

Recommended Corn Silage Hybrids for New York

Bill Cox, Jerry Cherney, and Phil Atkins,
Department of Crop & Soil Sciences, Cornell University

The increase in corn prices over the last few years has resulted in a higher percentage of corn silage in the dairy ration. Consequently, dairy producers must carefully select corn silage hybrids that have high yields as well as outstanding silage quality to maximize milk production from their herd. Cornell University evaluates 95-115 day corn silage hybrids at two locations in central/western NY and 80-100 day corn silage hybrids at two locations in Northern NY. We arrange the hybrids in the field into 5-day relative maturity (RM) groups (i.e. 95-100, 101-105 day hybrids, etc.) and harvest one or more RM groups at a particular site when the hybrids are in the 60-70% moisture range. We also take an initial 10,000-gram sample from each plot and then sub-sample to 700 grams to determine moisture and to run silage quality analyses on all four replications of each hybrid at each site.

MILK2006, a spreadsheet from the University of Wisconsin, calculates milk/ton, a silage quality index, derived from neutral detergent fiber (NDF), NDF digestibility (30 hr), crude protein, ash, and starch concentrations from the quality analyses. MILK2006 also calculates milk yield/acre of each hybrid by combining silage yield and milk/ton values. We recommend hybrids that have comparative milk yields of greater than 100 across the two sites (the average milk yield of each hybrid RM group is adjusted to 100 and hybrids within the RM group with above-average milk yields have values above 100). We list the comparative milk yields as well as comparative silage yields and milk/ton values for recommended hybrids in central/western (Table 1) and Northern NY (Table 2). **Hybrids within each table should only be compared within RM groups. Hybrids that have been tested more than 1 year should be given more weight because they have performed above-average in more environments.**

CENTRAL/WESTERN NY (TABLE 1)

95-100 day RM

The new hybrid, D39QN29, from Dyna-Gro, performed exceptionally well in 2010 with exceptionally high silage yields and an above-average milk/ton value (mostly because of above-average NDF digestibility). Other new hybrids that performed well include TMF2L533 from Mycogen (highest average silage yield in this RM); and TA 477-08 and TA 501-12 from T.A. Seeds. As in previous years, 1900F/RR/HT from LICA and HL STV50 from Hyland performed well.

101-105 day RM

The new hybrid release, N49J-3000GT, an NK brand, performed exceptionally well in 2010 with much-above average silage yield and an above-average milk/ton value (mostly because of above-average NDF digestibility). Also, 86T82-3000GT a Garst brand and MC530 from King's Agriseeds performed exceptionally well in NY for the second consecutive year. Hybrids that continued to perform much-above average for the third consecutive year included HL SR59 from Hyland Seed and 553GRB from Doebler's. Other new hybrid releases that performed well include P0125HR from Pioneer, 5667 GT3 from GROWMARK FS, and TA 545-20 from T.A. Seeds. Other hybrids that had above-average calculated milk yields in 2010 (in order) include DKC52-59 from DEKALB, 35F40 and 36V53 from Pioneer, HL B77R from Hyland, and TA 557-00F from T.A. Seeds.

106-110 day RM

New hybrid releases, P1011XR from Pioneer, DK58-83 from DEKALB, and 209-77VT3 from Channel, had much-above average calculated milk yields in 2010. Other new hybrid releases that performed well include 2114 LHX from Wolf River Valley, 85V88-3000GT a Garst brand, V4884HTXRNS from Dyna-Gro, and 210-61VT3 from Channel. Also, 1084L HX from LICA performed well for the second consecutive year as did DKC59-64 from DEKALB. The brown midrib hybrid, F2F622 from Mycogen, yielded reasonably well and had a much-above milk/ton value (because of its very high NDF digestibility) for the second consecutive year.

111-115 day RM

Two DEKALB hybrids, a new release, DKC63-84, and an older hybrid, DKC67-88, had much-above average calculated milk yield with DKC63-84 having a much above-average silage yield and above-average milk/ton value and DKC67-87 having the highest silage yields in 2010. New hybrid releases, V5294HTXRNS from Dyna-Gro and P1173HR from Pioneer, had above-average silage yields and above-average milk/ton values. Other new hybrids that performed well in 2010 include 214-14VT3P from Channel (above-average silage yield), 7000 GT from GROWMARK FS (above-average milk/ton value because of above-average NDF digestibility), and TA 657-13VP from T.A. Seeds. The older hybrid, DKC61-69 from DEKALB, also had above-average calculated milk yield in 2010 because of above-average silage yield.

Table 1. Recommended 95-115-day corn silage hybrids in New York based on tests in Cayuga Co. (Aurora Research Farm) and Livingston Co. (Sparta Farms, formerly Southview Farms).

Brand/Co.	Hybrid	Comparative Silage Yield	Comparative Milk/Ton	Comp. Milk Yield	Years in Test
		-----%-----			no.
95-100 day Relative Maturity					
Dyna-Gro	39QN29	110	103	114	1
Mycogen	TMF2L533	113	97	110	1
T.A. Seeds	TA 477-08	104	102	105	1
LICA	1900/F/RR/HT	105	97	102	2
T.A. Seeds	TA501-12	103	98	101	1
Hyland	HL STV50	102	99	101	3
101-105 day Relative Maturity					
NK	N49J-3000GT	110	101	111	1
Garst	86T82-3000GT	106	101	108	2
T.A. Seeds	TA557-00F	106	101	108	7
Master's Choice	530	106	100	107	2
Doebler's	552GR	103	102	105	3
Hyland	HL SR59	107	98	104	3
Pioneer	P0125HR	103	101	104	1
GROWMARK FS	5667 GT3	104	100	104	1
T.A. Seeds	TA 545-20	102	100	102	1
Pioneer	36V53	101	101	102	2
Hyland	HL B77R	105	97	102	1
DEKALB	DKC52-59	101	100	101	2
Pioneer	35F40	101	100	101	3
106-110 day Relative Maturity					
Pioneer	P011XR	113	100	112	1
DEKALB	DKC58-83	108	101	109	1
Channel	209-77VT3	107	100	107	1
LICA	1084 LHX	107	98	107	2
Wolf River Valley	2114 LHX	107	97	104	1
Garst	85V88-3000GT	103	101	104	1
Dyna-Gro	V4884HTXRNS	102	101	103	1
DEKALB	DKC59-64	105	98	103	2
Channel	210-61VT3	103	98	101	1
Mycogen	F2F622	95	107	101	2
111-115 day Relative Maturity					
DEKALB	DKC63-84	108	102	110	1
Dyna-Gro	V5294HTXRNS	105	103	108	1
DEKALB	DKC67-88	109	98	107	3
Pioneer	P1173HR	102	103	104	1
Channel	214-VT3P	103	100	102	1
GROWMARK FS	7000 GT3	100	102	102	1
T.A. Seeds	TA 657-13VP	101	102	102	1
DEKALB	DKC61-69	102	101	102	3

Crop Management

NORTHERN NY (TABLE 2) 80-85 day RM

The hybrid, TA290-11 from T.A. Seeds, has exceptionally high silage yields and an above-average milk/ton value. Despite being grouped with the 85-90 day hybrids in 2010, this 84-day hybrid had the 4th highest silage yield and calculated milk yield.

86-90 day RM

The new hybrid release, 87S9 from LICA, had an exceptionally high silage yield and calculated milk yield in 2010. Also, HL SR35 from Hyland Seed had much-above average calculated milk yield for the 4th consecutive year because of much above-average silage yield, as did the new hybrid release, MC 480, from King's Agriseeds. New hybrid releases, ST-9780 from Dairyland and HL B24R from Hyland Seed, had above-average milk yields with ST-9890 having an above-average milk/ton value and HL B24R having an above-average silage yield.

91-95 day RM

The hybrid, Hi.DF.-3195-Q from Dairyland, had an exceptionally high silage yield and calculated milk yield in 2010. Also, 946 LRR from LICA and 478SL from Doebler's performed exceptionally well for the fourth and second consecutive years, respectively. New hybrid releases that also performed well in 2010 include DS95RB from Croplan, DKC45-52 from DEKALB, TA451-19 from T.A. Seeds, and N34N-3000GT, an NK brand. The hybrid, TMF2L418 from Mycogen, also performed above-average in 2010.

96-100 day RM

New hybrid releases, 5288VT3 from GROWMARK FS, and 2702 L and 2596 LRR from Wolf River Valley, had much-

Table 2. Recommended 80-100-day corn silage hybrids in Northern NY based on tests in St. Lawrence Co. (Greenwood Farms) and Jefferson Co. (Robbins Farm in 2010).

Brand	Hybrid	Comparative Silage Yield	Comparative Milk/Ton	Comp. Milk Yield	Years in Test
-----%-----					
80-85 day Relative Maturity					
T.A. Seeds	TA290-11	108	102	110	3
86-90 day Relative Maturity					
LICA	87S9	115	99	114	1
Hyland	HL SR35	108	100	108	4
Master's Choice	480	105	101	107	1
Dairyland	ST-9789	100	102	102	1
Hyland	HL B24R	102	99	101	1
91-95 day Relative Maturity					
Dairyland	Hi.DF.-3195-Q	117	98	114	1
LICA	946 LRR	109	101	110	5
Doebler's	478SL	109	99	108	2
Croplan	DS95RB	104	102	106	1
DEKALB	DKC45-52	106	98	104	1
T.A. Seeds	TA 451-19	102	101	103	1
NK	N34N-3000GT	105	98	103	1
Mycogen	TMF2L418	102	101	103	4
96-100 day Relative Maturity					
GROWMARK FS	5288VT3	110	100	110	1
Wolf River Valley	2702 L	107	100	107	1
Wolf River Valley	2596 LRR	102	103	104	1

above calculated milk yields in 2010. The hybrids, 5288VT3 and 2702 L had much-above silage yields; whereas 2596 LRR had an above-average silage yield and milk/ton value (because of high NDF digestibility).

Conclusion

Hybrid selection is one of the most important management practices that affect corn silage yield and quality. Dairy producers must select the best adapted hybrid for their region to maximize high-quality corn silage in the ration, especially if the predicted lower milk prices coupled with higher grain materialize in 2011. We urge seed companies to enter their hybrids in our corn silage hybrid testing program so New York dairy producers can make informed decisions, based on tests under NY environmental conditions. You can access the detailed 2010 Corn Silage Hybrid Report at our Web site, www.fieldcrops.org.