



Corn Silage

C.C. Sheaffer, P.R. Peterson and D.R. Swanson
Varietal Trials Results, January 2007



The Minnesota Hybrid Corn Silage Evaluation Program evaluates the silage potential of corn hybrids in Minnesota. The goal of the program 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; they are listed in this publication. Results presented are from corn silage performance trials in regions of extensive corn silage use: southeastern, central and west-central Minnesota. The locations are in important dairy regions.

Test Sites

Silage hybrids entered in the southeast or central region trials were tested at two sites within each region. Hybrids entered in the west-central region were tested at one site. Sites within regions were as follows:

Southeast Dairy Region:

La Crescent (Houston County)
Potsdam (Olmsted County)

Central Dairy Region:

Paynesville (Stearns County)
Melrose (Stearns County)

West-Central Dairy Region:

Ottertail, MN (Otter Tail County)

Test Procedure

(Southeast and Central)

Design: Plots were established at La Crescent, Potsdam, Paynesville and Melrose in randomized complete block designs with four replications. Hybrids were planted at 33,000 seeds per acre with 30-inch row spacing on April 27 and 28 at the SE sites (La Crescent and Potsdam) and May 4 and 9 at the Central sites (Paynesville and Melrose). Plant nutrients as manure or inorganic fertilizer were applied according to University of Minnesota recommendation. Cultivation and herbicides applied by University of Minnesota recommendation were used to control weeds.

Harvesting: Plots were harvested and whole-plant herbage sampled for dry matter and forage quality at

each site. Each test site was harvested when the average whole-plant moisture across entries was estimated to be 65%. In 2006, harvest dates at La Crescent, Potsdam, Melrose and Paynesville were September 15, September 11, September 7 and September 5, respectively.

(West-Central)

Design: Plots were established May 3 near Ottertail under center-pivot irrigation in a randomized complete block design with three replications. Hybrids were planted at a 30,800 seeds per acre with 30-inch row spacing. Fertilizer was applied at a pre-plant rate of 15 tons dry manure per acre. Pre-emergent herbicide was applied to control weeds.

Harvesting: Plots were harvested and whole-plant herbage sampled for yield and forage quality on September 5.

Companies participating in 2006 hybrid corn silage performance trials.

Dairyland Seed Company, Inc., P.O. Box 958, West Bend, WI 53095

Dyna Gro Seed Company, 221 W Lake Lansing Rd Suite 102, East Lansing, MI 48823

Epley Bros. Hybrids, Inc., P.O. Box 310, Shell Rock, IA 50670

Garst Seed Company, 2369 330th St, Slater, IA 50244

Gold Country Seed, Inc., 16506 Hwy 15 North, P.O. Box 604, Hutchinson, MN 55350

Golden Harvest Seeds, Inc., 100 JC Robinson Blvd, P.O. Box 307, Waterloo, NE 68069

Hyland Seeds, 2 Hyland Drive, Blenheim, Ontario, Canada N0P 1A0

Legacy Seeds, Inc., 210 Pine Street, Waupaca, WI 54981

Monsanto Seed Group, Dekalb Genetics, 3100 Sycamore Road, DeKalb, IL 60115

Mycogen Seeds, 9330 Zionsville Rd, Indianapolis, IN 46268

Nu Tech Seed Co., 307 3rd Street, Alice, ND 58031

Pioneer Hi-Bred, International, 7000 NW 62nd Ave, Johnston, IA 50131

Producers Hybrids, P.O. Box C, Battle Creek, NE 68715

Syngenta Seeds, Inc. (NK), 7500 Olson Memorial Highway, Golden Valley, MN 55427

Trelay Seeds, 11623 State Road 80N, Livingston, WI 53554

Results Provided

Tables 1-5 summarize hybrid yield and forage quality results from La Crescent, Potsdam, Paynesville, Melrose 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). In 2006 drought conditions at Melrose resulted in lower yields and uneven grain development at that site, but had little effect at the Paynesville site.

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. With the exception of NDFD, all forage quality traits are expressed as a percent of dry matter. NDFD is expressed as a percent of NDF.

Milk production potentials per ton (lb milk/ton forage) and per acre (lb milk/acre forage) of forage were calculated using the new spreadsheet MILK2006 developed by the University of Wisconsin. 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). Values based on field calculations for hybrid moisture and DM yield; laboratory values for CP, NDF, NDFD, starch and ash concentration; and book values for NDFCP (1.3%) and ether extract (3.2%) concentration were used for spreadsheet calculations. For MILK2006 predictions, we assumed that kernel processing occurred.

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 mat-

ter digestibility, and NDFD estimates digestibility of the fiber fraction. Starch concentration is positively associated with digestibility because starch 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 trait and site is greater than the LSD value, there is a 90% probability that there is a real difference between the two hybrids for that parameter (i.e. moisture, yield, quality concentration or milk production).

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 2006.

Brand/ Hybrid Entry	RM, Rating	Moist %	Yield, Ton/Acre ¹		Quality (concentration) ² %					Milk Yield ³	
			DM	Silage	CP	NDF	IVD	NDFD	Starch	Lb/ Ton	Lb/ Acre
Pioneer 35A31	104	68.1	10.4	32.6	7.8	38	79	43	34	3,510	36,600
Mycogen TMF2M696	110	64.1	11.2	31.2	7.1	40	76	39	32	3,250	36,400
Dekalb DKC 57-79	107	66.2	10.8	31.9	7.2	37	78	41	33	3,360	36,300
Legacy Seeds L-6600	110	69.1	10.5	33.9	7.8	39	78	43	32	3,470	36,300
Garst Seed 8579 GT	107	62.3	10.0	26.6	7.2	37	78	41	36	3,560	35,700
NK Brand N58-L8	108	65.7	10.1	29.5	5.8	41	76	41	33	3,500	35,500
Dairyland Stealth 1612	108	69.9	10.3	34.2	8.0	38	77	41	32	3,440	35,300
Pioneer 34A18	109	66.9	10.4	31.4	7.7	40	77	43	30	3,370	34,900
NK Brand N65-C5	108	67.9	9.3	29.1	7.5	38	79	43	37	3,670	34,200
Dekalb DKC 55-82	105	68.9	10.1	32.4	7.4	43	75	42	29	3,370	33,900
Pioneer 34A86	106	70.0	10.2	33.8	7.6	46	75	46	25	3,290	33,400
Golden Harvest H-8318CB	106	64.7	9.1	25.7	7.7	36	80	44	36	3,640	33,100
Trelay 5B739	105	63.5	9.7	26.4	7.4	40	76	40	32	3,410	33,000
Epley Brothers Hybrids E5112	112	69.0	9.1	29.2	8.0	36	79	41	35	3,550	32,200
Producers Hybrids 6443 YGCB RR	104	58.3	9.6	23.1	6.8	40	76	40	34	3,330	32,100
Dekalb DKC 55-12	105	66.3	9.5	28.1	7.3	40	76	41	31	3,380	32,000
Dairyland HiDF 3007	106	67.2	9.2	27.9	7.3	39	78	43	33	3,470	31,800
Dekalb DKC 54-46	104	67.7	9.4	29.2	6.5	43	76	44	28	3,370	31,800
Mycogen TMF2Q714	110	71.0	9.6	33.0	7.7	46	75	46	26	3,280	31,400
Pioneer 35Y61	105	66.3	9.0	26.7	7.8	39	78	43	32	3,470	31,300
Dairyland Stealth 1611	108	68.6	8.8	28.0	8.0	38	79	45	33	3,510	31,000
Gold Country 100-04CBB	100	65.0	9.5	27.3	7.3	37	79	42	30	3,250	31,000
Pioneer 33T56	108	69.8	9.7	32.0	7.0	44	75	43	27	3,210	31,000
NK Brand N53-W3	105	66.8	9.2	27.6	7.2	38	79	44	21	3,320	30,400

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 2006 (continued).

Brand/ Hybrid Entry	RM, Rating	Moist %	Yield, Ton/Acre ¹		Quality (concentration) ² %					Milk Yield ³	
			DM	Silage	CP	NDF	IVD	NDFD	Starch	Lb/ Ton	Lb/ Acre
Garst Seed 8677 GT	105	65.6	8.7	25.3	8.5	33	80	41	35	3,440	29,900
Pioneer 35F38	106	68.6	8.9	28.4	7.9	37	79	43	31	3,320	29,700
Trelay 6K917	107	66.7	8.9	26.8	6.7	44	74	42	28	3,320	29,600
Mycogen TMF2T497	100	64.0	9.9	27.4	8.1	41	77	43	25	2,970	29,400
Garst Seed 8688 GT	104	66.1	9.1	26.8	7.2	38	79	43	30	3,140	28,500
Trelay 6R402	106	64.7	9.0	25.4	7.0	43	76	43	27	3,160	28,300
Dyna Gro DG55P32	103	63.9	8.6	23.7	6.8	42	75	41	29	3,240	27,700
NK Brand N51-T8	104	62.1	8.3	21.9	6.9	41	75	40	32	3,330	27,600
Legacy Seeds L-6600 BMR	110	67.7	8.2	25.3	8.1	38	80	47	29	3,330	27,200
Dyna Gro DG56P07	107	58.9	8.5	20.6	7.1	40	76	39	33	3,120	26,500
Epley Brothers Hybrids E5111SR	111	68.0	8.8	27.4	7.4	46	75	44	22	3,000	26,300
Mycogen F2F699	112	70.3	7.2	24.3	7.9	43	79	51	29	3,590	25,900
Producers Hybrids SS 104 RR	104	68.2	8.7	27.4	7.3	44	75	43	23	2,830	24,700
Mean		66.4	9.4	28.1	7.4	40	77	43	30	3,340	31,400
LSD(0.10)		2.8	1.2	3.2	0.7	6	3	2	7	260	5,400
CV		4	11	10	8	13	4	5	18	7	15

¹ DM yield is whole-plant corn yield at 100% dry matter; Silage yield is whole-plant corn yield at harvest moisture.

² Quality concentration expressed as a % of DM, except NDFD which is expressed as a % of NDF. Refer to Results Provided text for additional information.

³ Milk production was estimated using spreadsheet MILK2006 developed at the University of Wisconsin. Refer to Results Provided text for additional information.

Table 2. Relative maturity (RM), whole-plant moisture (Moist), dry matter and silage yield, and quality traits for corn hybrids planted at Potsdam (Olmsted County) in 2006.

Brand/ Hybrid Entry	RM, Rating	Moist %	Yield, Ton/Acre ¹		Quality (concentration) ² %					Milk Yield ³	
			DM	Silage	CP	NDF	IVD	NDFD	Starch	Lb/ Ton	Lb/ Acre
Producers Hybrids SS 104 RR	104	66.9	11.5	34.7	7.3	42	78	48	31	3,600	41,400
Gold Country 100-04CBR	100	62.6	11.1	29.7	7.2	35	80	43	42	3,700	41,100
Mycogen TMF2M696	110	65.1	11.1	31.7	7.6	40	79	48	34	3,650	40,400
NK Brand N53-W3	105	64.4	10.7	30.0	6.8	35	80	44	44	3,760	40,100
Pioneer 35Y61	105	65.5	10.6	30.8	7.6	36	81	46	40	3,770	40,100
Pioneer 35A31	104	65.7	10.7	31.3	7.0	38	79	44	39	3,710	39,800
Dairyland Stealth 1612	108	69.4	10.7	35.1	7.4	40	78	45	36	3,670	39,400
Mycogen TMF2Q714	110	67.8	10.8	33.4	7.5	39	79	47	38	3,660	39,400
Pioneer 33T56	108	66.0	10.6	31.2	7.3	38	80	48	39	3,700	39,400
Garst Seed 8579 GT	107	63.4	10.3	28.2	7.0	34	81	44	44	3,770	38,900
Dekalb DKC 57-79	107	65.7	10.4	30.4	7.3	39	78	44	38	3,630	37,900
Trelay 6R402	106	66.4	10.3	30.6	7.5	38	79	44	40	3,670	37,600
Mycogen TMF2T497	100	64.3	10.5	29.4	8.0	43	77	48	30	3,560	37,300
Pioneer 34A86	106	66.3	10.2	30.2	7.3	40	78	44	38	3,630	37,000
NK Brand N58-L8	108	64.1	9.7	27.0	6.2	36	80	44	44	3,810	36,900
Dairyland HiDF 3007	106	69.8	10.1	33.4	8.1	39	79	47	34	3,650	36,800
Dekalb DKC 54-46	104	67.5	9.9	30.6	7.5	40	79	46	39	3,680	36,600
Golden Harvest H-8318CB	106	63.9	9.7	26.9	7.1	35	81	46	44	3,770	36,600
Dairyland Stealth 1611	108	68.4	9.6	30.3	7.3	34	81	45	45	3,800	36,400
Pioneer 34A18	109	65.9	9.6	28.1	7.6	37	80	46	39	3,770	36,200
Dyna Gro DG55P32	103	62.3	9.9	26.3	6.9	36	79	40	42	3,640	36,100
NK Brand N65-C5	108	68.1	9.6	30.3	7.8	36	81	46	41	3,710	35,800
Trelay 6K917	107	66.8	9.7	29.2	7.1	40	78	46	37	3,670	35,600
Legacy Seeds L-6600	110	70.5	10.0	33.9	7.6	44	77	46	33	3,520	35,200
NK Brand N51-T8	104	66.1	9.6	28.4	7.3	40	78	45	37	3,640	35,000
Producers Hybrids 6443 YGCB RR	104	66.4	9.4	27.9	8.4	33	81	43	44	3,720	35,000
Dekalb DKC 55-82	105	68.9	9.4	30.2	7.8	41	78	46	37	3,650	34,400
Garst Seed 8688 GT	104	66.2	9.1	27.0	7.2	35	81	44	41	3,780	34,400

Table 2. Relative maturity (RM), whole-plant moisture (Moist), dry matter and silage yield, and quality traits for corn hybrids planted at Potsdam (Olmsted County) in 2006 (continued).

Brand/ Hybrid Entry	RM, Rating	Moist %	Yield, Ton/Acre ¹		Quality (concentration) ² %					Milk Yield ³	
			DM	Silage	CP	NDF	IVD	NDFD	Starch	Lb/ Ton	Lb/ Acre
Epley Brothers Hybrids E5112	112	67.7	9.2	28.4	7.3	36	81	45	42	3,730	34,200
Trelay 5B739	105	64.9	9.4	26.9	6.9	42	77	45	35	3,550	33,600
Dekalb DKC 55-12	105	68.4	9.5	30.0	6.8	40	77	43	37	3,520	33,400
Dyna Gro DG56P07	107	65.9	9.4	27.5	7.0	41	78	46	38	3,560	33,400
Pioneer 35F38	106	65.5	9.0	26.1	6.6	41	78	47	39	3,700	33,300
Garst Seed 8677 GT	105	66.4	8.9	26.4	7.4	37	79	45	40	3,690	32,700
Epley Brothers Hybrids E5111SR	111	69.1	10.1	32.8	7.6	45	76	47	24	3,080	31,200
Legacy Seeds L-6600 BMR	110	70.8	7.6	26.1	8.3	38	80	48	37	3,720	28,400
Mycogen F2F699	112	72.6	6.5	23.6	8.7	38	82	51	34	3,710	24,100
Mean		66.6	9.9	29.6	7.4	38	79	46	38	3,660	36,100
LSD (0.10)		2.6	1.0	2.4	0.6	5	2	2	6	170	4,900
CV		3	9	7	7	11	3	4	14	4	12

¹ DM yield is whole-plant corn yield at 100% dry matter; Silage yield is whole-plant corn yield at harvest moisture.

² Quality concentration expressed as a % of DM, except NDFD which is expressed as a % of NDF. Refer to Results Provided text for additional information.

³ Milk production was estimated using spreadsheet MILK2006 developed at the University of Wisconsin. Refer to Results Provided text for additional information.

Table 3. Relative maturity (RM), whole-plant moisture (Moist), dry matter and silage yield, and quality traits for corn hybrids planted at Paynesville (Stearns County) in 2006.

Brand/ Hybrid Entry	RM, Rating	Moist %	Yield, Ton/Acre ¹		Quality (concentration) ² %					Milk Yield ³	
			DM	Silage	CP	NDF	IVD	NDFD	Starch	Lb/ Ton	Lb/ Acre
Pioneer 35A31	104	65.6	10.3	29.9	7.0	40	79	46	33	3,560	36,500
Hyland Seeds HL B337	103	65.0	10.5	30.0	7.4	41	78	47	28	3,360	35,300
Pioneer 34A86	106	64.3	10.0	28.1	7.3	44	77	47	28	3,410	34,300
Dairyland HiDF 3002	102	65.8	10.4	30.4	7.6	43	77	45	27	3,250	33,800
Hyland Seeds HL B52R	101	64.2	9.3	25.9	7.1	39	78	44	35	3,550	32,900
Trelay 5K106	100	63.4	9.3	25.3	7.4	40	78	45	32	3,520	32,600
Garst Seed 8688 GT	104	65.1	8.8	25.3	7.0	36	80	44	36	3,540	31,400
Pioneer 35F38	106	61.3	8.9	23.1	7.3	37	79	43	36	3,510	31,400
Dairyland Stealth 5007	105	69.1	9.3	30.1	7.5	44	77	47	28	3,370	31,300
Hyland Seeds HL B295	100	65.0	9.6	27.5	7.3	43	76	46	28	3,240	31,300
Legacy Seeds L-4267 RR,Bt	102	65.7	9.0	26.1	7.6	41	77	45	29	3,440	30,800
Trelay 6R402	106	62.6	9.0	24.1	6.8	45	75	44	29	3,350	30,300
NK Brand B46-N9	102	64.1	8.8	24.5	7.5	39	78	43	32	3,410	30,100
NK Brand N47-F2	102	61.9	8.4	21.9	7.0	38	78	43	36	3,520	29,400
Hyland Seeds HL 2515	100	64.0	8.3	23.1	7.0	39	79	46	33	3,520	29,300
NK Brand N38-B4	98	60.2	8.9	22.3	8.3	40	77	42	30	3,280	29,200
Trelay 5N503	100	63.2	8.7	23.7	6.9	41	78	45	30	3,350	29,200
Producers Hybrids 5613 RR	96	57.6	8.6	20.2	6.4	39	77	42	36	3,400	29,100
Legacy Seeds L-3285 RR,Bt	96	63.9	8.5	23.4	7.3	38	78	41	35	3,400	28,800
Mycogen TMF2H308	96	64.7	8.5	24.0	7.2	42	77	45	29	3,390	28,800
Garst Seed 8866 RR	90	62.3	8.2	21.7	7.6	39	79	45	33	3,510	28,700
Pioneer 38H65	99	60.6	8.4	21.2	6.9	40	77	43	33	3,410	28,600
Hyland Seeds HL S047	100	59.4	8.8	21.6	7.2	44	75	43	32	3,250	28,500
Gold Country 100-04CBR	100	65.4	9.0	26.0	7.1	43	76	44	27	3,150	28,300
Trelay 4B268	96	61.4	8.0	20.7	6.9	41	77	45	34	3,520	28,200
Dekalb DKC 54-46	104	68.0	8.2	25.6	7.0	43	77	47	28	3,400	27,900
Pioneer 35Y61	105	66.0	8.3	24.5	7.2	40	78	46	30	3,320	27,600
Mycogen TMF2N422	95	60.7	8.3	21.0	6.7	42	75	40	33	3,320	27,400
Oekalb DKC 51-39	101	65.8	8.4	24.4	7.1	42	76	42	30	3,260	27,300
NK Brand N36-J2	97	63.4	8.7	23.8	7.0	46	74	45	25	3,120	27,200
Dekalb DKC 46-22	96	62.1	8.3	22.0	6.9	46	74	45	27	3,180	26,500
Producers Hybrids SS 96 RR	96	57.6	8.6	20.4	5.9	48	71	41	28	3,060	26,400

Table 3. Relative maturity (RM), whole-plant moisture (Moist), dry matter and silage yield, and quality traits for corn hybrids planted at Paynesville (Stearns County) in 2006 (continued).

Brand/ Hybrid Entry	RM, Rating	Moist %	Yield, Ton/Acre ¹		Quality (concentration) ² %					Milk Yield ³	
			DM	Silage	CP	NDF	IVD	NDFD	Starch	Lb/ Ton	Lb/ Acre
Hyland Seeds HL B43R	97	64.9	7.9	22.5	7.3	43	75	42	30	3,340	26,300
Hyland Seeds HL 2677	103	68.6	8.3	26.5	7.4	41	79	48	26	3,150	26,200
NK Brand N48-R3	103	62.3	8.3	22.0	7.0	40	77	42	31	3,170	26,200
Dekalb DKC 48-53	98	63.2	7.7	21.0	6.9	45	74	43	29	3,270	25,300
Legacy Seeds L-2927 RR,Bt	92	62.4	7.6	20.2	6.6	45	75	44	27	3,210	24,400
NK Brand N39-K7	99	64.8	7.2	20.3	7.7	46	76	47	24	3,190	22,800
Hyland Seeds HL S067	103	69.5	7.9	25.7	7.6	44	76	46	21	2,790	22,000
Hyland Seeds HL S058	101	70.0	7.8	25.9	7.5	46	76	47	20	2,740	21,300
Dekalb DKC 45-82	95	69.0	6.4	20.7	7.2	44	76	46	24	3,110	19,900
Mean		64.0	8.6	24.1	7.1	42	77	44	30	3,310	28,600
LSD (0.10)		2.6	1.4	3.2	0.7	5	3	2	6	300	5,700
CV		4	14	12	9	10	3	4	18	8	17

¹ DM yield is whole-plant corn yield at 100% dry matter; Silage yield is whole-plant corn yield at harvest moisture.

² Quality concentration expressed as a % of DM, except NDFD which is expressed as a % of NDF. Refer to Results Provided text for additional information.

³ Milk production was estimated using spreadsheet MILK2006 developed at the University of Wisconsin. Refer to Results Provided text for additional information.

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 2006.

Brand/ Hybrid Entry	RM, Rating	Moist %	Yield, Ton/Acre ¹		Quality (concentration) ² %					Milk Yield ³	
			DM	Silage	CP	NDF	IVD	NDFD	Starch	Lb/ Ton	Lb/ Acre
Hyland Seeds HL S047	100	68.6	6.3	19.9	9.1	43	78	49	29	3,530	22,100
Producers Hybrids SS 96 RR	96	68.7	6.1	19.3	9.0	40	79	47	30	3,490	21,100
Hyland Seeds HL B43R	97	67.4	5.8	17.7	9.6	40	79	48	33	3,610	20,900
Dairyland Stealth 5007	105	71.2	5.7	19.7	9.7	41	80	51	29	3,630	20,600
Gold Country 100-04CBB	100	70.5	5.4	18.4	9.2	40	80	49	30	3,640	19,800
Dekalb DKC 48-53	98	68.7	5.4	17.1	8.9	37	80	46	37	3,680	19,700
Pioneer 35A31	104	70.8	5.9	20.2	9.4	42	79	49	26	3,330	19,700
Garst Seed 8688 GT	104	68.9	5.7	18.1	9.3	38	81	49	29	3,400	19,200
Trelay 4B268	96	67.3	5.2	16.0	9.0	40	80	49	32	3,680	19,200
Dekalb 51-39eKalb	101	69.9	5.1	17.0	8.8	40	79	49	31	3,650	18,700
Dekalb DKC 45-82	95	70.2	5.6	18.6	9.3	44	79	51	23	3,300	18,300
Pioneer 34A86	106	73.2	5.3	19.8	9.8	44	79	51	24	3,430	18,200
Dekalb DKC 46-22	96	70.7	5.0	17.1	9.2	40	79	48	32	3,590	18,000
Trelay 6R402	106	71.7	5.3	18.6	9.3	42	79	49	26	3,350	17,700
Pioneer 35F38	106	70.1	4.7	15.8	9.6	37	81	50	33	3,700	17,500
NK Brand N47-F2	102	68.3	4.9	15.5	8.6	40	80	48	31	3,520	17,300
Producers Hybrids 5613 RR	96	68.8	4.7	15.2	8.7	39	80	49	32	3,640	17,300
Garst Seed 8866 RR	90	71.5	5.0	17.4	9.7	43	79	51	27	3,400	16,900
Hyland Seeds HL B52R	101	70.1	4.9	16.3	9.0	44	78	50	27	3,480	16,900
Dekalb DKC 54-46	104	73.4	5.0	18.9	8.9	43	79	51	23	3,310	16,700
Pioneer 35Y61	105	72.3	5.2	18.6	9.4	41	80	51	25	3,230	16,700
Legacy Seeds L-2927 RR,Bt	92	71.2	4.8	16.8	8.8	41	79	49	27	3,340	16,200
Mycogen TMF2N422	95	70.7	4.6	15.5	9.0	41	79	48	30	3,550	16,200
Legacy Seeds L-4267 RR,Bt	102	69.3	4.7	15.3	8.6	42	79	50	26	3,370	15,800
Hyland Seeds HL B337	103	72.5	5.2	18.8	9.8	45	78	51	19	3,000	15,600
NK Brand N38-B4	98	67.6	4.4	13.4	10.8	37	81	48	30	3,570	15,600
Hyland Seeds HL 2515	100	71.1	5.1	17.7	9.2	45	78	50	19	3,010	15,400
Hyland Seeds HL 2677	103	73.2	4.8	18.0	9.6	44	79	52	21	3,080	14,900
Trelay 5K106	100	70.2	4.8	16.0	9.9	43	78	49	21	3,110	14,800
Dairyland HiDF 3002	102	71.7	4.9	17.3	9.5	45	78	50	18	3,010	14,700
Legacy Seeds L-3285 RR,Bt	96	72.9	4.1	15.2	9.1	39	79	48	31	3,570	14,700
NK Brand N36-J2	97	73.6	4.3	16.4	11.0	44	79	51	21	3,260	14,200

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 2006 (continued).

Brand/ Hybrid Entry	RM, Rating	Moist %	Yield, Ton/Acre ¹		Quality (concentration) ² %					Milk Yield ³	
			DM	Silage	CP	NDF	IVD	NDFD	Starch	Lb/ Ton	Lb/ Acre
Hyland Seeds HL B295	100	71.6	4.2	14.8	10.7	41	80	51	25	3,340	14,100
NK Brand N48-R3	103	71.1	4.3	14.9	9.7	42	79	50	24	3,270	14,100
NK Brand N39-K7	99	70.8	4.0	13.9	10.2	43	79	52	23	3,460	14,000
Trelay 5N503	100	71.1	4.2	14.5	9.7	40	80	50	25	3,290	13,800
Hyland Seeds HL S058	101	72.8	5.0	18.5	9.2	48	77	51	12	2,480	12,500
Pioneer 38H65	99	69.4	3.6	11.7	9.8	40	80	51	25	3,320	12,000
Hyland Seeds HL S067	103	75.0	4.7	18.8	9.4	48	78	53	11	2,480	11,700
NK Brand B46-N9	102	73.3	3.8	14.1	10.5	43	79	52	18	3,050	11,500
Mycogen TMF2H308	96	74.1	3.8	14.6	10.4	46	77	50	15	2,720	10,300
Mean		70.8	4.9	16.9	9.5	42	79	50	26	3,340	16,500
LSD (0.10)		3.1	1.2	3.4	0.9	4	ns	ns	8	350	4,800
CV		4	21	17	8	9	2	5	26	9	25

¹ DM yield is whole-plant corn yield at 100% dry matter; Silage yield is whole-plant corn yield at harvest moisture.

² Quality concentration expressed as a % of DM, except NDFD which is expressed as a % of NDF. Refer to Results Provided text for additional information.

³ Milk production was estimated using spreadsheet MILK2006 developed at the University of Wisconsin. Refer to Results Provided text for additional information.

Table 5. 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 2006.

Brand/ Hybrid Entry	RM, Rating	Moist %	Yield, Ton/Acre ¹		Quality (concentration) ² %					Milk Yield ³	
			DM	Silage	CP	NDF	IVD	NDFD	Starch	Lb/ Ton	Lb/ Acre
Nu Tech QFO3100	100	66.0	10.1	29.7	5.5	50	72	44	26	3,110	31,500
Pioneer 38B86	98	57.4	9.1	21.4	6.5	37	77	38	41	3,350	30,400
Dekalb DKC 48-53	98	51.7	9.3	19.3	6.0	38	77	38	42	3,150	29,400
Pioneer 37A93	97	54.6	8.6	19.0	6.7	35	79	38	44	3,270	28,200
NK Seed N33-H6	94	59.7	8.9	22.0	6.2	46	73	42	33	3,190	28,200
Dekalb DKC 42-95	92	51.9	8.2	17.0	6.3	31	80	36	49	3,370	27,500
Hyland HL S047	100	53.6	8.8	19.0	6.6	48	73	43	29	3,000	26,500
Pioneer 38H65	99	56.0	8.3	18.9	5.9	40	75	38	37	3,180	26,400
Pioneer 38W22	92	45.0	8.2	14.8	5.9	41	75	39	39	3,150	25,700
Hyland HL S041	100	56.0	7.8	17.7	6.3	42	76	43	37	3,230	25,200
Nu Tech QFO5191	91	52.6	7.3	15.5	6.1	34	79	39	45	3,380	24,800
Nu Tech QFO3088	99	56.7	7.7	17.7	6.3	42	74	38	36	3,190	24,500
Hyland HL S034	92	51.8	8.2	16.9	5.9	45	73	39	35	2,930	23,900
Mean		54.8	8.5	19.2	6.2	41	76	40	38	3,190	27,100
LSD (0.10)		2.6	0.7	1.8	ns	7	3	3	6	160	2,900
CV		4	6	7	10	12	3	7	12	4	8

¹ DM yield is whole-plant corn yield at 100% dry matter; Silage yield is whole-plant corn yield at harvest moisture.

² Quality concentration expressed as a % of DM, except NDFD which is expressed as a % of NDF. Refer to Results Provided text for additional information.

³ Milk production was estimated using spreadsheet MILK2006 developed at the University of Wisconsin. Refer to Results Provided text for additional information.