

Corn Silage

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The Minnesota Hybrid Corn Silage Evaluation Program evaluates the silage potential of corn hybrids in Minnesota. The program's goal is to provide unbiased forage yield and quality information for educational and marketing programs.

The program is financed in part by entry fees from private seed companies that chose to enter hybrids for testing. These companies are listed below. Results presented are from corn silage performance trials in regions of extensive corn silage use: southeastern, central and west-central Minnesota, which are important dairy regions of Minnesota.

Test Sites

Southeast Dairy Region:

La Crescent (Houston County)
Rochester (Olmsted County)

Central Dairy Region:

Hutchinson (McLeod County)
Melrose (Stearns County)

West-Central Dairy Region:

Underwood (Otter Tail County)
Ottertail (Otter Tail County)

Test Procedure

Plots were established at La Crescent, Rochester, Hutchinson, Melrose, Underwood and Ottertail in randomized complete block designs with four

replications. Planting and harvesting dates at the test sites were: La Crescent, April 28 and Sept 7; Rochester, April 28 and Sept 8; Hutchinson, April 27 and Aug 30; Melrose, May 17 and Sept 14; and Underwood and Ottertail, May 18 and Sept 13, respectively.

Hybrid entries were planted at 33,000 seeds per acre with 30-inch row spacing. Plant nutrients as manure or inorganic fertilizer were applied according to University of Minnesota recommendation. Cultivation and herbicides were applied following University of Minnesota recommendation to control weeds. Plots were harvested and whole-plant herbage sampled for dry matter and forage quality analysis at each site. Test sites were harvested when the average whole-plant moisture across entries was estimated to be 65%.

Results Provided

Tables 1-6 summarize hybrid yield and forage quality results from La Crescent, Rochester, Hutchinson, Melrose, Underwood and Ottertail, respectively. Moisture content, whole-plant dry matter (DM) yield and silage yield are listed, and hybrids are ranked in descending order of milk yield per acre (Milk Yield, lb/acre). Genetic trait information is supplied by companies entered in the hybrid corn silage performance trial.

Whole-plant forage quality traits listed include crude protein (CP), neutral detergent fiber (NDF), 48-hour *in vitro* digestibility (IVD), 48-hour neutral detergent fiber digestibility (NDFD), and starch concentration. NDFD is expressed as a percent of NDF; all other forage quality traits are expressed as a percent of dry matter.

Milk production potentials per ton (lb milk/ton forage) and per acre (lb milk/acre forage) of forage were calculated using the MILK2006 spreadsheet developed by the University of Wisconsin.

Companies participating in 2010 hybrid corn silage performance trials.

AgriGold Hybrids	www.agrigold.com
Anderson Seeds,	37825 County Rd 63, St Peter, MN 56082
Blue River Hybrids	www.blueriverorgseed.com
Channel Bio LLC	www.channelbio.com
Dairyland Seed	www.dairylandseed.com
Dyna-Gro Seed	www.dynagroseed.com
Gold Country Seed	www.goldcountryseed.com
Hyland Seeds	www.hylandseeds.com
Legacy Seeds	www.legacyseeds.com
Masters Choice	www.seedcorn.com
Monsanto	www.asgrowanddekab.com
Mycogen Seeds	www.dowagro.com/mycogen
Nu Tech Seed, LLC	www.yieldleader.com
Pioneer Hi-Bred	www.pioneer.com
Producers Hybrids	www.producershybrids.com
REA Hybrids	www.rea-hybrids.com
Renk Seed Co.	www.renkseed.com
Syngenta Seeds	www.syngentaseeds.com
Trelay Seeds	www.trelay.com
Wensman Seed	www.wensmanseed.com

MILK2006 approximates animal performance based on a standard cow weight and milk production level (1,350-lb body weight and 90 lb/day at 3.8% fat). Field values for moisture and DM yield at harvest; laboratory values for CP, NDF, NDFD, starch, oil and ash concentration; and book values for NDFCP (1.3%) were used for spreadsheet calculations. For MILK2006 predictions, we assumed that kernel processing occurred. Milk production (lb milk/ton and lb milk/acre) values can be used as a quick reference for relative comparison of hybrids within test locations.

How To Use Results

NDF is a negative indicator of forage intake potential; higher NDF concentration generally implies lower animal performance potential. IVD provides an estimate of forage dry matter digestibility; NDFD estimates digestibility of the fiber fraction. Starch concentration is positively associated with digestibility because it is assumed to be 100% digestible. Relatively higher IVD, NDFD and/or starch concentrations generally imply greater animal performance potential. Milk yield per acre represents the combined effects of yield and quality.

Corn hybrids differed in yield, forage quality, and milk production potential at all sites. Means and least significant difference (LSD) values at the 10% probability level are shown for each parameter at each site. Where the difference between two hybrids for a particular yield or quality trait is greater than the LSD value, there is a 90% probability of a significant difference between the two hybrids for that parameter (i.e. moisture, yield, quality concentration or milk production).

Figures 1-6 summarize relationship between silage dry matter yield and milk per ton of forage for test sites at La Crescent, Rochester, Hutchinson, Melrose, Underwood and Ottertail, respectively.



Table 1. Relative maturity (RM), whole-plant moisture (Moist), dry matter, and silage yield and quality traits for corn hybrids planted at La Crescent (Houston County) in 2010.

No.	Brand / Hybrid Entry	Traits ¹	RM	Moist		Yield, Ton/Acre ²		Quality (Concentration), % ³					Milk Yield ⁴	
				%		DM	Silage	CP	NDF	IVD	NDFD	Starch	Lb/ Ton	Lb/ Acre
1	Garst Brand/ 85E98-3000GT	Bt,CRW,GLY,LL	109	63.2	14.7	40.0	7.4	37	77	56	39	3,490	51,400	
2	DEKALB/ DKC61-69 (VT3)	Bt,CRW,GLY	111	66.2	13.8	40.9	7.9	35	78	55	41	3,620	50,000	
3	Channel/ 209-85VT3P Brand	Bt,CRW,GLY	109	66.4	13.7	40.9	7.6	38	77	57	38	3,560	48,900	
4	G2 Genetics/ 5H-516 RR/HX	Bt,GLY,LL	116	67.8	13.9	43.1	7.5	41	75	59	34	3,470	48,300	
5	Gold Country Seed/ 110-35VT3	Bt,CRW,GLY	110	65.4	13.7	39.6	7.7	39	76	58	37	3,490	47,900	
6	DEKALB/ DKC59-64 (VT3)	Bt,CRW,GLY	109	67.1	13.8	41.8	7.3	40	75	56	37	3,460	47,700	
7	Legacy Seeds, Inc/ L-5350 3000GT	Bt,LL,GLY,CRW	104	62.3	13.7	36.3	7.4	37	76	55	39	3,460	47,400	
8	NK Brand/ N49J-3000GT	Bt,CRW,GLY,LL	103	63.2	13.5	36.6	7.3	40	76	59	38	3,500	47,100	
9	Mycogen/ TMF 2W727	Bt,CRW,GLY,LL	113	69.7	14.2	46.9	7.6	44	74	57	31	3,310	47,100	
10	Renk/ RK829VT3	Bt,CRW,GLY	112	67.0	13.4	40.7	8.0	40	76	58	36	3,490	47,000	
11	Channel/ 205-94VT3 Brand	Bt,CRW,GLY	105	62.8	13.5	36.2	6.9	39	76	56	39	3,480	46,900	
12	AgriGold/ A6323GT3	Bt,CRW,GLY,LL	103	61.6	13.3	34.6	6.8	39	77	59	38	3,520	46,900	
13	Channel/ 209-77VT3 Brand	Bt,CRW,GLY	109	66.2	13.1	38.7	7.3	38	76	56	39	3,560	46,700	
14	NuTech Seed/ 3T-713 VT3	Bt,CRW,GLY	113	63.4	13.9	38.0	7.5	41	75	56	36	3,350	46,500	
15	Pioneer Brand/ 33F88	Bt,CRW,GLY	114	67.8	13.1	40.6	7.7	40	76	58	35	3,520	46,000	
16	Legacy Seeds, Inc/ L-5309 3000GT	Bt,LL,GLY,CRW	106	65.4	12.6	36.4	7.1	35	78	58	42	3,650	45,900	
17	Channel/ 209-19VT3 Brand	Bt,CRW,GLY	110	67.8	13.4	41.5	7.5	43	74	58	33	3,420	45,800	
18	G2 Genetics/ 5X-007 RR/HXT	Bt,CRW,GLY,LL	107	66.2	13.1	38.9	7.3	40	75	57	37	3,460	45,500	
19	AgriGold/ A6419VT3	Bt,CRW,GLY	108	68.2	12.9	40.5	7.9	38	77	56	39	3,520	45,400	
20	Pioneer Brand/ 34A89	Bt,CRW,GLY	109	67.6	13.2	40.6	7.6	43	75	60	33	3,450	45,300	
21	Wensman Seed/ W7473VT3	Bt,CRW,GLY	109	68.1	12.8	40.3	7.6	39	76	56	38	3,510	45,000	
22	Renk/ RK880VT3P	Bt,CRW,GLY	112	65.2	12.8	36.8	6.9	39	75	56	39	3,450	44,300	
23	NK Brand/ N61P-3000GT	Bt,CRW,GLY,LL	107	65.7	12.6	36.8	7.4	39	76	55	40	3,510	44,200	
24	Masters Choice/ MC-535		107	66.7	12.3	37.0	7.1	39	76	57	38	3,580	44,100	
25	Channel/ 210-61VT3 Brand	Bt,CRW,GLY	110	67.1	13.5	40.9	7.1	42	73	52	35	3,270	44,000	
26	DEKALB/ DKC57-50 (VT3)	Bt,CRW,GLY	107	64.0	12.6	34.9	6.8	39	75	56	39	3,500	44,000	
27	AgriGold/ A6439VT3	Bt,CRW,GLY	109	68.5	12.8	40.8	8.0	42	75	56	33	3,400	43,700	
28	Dairyland Seed/ HiD.F. 3105-Q	Bt,CRW,GLY,LL	105	69.3	13.2	43.0	7.5	44	74	56	32	3,300	43,700	
29	Wensman Seed/ W7455VT3	Bt,CRW,GLY	107	66.0	12.1	35.5	7.6	39	76	59	38	3,580	43,200	
30	Producers Hybrids/ 7394VT3	Bt,CRW,GLY	113	69.1	12.7	41.1	7.7	40	75	55	38	3,390	43,000	
31	NK Brand/ N53W-3000GT	Bt,CRW,GLY,LL	105	62.6	12.7	33.9	6.8	41	75	58	35	3,380	42,800	
32	Renk/ RK848VT3P	Bt,CRW,GLY	112	67.4	12.5	38.3	7.8	41	75	56	35	3,430	42,800	
33	Wensman Seed/ W 7360VT3	Bt,CRW,GLY	103	63.5	11.8	32.4	6.9	37	77	58	41	3,600	42,700	
34	AgriGold/ A6384VT3Pro	Bt,CRW,GLY	106	65.4	12.6	36.3	7.1	42	74	58	36	3,390	42,600	
35	AgriGold/ A6309STX	Bt,CRW,GLY,LL	103	65.1	12.1	34.7	7.2	41	75	59	36	3,500	42,400	
36	Trelay/ 6ST576	Bt,CRW,GLY,LL	104	65.0	11.7	33.5	7.4	39	75	56	38	3,550	41,600	
37	Trelay/ 5T128	Bt,CRW,GLY	101	64.6	11.7	33.1	7.2	37	76	56	40	3,540	41,400	
38	Blue River Hybrids/ 56M30		106	68.5	12.0	38.2	7.1	41	74	56	35	3,440	41,300	
39	Garst Brand/ 86G35-3000GT	Bt,CRW,GLY,LL	105	65.0	12.0	34.4	7.0	41	75	56	36	3,400	40,900	
40	Producers Hybrids/ 7014VT3	Bt,CRW,GLY	110	70.4	12.0	40.7	8.3	41	75	56	34	3,390	40,800	
41	Wensman Seed/ W 7433VT3	Bt,CRW,GLY	105	66.1	11.5	33.9	7.7	42	75	60	34	3,540	40,700	
42	Renk/ RK723RRHXTRA ND	Bt,CRW,GLY,LL	109	69.7	12.3	40.7	8.1	44	74	58	30	3,290	40,600	
43	Anderson Seeds/ 103 RR	GLY	102	65.5	11.8	34.3	7.7	42	76	60	33	3,420	40,500	
44	Garst Brand/ 87W95 CB/LL	Bt,LL	103	63.4	11.7	31.8	7.4	40	77	57	38	3,460	40,300	
45	DEKALB/ DKC54-16 (VT3)	Bt,CRW,GLY	104	66.0	11.5	33.8	6.9	43	74	60	34	3,450	39,600	
46	Dairyland Seed/ HiD.F. 3110-6	GLY	111	69.3	13.1	42.7	7.4	42	73	53	35	3,010	39,500	
47	NuTech Seed/ 3A-406 GT	GLY	106	60.2	11.3	28.3	8.0	36	77	59	41	3,500	39,500	
48	Renk/ RK711RRHXTRA	Bt,CRW,GLY,LL	109	69.1	11.7	37.7	7.8	43	74	57	33	3,350	39,100	
49	DEKALB/ DKC51-86 (GENVT3P)	Bt,CRW,GLY	101	62.2	11.0	29.0	7.0	36	77	56	42	3,520	38,600	
50	Golden Harvest/ H-7647 3000GT	Bt,CRW,GLY,LL	101	58.7	11.2	27.2	7.2	38	77	59	41	3,420	38,300	
51	Trelay/ 6VT618	Bt,CRW,GLY	106	66.6	11.0	32.9	7.1	41	76	57	37	3,480	38,200	
52	Blue River Hybrids/ 57H36		107	67.7	11.0	34.0	7.7	41	74	57	36	3,480	38,200	
53	Blue River Hybrids/ 61L30		110	67.9	11.5	35.9	7.7	46	72	58	29	3,300	38,000	
54	Golden Harvest/ H-8239 3000GT	Bt,CRW,GLY,LL	105	62.8	10.8	29.0	7.8	36	77	55	42	3,510	37,800	
55	Blue River Hybrids/ 46M96		100	62.5	12.2	32.5	7.9	43	73	59	28	3,090	37,600	
56	Trelay/ 7VP745	Bt,CRW,GLY	112	67.6	11.0	33.9	7.9	42	74	57	33	3,360	36,800	

Table 1. (continued) Relative maturity (RM), whole-plant moisture (Moist), dry matter, and silage yield and quality traits for corn hybrids planted at La Crescent (Houston County) in 2010.

No.	Brand / Hybrid Entry	Traits ¹	RM	Moist %	Yield, Ton/Acre ²		Quality (Concentration), % ³					Milk Yield ⁴	
					DM	Silage	CP	NDF	IVD	NDFD	Starch	Lb/ Ton	Lb/ Acre
57	DEKALB/ DKC50-35 (VT3)	Bt,CRW,GLY	100	62.8	10.4	28.0	7.4	38	76	56	38	3,450	36,000
58	Anderson Seeds/ 103 VT3	Bt,CRW,GLY	103	65.2	10.4	29.8	7.8	41	75	58	34	3,410	35,300
59	Gold Country Seed/ 104-11VT2	Bt,GLY	104	65.0	10.5	30.1	7.5	44	73	59	31	3,320	34,900
60	Golden Harvest/ H-8265 3000GT	Bt,CRW,GLY,LL	106	67.2	10.5	32.0	7.9	44	72	55	31	3,270	34,400
	Mean			65.8	12.4	36.5	7.5	40	75	57	36	3,440	42,800
	LSD (0.10)			2.8	1.3	3.0	.6	4	2	3	5	200	5,800
	CV			3.7	9.6	7.2	7.0	8.5	2.7	4.7	11.4	5.0	11.6

¹ Bt, CRW, GLY, LL, Lf traits contain genes for European corn borer tolerance, corn rootworm tolerance, and glyphosate, Liberty LinkR (glufosinate-ammonium) herbicide resistance, and leafy trait, respectively.

² DM yield is whole-plant corn yield at 100% dry matter; Silage yield is whole-plant corn yield at harvest moisture.

³ Quality concentration expressed as a % of DM, except NDFD which is expressed as a % of NDF. Refer to Results Provided text for additional information.

⁴ Milk production was estimated using spreadsheet MILK2006 developed at the University of Wisconsin. Refer to Results Provided text for additional information.

Figure 1. Relationship between silage dry matter and milk per ton.

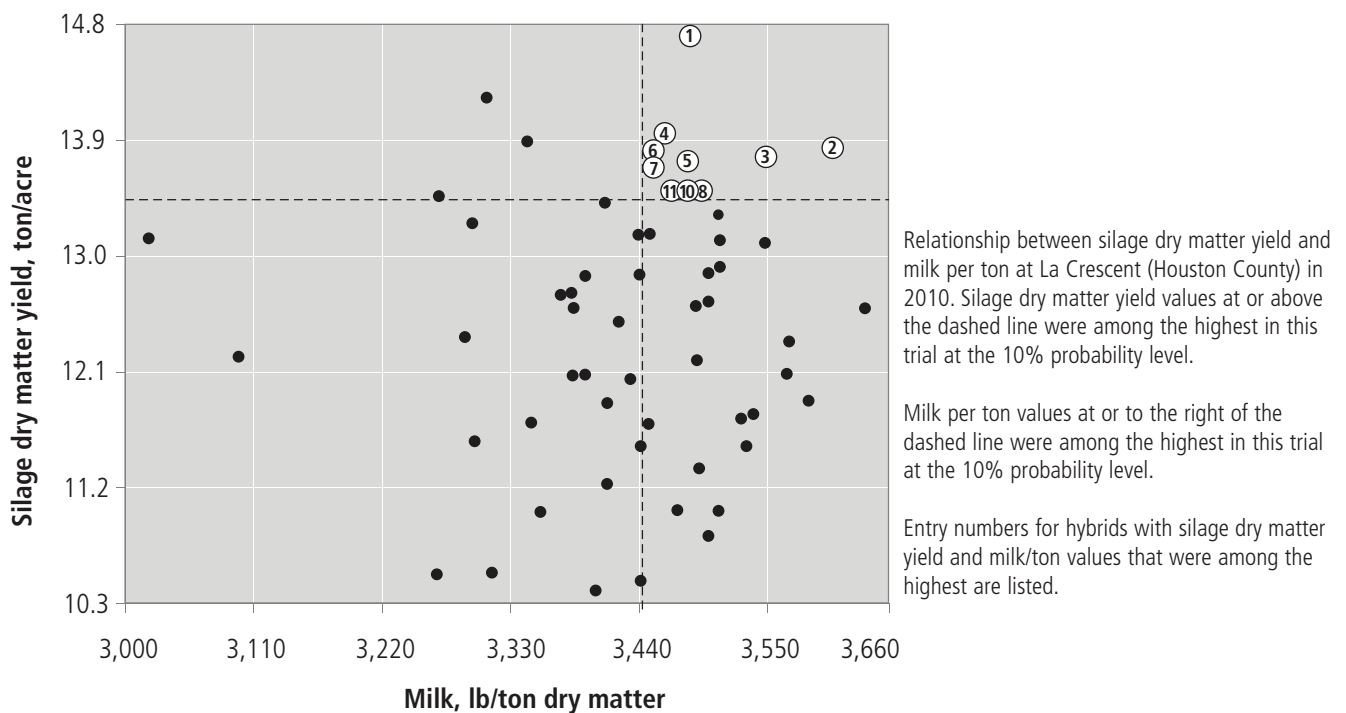


Table 2. Relative maturity (RM), whole-plant moisture (Moist), dry matter and silage yield, and quality traits for corn hybrids planted at Rochester, MN (Olmsted County) in 2010.

No.	Brand / Hybrid Entry	Traits ¹	RM	Moist %	Yield, Ton/Acre ²		Quality (Concentration), % ³					Milk Yield ⁴	
					DM	Silage	CP	NDF	IVD	NDFD	Starch	Lb/ Ton	Lb/ Acre
1	Gold Country Seed/ 110-35VT3	Bt,CRW,GLY	110	67.0	10.6	32.0	7.6	38	75	56	40	3,450	36,400
2	NK Brand/ N53W-3000GT	Bt,CRW,GLY,LL	105	65.5	10.5	30.4	7.2	39	75	55	40	3,450	36,300
3	Channel/ 209-19VT3 Brand	Bt,CRW,GLY	110	69.7	10.5	34.8	7.4	41	73	55	38	3,420	36,000
4	Channel/ 209-85VT3P Brand	Bt,CRW,GLY	109	68.9	10.5	33.7	7.2	40	73	54	38	3,360	35,200
5	DEKALB/ DKC50-35 (VT3)	Bt,CRW,GLY	100	63.0	10.1	27.3	6.9	37	75	54	43	3,480	35,100
6	Channel/ 209-77VT3 Brand	Bt,CRW,GLY	109	68.7	10.8	34.5	7.7	41	73	53	37	3,240	35,000
7	G2 Genetics/ 5H-516 RR/HX	Bt,GLY,LL	116	70.1	11.1	37.1	7.8	46	71	55	31	3,120	34,600
8	Wensman Seed/ W 7360VT3	Bt,CRW,GLY	103	64.2	10.0	27.9	6.7	38	75	55	43	3,460	34,400
9	AgriGold/ A6323GT3	Bt,CRW,GLY,LL	103	66.0	10.3	30.2	6.8	39	73	52	39	3,320	34,100
10	NuTech Seed/ 3T-713 VT3	Bt,CRW,GLY	113	68.9	10.3	33.2	7.4	41	75	54	38	3,290	33,900
11	Channel/ 210-61VT3 Brand	Bt,CRW,GLY	110	69.2	10.3	33.4	7.4	41	73	53	38	3,290	33,800
12	NuTech Seed/ 3A-406 GT	GLY	106	59.8	9.9	24.6	7.2	35	76	54	45	3,390	33,500
13	DEKALB/ DKC54-16 (VT3)	Bt,CRW,GLY	104	66.8	9.9	29.9	6.6	41	73	55	38	3,380	33,500
14	AgriGold/ A6439VT3	Bt,CRW,GLY	109	70.1	10.2	34.2	7.7	41	73	51	38	3,240	33,200
15	Trelay/ 7VP745	Bt,CRW,GLY	112	68.1	9.8	30.8	7.6	40	75	55	39	3,370	33,100
16	AgriGold/ A6384VT3Pro	Bt,CRW,GLY	106	68.8	10.4	33.2	7.1	42	72	50	37	3,170	32,900
17	Legacy Seeds, Inc/ L-5350 3000GT	Bt,LL,GLY,CRW	104	65.8	9.8	28.6	7.1	39	74	53	40	3,340	32,700
18	NK Brand/ N61P-3000GT	Bt,CRW,GLY,LL	107	69.2	9.8	31.8	7.0	40	73	52	39	3,330	32,600
19	NK Brand/ N49J-3000GT	Bt,CRW,GLY,LL	103	66.5	9.9	29.4	6.4	41	72	53	37	3,290	32,400
20	Renk/ RK848VT3P	Bt,CRW,GLY	112	69.8	9.9	32.9	7.4	42	73	54	37	3,260	32,400
21	Garst Brand/ 85E98-3000GT	Bt,CRW,GLY,LL	109	68.9	9.3	30.0	7.7	37	76	53	40	3,440	32,100
22	Dairyland Seed/ HiD.F. 3105-Q	Bt,CRW,GLY,LL	105	70.8	9.9	33.8	7.7	43	73	53	36	3,200	31,600
23	DEKALB/ DKC57-50 (VT3)	Bt,CRW,GLY	107	68.3	9.7	30.6	6.9	43	72	55	37	3,260	31,600
24	Trelay/ 6VT618	Bt,CRW,GLY	106	67.8	9.4	29.2	6.7	40	73	54	39	3,360	31,600
25	Producers Hybrids/ 7394VT3	Bt,CRW,GLY	113	71.1	9.4	32.6	7.6	42	73	55	36	3,320	31,300
26	Blue River Hybrids/ 46M96		100	65.5	9.6	27.8	7.5	42	73	54	35	3,260	31,300
27	DEKALB/ DKC61-69 (VT3)	Bt,CRW,GLY	111	69.9	9.3	30.8	7.8	41	73	55	38	3,360	31,200
28	G2 Genetics/ 5X-007 RR/HXT	Bt,CRW,GLY,LL	107	69.4	9.6	31.3	7.3	43	72	53	35	3,250	31,100
29	Pioneer Brand/ 33F88	Bt,CRW,GLY	114	70.5	9.5	32.1	7.7	42	73	55	35	3,260	30,900
30	Renk/ RK829VT3	Bt,CRW,GLY	112	69.8	9.2	30.4	8.0	40	74	54	39	3,340	30,800
31	Garst Brand/ 87W95 CB/LL	Bt,LL	103	67.5	9.1	28.2	6.9	41	74	53	38	3,350	30,600
32	Renk/ RK880VT3P	Bt,CRW,GLY	112	69.4	9.2	30.2	7.2	41	74	55	37	3,310	30,600
33	Trelay/ 6ST576	Bt,CRW,GLY,LL	104	69.0	9.2	29.6	7.0	41	74	54	39	3,310	30,300
34	Golden Harvest/ H-7647 3000GT	Bt,CRW,GLY,LL	101	64.0	8.9	24.7	7.0	38	74	54	40	3,390	30,100
35	Anderson Seeds/ 103 VT3	Bt,CRW,GLY	103	67.0	9.1	27.5	7.4	41	74	55	38	3,310	30,000
36	Channel/ 205-94VT3 Brand	Bt,CRW,GLY	105	67.3	9.3	28.4	6.7	43	72	52	36	3,210	29,800
37	Pioneer Brand/ 34A89	Bt,CRW,GLY	109	70.2	9.4	31.6	7.8	45	72	54	32	3,150	29,600
38	Trelay/ 5T128	Bt,CRW,GLY	101	66.6	8.5	25.5	7.0	40	73	56	39	3,440	29,300
39	DEKALB/ DKC51-86 (GENVT3P)	Bt,CRW,GLY	101	67.0	8.7	26.3	6.6	41	73	54	39	3,350	29,000
40	Wensman Seed/ W 7433VT3	Bt,CRW,GLY	105	69.0	8.7	28.1	7.5	40	73	54	38	3,320	29,000
41	Garst Brand/ 86G35-3000GT	Bt,CRW,GLY,LL	105	67.7	8.6	26.5	7.5	38	74	52	41	3,380	29,000
42	DEKALB/ DKC59-64 (VT3)	Bt,CRW,GLY	109	73.2	9.4	35.1	7.2	44	70	52	33	3,070	28,800
43	Blue River Hybrids/ 57H36		107	71.2	9.2	32.0	7.8	42	71	50	35	3,120	28,700
44	Renk/ RK723RRHXTRA ND	Bt,CRW,GLY,LL	109	71.3	8.5	29.7	8.5	41	74	54	38	3,330	28,500
45	Anderson Seeds/ 103 RR	GLY	102	67.5	8.6	26.5	6.8	40	73	53	38	3,310	28,400
46	Golden Harvest/ H-8239 3000GT	Bt,CRW,GLY,LL	105	66.7	8.2	24.6	7.6	38	75	54	41	3,440	28,100
47	AgriGold/ A6309STX	Bt,CRW,GLY,LL	103	68.1	8.6	26.9	7.2	43	73	54	35	3,230	27,800
48	Dairyland Seed/ HiD.F. 3110-6	GLY	111	71.3	8.8	30.6	8.0	45	72	54	33	3,150	27,700
49	Renk/ RK711RRHXTRA	Bt,CRW,GLY,LL	109	70.3	8.8	29.6	7.6	44	71	51	34	3,130	27,500
50	Legacy Seeds, Inc/ L-5309 3000GT	Bt,LL,GLY,CRW	106	71.1	8.3	28.7	7.5	41	73	54	37	3,270	27,100
51	Wensman Seed/ W7455VT3	Bt,CRW,GLY	107	71.3	8.4	29.2	7.7	43	72	54	35	3,210	26,900
52	Golden Harvest/ H-8265 3000GT	Bt,CRW,GLY,LL	106	69.7	8.1	26.8	8.0	40	73	53	38	3,300	26,700
53	Blue River Hybrids/ 56M30		106	71.1	8.3	28.7	7.4	42	73	52	36	3,210	26,600
54	Gold Country Seed/ 104-11VT2	Bt,GLY	104	70.0	8.7	29.1	7.4	46	70	54	30	3,040	26,500
55	Producers Hybrids/ 7014VT3	Bt,CRW,GLY	110	73.6	8.6	32.5	7.9	43	72	51	34	3,070	26,400
56	AgriGold/ A6419VT3	Bt,CRW,GLY	108	74.4	8.4	32.7	8.1	45	72	55	32	3,120	26,100

Table 2. (continued) Relative maturity (RM), whole-plant moisture (Moist), dry matter and silage yield, and quality traits for corn hybrids planted at Rochester, MN (Olmsted County) in 2010.

No. Brand / Hybrid Entry	Traits ¹	RM	Moist %	Yield, Ton/Acre ²		Quality (Concentration), % ³					Milk Yield ⁴	
				DM	Silage	CP	NDF	IVD	NDFD	Starch	Lb/ Ton	Lb/ Acre
57 Blue River Hybrids/ 61L30		110	71.6	8.3	29.3	7.5	49	69	55	26	2,940	24,500
58 Mycogen/ TMF 2W727	Bt,CRW,GLY,LL	113	73.8	8.1	31.0	7.5	48	68	53	28	2,970	24,100
59 Wensman Seed/ W7473VT3	Bt,CRW,GLY	109	72.5	8.0	29.2	7.9	46	71	52	32	3,010	24,100
60 Masters Choice/ MC-535		107	71.2	7.5	25.9	7.4	46	70	53	33	3,090	23,000
Mean			68.9	9.3	30.1	7.4	42	73	54	37	3,270	30,500
LSD (0.10)			1.9	1.2	4.0	.5	3	2	3	4	170	4,600
CV			2.4	11.8	11.5	5.9	6.4	2.3	4.5	9.0	4.3	13.0

¹ Bt, CRW, GLY, LL, Lf traits contain genes for European corn borer tolerance, corn rootworm tolerance, and glyphosate, Liberty LinkR (glufosinate-ammonium) herbicide resistance, and leafy trait, respectively.

² DM yield is whole-plant corn yield at 100% dry matter; Silage yield is whole-plant corn yield at harvest moisture.

³ Quality concentration expressed as a % of DM, except NDFD which is expressed as a % of NDF. Refer to Results Provided text for additional information.

⁴ Milk production was estimated using spreadsheet MILK2006 developed at the University of Wisconsin. Refer to Results Provided text for additional information.

Figure 2. Relationship between silage dry matter and milk per ton.

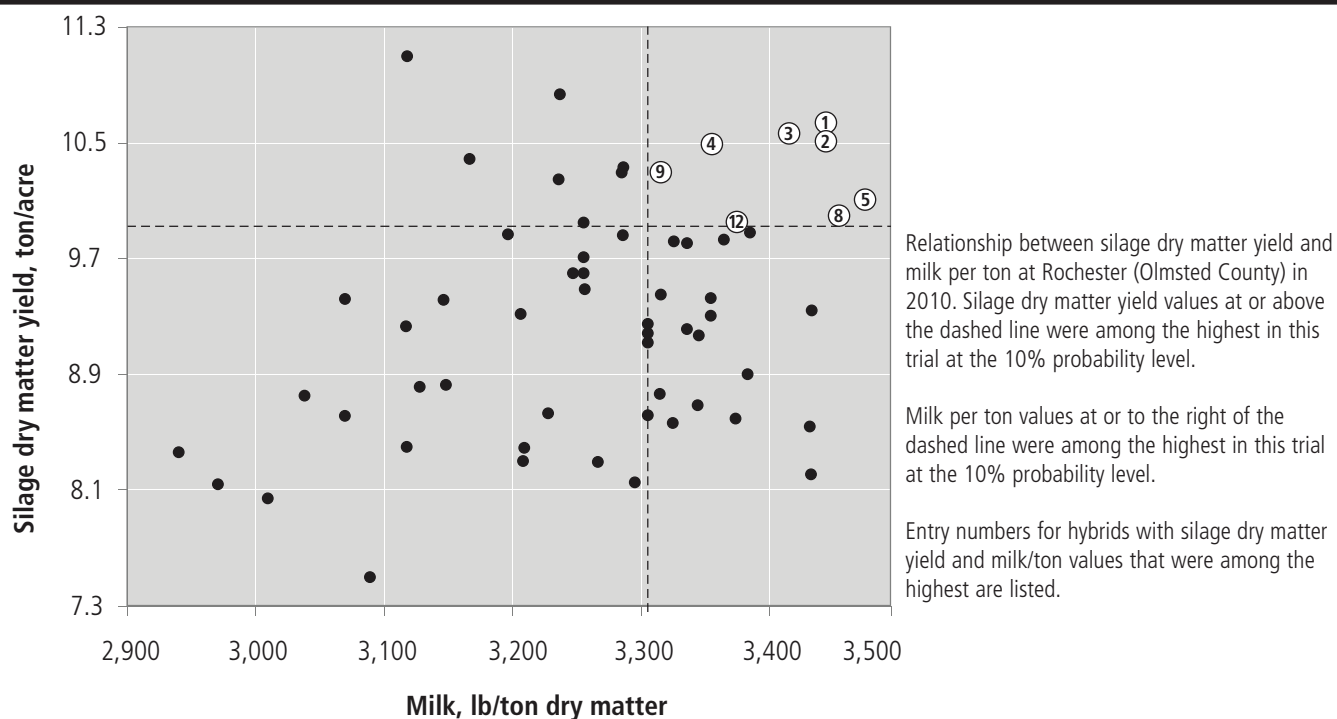


Table 3. Relative maturity (RM), whole-plant moisture (Moist), dry matter, and silage yield and quality traits for corn hybrids planted at Hutchinson (McLeod County) in 2010.

No.	Brand / Hybrid Entry	Traits ¹	RM	Moist		Yield, Ton/Acre ²		Quality (Concentration), % ³					Milk Yield ⁴	
				%	DM	Silage	CP	NDF	IVD	NDFD	Starch	Lb/ Ton	Lb/ Acre	
1	Producers Hybrids/ 6364GT3	Bt,CRW,GLY,LL	103	66.9	11.7	35.4	7.4	40	74	56	38	3,400	39,900	
2	DEKALB/ DKC54-16 (VT3)	Bt,CRW,GLY	104	65.0	11.1	31.6	6.7	38	75	56	42	3,530	39,000	
3	Pioneer Brand/ 36V53	Bt,GLY	102	65.0	11.4	32.5	7.4	38	76	54	41	3,430	39,000	
4	DEKALB/ DKC59-64 (VT3)	Bt,CRW,GLY	109	68.1	11.7	36.8	6.7	44	71	56	34	3,250	38,000	
5	Channel/ 209-77VT3 Brand	Bt,CRW,GLY	109	68.0	11.2	34.9	7.4	40	74	54	39	3,380	37,700	
6	NK Brand/ N53W-3000GT	Bt,CRW,GLY,LL	105	66.2	11.1	33.0	7.2	39	74	53	40	3,370	37,600	
7	Garst Brand/ 88E24-3000GT	Bt,CRW,GLY,LL	96	64.4	11.3	31.7	7.3	40	74	55	38	3,320	37,400	
8	NK Brand/ N37D-3000GT	Bt,CRW,GLY,LL	97	65.7	10.9	31.9	8.0	39	75	53	40	3,370	36,800	
9	Renk/ RK523GTCBLLRW	Bt,CRW,GLY,LL	98	65.9	10.9	32.1	8.5	42	73	56	38	3,340	36,600	
10	Trelay/ 5T128	Bt,CRW,GLY	101	65.0	10.7	30.5	6.9	38	74	55	41	3,420	36,500	
11	Hyland Seeds/ HL B77R	Bt,GLY	108	69.9	11.2	37.2	7.2	43	72	56	35	3,250	36,400	
12	NuTech Seed/ 3A-804 GT	GLY	104	66.1	11.0	32.6	6.8	42	72	55	37	3,280	36,200	
13	Trelay/ 6ST576	Bt,CRW,GLY,LL	104	68.2	10.5	33.2	7.2	40	73	55	40	3,410	36,000	
14	DEKALB/ DKC45-52 (GENVT3P)	Bt,CRW,GLY	95	62.1	10.5	27.8	7.2	37	76	54	43	3,400	35,800	
15	NK Brand/ N49J-3000GT	Bt,CRW,GLY,LL	103	65.6	11.6	33.6	6.6	44	70	52	34	3,090	35,800	
16	Producers Hybrids/ 6464VT3	Bt,CRW,GLY	104	66.9	11.0	33.2	6.9	42	72	53	38	3,240	35,600	
17	Renk/ RK698VT3	Bt,CRW,GLY	103	66.6	10.3	30.8	7.1	40	74	55	40	3,420	35,200	
18	Renk/ RK694GTCBLLRW	Bt,CRW,GLY,LL	104	66.6	10.5	31.5	8.1	40	74	55	38	3,340	35,100	
19	Channel/ 205-94VT3 Brand	Bt,CRW,GLY	105	67.0	10.9	32.9	7.0	43	72	54	35	3,220	35,100	
20	NuTech Seed/ 3T-098 VT3	Bt,CRW,GLY	97	62.9	10.7	28.7	7.3	39	73	55	40	3,280	35,000	
21	Mycogen/ TMF 2L533	Bt,CRW,GLY,LL	101	68.4	11.0	34.7	6.8	45	72	57	33	3,170	34,800	
22	Golden Harvest/ H-7647 3000GT	Bt,CRW,GLY,LL	101	63.5	10.2	27.8	7.4	37	76	55	43	3,420	34,700	
23	Dyna-Gro Seed/ 39QN29	Bt,CRW,GLY,LL	99	65.3	10.4	30.0	8.7	41	73	55	37	3,330	34,700	
24	Legacy Seeds, Inc/ L-5309 3000GT	Bt,CRW,GLY,LL	106	68.6	10.4	33.2	7.3	40	74	54	40	3,320	34,600	
25	Channel/ 209-85VT3P Brand	Bt,CRW,GLY	109	70.3	10.7	36.1	7.5	43	74	54	36	3,230	34,600	
26	DEKALB/ DKC57-50 (VT3)	Bt,CRW,GLY	107	66.5	10.3	30.7	6.9	42	73	57	36	3,350	34,400	
27	Legacy Seeds, Inc/ L-5350 3000GT	Bt,CRW,GLY,LL	104	66.6	10.1	30.3	7.1	40	73	56	39	3,380	34,200	
28	Pioneer Brand/ 35F44	Bt,CRW,GLY	105	69.0	10.2	33.0	7.8	41	74	54	38	3,320	33,900	
29	Garst Brand/ 88R89 GT	GLY	97	62.4	10.0	26.7	6.9	40	74	55	40	3,360	33,700	
30	Renk/ RK692CBLLRW	Bt, CRW,LL	105	66.7	10.2	30.6	7.6	40	73	52	39	3,290	33,500	
31	Trelay/ 6VT618	Bt,CRW,GLY	106	67.8	10.4	32.1	6.4	42	72	53	37	3,200	33,200	
32	DEKALB/ DKC50-35 (VT3)	Bt,CRW,GLY	100	63.2	10.1	27.3	7.1	40	74	55	39	3,290	33,100	
33	Dairyland Seed/ HiD.F. 3195-Q	Bt,CRW,GLY,LL	95	65.4	9.9	28.5	7.6	40	74	55	40	3,360	33,100	
34	Golden Harvest/ H-6816 GT/CB/LL	Bt,GLY,LL	94	57.9	10.0	23.8	6.6	37	75	56	43	3,280	32,900	
35	Hyland Seeds/ HL SR59	GLY	101	69.2	10.7	34.7	7.2	48	70	57	30	3,070	32,800	
36	Channel/ 201-16VT3P Brand	Bt,CRW,GLY	102	63.3	9.8	26.8	6.5	39	74	53	42	3,320	32,700	
37	Gold Country Seed/ 94-04VT3	Bt,CRW,GLY	94	57.8	10.0	23.7	7.2	37	76	55	43	3,280	32,700	
38	DEKALB/ DKC51-86 (GENVT3P)	Bt,CRW,GLY	101	63.3	10.0	27.2	6.8	40	73	52	39	3,270	32,600	
39	Mycogen/ TMF 2W587	GLY	104	68.9	9.9	31.7	8.1	41	74	54	38	3,290	32,500	
40	Trelay/ 4VP726	Bt,CRW,GLY	97	66.6	9.5	28.5	7.5	41	73	57	39	3,400	32,400	
41	NuTech Seed/ 5X-100 RR/HXT	Bt,CRW,GLY,LL	100	69.8	10.4	34.3	7.4	47	71	56	33	3,110	32,200	
42	G2 Genetics/ 5H-797 RR/HX	Bt,GLY,LL	97	63.3	9.7	26.4	7.2	40	73	53	40	3,300	32,000	
43	Hyland Seeds/ HL SVT50	Bt,CRW,GLY	100	66.7	10.5	31.6	7.0	45	70	52	34	3,030	31,800	
44	Gold Country Seed/ 104-11VT2	Bt,GLY	104	67.5	10.1	31.1	7.5	45	71	55	32	3,130	31,700	
45	Garst Brand/ 89T43 GT/CB/LL	Bt,GLY,LL	92	57.0	10.0	23.2	7.0	39	74	54	40	3,160	31,500	
46	Golden Harvest/ H-6724 GT	GLY	92	58.1	9.8	23.5	6.3	39	74	54	42	3,200	31,500	
47	Dyna-Gro Seed/ 34VN19	Bt,CRW,GLY	94	61.0	9.5	24.3	7.8	40	75	57	40	3,300	31,300	
48	Dairyland Seed/ ST-9703Q	Bt,CRW,GLY,LL	101	70.1	8.7	29.2	7.8	44	73	56	33	3,220	28,100	
	Mean			65.7	10.4	30.6	7.3	41	73	55	38	3,280	34,200	
	LSD (0.10)			2.8	1.2	3.5	0.5	3	2	ns	4	170	4,800	
	CV			3.6	9.9	9.9	6.0	6.7	2.4	5.4	8.9	4.4	12.1	

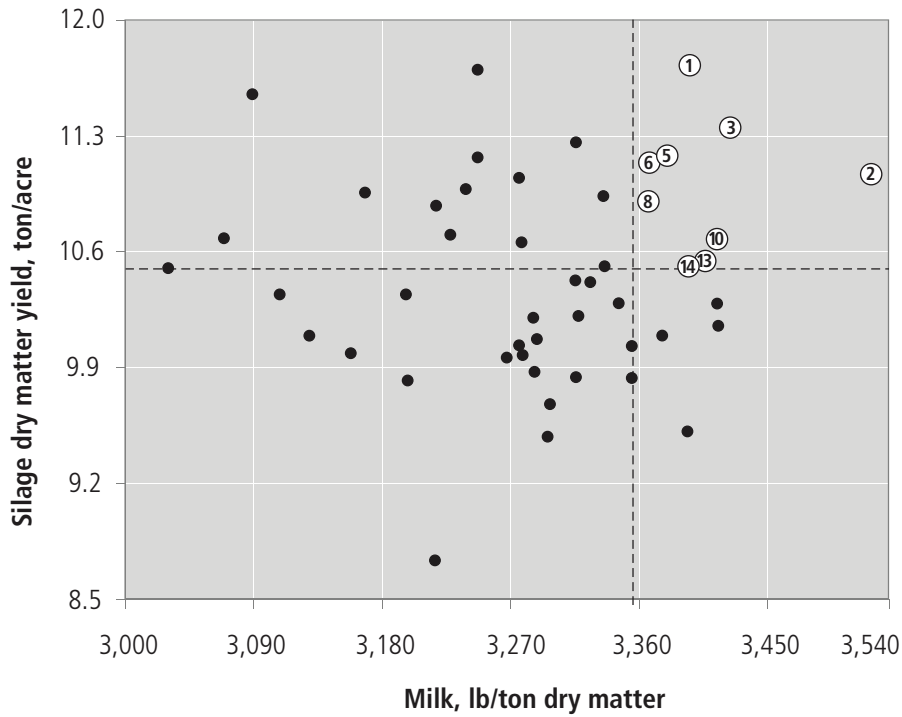
¹ CB, CRW, GLY, LL traits contain genes for European corn borer tolerance, corn rootworm tolerance, and glyphosate and Liberty Link R (glufosinate-ammonium) herbicide resistance, respectively.

² DM yield is whole-plant corn yield at 100% dry matter; Silage yield is whole-plant corn yield at harvest moisture.

³ Quality concentration expressed as a % of DM, except NDFD which is expressed as a % of NDF. Refer to Results Provided text for additional information.

⁴ Milk production was estimated using spreadsheet MILK2006 developed at the University of Wisconsin. Refer to Results Provided text for additional information.

Figure 3. Relationship between silage dry matter and milk per ton.



Relationship between silage dry matter yield and milk per ton at Hutchinson (McLeod County) in 2010. Silage dry matter yield values at or above the dashed line were among the highest in this trial at the 10% probability level.

Milk per ton values at or to the right of the dashed line were among the highest in this trial at the 10% probability level.

Entry numbers for hybrids with silage dry matter yield and milk/ton values that were among the highest are listed.

Table 4. Relative maturity (RM), whole-plant moisture (Moist), dry matter, and silage yield and quality traits for corn hybrids planted at Melrose (Stearns County) in 2010.

No.	Brand / Hybrid Entry	Traits ¹	RM	Moist		Yield, Ton/Acre ²		Quality (Concentration), % ³					Milk Yield ⁴	
				%		DM	Silage	CP	NDF	IVD	NDFD	Starch	Lb/ Ton	Lb/ Acre
1	Producers Hybrids/ 6464VT3	Bt,CRW,GLY	104	67.5	9.0	27.6	7.6	40	76	56	39	3,370	30,300	
2	Producers Hybrids/ 6364GT3	Bt,CRW,GLY,LL	103	68.0	9.0	28.2	7.4	39	76	53	40	3,360	30,300	
3	Pioneer Brand/ 36V53	Bt,GLY	102	66.5	8.5	25.3	7.8	37	77	54	43	3,500	29,600	
4	Channel/ 209-77VT3 Brand	Bt,CRW,GLY	109	68.0	8.8	27.4	7.5	40	76	56	39	3,380	29,600	
5	Pioneer Brand/ 35F44	Bt,CRW,GLY	105	68.5	8.7	27.5	7.8	38	76	53	41	3,390	29,400	
6	NK Brand/ N49J-3000GT	Bt,CRW,GLY,LL	103	68.3	8.7	27.3	6.8	41	74	56	38	3,370	29,200	
7	DEKALB/ DKC54-16 (VT3)	Bt,CRW,GLY	104	66.6	8.3	24.9	7.0	38	77	56	41	3,460	28,800	
8	Trelay/ 5T128	Bt,CRW,GLY	101	66.2	8.1	24.0	7.6	36	77	56	43	3,520	28,500	
9	Mycogen/ TMF 2L533	Bt,CRW,GLY,LL	101	66.7	8.5	25.4	7.3	41	75	55	38	3,300	28,000	
10	NuTech Seed/ 3A-804 GT	GLY	104	66.5	8.2	24.4	7.1	38	76	52	41	3,390	27,800	
11	Renk/ RK523GTCBLLRW	Bt,CRW,GLY,LL	98	65.4	7.9	22.9	8.2	38	77	54	43	3,430	27,200	
12	Dyna-Gro Seed/ 34VN19	Bt,CRW,GLY	94	66.9	7.8	23.7	8.4	37	77	55	42	3,460	27,100	
13	Renk/ RK694GTCBLLRW	Bt,CRW,GLY,LL	104	70.1	8.3	27.7	8.0	41	75	55	38	3,250	27,000	
14	NuTech Seed/ 3T-098 VT3	Bt,CRW,GLY	97	64.8	7.9	22.6	7.5	37	76	52	44	3,380	26,800	
15	Gold Country Seed/ 104-11VT2	Bt,GLY	104	66.3	8.5	25.3	7.4	44	73	53	34	3,130	26,700	
16	Channel/ 201-16VT3P Brand	Bt,CRW,GLY	102	66.0	7.9	23.2	7.4	39	77	54	39	3,380	26,600	
17	Renk/ RK698VT3	Bt,CRW,GLY	103	67.4	7.8	23.8	7.6	39	76	55	39	3,380	26,300	
18	Trelay/ 6VT618	Bt,CRW,GLY	106	67.8	7.8	24.2	7.0	40	76	56	39	3,360	26,300	
19	Hyland Seeds/ HL SVT50	Bt,CRW,GLY	100	68.7	8.1	25.8	7.3	42	74	54	37	3,240	26,200	
20	Legacy Seeds, Inc/ L-5350 3000GT	Bt,CRW,GLY,LL	104	66.7	7.6	22.9	6.9	39	75	57	40	3,430	26,200	
21	Golden Harvest/ H-6816 GT/CB/LL	Bt,GLY,LL	94	62.5	7.7	20.4	7.5	37	76	54	43	3,410	26,100	
22	DEKALB/ DKC59-64 (VT3)	Bt,CRW,GLY	109	70.7	8.1	27.6	6.9	41	74	52	38	3,210	26,000	
23	Garst Brand/ 88R89 GT	GLY	97	63.2	7.6	20.6	7.5	37	77	54	43	3,400	25,800	
24	Golden Harvest/ H-6724 GT	GLY	92	59.5	7.8	19.2	6.8	38	77	55	43	3,310	25,700	
25	Legacy Seeds, Inc/ L-5309 3000GT	Bt,CRW,GLY,LL	106	71.2	7.7	26.6	7.2	38	75	52	41	3,360	25,700	
26	DEKALB/ DKC50-35 (VT3)	Bt,CRW,GLY	100	65.9	7.4	21.8	7.4	38	76	54	41	3,410	25,400	
27	DEKALB/ DKC51-86 (GENVT3P)	Bt,CRW,GLY	101	67.0	7.4	22.4	7.4	38	76	55	41	3,400	25,200	
28	Trelay/ 6ST576	Bt,CRW,GLY,LL	104	69.5	7.6	25.0	7.6	41	75	56	37	3,300	25,200	
29	Channel/ 209-85VT3P Brand	Bt,CRW,GLY	109	71.3	7.5	26.1	7.8	40	75	55	38	3,300	24,800	
30	Golden Harvest/ H-7647 3000GT	Bt,CRW,GLY,LL	101	63.9	7.5	20.7	6.9	39	75	52	40	3,300	24,700	
31	NuTech Seed/ 5X-100 RR/HXT	Bt,CRW,GLY,LL	100	68.0	7.4	23.2	7.0	40	75	53	40	3,310	24,500	
32	Renk/ RK692CBLLRW	Bt, CRW,LL	105	67.3	7.6	23.3	7.7	42	75	54	36	3,210	24,400	
33	Dairyland Seed/ HiD.F. 3195-Q	Bt,CRW,GLY,LL	95	63.9	7.3	20.2	7.2	40	76	55	40	3,340	24,300	
34	Gold Country Seed/ 94-04VT3	Bt,CRW,GLY	94	66.8	7.1	21.5	7.8	39	76	53	42	3,370	24,000	
35	Dairyland Seed/ ST-9703Q	Bt,CRW,GLY,LL	101	68.9	7.3	23.4	7.3	41	75	54	38	3,300	23,900	
36	NK Brand/ N53W-3000GT	Bt,CRW,GLY,LL	105	66.9	7.2	21.8	7.4	40	75	54	38	3,300	23,800	
37	Hyland Seeds/ HL B77R	Bt,GLY	108	72.9	7.4	27.2	7.7	42	76	57	34	3,240	23,800	
38	NK Brand/ N37D-3000GT	Bt,CRW,GLY,LL	97	66.7	7.2	21.5	7.9	40	75	54	39	3,310	23,700	
39	Garst Brand/ 88E24-3000GT	Bt,CRW,GLY,LL	96	66.2	7.3	21.6	7.5	40	75	52	39	3,240	23,700	
40	DEKALB/ DKC45-52 (GENVT3P)	Bt,CRW,GLY	95	66.9	7.0	21.2	7.9	39	76	54	41	3,370	23,600	
41	Trelay/ 4VP726	Bt,CRW,GLY	97	68.7	7.0	22.4	7.9	40	76	56	39	3,340	23,500	
42	DEKALB/ DKC57-50 (VT3)	Bt,CRW,GLY	107	69.3	7.1	23.2	7.0	41	75	54	37	3,290	23,400	
43	Hyland Seeds/ HL SR59	GLY	101	70.2	7.7	25.7	6.7	47	69	55	31	3,050	23,400	
44	Channel/ 205-94VT3 Brand	Bt,CRW,GLY	105	68.4	6.9	21.9	7.0	42	75	56	36	3,320	22,900	

Table 4. (continued) Relative maturity (RM), whole-plant moisture (Moist), dry matter, and silage yield and quality traits for corn hybrids planted at Melrose (Stearns County) in 2010.

No. Brand / Hybrid Entry	Traits ¹	RM	Moist %	Yield, Ton/Acre ²		Quality (Concentration), % ³					Milk Yield ⁴	
				DM	Silage	CP	NDF	IVD	NDFD	Starch	Lb/ Ton	Lb/ Acre
45 Mycogen/ TMF 2W587	GLY	104	70.1	7.0	23.3	8.7	40	76	54	37	3,280	22,900
46 Dyna-Gro Seed/ 39QN29	Bt,CRW,GLY,LL	99	68.6	6.7	21.2	8.4	41	75	53	38	3,250	21,700
47 G2 Genetics/ 5H-797 RR/HX	Bt,GLY,LL	97	65.2	6.4	18.4	7.3	39	76	53	41	3,310	21,200
48 Garst Brand/ 89T43 GT/CB/LL	Bt,GLY,LL	92	63.0	6.3	17.1	7.6	40	75	52	39	3,210	20,300
Mean			67.4	7.7	23.6	7.5	40	75	54	39	3,320	25,400
LSD(0.10)			2.3	1.2	3.6	0.5	3	2	3	4	160	4,600
CV			3.0	13.9	13.3	6.2	6.9	2.3	5.0	8.5	4.2	15.3

¹ CB, CRW, GLY, LL traits contain genes for European corn borer tolerance, corn rootworm tolerance, and glyphosate and Liberty Link R (glufosinate-ammonium) herbicide resistance, respectively.

² DM yield is whole-plant corn yield at 100% dry matter; Silage yield is whole-plant corn yield at harvest moisture.

³ Quality concentration expressed as a % of DM, except NDFD which is expressed as a % of NDF. Refer to Results Provided text for additional information.

⁴ Milk production was estimated using spreadsheet MILK2006 developed at the University of Wisconsin. Refer to Results Provided text for additional information.

Figure 4. Relationship between silage dry matter and milk per ton.

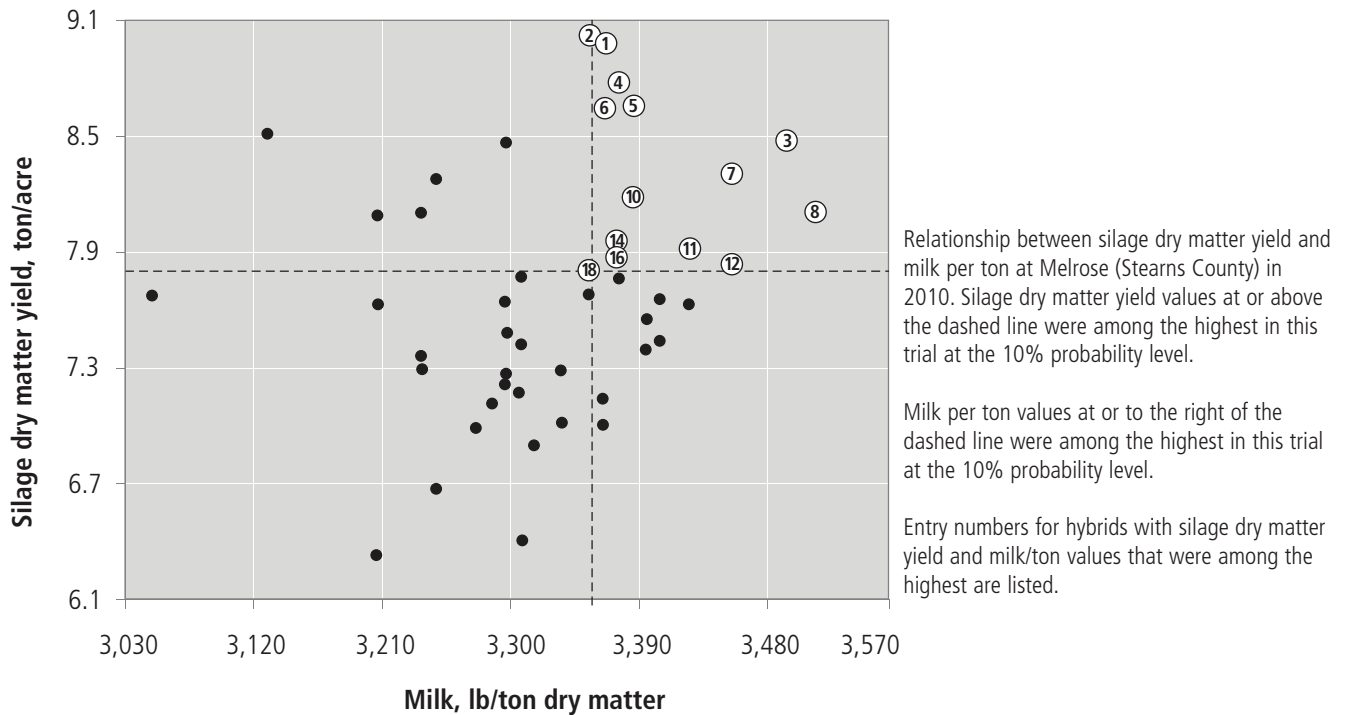


Table 5. Relative maturity (RM), whole-plant moisture (Moist), dry matter, and silage yield and quality traits for corn hybrids planted at Underwood (Otter Tail County) in 2010.

No.	Brand / Hybrid Entry	Traits ¹	RM	Moist %	Yield, Ton/Acre ²		Quality (Concentration), % ³					Milk Yield ⁴	
					DM	Silage	CP	NDF	IVD	NDFD	Starch	Lb/ Ton	Lb/ Acre
1	Dekalb/ DKC 54-49 (VT3)	Bt,CRW,GLY	104	68.3	10.7	33.9	7.5	45	72	56	33	3,160	34,000
2	Renk/ RK698VT3	Bt,CRW,GLY	103	63.2	10.0	27.1	7.0	40	74	56	39	3,300	32,900
3	Pioneer Brand/ 35F44	Bt,CRW,GLY	105	67.1	10.3	31.4	7.5	44	73	54	34	3,150	32,500
4	Channel/ 201-16VT3P Brand	Bt,CRW,GLY	102	68.3	10.0	31.4	6.9	43	72	54	36	3,180	31,600
5	Channel/ 205-94VT3 Brand	Bt,CRW,GLY	105	63.7	10.0	27.6	7.1	48	70	56	32	3,050	30,600
6	Blue River Hybrids/ 33L90		92	61.3	9.7	25.1	7.5	46	71	55	33	3,030	29,400
7	Hyland Seeds/ HL B77R	Bt,GLY	108	67.9	9.5	29.5	7.2	46	71	55	32	3,090	29,200
8	Masters Choice/ MC-515		98	67.4	9.3	28.5	7.3	45	71	54	33	3,100	28,700
9	Channel/ 199-55VT3 Brand	Bt,CRW,GLY	99	66.4	9.5	28.2	6.8	46	69	53	33	3,020	28,600
10	REA Hybrids/ 5V135-HDS	Bt,CRW,GLY	99	64.9	8.9	25.3	7.4	45	72	58	32	3,150	28,000
11	Gold Country Seed/ 94-04VT3	Bt,CRW,GLY	94	62.4	8.7	23.3	7.6	44	72	55	35	3,070	26,900
12	Hyland Seeds/ HL SR59	GLY	101	63.0	9.4	25.4	7.1	54	66	58	24	2,840	26,700
13	Hyland Seeds/ HL SVT50	Bt,CRW,GLY	100	61.3	9.1	23.4	7.1	48	68	54	31	2,940	26,600
14	Gold Country Seed/ 89-09RR	GLY	89	57.2	8.7	20.3	7.2	44	72	56	37	3,030	26,400
15	Dairyland Seed/ HiD.F. 3187-7	Bt,GLY	87	63.1	8.1	21.8	7.4	44	72	55	34	3,090	24,900
16	Renk/ RK523GTCBLLRW	Bt,CRW,GLY,LL	98	59.2	8.6	21.1	8.8	47	70	53	32	2,900	24,900
17	REA Hybrids/ 5T032-HDS	Bt,CRW,GLY	100	62.5	8.0	21.3	7.0	47	71	58	31	3,070	24,600
18	REA Hybrids/ 5S207-HDS	CRW,GLY	103	61.0	8.4	21.4	7.4	49	68	56	29	2,900	24,300
19	Dyna-Gro Seed/ 34VN19	Bt,CRW,GLY	94	64.1	7.7	21.5	7.7	48	69	56	31	2,970	22,900
20	Renk/ RK692CBLLRW	Bt, CRW,LL	105	60.4	7.3	18.5	7.7	45	73	56	34	3,070	22,500
21	REA Hybrids/ EXPV56-HDS	Bt,CRW,GLY	105	64.8	8.2	23.3	7.2	55	65	53	22	2,650	21,700
22	Dyna-Gro Seed/ 39QN29	Bt,CRW,GLY,LL	99	62.8	7.6	20.3	8.4	51	67	55	28	2,830	21,400
	Mean			63.6	9.0	24.9	7.4	46	70	55	32	3,030	27,300
	LSD(0.10)			3.7	1.0	3.8	0.6	4	3	3	5	200	3,900
	CV			4.9	9.2	12.9	7.0	8.4	3.6	4.4	13.0	5.6	12.1

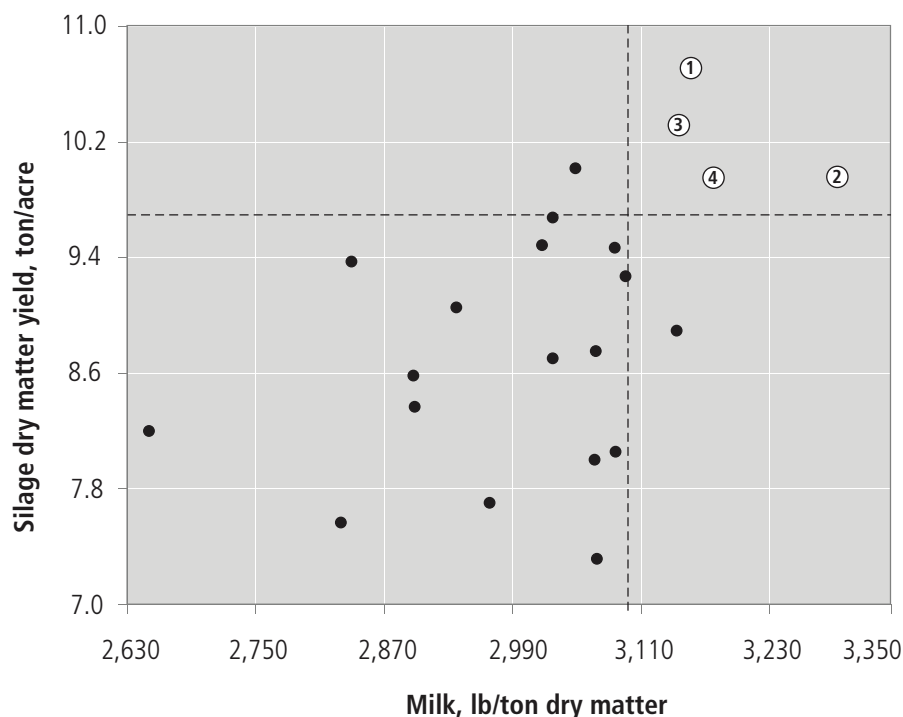
¹ CB, CRW, GLY, LL traits contain genes for European corn borer tolerance, corn rootworm tolerance, and glyphosate and Liberty Link R (glufosinate-ammonium) herbicide resistance, respectively. The LF trait denotes leafy silage.

² DM yield is whole-plant corn yield at 100% dry matter; Silage yield is whole-plant corn yield at harvest moisture.

³ Quality concentration expressed as a % of DM, except NDFD which is expressed as a % of NDF. Refer to Results Provided text for additional information.

⁴ Milk production was estimated using spreadsheet MILK2006 developed at the University of Wisconsin. Refer to Results Provided text for additional information.

Figure 5. Relationship between silage dry matter and milk per ton.



Relationship between silage dry matter yield and milk per ton at Underwood, MN (Otter Tail County) in 2010. Silage dry matter yield values at or above the dashed line were among the highest in this trial at the 10% probability level.

Milk per ton values at or to the right of the dashed line were among the highest in this trial at the 10% probability level.

Entry numbers for hybrids with silage dry matter yield and milk/ton values that were among the highest are listed.

Table 6. Relative maturity (RM), whole-plant moisture (Moist), dry matter, and silage yield and quality traits for corn hybrids planted at Ottertail (Otter Tail County) in 2010.

No.	Brand / Hybrid Entry	Traits ¹	RM	Moist %	Yield, Ton/Acre ²		Quality (Concentration), % ³					Milk Yield ⁴	
					DM	Silage	CP	NDF	IVD	NDFD	Starch	Lb/ Ton	Lb/ Acre
1	Pioneer Brand/ 35F44	Bt,CRW,GLY	105	64.0	12.1	33.6	7.4	37	76	52	43	3,410	41,200
2	REA Hybrids/ EXPV56-HDS	Bt,CRW,GLY	105	63.9	12.5	34.7	7.2	41	74	54	38	3,260	40,900
3	Channel/ 201-16VT3P Brand	Bt,CRW,GLY	102	63.2	11.9	32.3	7.2	40	76	53	41	3,310	39,300
4	Masters Choice/ MC-515		98	63.0	11.8	31.7	6.1	38	76	52	42	3,330	39,200
5	Dyna-Gro Seed/ 39QN29	Bt,CRW,GLY,LL	99	60.8	11.4	29.1	8.2	38	77	55	42	3,350	38,100
6	Hyland Seeds/ HL B77R	Bt,GLY	108	65.9	11.4	33.4	7.0	40	75	53	39	3,290	37,500
7	Renk/ RK698VT3	Bt,CRW,GLY	103	62.0	11.2	29.4	6.3	39	75	54	42	3,330	37,100
8	Renk/ RK692CBLLRW	Bt,CRW,LL	105	62.8	10.9	29.4	7.8	38	77	53	42	3,350	36,600
9	Channel/ 205-94VT3 Brand	Bt,CRW,GLY	105	63.9	11.5	31.8	6.3	44	73	53	36	3,170	36,500
10	Gold Country Seed/ 94-04VT3	Bt,CRW,GLY	94	61.2	10.8	27.7	7.2	36	77	53	45	3,390	36,400
11	Channel/ 199-55VT3 Brand	Bt,CRW,GLY	99	61.1	10.9	28.0	6.4	39	74	53	42	3,260	35,500
12	Dyna-Gro Seed/ 34VN19	Bt,CRW,GLY	94	62.8	10.7	28.7	6.9	41	74	54	39	3,260	34,800
13	Hyland Seeds/ HL SVT50	Bt,CRW,GLY	100	64.8	10.5	29.7	7.6	39	76	53	41	3,330	34,800
14	Dekalb/ DKC 54-49 (VT3)	Bt,CRW,GLY	104	62.5	10.7	28.6	6.3	41	74	53	40	3,230	34,600
15	Dairyland Seed/ HiD.F. 3187-7	Bt,GLY	87	59.3	10.7	26.3	7.1	39	76	54	42	3,220	34,400
16	REA Hybrids/ 5S207-HDS	CRW,GLY	103	64.1	10.6	29.7	7.0	42	73	54	37	3,220	34,300
17	REA Hybrids/ 5T032-HDS	Bt,CRW,GLY	100	64.2	10.4	29.0	7.5	40	74	53	39	3,280	34,000
18	Blue River Hybrids/ 33L90		92	57.7	10.8	25.6	7.7	40	74	53	39	3,130	33,900
19	REA Hybrids/ 5V135-HDS	Bt,CRW,GLY	99	64.8	10.3	29.1	7.3	42	74	55	38	3,270	33,500
20	Renk/ RK523GTCBLLRW	Bt,CRW,GLY,LL	98	63.2	10.3	28.0	7.7	43	73	54	38	3,210	33,000
21	Gold Country Seed/ 89-09RR	GLY	89	57.2	10.0	23.3	7.0	38	75	52	44	3,140	31,300
22	Hyland Seeds/ HL SR59	GLY	101	66.9	9.9	29.8	7.1	46	72	56	32	3,120	30,800
	Mean			62.5	11.0	29.5	7.1	40	75	53	40	3,270	36,000
	LSD(0.10)			2.1	1.2	3.2	0.8	3	2	ns	3	160	4,500
	CV			2.9	9.6	9.3	10.0	6.6	2.5	5.1	7.3	4.1	10.7

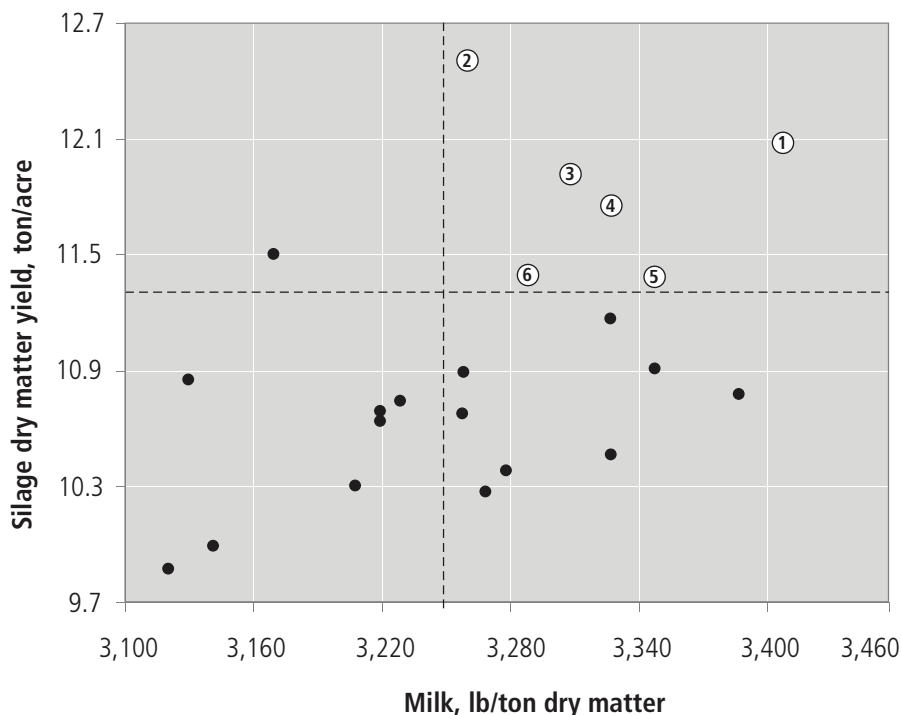
¹ CB, CRW, GLY, LL traits contain genes for European corn borer tolerance, corn rootworm tolerance, and glyphosate and Liberty Link R (glufosinate-ammonium) herbicide resistance, respectively. The LF trait denotes leafy silage.

² DM yield is whole-plant corn yield at 100% dry matter; Silage yield is whole-plant corn yield at harvest moisture.

³ Quality concentration expressed as a % of DM, except NDFD which is expressed as a % of NDF. Refer to Results Provided text for additional information.

⁴ Milk production was estimated using spreadsheet MILK2006 developed at the University of Wisconsin. Refer to Results Provided text for additional information.

Figure 6. Relationship between silage dry matter and milk per ton.



Relationship between silage dry matter yield and milk per ton at Ottertail (Otter Tail County) in 2010. Silage dry matter yield values at or above the dashed line were among the highest in this trial at the 10% probability level.

Milk per ton values at or to the right of the dashed line were among the highest in this trial at the 10% probability level.

Entry numbers for hybrids with silage dry matter yield and milk/ton values that were among the highest are listed.