

FIELD EXPERIMENT HISTORY

Title: Date of Planting and Hybrid Influence on Corn Silage Quality
Experiment: 03DOP **Trial ID** 1312 **Year:** 1998
Personnel: H. Darby, J.G. Lauer, P.J. Flannery, K.D. Kohn
Location: Arlington, WI **County:** Columbia
Supported By: Hatch

Site Information

Field: 407 **Previous Crop:** Alfalfa **Soil Type:** Plano
Soil Test: **Date:** 10/01/98 **pH** 6.2 **OM (%)** 3 **P (ppm)** 50 **K (ppm)** 190

Plot Management

Tillage Operations: Fall Chisel Plow Field Cultivator 1 Cultivation

	<u>Analysis:</u>	<u>Rate lbs/A:</u>	<u>Date:</u>
Fertilizer:			
Preplant :	46-0-0	325	4 /22/98
Starter :	6-24-24	150	4 /24/98
Post plant :	N/A	N/A	N/A
Manure:		None	

Herbicide: Lasso @ 2 qts/A; Bladex 90DF @ 2.2 lb/A **Insecticide:** Lorsban @7 lbs/A
Hybrid:

Irrigation: None

Planting Date: Varies **Planting Depth:** N/A **Row Width:** 30

Target Plant Density: plants per acre **Planting Method:** Kinze Plot Planter

Harvest Date: S-9/8/98,S-9/17/98,S-10/2/98,G-10/20/98 **Harvest Method:** Hand

Notes: N/A

Experimental Design

Design: RCB split plot **Replications:** 4
Plot Size Seeded: 10ft x 25ft **Experiment Size:** 10ft x 25ft
Harvest Plot Size: 2.5ft x 16ft **Harvest Plant Density:** G-26808,S-32897 plants per acre

Factors/Treatments:

<u>Planting Date</u>	<u>Hybrid</u>
4/23/98,5/1/98, 5/14/98,6/1/98, 6/14/98,6/25/98	Golden Harvest H2497 RM110, Renk RK617 RM100

Results: Tables E-20.

Table E-20. Date of Planting and Hybrid Influence on Corn Silage Yield and Quality
Arlington, WI - 1998

Date of planting	Hybrid	Final population plants/A	Reproductive stage @ harvest	Iowa State		Stover					In Vitro digestibility %	Cell Wall digestibility %
				Kernel milk %	Dry Matter yield tons/A	Moisture %	Ear:Stover ratio %	Crude protein %	ADF %	NDF %		
.	GH H2497	33668	5.0	62	4.86	73.2	49.3	6.30	35.4	65.1	71.2	55.9
.	Renk RK617	32126	5.0	42	3.94	70.1	57.8	6.49	38.8	69.9	69.4	56.2
113		32806	5.0	25	4.20	70.8	56.9	5.75	40.8	69.9	68.6	55.2
121		30220	5.0	41	4.85	71.3	55.2	5.86	38.1	66.2	70.8	55.9
134		34304	5.0	25	5.01	66.6	54.4	5.90	38.0	69.3	68.8	55.0
152		33487	5.0	54	3.91	72.0	58.9	6.68	37.6	70.7	69.7	57.0
165		30492	5.0	68	3.87	74.7	55.5	6.50	36.1	67.5	70.0	55.6
176		36073	5.0	98	4.56	74.5	40.3	7.71	31.9	61.6	73.8	57.5
113	GH H2497	34031	5.0	38	4.68	71.3	51.6	5.41	39.9	70.2	68.8	55.6
113	Renk RK617	31581	5.0	13	3.72	70.3	62.3	6.10	41.7	69.7	68.5	54.8
121	GH H2497	27225	5.0	56	5.63	73.5	49.4	5.87	35.8	62.2	72.7	56.0
121	Renk RK617	33215	5.0	26	4.07	69.1	60.9	5.84	40.5	70.1	69.0	55.8
134	GH H2497	33487	5.0	36	5.25	70.7	51.2	6.09	36.6	67.0	69.5	54.5
134	Renk RK617	35120	5.0	14	4.77	62.5	57.6	5.71	39.4	71.6	68.2	55.6
152	GH H2497	33215	5.0	69	4.31	74.9	53.9	6.79	35.5	66.7	70.8	56.3
152	Renk RK617	33759	5.0	39	3.52	69.2	63.9	6.56	39.8	74.7	68.5	57.8
165	GH H2497	34576	5.0	75	4.28	75.8	54.5	6.19	34.3	65.6	70.7	55.4
165	Renk RK617	26408	5.0	60	3.46	73.6	56.5	6.80	37.9	69.4	69.4	55.9
176	GH H2497	39476	5.0	98	5.01	73.1	35.1	7.48	30.2	59.0	75.0	57.7
176	Renk RK617	32670	5.0	99	4.11	75.8	45.5	7.95	33.6	64.2	72.5	57.2
Mean		32897	5.0	52	4.40	71.7	53.5	6.40	37.1	67.5	70.3	56.0
Probability (%)												
Rep		5.1	.	61.8	30.0	36.6	35.0	14.0	4.7	23.8	14.6	27.3
DOP		10.1	.	0.0	0.5	1.4	0.0	0.1	0.0	0.0	0.2	24.1
Hybrid		27.0	.	0.0	0.0	0.8	0.2	37.0	0.0	0.0	0.1	63.6
DOP x Hybrid		6.1	.	1.5	65.4	10.3	82.0	55.4	67.5	1.7	37.4	76.4
LSD (0.10)												
DOP		NS	-	10	0.52	3.6	5.5	0.78	1.6	2.5	1.8	NS
Hybrid		NS	-	4	0.31	1.8	3.9	NS	0.9	1.2	0.8	NS
DOP x Hybrid		7315	-	NS	NS	NS	NS	NS	NS	3.8	NS	NS
CV (%)		14	0	17	14	5	15	11	5	3	2	3

Table E-20. Date of Planting and Hybrid Influence on Corn Silage Yield and Quality
Arlington, WI - 1998

Date of planting	Hybrid	Final population plants/A	Iowa State Reproductive stage @ harvest	Kernel milk %	Whole Plant								
					Dry Matter yield tons/A	Moisture %	Crude protein %	ADF %	NDF %	<i>In Vitro</i> digestibility %	Cell Wall digestibility %	Milk Per ton acre lbs/T lbs/A	
.	GH H2497	33668	5.0	62	9.7	65.5	7.38	24.2	49.1	80.1	59.6	2001	19514
.	Renk RK617	32126	5.0	42	9.5	58.1	7.51	21.9	46.3	81.9	61.2	2230	21345
113		32806	5.0	25	9.9	60.0	6.96	24.9	47.4	80.6	59.3	2101	20859
121		30220	5.0	41	10.8	60.3	6.96	24.3	46.0	82.9	63.0	2294	24838
134		34304	5.0	25	11.0	57.3	7.14	23.8	49.9	78.7	57.3	1884	20891
152		33487	5.0	54	9.6	59.3	7.74	21.3	46.6	82.1	61.8	2225	21365
165		30492	5.0	68	8.7	63.7	7.63	20.8	46.9	81.3	60.3	2165	18642
176		36073	5.0	98	7.8	70.1	8.24	23.1	49.3	80.6	60.9	2021	15982
113	GH H2497	34031	5.0	38	9.9	65.0	6.42	27.3	51.1	78.2	57.4	1802	18051
113	Renk RK617	31581	5.0	13	9.8	54.9	7.51	22.5	43.7	83.0	61.2	2400	23666
121	GH H2497	27225	5.0	56	11.1	64.8	6.94	25.8	47.9	81.3	61.1	2127	23621
121	Renk RK617	33215	5.0	26	10.5	55.8	6.97	22.9	44.2	84.4	64.8	2462	26056
134	GH H2497	33487	5.0	36	10.7	61.9	7.16	24.8	51.1	78.5	58.0	1819	19727
134	Renk RK617	35120	5.0	14	11.3	52.6	7.12	22.8	48.6	78.8	56.6	1949	22055
152	GH H2497	33215	5.0	69	9.4	65.2	7.78	22.8	47.6	81.8	61.8	2165	20455
152	Renk RK617	33759	5.0	39	9.7	53.4	7.71	19.7	45.7	82.4	61.8	2284	22274
165	GH H2497	34576	5.0	75	9.4	65.2	7.66	21.1	47.6	80.9	59.9	2112	19687
165	Renk RK617	26408	5.0	60	8.0	62.2	7.60	20.4	46.3	81.8	60.7	2218	17597
176	GH H2497	39476	5.0	98	7.8	70.7	8.33	23.1	49.5	80.0	59.5	1978	15541
176	Renk RK617	32670	5.0	99	7.7	69.5	8.16	23.1	49.1	81.2	62.2	2064	16423
Mean		32897	5.0	52	9.6	61.8	7.45	23.0	47.7	81.0	60.4	2115	20430
Probability (%)													
Rep		5.1	.	61.8	9.1	39.1	25.2	7.5	15.8	17.6	32.2	16.1	13.0
DOP		10.1	.	0.0	0.0	0.1	0.3	1.9	30.0	7.8	3.4	16.4	1.9
Hybrid		27.0	.	0.0	45.2	0.0	42.3	4.3	1.8	4.4	13.1	2.6	15.0
DOP x Hybrid		6.1	.	1.5	37.4	10.1	23.7	80.5	52.7	61.9	57.8	58.9	63.0
LSD (0.10)													
DOP		NS	-	10.1	0.9	3.9	0.5	2.1	NS	2.3	2.7	NS	3720
Hybrid		NS	-	4.3	NS	2.0	NS	1.8	1.9	1.5	NS	164.1	NS
DOP x Hybrid		7315	-	NS	NS	6.6	NS	NS	NS	NS	NS	NS	NS
CV (%)		14	0	17	10	7	7	16	8	4	6	16	21

Table E-20. Date of Planting and Hybrid Influence on Corn Silage and Corn Grain Yield
Arlington, WI - 1998

Location	Date of planting	Hybrid	Grain				
			Final population plants/A	Broken stalks %	Yield bu/A	Moisture %	Test weight lbs/bu
ARL	.	GH H2497	26041	3.6	196	28.9	51.4
ARL	.	Renk RK617	27543	11.9	195	25.9	51.1
ARL	113		29539	5.6	234	19.4	55.2
ARL	121		27089	4.3	239	19.9	54.9
ARL	134		26681	5.4	225	21.5	53.6
ARL	152		28314	14.2	195	29.2	48.8
ARL	165		21780	1.3	152	34.2	48.9
ARL	176		27633	17.0	126	40.3	46.4
ARL	113	GH H2497	28042	1.1	239	21.2	54.7
ARL	113	Renk RK617	31037	10.0	229	17.6	55.6
ARL	121	GH H2497	25319	0.0	236	21.9	54.2
ARL	121	Renk RK617	28859	8.6	242	17.9	55.7
ARL	134	GH H2497	28042	7.4	234	23.1	53.1
ARL	134	Renk RK617	25319	3.4	216	19.9	54.1
ARL	152	GH H2497	28677	8.5	195	31.8	48.5
ARL	152	Renk RK617	28042	18.4	195	26.7	49.1
ARL	165	GH H2497	21236	0.0	158	34.6	49.5
ARL	165	Renk RK617	22325	2.5	147	33.7	48.3
ARL	176	GH H2497	25592	5.8	113	40.9	48.8
ARL	176	Renk RK617	29675	28.3	138	39.8	44.1
Mean			26808	7.8	195	27.4	51.3
Probability (%)							
Rep			21.7	36.3	38.7	0.7	8.5
DOP			1.2	8.9	0.0	0.0	0.0
Hybrid			17.0	0.1	85.0	0.0	61.6
DOP x Hybrid			41.8	2.5	30.8	5.3	7.8
LSD (0.10)							
DOP			3157	9.1	22	1.3	1.7
Hybrid			NS	3.5	NS	0.7	NS
DOP x Hybrid			NS	12.3	NS	2.3	3.3
CV (%)			13	89	10	5	4

FIELD EXPERIMENT HISTORY

Title: Date of Planting and Hybrid Influence On Corn Growth and Development
Experiment: 03DOP **Trial ID** 1318 **Year:** 1998
Personnel: H. Darby, J.G. Lauer, P.J. Flannery, K.D. Kohn
Location: Arlington, WI **County:** Columbia
Supported By: Hatch

Site Information

Field: 407 **Previous Crop:** Alfalfa **Soil Type:** Plano
Soil Test: **Date:** 10/01/98 **pH** 6.2 **OM (%)** 3 **P (ppm)** 50 **K (ppm)** 190

Plot Management

Tillage Operations: Chisel Plow Field Cultivator 1 Cultivation

	<u>Analysis:</u>	<u>Rate lbs/A:</u>	<u>Date:</u>
Fertilizer:			
Preplant :	46-0-0	325	4 /22/98
Starter :	6-24-24	150	4 /24/98
Post plant :	N/A	N/A	N/A
Manure:		None	

Herbicide: Lasso @ 2 qts/A; Bladex 90DF @ 2.2 lb/A **Insecticide:** Lorsban @ 7 lbs/A
Hybrid:

Irrigation: None

Planting Date: N/A **Planting Depth:** **Row Width:** 30

Target Plant Density: plants per acre **Planting Method:** Kinze Plot Planter

Harvest Date: S-9/8/98, S-9/17/98, S-10/2/98, G-10/20/98 **Harvest Method:** Hand

Notes: N/A

Experimental Design

Design: RCB split plot **Replications:** 4
Plot Size Seeded: 10ft x 25ft **Experiment Size:** 10ft x 25ft
Harvest Plot Size: 2.5ft x 16ft **Harvest Plant Density:** G-26808 S-32897 plants per acre

Factors/Treatments:

Date of Planting:	Sample DOY:	Hybrid:
4/23/98,5/1/98	146, 161, 176, 186, 202, 215, 228, 238	Golden Harvest H297 RM110
5/14/98,6/1/98,		Renk RK617 RM100
6/14/98,6/25/98		

Results: Tables E-21.

E-21 The Effects of Planting Date on Growth and Development of Corn.
Arlington, WI - 1998

Date of Planting	Hybrid	Day of year	Leaf Development			Plant height inches
			Leaf collars	Hail adjusters' method	Total leaves	
.		146	3.2	4.8	6.0	5
.		161	4.6	7.5	8.7	14
.		176	7.5	10.8	11.9	31
.		186	9.9	12.3	13.3	49
.		202	9.1	11.9	13.1	77
.		215	12.0	14.0	15.2	71
.		228	14.3	15.3	16.2	110
.		238	.	.	.	109
.	GH2497	.	8.3	10.7	11.9	67
.	RK617	.	8.5	11.1	12.3	63
.	GH2497	146	3.3	4.9	5.9	5
.	GH2497	161	4.4	7.0	8.2	14
.	GH2497	176	7.2	10.3	11.4	32
.	GH2497	186	9.8	12.2	13.3	49
.	GH2497	202	9.0	11.5	12.8	79
.	GH2497	215	12.0	14.1	15.3	72
.	GH2497	228	14.4	15.5	16.3	113
.	GH2497	238	.	.	.	115
.	RK617	146	3.1	4.8	6.0	5
.	RK617	161	4.9	7.9	9.2	14
.	RK617	176	7.8	11.3	12.3	30
.	RK617	186	10.0	12.3	13.4	48
.	RK617	202	9.1	12.2	13.3	76
.	RK617	215	12.0	14.0	15.1	70
.	RK617	228	14.1	15.1	16.1	107
.	RK617	238	.	.	.	104
113		.	8.7	11.5	12.7	63
121		.	8.0	10.8	12.0	60
134		.	6.6	9.4	10.6	55
152		.	9.0	11.2	12.2	69
165		.	8.8	11.2	12.3	78
176		.	9.5	11.6	12.8	68
113		146	3.1	4.7	5.9	5
113		161	5.4	8.6	10.1	19
113		176	10.1	14.0	15.2	46
113		186	14.8	17.0	17.8	81
113		202	.	.	.	106

continued

E-21 The Effects of Planting Date on Growth and Development of Corn.
Arlington, WI - 1998

Date of Planting	Hybrid	Day of year	Leaf Development			Plant height inches
			Leaf collars	Hail adjusters' method	Total leaves	
113		215	.	.	.	.
113		228	.	.	.	.
113		238	.	.	.	105
121		146	3.1	4.8	5.8	4
121		161	4.7	7.7	8.9	15
121		176	9.3	13.1	14.6	43
121		186	13.8	16.0	16.9	72
121		202	.	.	.	103
121		215	.	.	.	.
121		228	.	.	.	.
121		238	.	.	.	106
134		146	3.5	5.3	6.4	6
134		161	3.8	6.1	7.0	8
134		176	6.9	10.4	11.4	26
134		186	10.9	13.9	15.4	56
134		202	.	.	.	100
134		215	.	.	.	.
134		228	.	.	.	.
134		238	.	.	.	108
134		251	.	.	.	101
152		161	.	.	.	.
152		176	3.6	5.7	6.4	8
152		186	5.6	8.2	9.1	20
152		202	11.8	14.5	15.8	69
152		215	15.1	16.3	17.3	90
152		228	.	.	.	115
152		238	.	.	.	115
165		146	.	.	.	.
165		161	.	.	.	.
165		176	.	.	.	.
165		186	4.3	6.2	7.3	14
165		202	9.5	12.4	13.7	61
165		215	12.7	14.9	15.9	79
165		228	.	.	.	117
165		238	.	.	.	117
176		146	.	.	.	.
176		161	.	.	.	.
176		176	.	.	.	.
176		186	.	.	.	.
176		202	5.9	8.6	9.8	25
176		215	8.2	10.9	12.3	44
176		228	14.3	15.3	16.2	97
176		238	.	.	.	105

continued

E-21 The Effects of Planting Date on Growth and Development of Corn.
Arlington, WI - 1998

Date of Planting	Hybrid	Sample day of year	Leaf Development			Plant height inches
			Leaf collars	Hail adjusters' method	Total leaves	
113	GH2497	.	8.5	11.2	12.3	65
113	RK617	.	8.9	11.8	13.0	61
121	GH2497	.	7.7	10.4	11.6	63
121	RK617	.	8.3	11.1	12.3	56
134	GH2497	.	6.7	9.4	10.5	57
134	RK617	.	6.6	9.5	10.7	53
152	H2497	.	9.0	11.0	12.1	71
152	RK617	.	9.1	11.3	12.2	68
165	H2497	.	8.6	10.9	12.0	79
165	RK617	.	9.1	11.4	12.6	76
176	H2497	.	9.5	11.5	12.7	69
176	RK617	.	9.5	11.8	12.8	66
113	H2497	146	3.0	4.3	5.5	4
113	H2497	161	5.3	8.3	9.6	19
113	H2497	176	9.9	13.6	14.6	49
113	H2497	186	14.6	17.0	17.9	80
113	H2497	202	.	.	.	111
113	H2497	215	.	.	.	.
113	H2497	228	.	.	.	.
113	H2497	238	.	.	.	112
113	RK617	146	3.2	5.0	6.3	6
113	RK617	161	5.6	9.0	10.6	19
113	RK617	176	10.4	14.4	15.8	44
113	RK617	186	15.0	17.0	17.8	82
113	RK617	202	.	.	.	101
113	RK617	215	.	.	.	.
113	RK617	228	.	.	.	.
113	RK617	238	.	.	.	99
121	H2497	146	3.2	4.8	5.7	5
121	H2497	161	4.3	7.0	8.3	14
121	H2497	176	8.9	12.5	14.1	45
121	H2497	186	13.5	16.0	17.0	73
121	H2497	202	.	.	.	109
121	H2497	215	.	.	.	.
121	H2497	228	.	.	.	.
121	H2497	238	.	.	.	117
121	RK617	238	.	.	.	95
121	RK617	146	3.0	4.7	5.8	4
134	H2497	146	4.0	6.0	7.0	7
134	H2497	161	3.6	5.8	6.6	8

continued

E-21 The Effects of Planting Date on Growth and Development of Corn.
Arlington, WI - 1998

Date of Planting	Hybrid	Sample day of year	Leaf Development			Plant height inches
			Leaf collars	Hail adjusters' method	Total leaves	
121	RK617	146	3.0	4.7	5.8	4
134	H2497	176	6.8	10.0	11.0	27
134	H2497	186	11.1	14.3	15.5	58
134	H2497	202	.	.	.	99
134	H2497	215	.	.	.	.
134	H2497	228	.	.	.	.
134	H2497	238	.	.	.	116
134	RK617	146	3.0	4.5	5.8	5
134	RK617	161	3.9	6.4	7.4	8
134	RK617	176	7.0	10.9	11.8	26
134	RK617	186	10.6	13.6	15.4	53
134	RK617	202	.	.	.	102
134	RK617	215	.	.	.	.
134	RK617	228	.	.	.	.
134	RK617	238	.	.	.	100
152	H2497	146	.	.	.	.
152	H2497	161	.	.	.	.
152	H2497	176	3.1	5.3	6.0	8
152	H2497	186	5.4	7.8	8.6	19
152	H2497	202	12.0	14.4	16.0	69
152	H2497	215	15.5	16.8	17.8	93
152	H2497	228	.	.	.	118
152	H2497	238	.	.	.	118
152	RK617	146	.	.	.	.
152	RK617	161	.	.	.	.
152	RK617	176	4.0	6.1	6.8	8
152	RK617	186	5.9	8.6	9.6	20
152	RK617	202	11.6	14.6	15.6	69
152	RK617	215	14.8	15.8	16.9	88
152	RK617	228	.	.	.	112
152	RK617	238	.	.	.	112
165	H2497	146	.	.	.	.
165	H2497	161	.	.	.	.
165	H2497	176	.	.	.	.
165	H2497	186	4.1	6.1	7.3	14
165	H2497	202	9.3	12.0	13.1	60
165	H2497	215	12.4	14.6	15.6	78
165	H2497	228	.	.	.	121
165	H2497	238	.	.	.	121
165	RK617	146	.	.	.	.
165	RK617	161	.	.	.	.
165	RK617	176	.	.	.	.

continued

E-21 The Effects of Planting Date on Growth and Development of Corn.
Arlington, WI - 1998

Date of Planting	Hybrid	Sample day of year	Leaf Development			Plant height inches
			Leaf collars	Hail adjusters' method	Total leaves	
165	RK617	186	4.5	6.3	7.4	14
165	RK617	202	9.8	12.9	14.3	61
165	RK617	215	13.0	15.1	16.1	80
165	RK617	228	.	.	.	114
134	RK617	.	6.6	9.5	10.7	53
152	H2497	.	9.0	11.0	12.1	71
152	RK617	.	9.1	11.3	12.2	68
165	H2497	.	8.6	10.9	12.0	79
165	RK617	.	9.1	11.4	12.6	76
176	H2497	.	9.5	11.5	12.7	69
176	RK617	.	9.5	11.8	12.8	66
113	H2497	146	3.0	4.3	5.5	4
113	H2497	161	5.3	8.3	9.6	19
113	H2497	176	9.9	13.6	14.6	49
113	H2497	186	14.6	17.0	17.9	80
113	H2497	202	.	.	.	111
113	H2497	215	.	.	.	.
113	H2497	228	.	.	.	.
113	H2497	238	.	.	.	112
113	RK617	146	3.2	5.0	6.3	6
113	RK617	161	5.6	9.0	10.6	19
113	RK617	176	10.4	14.4	15.8	44
113	RK617	186	15.0	17.0	17.8	82
113	RK617	202	.	.	.	101
113	RK617	215	.	.	.	.
113	RK617	228	.	.	.	.
113	RK617	238	.	.	.	99
121	H2497	146	3.2	4.8	5.7	5
121	H2497	161	4.3	7.0	8.3	14
121	H2497	176	8.9	12.5	14.1	45
121	H2497	186	13.5	16.0	17.0	73
121	H2497	202	.	.	.	109
121	H2497	215	.	.	.	.
121	H2497	228	.	.	.	.
121	H2497	238	.	.	.	117
121	RK617	146	3.0	4.7	5.8	4
121	RK617	161	5.1	8.4	9.6	15
121	RK617	176	9.8	13.8	15.1	42
121	RK617	186	14.0	16.0	16.9	72
121	RK617	202	.	.	.	98
121	RK617	215	.	.	.	.
121	RK617	228	.	.	.	.

continued

E-21 The Effects of Planting Date on Growth and Development of Corn.
Arlington, WI - 1998

Date of Planting	Hybrid	Sample day of year	Leaf Development			Plant height inches
			Leaf collars	Hail adjusters' method	Total leaves	
121	RK617	238	.	.	.	95
134	H2497	146	4.0	6.0	7.0	7
134	H2497	161	3.6	5.8	6.6	8
134	H2497	176	6.8	10.0	11.0	27
134	H2497	186	11.1	14.3	15.5	58
134	H2497	202	.	.	.	99
134	H2497	215	.	.	.	.
134	H2497	228	.	.	.	.
134	H2497	238	.	.	.	116
134	RK617	146	3.0	4.5	5.8	5
134	RK617	161	3.9	6.4	7.4	8
134	RK617	176	7.0	10.9	11.8	26
134	RK617	186	10.6	13.6	15.4	53
134	RK617	202	.	.	.	102
134	RK617	215	.	.	.	.
134	RK617	228	.	.	.	.
134	RK617	238	.	.	.	100
152	H2497	146	.	.	.	.
152	H2497	161	.	.	.	.
152	H2497	176	3.1	5.3	6.0	8
152	H2497	186	5.4	7.8	8.6	19
152	H2497	202	12.0	14.4	16.0	69
152	H2497	215	15.5	16.8	17.8	93
152	H2497	228	.	.	.	118
152	H2497	238	.	.	.	118
152	RK617	146	.	.	.	.
152	RK617	161	.	.	.	.
152	RK617	176	4.0	6.1	6.8	8
152	RK617	186	5.9	8.6	9.6	20
152	RK617	202	11.6	14.6	15.6	69
152	RK617	215	14.8	15.8	16.9	88
152	RK617	228	.	.	.	112
152	RK617	238	.	.	.	112
165	H2497	146	.	.	.	.
165	H2497	161	.	.	.	.
165	H2497	176	.	.	.	.
165	H2497	186	4.1	6.1	7.3	14
165	H2497	202	9.3	12.0	13.1	60
165	H2497	215	12.4	14.6	15.6	78
165	H2497	228	.	.	.	121
165	H2497	238	.	.	.	121
165	RK617	146	.	.	.	.

continued

E-21 The Effects of Planting Date on Growth and Development of Corn.
Arlington, WI - 1998

Date of Planting	Hybrid	Sample day of year	Leaf Development			Plant height inches
			Leaf collars	Hail adjusters' method	Total leaves	
165	RK617	161	.	.	.	.
165	RK617	176	.	.	.	.
165	RK617	186	4.5	6.3	7.4	14
165	RK617	202	9.8	12.9	14.3	61
165	RK617	215	13.0	15.1	16.1	80
165	RK617	228	.	.	.	114
165	RK617	238	.	.	11.0	4
176	H2497	146	.	.	.	.
176	H2497	161	.	.	.	.
176	H2497	176	.	.	.	.
176	H2497	186	.	.	.	.
176	H2497	202	5.9	8.1	9.4	5.3
176	H2497	215	8.1	10.9	2.4	5.0
176	H2497	228	14.4	15.5	6.3	9.5
176	H2497	238	.	.	10.0	6.3
176	RK617	146	.	.	.	.
176	RK617	161	.	.	.	.
176	RK617	176	.	.	.	.
176	RK617	186	.	.	.	.
176	RK617	202	6.0	9.1	0.1	5.0
176	RK617	215	8.3	11.0	2.3	3.0
176	RK617	228	14.1	15.1	6.1	4.9
176	RK617	238	.	.	10.0	3.0
Mean			8.4	10.9	12.1	65
Probability (%)						
Rep (R)			46.9	29.3	17.9	46.7
DOP (D)			0.0	0.0	0.0	0.0
Hybrid (H)			12.9	6.0	3.9	0.0
H x D			13.5	40.0	53.2	1.7
Sample DOY (SD)			0.0	0.0	0.0	0.0
SD X D			0.0	0.0	0.0	0.0
SD X H			0.2	0.0	0.1	0.0
SD X D X H			34.0	7.5	14.3	9.6
LSD (.10)						
DOP (D)			0.4	0.4	0.4	3
Hybrid (H)			NS	0.3	0.3	1
H x D			NS	NS	NS	9
Sample DOY (SD)			0.2	0.2	0.2	1
SD X D			0.9	1.1	1.0	9
SD X H			0.8	1.1	1.1	6
SD X D X H			NS	0.5	NS	3
CV (%)			5	5	5	6

FIELD EXPERIMENT HISTORY

Title: Date of Planting and Hybrid Influence on Corn Silage Quality
Experiment: 03DOP **Trial ID** 1304 **Year:** 1998
Personnel: J.Lauer, H. Darby, P. Flannery, K. Kohn
Location: Ashland, WI **County:** Bayfield
Supported By: Hatch

Site Information

Field: **Previous Crop:** Corn **Soil Type:** Superior
Soil Test: **Date:** 11/00/97 **pH** 6.8 **OM (%)** 3 **P (ppm)** 170 **K (ppm)** 103

Plot Management

Tillage Operations: Moldboard plow Disk, Field

	<u>Analysis:</u>	<u>Rate lbs/A:</u>	<u>Date:</u>
Fertilizer: Preplant :	46-0-0	150	N/A
Starter :	N/A	N/A	N/A
Post plant :	N/A	N/A	N/A
Manure:		None	

Herbicide: Lasso 2qt/a, Bladex 2qt/a

Insecticide:

Irrigation: None

Hybrid:

Planting Date: N/A **Planting Depth:** 1.5 **Row Width:** 30

Target Plant Density: plants per acre **Planting Method:** Hand

Harvest Date: S:9/7/98,S:9/20/98, G:10/11/98 **Harvest Method:** Hand

Notes:

Experimental Design

Design: RCB split plot

Replications: 4

Plot Size Seeded: 10ft x 25ft

Experiment Size: 10ft x 25ft

Harvest Plot Size: 2.5ft x 16ft

Harvest Plant Density: G:34053, S:32575 plants per acre

Factors/Treatments:

<u>Planting Date</u>	<u>Hybrid</u>
4/23/98, 5/4/98, 5/18/98, 6/1/98, 6/15/98, 6/25/98	Golden Harvest H2279 RM90, Pioneer 3936 RM80

Results: Tables E-22.

Table E-22. Date of Planting and Hybrid Influence on Corn Silage Yield and Quality
Ashland, WI - 1998

Date of planting	Hybrid	Final population plants/A	Iowa State Reproductive stage @ harvest	Kernel milk %	Dry Matter		Ear:Stover ratio %	Stover			In Vitro digestibility %	Cell Wall digestibility %
					yield tons/A	Moisture %		Crude protein %	ADF %	NDF %		
.	GH H2279	32571	4.6	41	2.73	68.1	47.0	6.30	40.2	73.8	67.6	56.0
.	Pioneer 3936	32579	4.8	28	2.61	62.2	51.0	5.61	41.6	76.0	65.7	54.9
113		33351	5.0	28	2.52	60.9	59.9	4.75	42.3	77.3	64.5	54.0
124		33078	5.0	33	3.04	59.0	54.4	5.78	45.7	76.5	65.5	54.8
138		32534	5.4	16	2.41	59.9	56.2	5.64	42.3	77.7	66.0	56.3
152		32942	5.0	48	2.89	64.7	50.9	5.40	40.5	77.4	65.3	55.2
166		33351	4.7	73	2.60	70.8	39.9	6.65	38.9	74.8	68.1	57.3
176		29403	3.3	0	2.49	75.4	32.6	7.50	35.7	65.8	70.5	55.1
113	GH H2279	32670	5.0	36	2.46	61.1	63.8	5.23	43.1	77.6	65.1	55.0
113	Pioneer 3936	34031	5.0	19	2.59	60.6	56.0	4.27	41.4	77.0	63.9	53.0
124	GH H2279	33487	5.0	41	3.32	63.2	50.9	6.25	45.3	74.7	66.6	55.3
124	Pioneer 3936	32670	5.0	25	2.77	54.8	57.6	5.31	46.1	78.2	64.3	54.4
138	GH H2279	32670	5.3	23	2.67	64.3	51.6	6.01	41.8	76.8	67.5	57.7
138	Pioneer 3936	32398	5.5	9	2.15	55.6	60.8	5.27	42.9	78.6	64.5	54.9
152	GH H2279	32942	5.0	68	3.04	70.0	45.6	5.85	38.7	75.5	66.7	55.9
152	Pioneer 3936	32942	5.0	28	2.74	59.4	56.1	4.96	42.2	79.3	64.0	54.6
166	GH H2279	34576	4.5	75	2.49	74.0	36.8	7.05	36.6	72.5	69.1	57.4
166	Pioneer 3936	32126	4.9	72	2.71	67.6	43.0	6.25	41.1	77.1	67.0	57.2
176	GH H2279	25592	3.0	0	2.11	76.0	33.1	7.40	35.7	65.6	70.3	54.7
176	Pioneer 3936	31309	3.5	.	2.69	74.8	32.0	7.61	35.7	65.9	70.7	55.5
Mean		32575	4.7	35	2.67	65.1	49.0	5.95	40.9	74.9	66.6	55.5
Probability (%)												
Rep		49.5	99.3	7.8	18.1	0.9	5.4	25.2	48.2	26.6	18.6	3.2
DOP		0.1	0.0	0.3	1.1	0.0	0.0	0.3	0.0	0.0	0.0	0.8
Hybrid		22.1	2.3	0.0	56.7	0.0	7.9	42.3	1.7	0.3	0.7	9.3
DOP x Hybrid		5.0	26.1	12.8	24.3	7.6	16.0	23.9	3.1	19.0	61.6	60.5
LSD (0.10)												
DOP		NS	0.4	NS	0.30	4.5	8.3	0.83	2.3	2.6	1.7	1.3
Hybrid		NS	0.1	6	0.23	1.9	3.7	NS	0.9	1.1	1.1	1.1
DOP x Hybrid		NS	0.5	NS	0.69	6.5	1.3	NS	3.18	NS	NS	NS
CV (%)		7	6	29	17	6	15	11	4	3	3	3.8

Table E-22. Date of Planting and Hybrid Influence on Corn Silage Yield and Quality
Ashland, WI - 1998

Date of planting	Hybrid	Final population plants/A	Iowa State Reproductive stage @ harvest	Kernel milk %	Whole Plant								
					Dry Matter yield tons/A	Moisture %	Crude protein %	ADF %	NDF %	<i>In Vitro</i> digestibility %	Cell Wall digestibility %	Milk Per ton acre lbs/T lbs/A	
.	GH H2279	32571	4.6	41	5.31	64.1	8.20	26.6	54.5	76.1	56.2	1535	8501
.	Pioneer 3936	32579	4.8	28	5.57	55.3	7.89	25.8	54.8	74.8	54.0	1449	8237
113		33351	5.0	28	5.79	51.9	7.64	24.5	51.5	76.1	53.6	1665	9744
124		33078	5.0	33	6.70	54.3	8.00	26.0	50.9	77.2	55.1	1755	11721
138		32534	5.4	16	5.62	51.1	8.20	25.8	56.2	74.5	54.6	1373	8302
152		32942	5.0	48	6.00	59.0	7.63	25.8	56.0	75.0	55.5	1409	8461
166		33351	4.7	73	4.37	67.9	8.62	25.8	55.7	74.8	54.8	1407	6140
176		29403	3.3	0	3.80	73.8	8.18	29.3	57.6	75.1	56.9	1344	4959
113	GH H2279	32670	5.0	36	8.74	27.1	7.81	24.7	51.2	77.0	55.2	1733	9770
113	Pioneer 3936	34031	5.0	19	5.97	49.6	7.46	24.4	51.9	75.1	52.1	1597	9718
124	GH H2279	33487	5.0	41	6.77	59.5	8.23	25.3	50.1	77.6	55.4	1815	12344
124	Pioneer 3936	32670	5.0	25	6.63	49.1	7.77	26.8	51.7	76.7	54.8	1696	11098
138	GH H2279	32670	5.3	23	5.63	57.7	8.13	27.9	58.2	74.3	55.9	1270	7668
138	Pioneer 3936	32398	5.5	9	5.61	44.5	8.28	23.7	54.1	74.7	53.2	1475	8936
152	GH H2279	32942	5.0	68	5.64	66.1	7.70	26.2	55.5	76.5	57.8	1516	8801
152	Pioneer 3936	32942	5.0	28	6.35	51.9	7.57	25.5	56.5	73.6	53.2	1302	8120
166	GH H2279	34576	4.5	75	3.98	72.5	9.09	26.7	54.7	75.6	55.4	1501	6034
166	Pioneer 3936	32126	4.9	72	4.75	63.3	8.14	24.8	56.8	74.0	54.2	1314	6247
176	GH H2279	25592	3.0	0	3.10	74.3	8.21	29.1	57.4	75.5	57.6	1375	4278
176	Pioneer 3936	31309	3.5	.	4.15	73.3	8.15	29.5	57.7	74.6	56.2	1313	5300
Mean		32575	4.7	35	5.72	57.4	8.04	26.2	54.6	75.4	55.1	1492	8786
Probability (%)													
Rep		49.5	99.3	7.8	12.2	52.2	28.8	48.4	39.0	15.0	7.7	27.2	12.6
DOP		0.1	0.0	0.3	8.0	2.8	26.3	63.6	32.5	65.5	23.8	45.2	7.0
Hybrid		22.1	2.3	0.0	79.7	32.9	20.6	46.6	86.2	12.5	0.7	45.5	34.0
DOP x Hybrid		5.0	26.1	12.8	34.4	16.6	79.6	79.1	83.7	88.5	63.6	87.8	38.8
LSD (0.10)													
DOP		NS	0.4	NS	1.95	NS	NS	NS	NS	NS	NS	NS	3984
Hybrid		NS	0.1	6	0.87	7.4	NS	NS	NS	NS	1.3	NS	NS
DOP x Hybrid		NS	0.5	NS	2.82	NS	NS	NS	NS	NS	NS	NS	NS
CV (%)		7	6	29	30	26	10	16	9	4	4.6	24	32

Table E-22. Date of Planting and Hybrid Influence on Corn Silage and Corn Grain Yield
Ashland, WI - 1998

Location	Date of planting	Hybrid	Grain				
			Final population plants/A	Broken stalks %	Yield bu/A	Moisture %	Test weight lbs/bu
ASH	.	GH H2279	34576	5.2	124	26.3	48.4
ASH	.	Pioneer 3936	33655	3.6	120	22.8	49.8
ASH	113		34031	0.4	131	18.3	48.7
ASH	124		34167	1.7	147	19.2	52.9
ASH	138		34576	3.8	127	23.2	50.9
ASH	152		33603	4.1	114	27.7	47.3
ASH	166		34412	11.3	82	30.0	46.2
ASH	176		30492	25.0	57	43.5	46.4
ASH	113	GH H2279	33759	0.0	129	19.7	45.7
ASH	113	Pioneer 3936	34304	0.8	133	17.0	51.7
ASH	124	GH H2279	34576	1.6	143	21.0	51.6
ASH	124	Pioneer 3936	33759	1.8	150	17.4	54.1
ASH	138	GH H2279	35665	7.8	132	29.8	51.7
ASH	138	Pioneer 3936	33487	0.8	123	18.3	50.3
ASH	152	GH H2279	34485	9.4	98	32.9	46.5
ASH	152	Pioneer 3936	32942	0.0	126	22.6	48.1
ASH	166	GH H2279	33759	19.4	81	37.6	44.8
ASH	166	Pioneer 3936	34576	9.2	82	28.2	46.6
ASH	176	GH H2279	.	.	.	.	.
ASH	176	Pioneer 3936	30492	25.0	57	43.5	46.4
Mean			34053	4.3	121	24.3	49.2
Probability (%)							
Rep			17.1	42.5	47.6	71.0	28.6
DOP			37.5	7.2	3.0	0.0	9.6
Hybrid			18.5	15.2	29.6	0.0	37.9
DOP x Hybrid			13.5	30.1	84.3	2.7	82.2
LSD (0.10)							
DOP			NS	8.6	NS	2.5	4.7
Hybrid			NS	3.0	10	1.2	3.3
DOP x Hybrid			NS	8.6	NS	4.0	8.8
CV (%)							
			3	115	14	10	12

FIELD EXPERIMENT HISTORY

Title: Date of Planting and Hybrid Influence on Corn Silage Quality
Experiment: 03DOP **Trial ID** 1303 **Year:** 1998
Personnel: H. Darby, J.G. Lauer, P.J. Flannery, K.D. Kohn
Location: Hancock, WI **County:** Waushara
Supported By: Hatch

Site Information

Field: V13 East **Previous Crop:** Peas **Soil Type:** Plainfield
Soil Test: **Date:** N/A **pH** 6.1 **OM (%)** **P (ppm)** 130 **K (ppm)** 123

Plot Management

Tillage Operations: Plow

	<u>Analysis:</u>	<u>Rate lbs/A:</u>	<u>Date:</u>
Fertilizer:			
Preplant :	0-0-60	100	4 /3 /98
Starter :	5-10-30	100	5 /1 /98
Post plant :	N/A	N/A	N/A
Manure:		None	

Herbicide: Lasso 2 qts/a, Aatrex 4L 2.4 lb/a, Microtec 2 qts/a **Insecticide:**
Hybrid:

Irrigation: None

Planting Date: N/A **Planting Depth:** N/A **Row Width:** 30

Target Plant Density: plants per acre **Planting Method:** John Deere 7200

Harvest Date: S:9/3/98, S:9/20/98, S:9/29/98, G:10/22/98 **Harvest Method:** Hand

Notes: N/A

Experimental Design

Design: RCB split plot **Replications:** 4
Plot Size Seeded: 10ft x 25ft **Experiment Size:** 10ft x 25ft
Harvest Plot Size: 2.5ft x 16ft **Harvest Plant Density:** G:32716, S:32738 plants per acre

Factors/Treatments:

<u>Planting Date</u>	<u>Hybrid</u>
4/24/98, 5/1/98, 5/15/98, 5/29/98, 6/15/98, 6/26/98	Dairyland Stealth H1203 RM105, NK Brand N3030 RM95

Results: Tables E-23.

Table E-23. Date of Planting and Hybrid Influence on Corn Silage Yield and Quality
Hancock, WI - 1998

Date of planting	Hybrid	Final population plants/A	Iowa State Reproductive stage @ harvest	Kernel milk %	Stover							
					Dry Matter yield tons/A	Moisture %	Ear:Stover ratio %	Crude protein %	ADF %	NDF %	<i>In Vitro</i> digestibility %	Cell Wall digestibility %
.	DL H1203	33260	5.1	34	4.49	68.8	53.6	4.81	38.5	70.6	67.5	53.9
.	NK N3030	32216	5.0	38	4.17	69.2	56.0	5.21	37.9	70.1	67.7	54.0
114		29948	5.0	28	5.10	70.2	54.4	4.87	39.8	67.8	68.9	54.1
121		30356	5.0	35	4.81	70.9	55.9	4.54	41.1	70.5	68.0	54.5
135		28314	5.6	2	4.60	66.6	52.5	3.36	36.5	74.4	65.6	53.7
149		36209	5.0	12	4.12	64.1	58.8	4.60	38.4	73.7	65.0	52.5
166		39340	5.0	58	3.86	68.9	58.3	5.94	38.3	70.4	67.7	54.2
177		32262	4.9	98	3.48	73.3	48.8	6.78	35.1	65.3	70.4	54.7
114	DL H1203	29948	5.0	30	5.25	70.9	54.4	4.43	41.3	68.7	67.7	53.0
114	NK N3030	29948	5.0	25	4.95	69.5	54.4	5.30	38.4	66.9	70.0	55.3
121	DL H1203	29131	5.0	41	5.00	72.1	56.7	4.45	41.7	71.2	67.5	54.4
121	NK N3030	31581	5.0	29	4.62	69.7	55.1	4.63	40.5	69.7	68.4	54.7
135	DL H1203	28042	6.0	0	4.75	66.1	50.4	3.14	36.1	74.5	66.2	54.6
135	NK N3030	28586	5.3	4	4.45	67.1	54.7	3.58	36.9	74.2	65.0	52.8
149	DL H1203	38932	5.0	8	4.21	63.7	57.4	4.80	38.5	73.4	65.1	52.5
149	NK N3030	33487	5.0	16	4.02	64.4	60.3	4.39	38.3	74.1	64.8	52.5
166	DL H1203	39749	5.0	59	4.07	67.3	58.0	5.97	38.9	70.2	68.3	54.9
166	NK N3030	38932	5.0	56	3.64	70.5	58.6	5.90	37.8	70.6	67.1	53.5
177	DL H1203	33759	4.8	100	3.65	72.6	44.9	6.08	34.5	65.4	70.2	54.3
177	NK N3030	30764	5.0	98	3.31	74.1	52.6	7.49	35.8	65.2	70.7	55.0
Mean		32738	5.1	36	4.33	69.0	54.8	5.01	38.2	70.3	67.6	54.0
Probability (%)												
Rep		33.0	71.8	50.6	56.1	76.4	29.5	1.6	85.0	14.3	4.0	26.3
DOP		1.2	0.0	0.0	0.0	0.0	3.3	0.0	0.1	0.1	0.0	9.5
Hybrid		21.8	10.0	58.5	5.0	45.5	13.9	11.3	34.8	57.6	74.4	98.7
DOP x Hybrid		13.6	0.0	37.1	99.9	12.8	54.5	33.2	29.3	93.5	37.0	17.0
LSD (0.10)												
DOP		5034	0.2	4	0.49	2.1	5.2	0.62	5.3	2.9	1.4	1.3
Hybrid		NS	0.1	NS	0.27	NS	NS	NS	NS	NS	NS	NS
DOP x Hybrid		NS	0.3	NS	NS	NS	NS	NS	NS	NS	NS	NS
CV (%)		9	3	27	12	3	10	17	5	4	3	3

Table E-23. Date of Planting and Hybrid Influence on Corn Silage Yield and Quality
Hancock, WI - 1998

Date of planting	Hybrid	Final population plants/A	Iowa State Reproductive stage @ harvest	Kernel milk %	Whole Plant								
					Dry Matter		Crude protein %	In Vitro			Milk Per		
					yield tons/A	Moisture %		ADF %	NDF %	digestibility %	Cell Wall digestibility %	ton lbs/T	acre lbs/A
.	DL H1203	33260	5.1	34	9.8	58.7	6.53	23.69	49.40	78.94	57.7	1922	19241
.	NK N3030	32216	5.0	38	9.6	59.6	6.64	22.37	48.86	78.95	57.1	1946	18957
114		29948	5.0	28	11.2	58.0	7.18	25.02	43.53	82.03	58.9	2355	26474
121		30356	5.0	35	11.0	60.4	6.34	26.29	47.44	80.72	59.4	2109	23222
135		28314	5.6	2	9.8	58.0	5.61	23.26	53.43	74.60	52.5	1497	14897
149		36209	5.0	12	10.2	52.8	6.04	21.09	51.93	76.35	54.5	1663	17536
166		39340	5.0	58	9.3	58.3	6.88	20.69	48.92	80.12	59.6	2011	18937
177		32262	4.9	98	6.8	67.5	7.49	21.83	49.51	79.87	59.4	1970	13526
114	DL H1203	29948	5.0	30	11.5	57.0	7.04	24.95	43.15	81.85	57.9	2361	27213
114	NK N3030	29948	5.0	25	10.9	58.9	7.31	25.08	43.92	82.21	59.8	2349	25735
121	DL H1203	29131	5.0	41	11.5	60.2	6.45	26.61	47.54	81.19	60.5	2132	24724
121	NK N3030	31581	5.0	29	10.4	60.5	6.23	25.96	47.34	80.24	58.3	2086	21721
135	DL H1203	28042	6.0	0	9.7	58.5	5.41	24.37	55.79	73.65	52.9	1339	13393
135	NK N3030	28586	5.3	4	9.8	57.6	5.82	22.15	51.07	75.56	52.2	1655	16400
149	DL H1203	38932	5.0	8	9.9	52.0	5.95	21.22	52.02	75.98	54.0	1638	16503
149	NK N3030	33487	5.0	16	10.5	53.5	6.12	20.96	51.84	76.72	55.1	1688	18569
166	DL H1203	39749	5.0	59	9.7	56.4	6.91	21.56	47.96	81.47	61.7	2130	20508
166	NK N3030	38932	5.0	56	9.0	60.1	6.85	19.82	49.88	78.78	57.5	1891	17367
177	DL H1203	33759	4.8	100	6.7	68.2	7.44	23.43	49.93	79.51	59.1	1931	13105
177	NK N3030	30764	5.0	98	7.0	66.8	7.54	20.23	49.08	80.22	59.8	2009	13948
Mean		32738	5.1	36	9.7	59.1	6.59	23.03	49.13	78.95	57.4	1934	19099
Probability (%)													
Rep		33.0	71.8	50.6	93.3	38.3	50.6	46.9	47.8	45.0	13.3	49.1	71.6
DOP		1.2	0.0	0.0	0.1	0.0	0.1	15.0	5.3	0.7	0.1	2.2	1.7
Hybrid		21.8	10.0	58.5	41.0	30.6	40.4	11.2	59.8	98.4	55.1	77.0	78.0
DOP x Hybrid		13.6	0.0	37.1	56.0	46.4	76.7	81.7	53.8	52.7	34.6	55.7	37.1
LSD (0.10)													
DOP		5034	0.2	4	1.4	3.8	0.60	NS	5.1	3.1	2.6	399	6146
Hybrid		NS	0.1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
DOP x Hybrid		NS	0.3	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
CV (%)		9	3	27	11	5	7	12	7	3	5	15	18

Table E-23. Date of Planting and Hybrid Influence on Corn Silage and Corn Grain Yield
Hancock, WI - 1998

Location	Date of planting	Hybrid	Grain				
			Final population plants/A	Broken stalks %	Yield bu/A	Moisture %	Test weight lbs/bu
HAN	.	DL H1203	32942	2.5	204	26.4	48.9
HAN	.	NK N3030	32481	1.6	196	24.5	51.5
HAN	114		30336	0.5	226	18.7	53.6
HAN	121		31853	0.4	235	17.8	54.2
HAN	135		28042	2.8	208	20.4	52.6
HAN	149		33623	6.7	199	23.6	50.1
HAN	166		38660	0.7	214	30.1	48.3
HAN	177		33487	1.1	122	42.1	43.3
HAN	114	DL H1203	31309	0.0	227	17.2	53.7
HAN	114	NK N3030	29040	1.2	223	20.1	53.6
HAN	121	DL H1203	31037	0.0	232	19.6	51.8
HAN	121	NK N3030	32670	0.8	238	16.1	56.0
HAN	135	DL H1203	26681	4.0	195	21.9	50.7
HAN	135	NK N3030	29403	1.6	222	19.0	54.4
HAN	149	DL H1203	35665	7.6	205	26.6	48.2
HAN	149	NK N3030	31581	5.8	193	20.5	51.9
HAN	166	DL H1203	38660	1.4	239	29.7	48.0
HAN	166	NK N3030	38660	0.0	188	30.4	48.7
HAN	177	DL H1203	34304	2.2	126	43.2	42.0
HAN	177	NK N3030	32670	0.0	118	41.1	44.7
Mean			32716	2.1	200	25.4	50.3
Probability (%)							
Rep			26.6	71.5	61.4	99.8	4.2
DOP			5.1	12.0	0.0	0.0	0.0
Hybrid			30.8	60.8	27.4	7.9	1.5
DOP x Hybrid			12.4	98.7	11.7	17.7	69.6
LSD (0.10)							
DOP			5408	NS	28	3.9	2.3
Hybrid			NS	NS	NS	1.7	1.6
DOP x Hybrid			NS	NS	NS	NS	NS
CV (%)							
			8	301	13	13	6

FIELD EXPERIMENT HISTORY

Title: Date of Planting and Hybrid Influence on Corn Silage Quality
Experiment: 03DOP **Trial ID** 1300 **Year:** 1998
Personnel: H. Darby, J.G. Lauer, P.J. Flannery, K.D. Kohn
Location: Lancaster, WI **County:** Grant
Supported By: Hatch

Site Information

Field: 802 **Previous Crop:** Corn **Soil Type:** Rozetta
Soil Test: **Date:** 10/00/96 **pH** 7.1 **OM (%)** 3 **P (ppm)** 25 **K (ppm)** 115

Plot Management

Tillage Operations: Chisel Plow 2x Disc,

	<u>Analysis:</u>	<u>Rate lbs/A:</u>	<u>Date:</u>
Fertilizer:			
Preplant :	N/A	N/A	N/A
Starter :	8-32-17	145	N/A
Post plant :	N/A	N/A	N/A
Manure:		15 TA ,8-3-18	4/96

Herbicide: 2qt. Bladex 4L, 1qt. Dual II per/A except planting dates # 5,# 6
1qt. Atrex, 1qt. Dual II per/A on June 17th to dates #5,#6
Insecticide: 8.7 lbs/acre Lorsban 15G
Hybrid:

Irrigation: None

Planting Date: N/A **Planting Depth:** N/A **Row Width:** 30

Target Plant Density: 0 plants per acre **Planting Method:** White 4 row/30in no-till

Harvest Date: S:9/10/98,S:9/17/98, S:10/8/98 **Harvest Method:** Hand

Notes:

Experimental Design

Design: RCB split plot **Replications:** 4
Plot Size Seeded: 10ft. x 25ft. **Experiment Size:**
Harvest Plot Size: 2.5ft x 16ft **Harvest Plant Density:** S:30168 plants per acre

Factors/Treatments:

<u>Planting Date</u>	<u>Hybrid</u>
4/24/98, 5/1/98, 5/14/98, 5/28/98, 6/16/98, 6/25/98	Golden Harvest H2497 RM110, Renk RK617 RM100

Results: Tables E-24.

Table E-24. Date of Planting and Hybrid Influence on Corn Silage and Corn Grain Yield
Lancaster, WI - 1998

Date of planting	Hybrid	Final population plants/A	Iowa State Reproductive stage @ harvest	Kernel milk %	Dry Matter		Ear:Stover ratio %	Stover			<i>In Vitro</i> digestibility %	Cell Wall digestibility %
					yield tons/A	Moisture %		Crude protein %	ADF %	NDF %		
.	GH H2497	30447	5.0	54	4.08	73.7	49.7	6.94	35.9	62.3	72.4	55.7
.	Renk RK617	29876	5.0	31	3.26	68.8	54.7	6.99	39.6	67.3	69.5	54.7
114		30356	5.0	33	3.07	70.0	61.1	6.48	39.5	65.9	71.1	56.3
121		33137	5.0	38	3.93	71.5	54.1	6.35	39.3	65.5	71.5	56.8
134		29131	5.0	33	3.72	73.2	57.5	6.81	40.7	67.6	70.2	56.0
148		31037	5.0	25	3.85	69.2	46.0	7.19	36.9	65.2	70.0	54.0
167		29811	5.0	46	3.63	70.1	52.7	7.20	36.2	64.4	69.9	53.3
176		27906	5.0	80	3.90	73.7	41.4	7.68	33.9	59.9	73.1	55.1
114	GH H2497	30492	5.0	54	3.54	74.4	54.8	6.70	36.9	63.1	73.0	57.3
114	Renk RK617	30220	5.0	13	2.60	65.6	67.4	6.27	42.1	68.8	69.3	55.3
121	GH H2497	33759	5.0	50	4.75	74.7	45.4	6.53	35.1	60.2	75.0	58.6
121	Renk RK617	32307	5.0	22	2.84	67.2	65.9	6.12	44.9	72.5	66.9	54.4
134	GH H2497	30492	5.0	46	4.15	77.0	56.2	7.15	39.9	66.2	71.2	56.5
134	Renk RK617	27770	5.0	20	3.28	69.4	58.9	6.47	41.5	69.0	69.2	55.5
148	GH H2497	29948	5.0	33	4.13	70.3	51.7	7.06	36.9	65.5	70.0	54.2
148	Renk RK617	32126	5.0	18	3.57	68.0	40.3	7.32	36.9	64.9	70.0	53.8
167	GH H2497	29675	5.0	59	3.64	71.2	49.7	6.83	34.1	60.8	71.0	52.4
167	Renk RK617	29948	5.0	34	3.61	69.1	55.7	7.57	38.3	68.1	68.8	54.2
176	GH H2497	28314	5.0	83	4.25	74.4	40.1	7.39	32.5	57.9	74.2	55.4
176	Renk RK617	27497	5.0	78	3.56	73.0	42.7	7.98	35.2	61.9	72.0	54.7
Mean		30168	5.0	43	3.68	71.3	52.1	6.96	37.7	64.7	71.0	55.2
Probability (%)												
Rep		30.7	.	21.7	8.8	40.6	66.4	48.4	88.6	72.8	56.6	40.0
DOP		19.2	.	0.0	16.0	10.1	15.0	18.3	0.9	19.8	41.4	7.1
Hybrid		49.8	.	0.0	0.0	0.0	1.1	96.4	0.1	0.2	0.1	2.8
DOP x Hybrid		30.2	.	41.6	2.5	21.9	0.7	44.0	7.9	20.4	11.3	4.0
LSD (0.10)												
DOP		NS	-	14	NS	3.1	NS	NS	3.1	NS	NS	2.0
Hybrid		NS	-	9	0.26	1.8	3.7	NS	1.7	2.6	1.4	0.8
DOP x Hybrid		NS	-	NS	0.84	5.7	2.2	NS	5.3	NS	NS	2.7
CV (%)		7	0	40	14	5	14	12	9	8	4	3

Table E-24. Date of Planting and Hybrid Influence on Corn Silage and Corn Grain Yield
Lancaster, WI - 1998

Date of planting	Hybrid	Final population plants/A	Iowa State Reproductive stage @ harvest	Kernel milk %	Whole Plant								
					Dry Matter		Crude protein %	Cell Wall			Milk Per		
					yield tons/A	Moisture %		ADF %	NDF %	<i>In Vitro</i> digestibility %	Cell Wall digestibility %	ton lbs/T	acre lbs/A
.	GH H2497	30447	5.0	54	8.40	64.8	7.80	25.3	47.4	80.4	59.0	2093	17702
.	Renk RK617	29876	5.0	31	7.63	57.1	8.14	24.0	46.9	80.0	57.7	2092	16371
114		30356	5.0	33	8.20	53.4	7.74	22.0	42.7	83.9	62.5	2502	20512
121		33137	5.0	38	8.60	60.2	7.77	27.1	48.9	79.9	59.1	1995	16622
134		29131	5.0	33	8.81	61.8	7.84	24.1	45.6	81.3	59.1	2226	19747
148		31037	5.0	25	7.75	62.1	8.11	26.3	50.2	77.0	54.2	1772	14460
167		29811	5.0	46	8.04	60.0	7.98	22.9	47.1	79.9	57.7	2078	17282
176		27906	5.0	80	6.80	68.5	8.34	25.9	48.7	79.2	57.6	1970	13625
114	GH H2497	30492	5.0	54	7.90	64.9	7.51	23.0	43.2	84.6	64.7	2518	19979
114	Renk RK617	30220	5.0	13	8.50	41.8	7.98	21.0	42.1	83.2	60.4	2487	21044
121	GH H2497	33759	5.0	50	8.81	68.0	7.37	31.3	52.8	77.8	58.2	1708	14311
121	Renk RK617	32307	5.0	22	8.33	49.7	8.31	21.4	43.8	82.6	60.3	2378	19703
134	GH H2497	30492	5.0	46	9.65	65.5	7.69	23.3	44.8	83.1	62.3	2364	23046
134	Renk RK617	27770	5.0	20	7.96	58.0	7.99	25.0	46.4	79.5	56.0	2088	16448
148	GH H2497	29948	5.0	33	9.37	58.3	8.35	23.1	45.5	79.6	55.2	2128	20238
148	Renk RK617	32126	5.0	18	6.12	66.0	7.87	29.6	54.9	74.3	53.3	1417	8682
167	GH H2497	29675	5.0	59	7.49	62.3	7.84	25.1	48.7	78.7	56.7	1941	14952
167	Renk RK617	29948	5.0	34	8.59	57.8	8.12	20.6	45.5	81.1	58.8	2216	19613
176	GH H2497	28314	5.0	83	7.16	69.7	8.08	26.2	49.5	78.7	56.9	1902	13683
176	Renk RK617	27497	5.0	78	6.45	67.2	8.61	25.6	47.9	79.8	58.2	2038	13566
Mean		30168	5.0	43	8.02	61.0	7.97	24.7	47.2	80.2	58.4	2093	17050
Probability (%)													
Rep		30.7	.	21.7	39.8	40.4	59.1	80.1	82.5	95.6	31.8	95.3	72.2
DOP		19.2	.	0.0	50.4	0.4	53.2	50.9	29.9	9.2	4.1	17.0	30.6
Hybrid		49.8	.	0.0	11.5	0.2	1.4	17.7	44.0	96.5	20.5	66.6	63.0
DOP x Hybrid		30.2	.	41.6	8.3	1.2	8.4	2.3	2.8	1.8	2.5	2.2	2.0
LSD (0.10)													
DOP		NS	-	14	NS	5.2	NS	NS	NS	3.8	3.9	NS	NS
Hybrid		NS	-	9	NS	3.9	0.25	NS	NS	NS	NS	NS	NS
DOP x Hybrid		NS	-	NS	2.55	11.7	0.83	7.2	8.5	5.2	5.0	656	8787
CV (%)		7	0	40	18	13	6	18	11	4	5	18	30

FIELD EXPERIMENT HISTORY

Title: Date of Planting and Hybrid Influence on Corn Silage Quality
Experiment: 03DOP **Trial ID** 1301 **Year:** 1998
Personnel: H. Darby, J.G. Lauer, P.J. Flannery, K.D. Kohn
Location: Marshfield, WI **County:** Wood
Supported By: Hatch

Site Information

Field: 14 **Previous Crop:** Alfalfa **Soil Type:** Withee
Soil Test: **Date:** N/A **pH** 6.8 **OM (%)** 3 **P (ppm)** 55 **K (ppm)** 153

Plot Management

Tillage Operations: Moldboard Field cultivator

	<u>Analysis:</u>	<u>Rate lbs/A:</u>	<u>Date:</u>
Fertilizer:			
Preplant :	N/A	N/A	N/A
Starter :	9-23-30	250	N/A
Post plant :	N/A	N/A	N/A
Manure:		33 T/A	Fall 97

Herbicide: Lasso 3qts/a, Buctril 2pt/a **Insecticide:** None
Irrigation: None **Hybrid:**

Planting Date: N/A **Planting Depth:** N/A **Row Width:** 30
Target Plant Density: plants per acre **Planting Method:** John Deere 7000
Harvest Date: S:9/15/98,S:10/1/98, G:10/18/98, **Harvest Method:** Hand
Notes: N/A

Experimental Design

Design: RCB split plot **Replications:** 4
Plot Size Seeded: 10ft x 30ft **Experiment Size:** 10ft x 30ft
Harvest Plot Size: 2.5ft x 16ft **Harvest Plant Density:** G:27293, S:27293 plants per acre

Factors/Treatments:

<u>Planting Date</u>	<u>Hybrid</u>
4/20/98, 5/1/98, 5/14/98, 6/2/98, 2/17/98, 7/1/98	Dairyland Stealth H1203 RM105, NK Brand N3030 RM95

Results: Tables E-25.

Table E-25. Date of Planting and Hybrid Influence on Corn Silage Yield and Quality
Marshfield, WI - 1998

Date of planting	Hybrid	Final population plants/A	Iowa State Reproductive stage @ harvest	Kernel milk %	Dry Matter		Ear:Stover ratio %	Crude protein %	Stover		<i>In Vitro</i> digestibility %	Cell Wall digestibility %
					yield tons/A	Moisture %			ADF %	NDF %		
.	DL H1203	27225	4.9	35	3.43	67.9	44.4	5.60	42.15	68.56	68.65	54.33
.	NK N3030	27361	4.9	33	3.17	67.6	51.9	5.07	43.45	71.77	66.51	53.31
110		26817	5.3	9	3.61	65.1	46.6	4.82	41.45	66.10	67.79	51.34
121		27225	5.0	23	3.66	64.1	54.3	4.37	45.14	71.56	65.96	52.42
134		26408	5.0	52	3.50	69.1	54.1	5.00	43.89	68.82	67.69	53.15
153		28042	5.0	18	3.19	62.9	52.0	5.19	44.56	76.25	64.62	53.57
168		25183	5.0	68	2.58	69.4	47.4	5.69	44.07	74.11	67.41	56.02
182		30084	4.3	.	3.25	75.8	34.6	6.94	37.67	64.14	72.04	56.41
110	DL H1203	26408	5.3	9	3.95	63.7	35.5	5.38	38.36	61.79	70.19	51.85
110	NK N3030	27225	5.3	9	3.27	66.5	57.6	4.27	44.54	70.40	65.39	50.84
121	DL H1203	27497	5.0	21	3.91	61.9	50.2	4.21	46.67	73.87	65.19	52.89
121	NK N3030	26953	5.0	24	3.41	66.4	58.3	4.53	43.62	69.26	66.72	51.95
134	DL H1203	26953	5.0	51	3.70	69.4	52.2	5.50	43.19	66.44	69.79	54.62
134	NK N3030	25864	5.0	53	3.30	68.9	56.0	4.51	44.59	71.21	65.59	51.68
153	DL H1203	26953	5.0	23	3.16	65.8	52.9	5.29	43.23	74.34	64.77	52.59
153	NK N3030	29131	5.0	14	3.22	60.1	51.1	5.08	45.89	78.16	64.47	54.55
168	DL H1203	26408	5.0	69	2.64	70.8	45.8	5.99	43.38	71.86	68.73	56.49
168	NK N3030	23958	5.0	66	2.52	68.0	48.9	5.40	44.75	76.36	66.08	55.55
182	DL H1203	29131	4.2	.	3.20	75.9	29.6	7.26	38.04	63.03	73.24	57.52
182	NK N3030	31037	4.4	.	3.29	75.7	39.7	6.62	37.31	65.25	70.83	55.30
Mean		27293	4.9	34	3.30	67.8	48.2	5.39	42.78	69.85	67.75	53.8
Probability (%)												
Rep		70.9	11.3	38.9	64.6	39.7	28.8	27.2	12.9	2.8	13.8	60.9
DOP		28.2	0.0	0.0	1.1	0.0	0.9	0.0	0.2	0.0	0.1	0.2
Hybrid		88.3	54.9	60.6	4.3	75.5	0.7	0.7	7.3	0.0	0.0	9.1
DOP x Hybrid		66.3	86.0	74.4	36.6	8.1	16.5	24.0	2.3	0.1	0.5	25.5
LSD (0.10)												
DOP		NS	0.2	10	0.47	3.9	8.5	0.74	2.8	3.2	2.3	1.9
Hybrid		NS	NS	NS	0.21	NS	4.4	0.31	1.2	1.1	0.8	NS
DOP x Hybrid		NS	NS	NS	NS	5.8	NS	NS	4.0	4.1	2.9	NS
CV (%)		12	5	27	13	5	18	11	6	3	2	4

Table E-25. Date of Planting and Hybrid Influence on Corn Silage Yield and Quality
Marshfield, WI - 1998

Date of planting	Hybrid	Final population plants/A	Iowa State Reproductive stage @ harvest	Kernel milk %	Whole Plant								Milk Per	
					Dry Matter		Crude protein %	ADF %	NDF %	In Vitro digestibility %	Cell Wall digestibility %	ton	acre	
					yield tons/A	Moisture %						lbs/T	lbs/A	
.	DL H1203	27225	4.9	35	6.42	62.4	7.23	30.6	53.2	76.3	55.50	1605	10644	
.	NK N3030	27361	4.9	33	6.74	59.5	6.94	28.4	52.3	77.2	56.49	1698	11629	
110		26817	5.3	9	7.13	58.1	6.61	29.7	51.7	75.6	52.92	1629	12019	
121		27225	5.0	23	8.09	54.0	6.63	27.1	49.5	77.4	54.37	1831	14879	
134		26408	5.0	52	7.66	58.5	6.90	28.0	50.3	77.9	56.11	1822	13990	
153		28042	5.0	18	6.65	56.0	6.83	29.2	54.6	76.4	56.76	1548	10451	
168		25183	5.0	68	4.94	65.0	7.47	30.9	55.6	76.4	57.60	1508	7557	
182		30084	4.3	.	5.00	74.1	8.07	32.2	54.8	77.0	58.20	1572	7924	
110	DL H1203	26408	5.3	9	6.49	62.6	6.30	32.1	52.8	74.2	51.51	1503	10268	
110	NK N3030	27225	5.3	9	7.78	53.7	6.93	27.4	50.5	76.9	54.32	1756	13770	
121	DL H1203	27497	5.0	21	8.00	55.5	6.74	27.9	50.2	77.0	54.12	1779	14421	
121	NK N3030	26953	5.0	24	8.18	52.4	6.51	26.2	48.8	77.8	54.63	1883	15337	
134	DL H1203	26953	5.0	51	7.80	58.0	7.18	26.8	49.4	78.4	56.26	1890	14796	
134	NK N3030	25864	5.0	53	7.52	59.0	6.62	29.2	51.2	77.4	55.96	1753	13184	
153	DL H1203	26953	5.0	23	6.69	56.3	6.94	30.7	55.5	75.6	56.21	1465	9902	
153	NK N3030	29131	5.0	14	6.62	55.8	6.73	27.8	53.7	77.2	57.32	1631	11000	
168	DL H1203	26408	5.0	69	4.96	66.2	7.60	32.8	56.0	75.7	56.66	1450	7324	
168	NK N3030	23958	5.0	66	4.93	63.8	7.34	29.0	55.1	77.1	58.53	1566	7790	
182	DL H1203	29131	4.2	.	4.57	76.0	8.61	33.5	55.3	76.9	58.24	1545	7152	
182	NK N3030	31037	4.4	.	5.43	72.2	7.52	30.9	54.3	77.1	58.16	1599	8695	
Mean		27293	4.9	34	6.58	61.0	7.13	29.4	52.5	76.9	56.0	1668	11110	
Probability (%)														
Rep		70.9	11.3	38.9	8.6	0.2	54.2	55.9	12.0	11.1	34.8	10.0	6.4	
DOP		28.2	0.0	0.0	0.0	0.0	1.8	3.5	2.8	54.4	1.6	19.1	0.0	
Hybrid		88.3	54.9	60.6	10.7	1.9	24.5	6.2	53.1	34.8	32.9	42.3	30.3	
DOP x Hybrid		66.3	86.0	74.4	18.3	24.7	50.6	55.8	97.2	91.2	93.6	94.7	75.3	
LSD (0.10)														
DOP		NS	0.2	10	0.74	2.3	0.72	2.6	3.4	NS	2.5	NS	2454	
Hybrid		NS	NS	NS	NS	2.0	NS	1.9	NS	NS	NS	NS	NS	
DOP x Hybrid		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
CV (%)		12	5	27	10	7	12	13	9	4	6	24	29	

Table E-25. Date of Planting and Hybrid Influence on Corn Silage and Corn Grain Yield
Marshfield, WI - 1998

Location	Date of planting	Hybrid	Grain				
			Final population plants/A	Broken stalks %	Yield bu/A	Moisture %	Test weight lbs/bu
MAR	.	DL H1203	25955	2.2	127	21.6	48.6
MAR	.	NK N3030	25889	2.8	132	25.1	51.8
MAR	110		24911	5.6	158	19.4	55.1
MAR	121		26136	3.2	140	20.3	54.2
MAR	134		24775	0.6	139	22.7	51.3
MAR	153		26914	0.6	143	28.9	47.9
MAR	168		25047	1.9	116	34.8	49.0
MAR	182		27770	2.6	75	13.9	42.2
MAR	110	DL H1203	24503	4.4	151	20.4	54.5
MAR	110	NK N3030	25319	6.8	165	18.4	55.7
MAR	121	DL H1203	25864	2.0	148	21.3	52.8
MAR	121	NK N3030	26408	4.3	131	19.3	55.6
MAR	134	DL H1203	24775	1.2	127	24.2	49.7
MAR	134	NK N3030	24775	0.0	151	21.2	52.8
MAR	153	DL H1203	27497	0.0	147	30.4	46.3
MAR	153	NK N3030	26136	1.4	138	27.4	49.4
MAR	168	DL H1203	25864	2.4	121	33.1	49.1
MAR	168	NK N3030	23958	1.2	109	37.1	48.9
MAR	182	DL H1203	27225	3.3	69	0.4	39.3
MAR	182	NK N3030	28314	2.0	83	31.9	46.1
Mean			25923	2.5	130	23.3	50.1
Probability (%)							
		Rep	50.4	52.2	2.2	32.9	59.8
		DOP	31.0	54.7	0.0	0.1	0.0
		Hybrid	95.3	80.8	87.7	4.9	0.7
		DOP x Hybrid	93.8	80.0	38.3	0.3	27.1
LSD (0.10)							
		DOP	NS	NS	18	6.2	2.3
		Hybrid	NS	NS	NS	3.7	1.3
		DOP x Hybrid	NS	NS	NS	11.4	NS
CV (%)			10	161	16	31	5

FIELD EXPERIMENT HISTORY

Title: Date of Planting and Hybrid Influence on Corn Silage Quality
Experiment: 03DOP **Trial ID** 1302 **Year:** 1998
Personnel: H. Darby, J.G. Lauer, P.J. Flannery, K.D. Kohn
Location: Spooner, WI **County:** Washburn
Supported By: Hatch

Site Information

Field: 14 **Previous Crop:** Alfalfa/Grass **Soil Type:** Cress
Soil Test: **Date:** 00/00/96 **pH** 5.9 **OM (%)** 2 **P (ppm)** 35 **K (ppm)** 123

Plot Management

Tillage Operations: Moldboard Plow Disk

	<u>Analysis:</u>	<u>Rate lbs/A:</u>	<u>Date:</u>
Fertilizer:			
Preplant :	N/A	N/A	N/A
Starter :	5-10-30	200	N/A
Post plant :	N/A	N/A	N/A
Manure:		None	

Herbicide: Bladex 1.1 lb/a, Frontier 1 pt/a, Atrazine 0.75 pt/a **Insecticide:**
Hybrid:

Irrigation: 2.6" in five applications

Planting Date: N/A **Planting Depth:** N/A **Row Width:** 30
Target Plant Density: plants per acre **Planting Method:** Almaco Plot Planter
Harvest Date: S:9/7/98,S:9/19/98 **Harvest Method:** Hand
Notes: N/A

Experimental Design

Design: RCB split plot **Replications:** 4
Plot Size Seeded: 10ft x 25ft **Experiment Size:** 10ft x 25ft
Harvest Plot Size: 2.5ft x 16ft **Harvest Plant Density:** S:32920 plants per acre

Factors/Treatments:

<u>Planting Date</u>	<u>Hybrid</u>
4/28/98, 5/4/98, 5/15/98, 5/29/98, 6/12/98, 6/24/98	Golden Harvest H2279 RM90, Pioneer 3936 RM80

Results: Tables E-26.

Table E-26. Date of Planting and Hybrid Influence on Corn Silage Yield and Quality
Spooner, WI - 1998

Date of planting	Hybrid	Final population plants/A	Iowa State Reproductive stage @ harvest	Kernel milk %	Dry Matter		Ear:Stover ratio %	Stover			In Vitro digestibility %	Cell Wall digestibility %
					yield tons/A	Moisture %		Crude protein %	ADF %	NDF %		
.	GH H2279	33033	4.8	43	3.28	69.8	51.9	7.52	47.0	71.8	71.0	59.6
.	Pioneer 3936	32806	4.8	34	2.89	69.2	54.8	7.31	45.9	71.0	70.5	58.4
118		31309	5.0	28	3.02	71.3	61.1	6.72	45.1	67.4	73.0	59.8
124		30084	5.0	43	3.40	72.0	58.6	6.98	45.5	66.3	73.5	60.1
135		38932	5.5	2	2.70	63.8	64.5	6.83	50.5	77.1	68.1	58.4
149		33351	5.0	35	3.01	66.4	56.6	6.42	49.4	77.2	67.1	57.2
163		32942	5.0	84	3.27	68.2	4.4	8.22	44.4	70.7	71.2	59.3
175		30900	3.0	.	3.11	75.4	35.0	9.34	43.8	69.7	71.6	59.2
118	GH H2279	33487	5.0	39	3.61	71.1	54.7	6.84	44.9	67.5	73.7	61.1
118	Pioneer 3936	29131	5.0	18	2.42	71.4	67.5	6.61	45.4	67.3	72.2	58.6
124	GH H2279	28859	5.0	40	3.64	72.0	55.7	7.22	44.7	64.6	74.7	60.8
124	Pioneer 3936	31309	5.0	45	3.16	72.0	61.4	6.74	46.3	68.0	72.3	59.3
135	GH H2279	37298	5.5	2	2.80	62.8	62.7	7.02	53.7	80.8	67.6	59.9
135	Pioneer 3936	40565	5.5	3	2.61	64.7	66.3	6.63	47.3	73.4	68.5	56.9
149	GH H2279	34848	5.0	39	3.20	68.1	55.7	6.93	48.4	74.8	67.9	56.8
149	Pioneer 3936	31853	5.0	31	2.82	64.7	57.5	5.92	50.4	79.6	66.3	57.6
163	GH H2279	33487	5.0	94	3.37	69.7	44.0	8.49	46.1	73.0	71.0	60.2
163	Pioneer 3936	32398	5.0	74	3.17	66.8	44.7	7.96	42.8	68.4	71.4	58.4
175	GH H2279	30220	3.0	.	3.05	75.0	38.4	8.65	44.3	70.2	71.1	58.9
175	Pioneer 3936	31581	3.0	.	3.18	75.8	31.6	10.03	43.3	69.1	72.1	59.6
Mean		32920	4.8	38	3.08	69.5	53.4	7.42	46.3	71.1	70.8	59.0
Probability (%)												
Rep		90.3	42.0	59.8	11.4	28.7	29.6	36.8	29.8	50.7	18.0	1.3
DOP		0.3	0.0	0.0	19.9	0.0	0.0	0.0	11.2	2.8	0.2	9.7
Hybrid		85.2	0.0	0.1	0.4	45.3	11.1	36.9	48.1	64.0	53.8	7.2
DOP x Hybrid		39.2	0.0	0.3	6.7	23.3	10.3	10.6	58.9	39.4	77.6	41.1
LSD (0.10)												
DOP		3170	0.3	11	NS	3.0	7.5	0.80	NS	6.3	2.6	1.7
Hybrid		NS	0.0	4	0.20	NS	NS	NS	NS	NS	NS	1.1
DOP x Hybrid		NS	0.2	13	0.68	NS	NS	NS	NS	NS	NS	NS
CV (%)		13	0	17	13	4	12	11	11	9	4	4

Table E-26. Date of Planting and Hybrid Influence on Corn Silage Yield and Quality
 Spooner, WI - 1998

Date of planting	Hybrid	Final population plants/A	Iowa State Reproductive stage @ harvest	Kernel milk %	Whole Plant								
					Dry Matter yield tons/A	Moisture %	Crude protein %	ADF %	NDF %	In Vitro digestibility %	Cell Wall digestibility %	Milk Per	
												ton lbs/T	acre lbs/A
.	GH H2279	33033	4.8	43	7.00	61.5	8.75	31.2	53.5	78.4	59.8	1714	12308
.	Pioneer 3936	32806	4.8	34	6.75	60.1	9.10	32.5	53.1	78.6	60.3	1742	12406
118		31309	5.0	28	7.71	59.3	8.42	28.9	45.8	83.7	64.7	2352	18059
124		30084	5.0	43	8.19	60.7	8.29	29.5	46.6	83.2	64.2	2289	18790
135		38932	5.5	2	7.62	48.5	8.59	30.6	53.4	77.3	57.7	1653	12648
149		33351	5.0	35	6.94	57.4	8.65	30.9	53.7	77.2	57.6	1630	11248
163		32942	5.0	84	5.98	65.2	9.07	35.3	60.0	74.6	57.7	1209	7468
175		30900	3.0	.	4.81	73.6	10.54	35.8	60.1	75.1	58.4	1233	5928
118	GH H2279	33487	5.0	39	8.00	62.7	7.66	31.1	50.2	81.2	62.5	2016	16162
118	Pioneer 3936	29131	5.0	18	7.43	56.0	9.17	26.7	41.4	86.2	66.8	2689	19957
124	GH H2279	28859	5.0	40	8.21	62.4	7.73	30.8	48.5	82.8	64.7	2183	17877
124	Pioneer 3936	31309	5.0	45	8.18	59.0	8.86	28.1	44.7	83.6	63.6	2396	19704
135	GH H2279	37298	5.5	2	7.51	47.9	8.79	27.1	50.5	78.4	57.4	1843	13840
135	Pioneer 3936	40565	5.5	3	7.73	49.1	8.40	34.1	56.3	76.2	57.9	1464	11457
149	GH H2279	34848	5.0	39	7.23	57.9	8.43	30.6	54.4	76.9	57.6	1587	11364
149	Pioneer 3936	31853	5.0	31	6.65	56.9	8.86	31.1	53.1	77.4	57.6	1673	11133
163	GH H2279	33487	5.0	94	6.06	65.7	9.42	34.2	59.7	75.2	58.4	1261	7644
163	Pioneer 3936	32398	5.0	74	5.90	64.8	8.73	36.4	60.4	74.0	57.0	1158	7292
175	GH H2279	30220	3.0	.	4.98	72.5	10.48	33.1	57.6	75.9	58.1	1392	6962
175	Pioneer 3936	31581	3.0	.	4.64	74.8	10.61	38.4	62.5	74.2	58.7	1074	4894
Mean		32920	4.8	38	6.88	60.8	8.91	31.8	53.3	78.5	60.0	1728	12377
Probability (%)													
Rep		90.3	42.0	59.8	13.8	81.4	80.9	49.0	77.0	61.0	33.4	72.0	88.3
DOP		0.3	0.0	0.0	0.0	0.0	0.0	10.3	0.3	0.1	0.1	0.1	0.0
Hybrid		85.2	0.0	0.1	30.1	23.5	16.4	42.3	81.9	84.3	55.0	82.3	92.6
DOP x Hybrid		39.2	0.0	0.3	89.8	25.7	12.0	33.3	22.9	22.9	37.8	21.5	52.9
LSD (0.10)													
DOP		3170	0.3	11	0.71	4.1	0.63	NS	6.2	3.4	3.1	453	3722
Hybrid		NS	0.0	4	NS	NS	NS	NS	NS	NS	NS	NS	NS
DOP x Hybrid		NS	0.2	13	NS	NS	NS	NS	NS	NS	NS	NS	NS
CV (%)													
		13	0	17	12	6	9	18	12	4	5	25	29

Table E-26. Date of Planting and Hybrid Influence on Corn Silage and Corn Grain Yield
 Spooner, WI - 1998

Location	Date of planting	Hybrid	Grain				
			Final population plants/A	Broken stalks %	Yield bu/A	Moisture %	Test weight lbs/bu
SPO	.	GH H2279	.	.	115	.	.
SPO	.	Pioneer 3936	.	.	122	.	.
SPO	118		.	.	153	.	.
SPO	124		.	.	172	.	.
SPO	135		.	.	112	.	.
SPO	149		.	.	100	.	.
SPO	163		.	.	96	.	.
SPO	175		.	.	79	.	.
SPO	118	GH H2279	.	.	156	.	.
SPO	118	Pioneer 3936	.	.	151	.	.
SPO	124	GH H2279	.	.	165	.	.
SPO	124	Pioneer 3936	.	.	180	.	.
SPO	135	GH H2279	.	.	114	.	.
SPO	135	Pioneer 3936	.	.	110	.	.
SPO	149	GH H2279	.	.	93	.	.
SPO	149	Pioneer 3936	.	.	106	.	.
SPO	163	GH H2279	.	.	91	.	.
SPO	163	Pioneer 3936	.	.	102	.	.
SPO	175	GH H2279	.	.	74	.	.
SPO	175	Pioneer 3936	.	.	85	.	.
Mean			.	.	119	.	.
Probability (%)							
Rep					4.8		
DOP					0.0		
Hybrid					23.4		
DOP x Hybrid					82.2		
LSD (0.10)							
DOP					18		
Hybrid					NS		
DOP x Hybrid					NS		
CV (%)					16		

FIELD EXPERIMENT HISTORY

Title: Harvest Date and Hybrid Influence On Silage Quality
Experiment: 03DOP **Trial ID** 1313 **Year:** 1998
Personnel: H. Darby, J.G. Lauer, P.J. Flannery, K.D. Kohn
Location: Arlington, WI **County:** Columbia
Supported By: Hatch

Site Information

Field: 407 **Previous Crop:** Alfalfa **Soil Type:** Plano
Soil Test: **Date:** 10/1 /98 **pH** 6.2 **OM (%)** 3 **P (ppm)** 50 **K (ppm)** 190

Plot Management

Tillage Operations: Fall Chisel Plow Field Cultivator 1 Cultivation

	<u>Analysis:</u>	<u>Rate lbs/A:</u>	<u>Date:</u>
Fertilizer:			
Preplant :	46-0-0	325	4 /22/98
Starter :	6-24-24	150	4 /24/98
Post plant :	N/A	N/A	N/A
Manure:		None	

Herbicide: Lasso @ 2 qts/A; Bladex 90DF @ 2.2 lb/A **Insecticide:** Lorsban @7 lbs/A
Hybrid:

Irrigation: None

Planting Date: 05/12/98 **Planting Depth:** N/A **Row Width:** 30

Target Plant Density: plants per acre **Planting Method:** Kinze Plot Planter

Harvest Date: Varies **Harvest Method:** Hand

Notes: N/A

Experimental Design

Design: RCB split plot **Replications:** 4
Plot Size Seeded: 40ft x 25ft **Experiment Size:** 40ft x 25ft
Harvest Plot Size: 2.5ft x 16ft **Harvest Plant Density:** S-32499 plants per acre

Factors/Treatments:

<u>Hybrid</u>	<u>Harvest Date</u>
Golden Harvest H2497 RM110,	7/15/98, 7/24/98, 8/3/98, 8/12/98, 8/22/98, 9/1/98, 9/11/98,9/21/98
Dekalb DK591 RM100	
Golden Harvest H2387 RM100	
Dairyland Stealth1400 RM100	

Results: Tables E-27.

Table E-27. Harvest Date and Hybrid Influence on Corn Silage Yield
Arlington, WI - 1998.

Hybrid	Harvest date	Final population plants/A	Iowa State	Iowa State	Kernel milk %	Whole Plant		Stover		Ear:Stover ratio %
			Reproductive stage @ harvest	Vegetative stage @ harvest		Dry Matter yield tons/A	Moisture %	Dry Matter yield tons/A	Moisture %	
	194	34576	.	14.0	.	3.2	88.0	.	.	.
	204	33010	1.00	18.0	.	4.4	84.5	.	.	.
	214	31291	1.31	.	.	5.5	81.7	.	82.0	.
	223	33895	3.16	.	.	6.6	80.0	5.14	80.4	22.2
	233	31377	3.69	.	.	8.2	75.8	5.12	79.4	36.9
	243	31853	4.91	.	81	9.7	69.7	4.83	78.1	49.0
	253	32330	5.00	.	54	10.5	61.6	4.97	71.8	52.6
	263	31581	5.13	.	18	10.7	57.9	4.98	67.0	52.7
DK591	.	33078	3.78	16.0	43	7.5	76.1	5.40	76.9	39.5
DL1400	.	31717	3.43	14.0	51	7.2	73.9	5.12	72.7	40.6
GH H2387	.	32976	3.7	14.0	35	7.1	74.1	4.34	76.4	47.9
GH H2497	.	32213	3.4	14.0	63	7.5	75.5	5.18	76.7	42.7
DK591	194	33487	.	14.0	.	3.0	88.3	.	.	.
DK591	204	34576	.	18.0	.	4.5	84.8	.	.	.
DK591	214	33759	1.3	.	.	5.8	82.7	.	82.1	.
DK591	223	34576	3.0	.	.	6.9	80.9	5.80	79.8	15.4
DK591	233	29675	3.6	.	.	8.2	77.2	5.73	78.9	28.8
DK591	243	37026	4.8	.	100	11.0	70.9	5.69	79.1	48.3
DK591	253	30764	5.0	.	51	9.8	62.1	4.41	74.2	54.7
DK591	263	30764	5.0	.	20	11.1	61.9	5.36	71.0	50.5
DL1400	194	32398	.	14.0	.	3.1	86.8	.	.	.
DL1400	204	32942	1.0	.	.	4.5	83.7	.	.	.
DL1400	214	28314	1.3	.	.	5.1	80.9	.	.	.
DL1400	223	33487	3.1	.	.	6.5	79.4	5.15	79.3	20.3
DL1400	233	31853	3.7	.	.	9.0	73.5	5.27	78.7	41.3
DL1400	243	28586	5.0	.	76	7.6	71.0	4.21	76.9	0.4
DL1400	253	33487	5.0	.	63	10.8	61.3	5.57	68.4	48.1
DL1400	263	32670	5.0	.	14	10.7	54.7	5.39	60.0	49.3
GH H2387	194	38387	.	14.0	.	3.4	88.6	.	.	.
GH H2387	204	29948	1.0	.	.	4.1	84.7	.	.	.
GH H2387	214	33487	1.8	.	.	5.6	81.5	.	81.9	.
GH H2387	223	33215	3.5	.	.	6.2	79.4	4.01	81.9	34.9
GH H2387	233	32670	3.9	.	.	7.3	77.2	4.47	80.7	36.7
GH H2387	243	32398	5.0	.	75	10.6	66.4	4.54	78.2	56.9
GH H2387	253	31853	5.0	.	35	9.3	62.3	4.39	71.4	53.2
GH H2387	263	31853	5.5	.	4	10.1	52.3	4.28	64.0	57.6
GH H2497	194	34031	.	14.0	.	3.1	88.3	.	.	.
GH H2497	204	34576	1.0	.	.	4.5	84.8	.	.	.
GH H2497	214	29040	1.0	.	.	5.4	81.6	.	.	.
GH H2497	223	34304	3.0	.	.	6.8	80.2	5.62	80.3	18.1
GH H2497	233	31309	3.6	.	.	8.4	75.2	5.01	79.1	40.6
GH H2497	243	29403	4.9	.	86	9.3	70.7	4.89	78.1	47.1
GH H2497	253	33215	5.0	.	69	12.1	60.8	5.53	73.1	54.2
GH H2497	263	31037	5.0	.	33	10.7	62.5	4.88	73.0	53.4
Mean		32499	3.6	14.8	48	7.3	74.9	5.01	75.7	42.7
Probability (%)										
Rep		51.0	82.00	42.0	41.0	71.0	44.0	77.0	4.6	96.0
Hybrid		41.0	0.13	13.5	2.1	31.0	11.0	0.5	0.3	2.0
Date of Harvest		26.0	0.01	0.0	0.0	0.0	0.0	57.0	0.0	0.0
Hybrid x Date of Harvest		40.0	27.00	0.0	8.4	0.9	0.8	0.6	0.1	13.8
LSD (0.10)										
Hybrid		NS	0.10	NS	12	NS	NS	0.41	1.2	3.0
Date of Harvest		NS	0.14	0.0	5	0.6	1.6	NS	1.7	4.6
Hybrid x Date of Harvest		NS	NS	0.0	20	1.8	4.7	0.98	4.4	NS
CV (%)		13	7	0.0	17	15	4	12	4	18