017 NNYADP testing of corn grain hybrids were incorporated into the multi-year tables of recommended hybrids in the 2019 Cornell Guide for Integrated Field Crop Management (Cornell University, 2018). These results are available for farmer and seed company use in selecting hybrids best adapted to the challenging soils and climates of NNY. This publication is distributed through extension offices and at various extension and outreach meetings.

Silage results have been shared at numerous crop meetings, both in NNY and beyond. Joe Lawrence has presented/will present this data at the following venues:

- 2018 Northeast Region CCA Training, 28 November 2018
- Oneida County Crop Congress, 4 January 2019
- South Central New York Winter Crop Meeting, 29 January 2019
- PRO-DAIRY Webinar Series, 31 January 2019
- Lowville Farmers Coop Winter Forage Forum, 4 February 2019
- Central New York Winter Forage Meeting, Hamilton, 27 February 2019

- Central New York Winter Forage Meeting, Johnston, 28 February 2019
- Cayuga County Cornell Cooperative Extenssion Shop Meeting, 1 March 2019

Project leaders Joe Lawrence and Margaret Smith would be happy to share results at additional meetings in NNY as requested.

Next Steps:

We will plan to continue testing hybrids in NNY to ensure that farmers and seed companies have a solid basis for their choices of corn silage and grain hybrids for this important agricultural production region of the state.

Acknowledgments:

Funding from the Northern New York Agricultural Development Program and from seed companies entering hybrids in these trials is gratefully acknowledged. We also acknowledge general support for corn breeding and hybrid testing from the Cornell University Agricultural Experiment Station. Donations of hybrid seed from the companies entering their hybrids in these trials are also much appreciated. We acknowledge the assistance of Dr. Michael Davis of the Cornell Willsboro Research Farm with planting, general management, and harvest of the trials at the Willsboro Farm and at Miner Institute in Chazy, and we gratefully acknowledge the in-kind support of Miner Institute in providing field space for our corn grain trial.

Reports and/or articles in which results of this project have been published:

- The 2018 New York and Vermont Corn Silage Hybrid Trial data tables are posted at: https://scs.cals.cornell.edu/sites/scs.cals.cornell.edu/files/shared/documents/NY_VT%20Corn%20Silage%20Hybrid%20Evaluation%20Report_11.19.2018.pdf
- 2018 Corn Silage Overview: https://prodairy.cals.cornell.edu/sites/prodairy.cals.cornell.edu/files/shared/documents/CS%20overview%20Oct%202018%5B1%5D.pdf
- 2017 corn grain trial results are published in the following document, 2018 results will be in the next edition: Smith, M.E. and J. Singer. 2018. Corn grain hybrid selection. pp. 53-55. In: Thomas-Murphy, J. (ed.) 2019 Cornell Guide for Integrated Field Crop Management. Pesticide Management Education Program, Cornell Univ., Ithaca NY. 160 pp.

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Table 2. Results from evaluation of 80 to 95 day corn silage hybrids in Willsboro, NY; summer 2018.

Company/Brand	Hybrid	Trait Code †	Relative Maturity	Harvest Population	Dry Matter	Yield, 35% DM	Starch	Crude Protein	Lignin	Ash	Total Fatty Acids	aNDFom	NDF	12 hr NDFD	Wet Chem NDF	Wet Chem 30 hr NDFD	30 hr NDFD	120 hr NDFD	240 hr NDFD	240 hr uNDFom	RFC - Fill Ratio[1]	CNCPS v. 7.0 Predicted Allowable Milk Yield	CNCPS v. 7.0 Predicted Dry Matter Intake
				plants/ac	%	tons/ac	% DM	% DM	% DM	% DM	% DM	% DM	% DM	% NDF	% DM	% NDF	% NDFom	% NDFom	% NDFom	% DM		lbs/day	lbs/day
Syngenta NK	NK9227-3220A	20	92	32960	32.2	20.4	35.5	8.5	2.6	3.2	2.6	34.6	35.4	36.7	35.4	58.4	60.5	67.5	70.3	10.4	3.9	111.5	63.2
Channel	192-98VT2PRIB	42	92	31654	33.0	17.8	36.4	8.7	2.4	3.1	2.7	34.1	34.7	38.7			63.2	71.5	74.6	8.8	4.5	120.0	66.3
Local Seed Company	LC9278 SSXRIB	36	92	34122	33.2	18.2	35.0	7.9	2.4	3.1	2.6	35.9	36.5	39.8			63.7	70.3	73.4	9.6	4.3	117.9	65.6
Syngenta NK	NK8920-3120	18	89	32234	34.3	20.1	32.1	8.4	2.8	3.5	2.4	38.4	39.0	37.4	37.7	57.3	60.4	67.7	70.7	11.3	3.5	103.2	60.4
Dekalb	DKC40-77RIB	36	90	32525	35.2	18.5	35.2	8.3	2.5	3.2	2.5	35.0	35.6	38.4			63.1	69.9	72.9	9.6	4.3	117.4	65.6
Dekalb	DKC36-28RIB	36	86	33541	35.3	16.5	31.8	8.5	2.6	3.6	2.5	38.9	39.5	40.8			65.0	72.1	75.2	9.7	4.1	113.9	64.6
Seedway	SW3654RR	2	91	32089	35.4	18.1	33.6	8.1	2.7	3.1	2.3	37.9	38.5	39.3			61.9	69.0	71.8	10.7	3.9	108.8	62.4
Local Seed Company	ZS8926 VIP3111	17	89	30492	37.4	18.2	34.6	7.6	2.6	3.0	2.5	36.2	36.9	37.3			61.3	68.2	71.1	10.5	3.9	110.9	62.8
Hubner	H4062RC2P	42	86	32815	37.9	19.3	39.6	7.9	2.4	3.2	2.7	33.2	33.7	40.1	32.5	60.0	62.2	70.7	73.8	8.7	4.7	121.0	66.7
Growmark FS	FS 42R88VT2P	41	92	32380	37.9	18.3	39.0	7.9	2.2	3.1	2.8	33.4	33.9	40.2	33.7	62.4	64.3	71.5	74.5	8.6	5.0	124.9	68.2
Masters Choice	MCT3891	10	88	32089	38.4	18.5	37.8	8.3	2.4	2.9	2.8	34.4	35.0	38.7			62.7	69.1	72.0	9.7	4.5	118.2	65.5
		86-92 day RM Mean		**32446**	**35.5**	**18.5**	**35.5**	**8.2**	**2.5**	**3.2**	**2.6**	**35.6**	**36.2**	**38.9**	**34.8**	**59.5**	**62.6**	**69.8**	**72.8**	**9.8**	**4.2**	**115.2**	**64.7**
Dekalb	DKC45-07RIB	36	95	31654	32.7	18.2	35.5	8.4	2.3	3.4	2.5	35.1	35.8	40.7			64.9	72.0	75.2	8.7	4.5	122.1	67.4
Seedway	SW3600GENSS	36	93	31073	33.0	17.6	30.8	8.2	2.6	3.4	2.3	37.9	38.8	38.0			64.0	73.1	76.2	9.1	3.8	115.3	65.2
Seedway	SW3768GENSS	36	95	29185	33.9	17.6	34.5	8.5	2.4	3.2	2.5	35.5	36.1	39.1			63.9	69.8	72.7	9.8	4.3	117.6	65.6
Masters Choice	MCT4572	16	95	32815	33.9	19.0	34.8	8.5	2.4	3.1	2.4	33.9	34.8	37.4			63.6	69.4	72.5	9.3	4.3	121.0	66.9
Dyna-Gro	D35SS58	34	95	32089	34.1	16.5	35.4	8.5	2.4	3.3	2.4	35.1	35.8	40.5	35.9	62.2	64.6	71.5	74.5	9.1	4.5	120.6	66.7
Augusta Seed Corp.	A2843	16	93	27733	34.5	18.4	35.5	8.6	2.6	3.0	2.6	34.1	34.8	37.1	33.9	57.5	60.7	68.9	71.9	9.7	4.0	112.2	63.2
Dekalb	DKC44-80RIB	42	94	33541	34.5	18.6	36.7	7.4	2.3	3.2	2.4	34.3	35.0	39.9			64.1	72.4	75.5	8.4	4.5	122.6	67.4
Wolf River Valley	3995FL	48	95	31799	35.3	20.2	29.9	8.0	2.8	3.2	2.2	39.5	40.1	37.0			61.1	67.6	70.6	11.7	3.4	101.3	59.7
Pioneer	P9330AM	3	93	32960	38.5	19.2	34.8	7.9	2.6	3.0	2.3	36.8	37.4	38.7			61.4	68.4	71.3	10.6	4.0	110.7	63.0
		93-95 day RM Mean		**31428**	**34.5**	**18.4**	**34.2**	**8.2**	**2.5**	**3.2**	**2.4**	**35.8**	**36.5**	**38.7**	**34.9**	**59.9**	**63.1**	**70.4**	**73.4**	**9.6**	**4.1**	**115.9**	**65.0**
		LSD (0.10)		**2150**	**1.6**	**NS[2]**	**4.0**	**0.5**	**0.3**	**0.3**	**0.3**	**2.9**	**2.9**	**1.9**	**NS**	**3.0**	**NS**	**NS**	**NS**	**NS**	**0.6**	**11.3**	**4.3**
		OverallMean		**31988**	**35.0**	**18.4**	**34.9**	**8.2**	**2.5**	**3.2**	**2.5**	**35.7**	**36.4**	**38.8**	**34.9**	**59.6**	**62.8**	**70.0**	**73.0**	**9.7**	**4.2**	**115.6**	**64.8**

† Trait codes indicate special traits of each hybrid and are listed in the chart on page 4.

[1] RFC – Fill Ratio = rumen fermentable carbohydrate – fill ratio, defined as ((NDFd30 + starch)/uNDF30); useful for ranking silage samples.

[2] NS = not significant.

Figure 1. Percent of plot mean for crop yield vs. predicted milk yield, 80 to 95 day silage hybrids in Willsboro, NY; summer 2018.

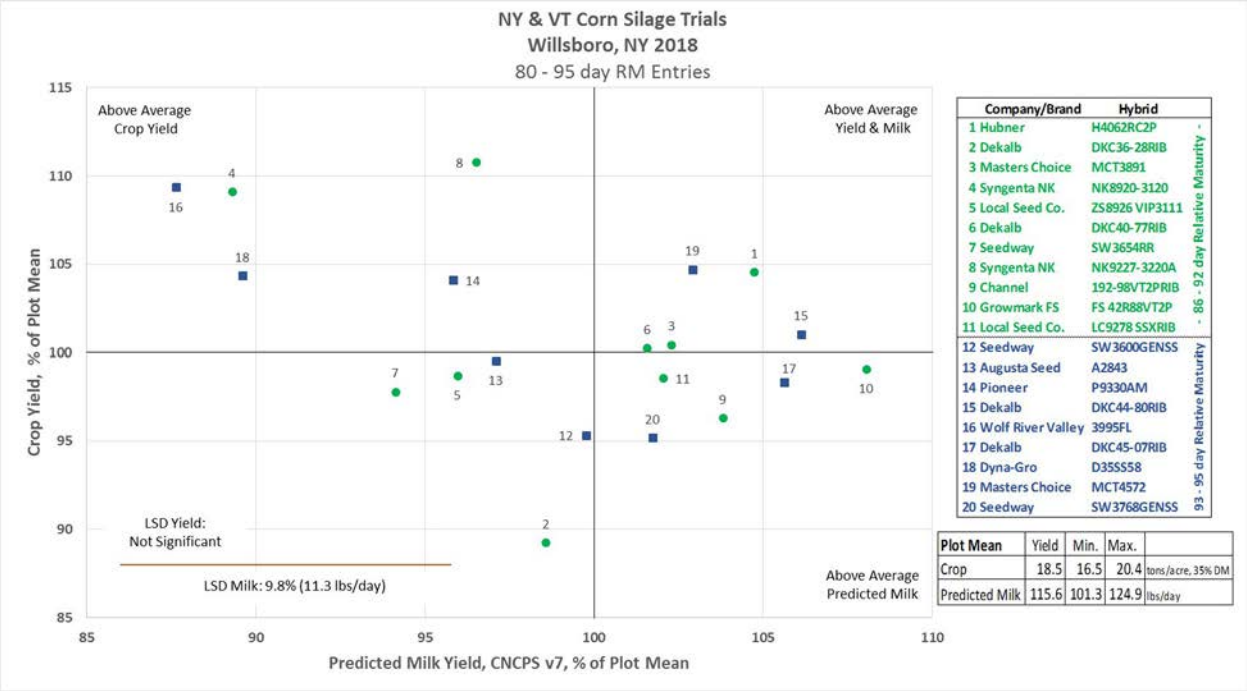

Figure 1. Percent of plot mean for crop yield vs. predicted milk yield, 80 to 95 day silage hybrids in Willsboro, NY; summer 2018, NNYADP Trials.

Table 3. Results from evaluation of 96 to 110 day corn silage hybrids in Madrid, NY; summer 2018, NNYADP trials. Table continues on next page.

Company/Brand	Hybrid	Trait Code †	Relative Maturity	Harvest Population	Dry Matter	Yield, 35% DM	Starch	Crude Protein	Lignin	Ash	Total Fatty Acids	aNDFom	NDF	12 hr NDFD	Wet Chem NDF	Wet Chem 30 hr NDFD	30 hr NDFD	120 hr NDFD	240 hr NDFD	240 hr uNDFom	RFC - Fill Ratio[1]	CNCPS v. 7.0 Predicted Allowable Milk Yield	CNCPS v. 7.0 Predicted Dry Matter Intake
				plants/ac	%	tons/ac	% DM	% DM	% DM	% DM	% DM	% DM	% DM	% NDF	% DM	% NDF	% NDFom	% NDFom	% NDFom	% DM		lbs/day	lbs/day
Mycogen	F2F499	34	99	31833	31.6	24.9	36.6	7.4	1.9	3.0	2.5	35.2	35.8	44.5	34.7	66.4	69.1	77.4	80.8	6.8	5.4	133.6	71.5
Growmark FS	FS 49R79SS	34	99	33833	32.0	28.8	31.5	8.3	2.8	3.6	2.3	38.3	38.9	36.7	38.1	56.8	60.2	67.6	70.7	11.3	3.5	102.6	60.3
Viking	O.79-00	1	100	33000	32.1	27.3	37.5	7.2	2.7	3.2	2.8	35.7	36.2	38.6			59.3	67.8	70.8	10.5	3.9	109.0	61.9
Mycogen	BMR97B37	35	97	34167	32.3	25.2	34.5	7.4	2.2	3.1	2.5	37.5	38.1	43.2	35.9	64.4	68.2	75.7	78.9	8.0	4.9	127.0	69.2
Dairyland	HiDF-3197RA	35	97	35333	32.6	29.0	36.4	7.7	2.6	3.3	2.5	36.7	37.2	39.5	35.3	55.8	60.8	69.5	72.5	10.1	4.0	110.2	62.7
Channel	197-90STXRIB	36	97	35167	32.7	29.1	33.4	8.0	2.7	3.2	2.3	37.2	37.8	36.7			60.8	67.8	70.7	10.9	3.8	107.7	61.9
Wolf River Valley	3900FL	48	100	34667	32.7	31.5	26.9	7.8	3.2	3.5	2.2	41.6	42.2	35.1			57.8	64.9	67.7	13.5	2.8	88.0	54.5
CROPPLAN	4004	1	100	33333	32.8	26.9	34.7	7.3	2.7	3.3	2.7	37.7	38.3	38.6			60.5	68.3	71.3	10.9	3.8	107.6	61.8
Doebler's	4018AMXT	9	100	35833	33.2	29.3	37.1	7.4	2.4	3.2	2.6	34.9	35.4	39.6	33.7	55.3	62.3	70.8	73.9	9.2	4.4	117.6	65.4
Augusta Seed Corp.	A2448	20	98	35333	33.3	28.5	33.6	8.0	2.8	3.3	2.6	36.8	37.3	35.3	36.5	53.0	57.4	64.6	67.4	12.0	3.5	98.4	58.2
Dekalb	DKC51-40RIB	42	101	33167	33.4	27.5	35.0	7.5	2.6	3.5	2.5	36.1	36.6	38.0			60.5	69.1	72.2	10.1	3.9	111.1	63.2
Local Seed Company	ZS9725 VIP3111	17	97	32833	33.4	27.3	37.2	8.0	2.7	3.7	3.0	33.8	34.3	35.7			58.6	66.9	69.6	10.3	4.0	110.5	62.8
Hubner	H6219RCSS	36	100	34333	33.5	26.8	34.4	7.8	2.6	3.3	2.2	36.9	37.4	38.3	36.2	55.6	61.6	69.0	71.9	10.4	4.0	110.8	63.1
Dekalb	DKC50-09RIB	42	100	33333	33.7	27.8	38.1	7.7	2.5	3.3	2.8	33.9	34.4	38.7			61.7	69.7	72.7	9.3	4.4	118.3	65.7
Dairyland	HiDF-3202P	31	102	32667	33.7	29.2	37.9	8.0	2.3	3.0	3.0	34.2	34.7	40.3	34.6	56.3	62.6	69.8	72.9	9.3	4.5	120.4	66.4
Channel	202-81STXRIB	36	102	33667	33.9	30.2	34.8	7.6	2.6	3.2	2.6	36.4	36.9	38.3			62.3	70.2	73.2	9.8	4.1	115.1	64.7
Hubner	H6225RCSS	36	102	33833	33.9	27.8	37.1	7.5	2.4	3.2	2.4	35.5	36.0	39.8	35.8	56.6	62.1	71.4	74.5	9.2	4.3	116.0	65.0
Masters Choice	MCT4934	17	99	27167	34.0	23.5	31.9	8.1	2.5	3.3	2.1	36.9	37.8	36.9			62.9	71.1	74.2	9.6	3.8	113.0	63.9
Augusta Seed Corp.	A3750	16	100	35000	34.4	28.5	34.3	7.4	2.8	3.4	2.5	37.8	38.3	36.0	38.3	56.6	58.4	66.3	69.1	11.7	3.5	100.4	59.0
Hubner	H6124RCSS	36	96	34333	34.8	30.2	33.6	7.9	2.7	3.2	2.3	37.8	38.3	38.1	38.0	57.9	61.1	68.2	71.1	11.0	3.8	107.0	61.6
Syngenta NK	NK9738-3220	20	97	33167	34.9	27.8	35.0	8.1	2.5	3.3	2.5	35.3	35.8	37.3	35.2	57.1	61.1	67.7	70.6	10.5	4.0	109.9	62.5
Pioneer	P9998AMXT	9	99	33833	34.9	31.3	42.9	8.0	2.4	3.0	2.8	29.5	29.9	37.1			59.7	67.6	70.6	8.7	5.0	124.6	68.0
Doebler's	3618AMXT	9	96	34000	34.9	28.8	37.4	8.2	2.4	3.2	2.4	33.9	34.4	37.9	32.9	55.0	60.9	68.6	71.6	9.7	4.3	115.9	65.0
Doebler's	4115AMXT	9	101	33833	35.1	30.1	36.6	7.0	2.5	3.2	2.2	36.5	37.1	39.0	35.8	58.1	61.5	71.0	74.0	9.5	4.1	112.6	63.7
CROPPLAN	3899	42	98	33167	35.5	28.7	40.6	7.5	2.2	2.9	2.8	32.4	32.9	40.0			62.7	71.0	74.0	8.5	4.9	123.8	67.6
Growmark FS	FS 46R77SS	34	96	33500	35.8	26.7	31.4	7.5	2.7	3.1	2.1	39.5	40.1	37.1	37.6	57.1	61.5	68.2	71.1	11.5	3.6	103.6	60.4
Dekalb	DKC47-27RIB	42	97	34333	36.1	28.4	36.8	7.5	2.5	3.4	2.4	35.5	36.0	38.5			61.3	69.4	72.4	9.8	4.1	113.9	64.1
Masters Choice	MCT4632	16	96	30000	36.5	27.5	38.6	8.7	2.3	3.4	2.4	32.0	32.5	39.4			63.0	72.0	75.2	8.2	5.1	125.1	68.7
		96-102 day RM Mean		**33524**	**33.9**	**28.2**	**35.6**	**7.7**	**2.5**	**3.2**	**2.5**	**35.9**	**36.5**	**38.4**	**35.9**	**57.5**	**61.4**	**69.3**	**72.3**	**10.0**	**4.1**	**112.6**	**63.7**
		LSD (0.10)		**2099**	**2.2**	**2.8**	**4.9**	**0.5**	**0.3**	**0.3**	**0.3**	**4.0**	**4.0**	**2.1**	**3.8**	**3.1**	**2.3**	**2.7**	**2.9**	**1.7**	**0.8**	**12.3**	**4.5**
		OverallMean		**33576**	**32.9**	**28.5**	**35.4**	**7.7**	**2.5**	**3.2**	**2.5**	**35.9**	**36.4**	**38.6**	**36.2**	**58.2**	**61.8**	**69.9**	**72.9**	**9.8**	**4.2**	**114.0**	**64.2**

Table 3 (continued). Results from evaluation of 96 to 110 day corn silage hybrids in Madrid, NY; summer 2018, NNYADP trials.

Company/Brand	Hybrid	Trait Code †	Relative Maturity	Harvest Population	Dry Matter	Yield, 35% DM	Starch	Crude Protein	Lignin	Ash	Total Fatty Acids	aNDFom	NDF	12 hr NDFD	Wet Chem NDF	Wet Chem 30 hr NDFD	30 hr NDFD	120 hr NDFD	240 hr NDFD	240 hr uNDFom	RFC - Fill Ratio[1]	CNCPS v. 7.0 Predicted Allowable Milk Yield	CNCPS v. 7.0 Predicted Dry Matter Intake
				plants/ac	%	tons/ac	% DM	% DM	% DM	% DM	% DM	% DM	% DM	% NDF	% DM	% NDF	% NDFom	% NDFom	% NDFom	% DM		lbs/day	lbs/day
Channel	210-98STXRIB	36	110	33500	28.7	27.6	33.8	7.9	2.6	3.2	2.5	36.8	37.4	37.3			60.9	68.4	71.3	10.6	3.8	108.1	61.8
Mycogen	BMR10B27	35	110	32667	28.9	24.8	31.8	7.5	1.8	2.8	2.2	38.1	38.7	45.2	37.2	67.9	71.5	78.9	82.3	6.8	5.2	133.2	71.8
Doebler's	5018AM	3	110	35167	29.0	29.7	35.5	7.6	2.4	3.0	2.4	35.8	36.4	40.0	35.6	57.4	61.6	70.4	73.3	9.6	4.1	113.7	63.9
Mycogen	BMR06B58	37	106	31667	30.1	25.7	30.9	7.9	1.9	3.1	2.3	40.7	41.3	47.7	39.9	69.0	72.6	83.1	86.7	5.5	5.2	133.2	71.9
Hubner	H6257RCSS	36	105	32833	30.5	25.5	31.6	8.0	2.4	3.5	2.4	37.4	37.9	39.9	39.8	59.2	63.7	71.3	74.4	9.7	4.0	114.3	64.5
Doebler's	4717AMX	8	107	35333	30.6	29.5	32.4	7.5	2.8	3.2	2.2	39.2	39.8	37.4	38.4	54.8	60.2	68.6	71.5	11.2	3.5	103.7	60.5
Seedway	SW5554GT	10	105	31667	30.7	29.4	33.6	7.6	2.6	3.3	2.2	38.3	38.9	39.3			62.0	70.6	73.7	10.1	3.8	110.1	62.8
Channel	209-15STXRIB	36	109	33667	30.7	29.3	35.1	7.8	2.7	3.2	2.5	36.8	37.3	38.1			60.4	68.3	71.2	10.6	3.9	108.7	62.0
Growmark FS	FS 55R25SS	34	105	32833	31.0	30.0	34.5	7.6	2.5	3.3	2.4	36.5	37.0	37.3	36.3	53.7	60.6	68.7	71.8	10.4	3.9	108.5	62.2
Syngenta NK	NK0968-3000GT	14	109	33167	31.1	26.6	32.9	7.8	2.7	3.1	2.3	38.7	39.2	38.6	38.0	60.6	60.3	67.8	70.8	11.4	3.7	102.6	59.8
Dekalb	DKC57-75RIB	36	107	36333	31.4	28.4	31.2	7.4	2.6	3.1	2.4	38.6	39.2	38.9			63.7	71.3	74.4	9.9	3.8	112.6	63.8
Doebler's	4318AMXT	9	103	34000	31.6	30.1	36.3	7.8	2.6	3.3	2.3	34.8	35.4	36.7	34.0	56.4	59.4	68.9	71.7	9.9	4.0	111.4	63.2
Masters Choice	MCT5790	1	107	32167	31.7	30.0	33.2	8.2	2.5	3.3	2.3	36.2	36.8	37.1			62.0	69.7	72.8	9.9	3.9	114.6	64.7
Channel	203-01STXRIB	36	103	33167	31.8	24.5	35.8	7.5	2.3	3.2	2.7	34.8	35.4	40.2			64.4	72.1	75.2	8.6	4.5	122.2	67.1
Channel	207-90STXRIB	36	107	33833	31.8	29.5	31.5	7.9	2.6	3.5	2.2	38.8	39.4	38.7			62.5	70.1	73.2	10.5	3.8	108.3	62.2
Pioneer	P0789AMXT	9	107	35000	31.8	30.6	32.4	7.6	2.8	3.4	2.3	37.9	38.5	36.3			60.4	68.6	71.6	10.8	3.6	106.1	61.5
Channel	206-11STXRIB	36	106	33333	32.1	28.3	36.0	8.0	2.4	3.2	2.9	33.7	34.2	39.0			63.0	68.9	71.9	9.5	4.5	120.2	66.3
Dyna-Gro	D49VC70	41	109	34500	32.3	30.1	40.8	7.8	2.3	3.1	2.8	30.6	31.1	38.9	31.8	56.0	61.2	69.0	72.2	8.6	4.9	125.2	68.3
Dekalb	DKC59-07RIB	36	109	34167	32.3	29.7	33.8	7.6	2.4	3.1	2.4	35.5	36.0	37.2			62.3	69.5	72.5	9.8	4.1	116.2	65.1
Pioneer	P0414AM	3	104	33833	32.9	30.0	37.8	7.6	2.4	3.3	2.5	34.2	34.9	38.5			61.7	71.8	74.8	8.7	4.3	118.0	65.6
Masters Choice	MCT5371	10	103	32833	33.1	28.8	29.8	7.2	2.7	3.2	2.1	40.1	40.6	37.5			62.3	70.2	73.2	10.8	3.6	106.0	61.4
Seedway	SW5440GENSS	36	105	33833	33.3	29.6	38.0	7.9	2.4	3.0	2.6	32.8	33.4	37.7			61.5	69.6	72.7	9.0	4.4	120.4	66.5
Albert Lea Viking	O.51-04GS	1	104	34000	33.3	29.8	41.3	7.7	2.2	3.1	3.0	30.7	31.2	39.5			62.2	71.0	74.1	8.0	5.1	127.1	68.9
Local Seed Company	LC0488 SSXRIB	36	104	31667	33.8	28.3	37.1	7.6	2.5	3.0	2.6	33.8	34.3	36.7			60.3	67.5	70.3	10.1	4.3	115.0	64.4
Seedway	SW6614RR	2	109	34333	33.9	29.6	37.7	7.3	2.7	3.1	2.4	34.9	35.5	36.0			58.2	67.1	69.9	10.6	3.9	107.7	61.7
Dekalb	DKC54-40RIB	42	104	34167	34.2	28.6	36.4	7.5	2.5	3.2	2.5	35.1	35.7	38.4			62.2	70.2	73.2	9.5	4.3	116.5	65.0
Albert Lea Viking	O.48-08GS	1	108	34000	34.6	30.1	39.2	7.6	2.4	3.1	2.5	32.5	33.0	38.2			60.5	69.4	72.2	9.1	4.5	119.1	66.0
CROPPLAN	4549	1	105	34000	34.9	30.1	41.6	7.3	2.2	3.1	2.7	31.7	32.2	39.8			61.7	70.7	73.7	8.4	4.9	123.6	67.6
Growmark FS	FS 53R85SS	34	103	33500	35.0	29.4	36.8	7.5	2.5	2.9	2.6	34.9	35.4	38.9	34.5	57.5	61.3	69.1	72.1	9.8	4.3	115.7	64.8
		103-110 day RM Mean		**33626**	**32.0**	**28.7**	**35.1**	**7.7**	**2.5**	**3.2**	**2.5**	**35.9**	**36.4**	**38.8**	**36.6**	**59.2**	**62.2**	**70.4**	**73.4**	**9.6**	**4.2**	**115.2**	**64.7**
		LSD (0.10)		**2099**	**2.2**	**2.8**	**4.9**	**0.5**	**0.3**	**0.3**	**0.3**	**4.0**	**4.0**	**2.1**	**3.8**	**3.1**	**2.3**	**2.7**	**2.9**	**1.7**	**0.8**	**12.3**	**4.5**
		OverallMean		**33576**	**32.9**	**28.5**	**35.4**	**7.7**	**2.5**	**3.2**	**2.5**	**35.9**	**36.4**	**38.6**	**36.2**	**58.2**	**61.8**	**69.9**	**72.9**	**9.8**	**4.2**	**114.0**	**64.2**

† Trait codes indicate special traits of each hybrid and are listed in the chart on page 4.

[1] RFC – Fill Ratio = rumen fermentable carbohydrate – fill ratio, defined as ((NDFd30 + starch)/uNDF30); useful for ranking silage samples.

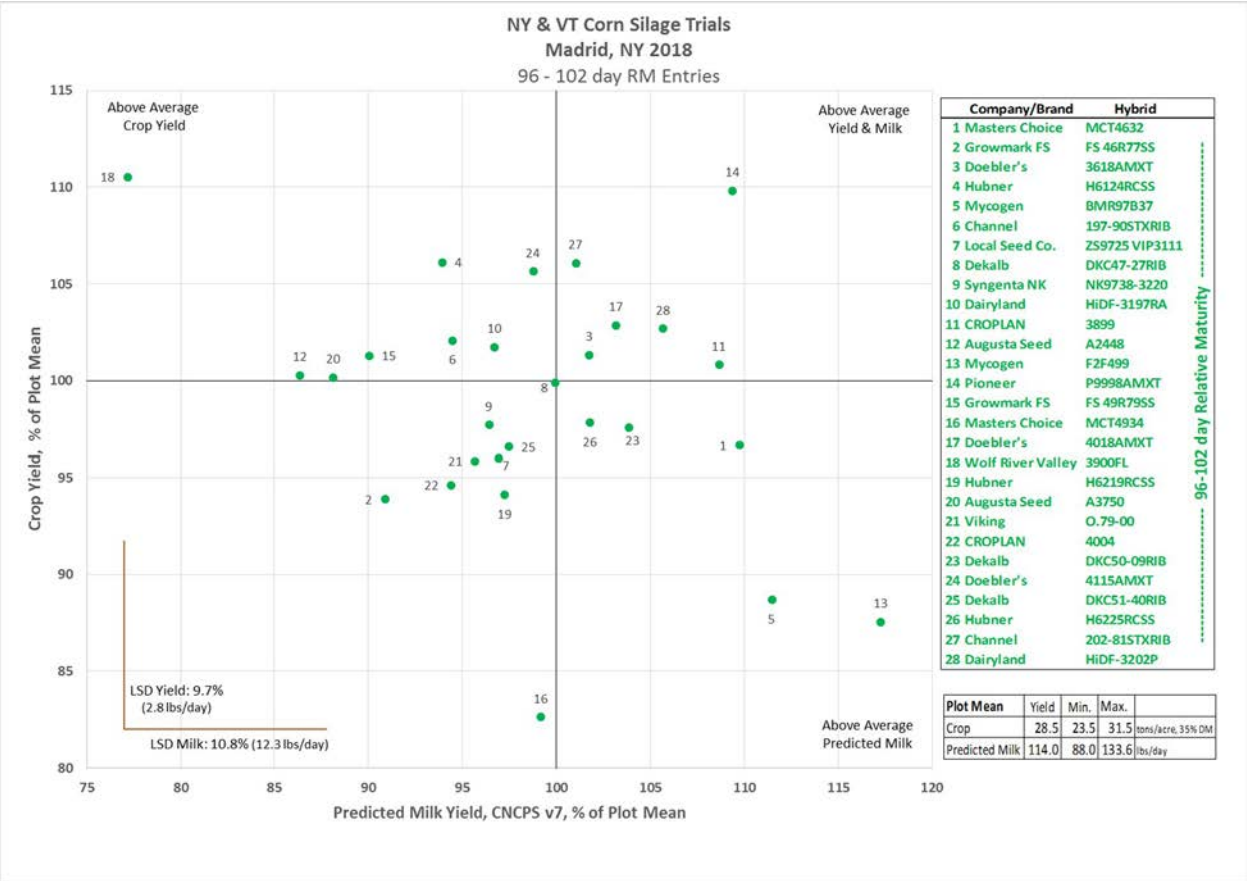

Figure 2a. Percent of plot mean for crop yield vs. predicted milk yield, 96 to 102 day silage hybrids in Madrid, NY; summer 2018, NNYADP trials.

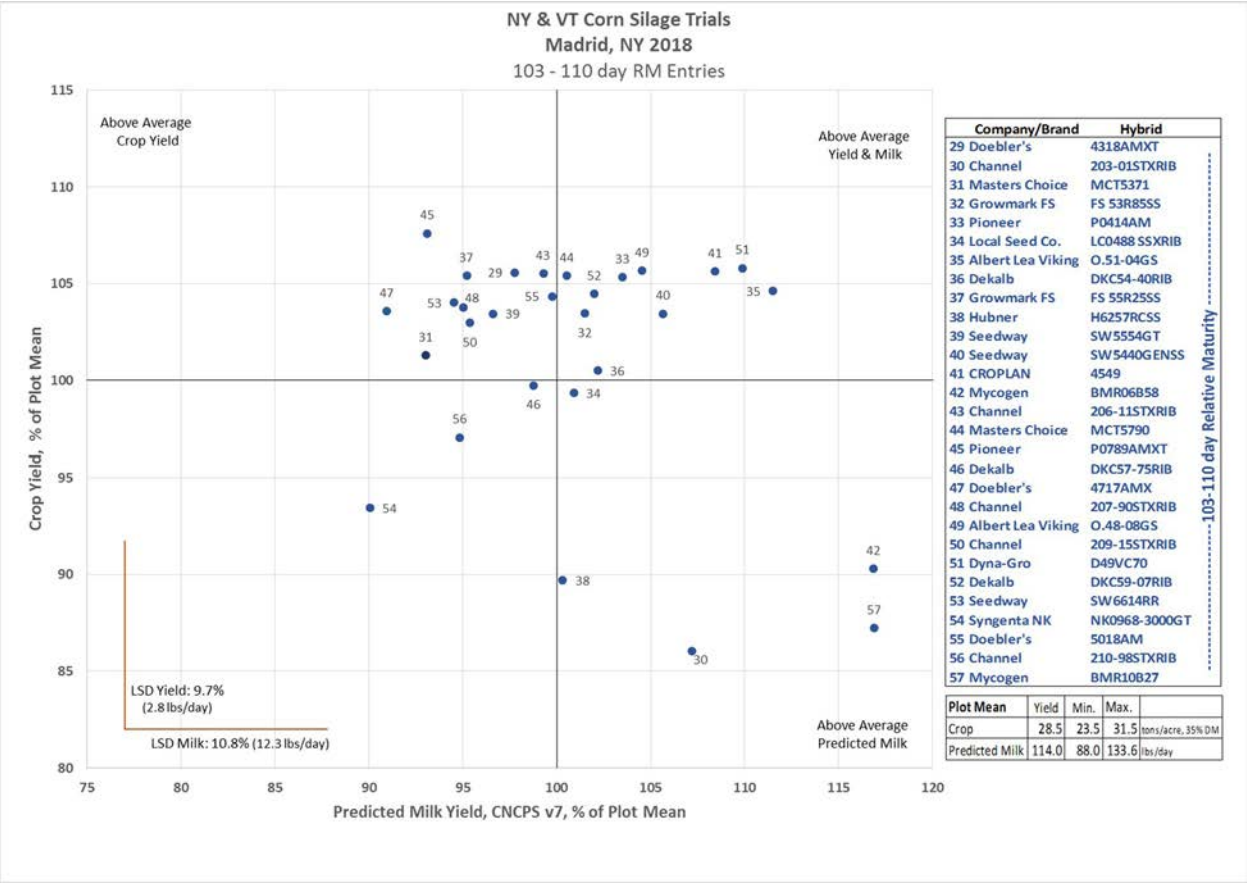

Figure 2b. Percent of plot mean for crop yield vs. predicted milk yield, 103 to 110 day silage hybrids in Madrid, NY; summer 2018; NNYADP trials.

Table 4. Over-locations trial means from evaluation of 79 to 89 day corn grain hybrids in Chazy and Madrid, NY; summer 2018.

Company/ Brand	Hybrid	Grain yield, bu/A	Grain mois-ture, %	Yield : mois-ture ratio	Lodging, %		Plants per plot, No.
					Root	Stalk	
Masters Choice	286T	140	17.7	8.0	0	1	59
Masters Choice	MCT2552 VIP3110	176	19.2	9.4	0	0	58
Dyna-Gro	D22VC62	165	21.2	8.1	0	2	59
Seedway	SW 2840GENVT2P (RIB)	193	21.3	9.4	0	1	58
Dyna-Gro	D27VC87	190	21.6	9.2	0	2	59
Dairyland	DS 7781RA	178	21.6	8.6	0	1	56
Axis	37K28	195	21.7	9.4	0	2	58
Partner's Brand	CL 520	158	21.8	7.4	0	1	59
Growmark FS	GX 2808VT2P	194	22.0	9.3	0	0	58
Partner's Brand	PB5630	198	22.0	9.7	0	0	58
Kingfisher	KF 35C10	191	22.1	9.5	0	3	59
Axis	30B10	189	22.1	9.0	0	0	57
Seedway	SW 1964GT	177	22.2	8.6	0	4	57
Local Seed Co.	ZS8557 3000GT	193	22.3	9.4	0	2	56
Brownseed Genetics	18 OB 313	166	22.3	7.9	0	0	58
Chemgro	4668 G3A	200	22.3	9.5	0	0	58
Local Seed Co.	ZS8326 3000GT	197	22.3	9.5	0	1	60
Growmark FS	FS 38R76SS	178	22.6	8.2	0	2	57
Local Seed Co.	LC8667 SSXRIB	200	22.7	9.5	0	1	56
Growmark FS	FS 36R47VT2P	205	22.7	9.7	0	0	59
Masters Choice	336T	201	22.8	9.5	0	1	57
Dairyland	DS 9085	191	22.8	9.0	0	0	58
Brownseed Genetics	17 BEL 121	183	22.9	8.7	0	3	57
Seedway	SW 1994GT	163	22.9	7.6	0	0	57
Chemgro	4348 G3	194	22.9	9.1	0	0	58
Masters Choice	MCT3223 3000GT	210	23.0	10.1	0	1	57
Axis	40R58	211	23.1	9.8	0	1	57
Brownseed Genetics	17 BEL 136	157	23.1	7.3	0	0	58
Seedway	SW 2359 3000GT	193	23.2	9.3	0	2	57
Masters Choice	MCT3393 3000GT	205	23.3	9.7	0	1	56
Dyna-Gro	D27GT59	192	23.4	9.2	0	2	59
Partner's Brand	PB5203	195	23.5	9.2	0	4	55
Brownseed Genetics	18 OB 314	170	23.6	7.7	0	0	57
Chemgro	4668 G3A	193	23.7	8.8	0	0	59
Dairyland	DS9686	193	23.7	8.9	0	1	58
Seedway	SW 2369 3000GT	192	24.0	8.9	0	1	57
Chemgro	5469 R5Y	208	24.3	9.4	0	1	57
Chemgro	5245 RDP	204	24.9	9.3	0	1	58
Brownseed Genetics	17 BEL 123	163	25.0	7.1	0	2	57
Growmark FS	FS 39R71VP2	240	26.0	10.6	0	0	58
	MEAN	189	22.6	9.0	0	1	58
	S.D.	18	1.1	.8	0	2	1
	C.V.	9.4	5.0				
	LSD (.05)	20	1.3				

Table 5. Results from evaluation of 79 to 89 day corn grain hybrids in Chazy, NY; summer 2018.

Company/ Brand	Hybrid	Grain yield, bu/A	Grain mois-ture, %	Yield : mois-ture ratio	Lodging, %		Plants per plot, No.
					Root	Stalk	
Masters Choice	286T	139	18.8	7.5	0	2	54
Masters Choice	MCT2552 VIP3110	168	22.0	7.7	0	0	52
Dyna-Gro	D22VC62	171	25.3	6.8	0	2	53
Seedway	SW 2840GENVT2P (RIB)	204	25.9	7.9	0	2	53
Partner's Brand	CL 520	177	26.5	6.7	0	1	53
Dairyland	DS 7781RA	186	26.8	7.0	0	2	48
Dyna-Gro	D27VC87	206	26.9	7.7	0	1	53
Axis	37K28	207	27.0	7.7	0	0	53
Growmark FS	GX 2808VT2P	205	27.5	7.5	0	0	51
Chemgro	4668 G3A	200	27.5	7.4	0	0	51
Partner's Brand	PB5630	194	27.7	7.0	0	0	52
Brownseed Genetics	18 OB 313	174	27.9	6.2	0	0	51
Axis	30B10	215	27.9	7.9	0	0	52
Growmark FS	FS 38R76SS	192	27.9	6.9	0	3	52
Local Seed Co.	ZS8557 3000GT	181	27.9	6.5	0	2	48
Local Seed Co.	ZS8326 3000GT	194	28.0	6.9	0	2	55
Kingfisher	KF 35C10	185	28.1	6.6	0	1	54
Seedway	SW 1964GT	179	28.3	6.3	0	6	50
Chemgro	4348 G3	188	28.6	6.6	0	1	53
Dairyland	DS 9085	189	28.9	6.5	0	1	53
Growmark FS	FS 36R47VT2P	208	29.0	7.2	0	0	54
Local Seed Co.	LC8667 SSXRIB	210	29.0	7.3	0	1	48
Masters Choice	336T	207	29.1	7.1	0	0	49
Masters Choice	MCT3223 3000GT	194	29.3	6.6	0	0	51
Axis	40R58	221	29.6	7.5	0	3	51
Brownseed Genetics	17 BEL 121	191	29.7	6.4	0	4	53
Brownseed Genetics	17 BEL 136	170	29.9	5.7	0	0	52
Seedway	SW 1994GT	182	29.9	6.1	0	0	50
Seedway	SW 2359 3000GT	181	30.0	6.0	0	3	50
Masters Choice	MCT3393 3000GT	201	30.1	6.7	0	0	49
Chemgro	4668 G3A	197	30.1	6.6	0	0	55
Partner's Brand	PB5203	189	30.4	6.2	0	5	46
Brownseed Genetics	18 OB 314	179	30.4	5.9	0	0	51
Dyna-Gro	D27GT59	179	30.4	5.9	0	3	53
Dairyland	DS9686	187	30.5	6.1	0	1	53
Seedway	SW 2369 3000GT	179	31.0	5.8	0	0	50
Chemgro	5469 R5Y	208	31.5	6.6	0	3	51
Brownseed Genetics	17 BEL 123	171	32.9	5.2	0	2	51
Chemgro	5245 RDP	194	32.9	5.9	0	1	53
Growmark FS	FS 39R71VP2	221	34.4	6.4	0	0	52
	MEAN	191	28.6	6.7	0	1	52
	S.D.	16	1.5	0.9	0	2	4
	C.V.	8.6	5.3				
	LSD (.05)	27	2.5				

Table 6. Results from evaluation of 79 to 89 day corn grain hybrids in Madrid, NY; summer 2018.

Company/ Brand	Hybrid	Grain yield, bu/A	Grain mois-ture, %	Yield: mois-ture ratio	Lodging, %		Plants per plot, No.
					Root	Stalk	
Kingfisher	KF 35C10	198	16.0	12.4	0	4	64
Seedway	SW 1994GT	144	16.0	9.0	0	0	64
Brownseed Genetics	17 BEL 121	175	16.1	10.9	0	3	62
Seedway	SW 1964GT	175	16.2	10.8	0	3	64
Dyna-Gro	D27VC87	174	16.3	10.7	0	3	64
Axis	30B10	164	16.3	10.0	0	0	63
Local Seed Co.	LC8667 SSXRIB	190	16.3	11.7	0	1	64
Partner's Brand	PB5630	202	16.3	12.4	0	1	64
Brownseed Genetics	17 BEL 136	144	16.4	8.8	0	0	64
Dyna-Gro	D27GT59	205	16.4	12.5	0	0	64
Seedway	SW 2359 3000GT	204	16.4	12.5	0	0	64
Masters Choice	MCT2552 VIP3110	183	16.4	11.2	0	0	64
Masters Choice	336T	195	16.4	11.8	0	3	64
Growmark FS	GX 2808VT2P	183	16.4	11.1	0	1	64
Dairyland	DS 7781RA	170	16.5	10.3	0	1	64
Axis	37K28	183	16.5	11.1	0	4	64
Axis	40R58	201	16.5	12.2	0	0	63
Masters Choice	MCT3393 3000GT	209	16.5	12.6	0	1	63
Growmark FS	FS 36R47VT2P	203	16.5	12.3	0	0	63
Masters Choice	286T	141	16.6	8.5	0	0	64
Seedway	SW 2840GENVT2P (RIB)	183	16.6	11.0	0	0	63
Partner's Brand	PB5203	202	16.6	12.2	0	3	64
Local Seed Co.	ZS8557 3000GT	205	16.6	12.3	0	2	64
Masters Choice	MCT3223 3000GT	225	16.7	13.5	0	1	63
Dairyland	DS 9085	193	16.7	11.6	0	0	64
Brownseed Genetics	18 OB 313	158	16.7	9.5	0	0	64
Local Seed Co.	ZS8326 3000GT	201	16.7	12.0	0	0	64
Brownseed Genetics	18 OB 314	160	16.9	9.5	0	0	64
Chemgro	5245 RDP	214	16.9	12.6	0	1	64
Dyna-Gro	D22VC62	158	17.0	9.3	0	2	64
Dairyland	DS9686	198	17.0	11.6	0	1	64
Partner's Brand	CL 520	139	17.0	8.1	0	2	64
Chemgro	5469 R5Y	208	17.1	12.3	0	0	64
Seedway	SW 2369 3000GT	205	17.1	12.0	0	1	64
Brownseed Genetics	17 BEL 123	155	17.1	9.1	0	2	64
Chemgro	4668 G3A	199	17.2	11.6	0	0	64
Chemgro	4668 G3A	189	17.3	10.9	1	0	63
Growmark FS	FS 38R76SS	164	17.3	9.5	0	0	62
Chemgro	4348 G3	201	17.3	11.6	0	0	64
Growmark FS	FS 39R71VP2	259	17.5	14.7	0	1	64
	MEAN	187	16.7	11.2	0	1	64
	S.D.	19	0.5	1.7	0	2	1
	C.V.	10.3	2.9				
	LSD(.05)	31	0.8				