

FIELD EXPERIMENT HISTORY

Year: 1998

Expt. Number: 9890

Title: Twenty Year Corn/Soybean Rotation Study

Personnel: E.S. Oplinger, J.G. Lauer, J.M. Gaska, M.J. Martinka, and K.D. Kohn

Location: Arlington Research Station, Arlington, WI

Supported by: HATCH Project 142-E018

FIELD INFORMATION

Field: 334W

Soil Type: Plano Silt Loam

Soil Test Resu Test Date: 10/97 pH: 6.3 P (ppm): 35 K (ppm): 2 OM (%): 3.5

Fertilizer Appli Soybean : None

Corn: 180 lb/a nitrogen preplant

Tillage Operat No-till and

Fall chisel plowed

Spring field cultivated (2) and cultmulched

Previous Crop Corn and soybean

Previous Herb Dual, Pursuit, Pinnacle, Basagran

Irrigation: None

EXPERIMENTAL PROCEDURE

Exp. Design: RCB Split-Split Plot

Replicates: 4

Variables: A: Tillage, B: Rotation Sequence, C: Row Spacing

	<u>Corn</u>	<u>Soybean</u>
Area Planted:	10' x 35'	10' x 35'
Area Harveste	5' x 30'	5' x 30'
Row Spacing:	7.5, 15, and 30"	7.5, 15, and 30"
Seeding Rate	30K, 35K, and 40K	225K, 175K, and 125K

Hybrid/Variety DK493RR AG2501

Planting Date: 5/11/1998 5/11/1998

Planting Equip Kinze 2000 Interplant planter (15" and 30") and John Deere 750 No-till Drill (7.5")

Harvesting Date:

Harvesting Eq Kincaid plot combine Almaco plot combine

	<u>Date</u>	<u>Material</u>	<u>Crop</u>	<u>Rate</u>
Herbicides:	22-Apr	Round-Up	Both	2 qt/a
	22-Apr	2,4-D	Both	1 qt/a
	17-Jun	Round-Up	Both	1 qt/a
Insecticides:	11-May	Lorsban	Corn only	10 lb/a

Results: Table D-1 and D-2.

**Table D-1. 20 Year Corn/Soybean Rotation Study - Corn.
Arlington, WI Experiment 9890.**

Tillage	Rotation 16th Year	Row space	Yield bu/A	Moisture %	Test weight lbs/bu	Broken/ lodged %	Final population plants/A	Harvest ears ears/plant
		7.5 inch	203	18.8	56	1.1	34349	1.00
		15 inch	224	17.8	56	2.2	31985	1.00
		30 inch	226	17.7	57	1.6	31932	1.00
	ccccccccccC		211	17.8	56	1.0	32996	1.00
	ccccssssscC		218	18.1	56	2.0	31552	1.00
	ccccssssccC		213	18.1	56	1.4	33575	1.00
	ccssssccccC		212	18.2	56	2.0	33658	1.00
	ccssssccccC		208	18.1	56	1.1	31926	1.00
	sccccsssssC		239	18.0	57	3.0	32790	1.00
	scscscscscC		222	18.6	56	0.9	32792	1.00
	ccccccccccC	7.5 inch	205	18.1	56	0.2	35888	1.00
	ccccccccccC	15 inch	215	17.5	56	0.9	31363	0.99
	ccccccccccC	30 inch	213	17.7	56	2.0	31737	1.00
	ccccssssscC	7.5 inch	200	19.7	55	0.7	31433	1.00
	ccccssssscC	15 inch	227	17.3	56	3.8	31363	1.00
	ccccssssscC	30 inch	228	17.5	57	1.4	31861	1.00
	ccccssssccC	7.5 inch	203	18.8	56	0.3	36506	1.00
	ccccssssccC	15 inch	216	17.8	56	1.7	32110	1.00
	ccccssssccC	30 inch	219	17.6	57	2.3	32110	1.00
	ccssssccccC	7.5 inch	196	18.6	56	2.1	36878	1.00
	ccssssccccC	15 inch	221	18.1	56	2.8	31985	1.00
	ccssssccccC	30 inch	220	17.9	56	1.0	32110	1.00
	ccssssccccC	7.5 inch	189	18.4	56	0.5	31061	1.00
	ccssssccccC	15 inch	211	18.2	56	2.1	32483	1.00
	ccssssccccC	30 inch	223	17.8	57	0.8	32234	1.00
	sccccsssssC	7.5 inch	230	18.4	56	2.7	34774	1.00
	sccccsssssC	15 inch	247	17.9	57	2.9	32110	1.00
	sccccsssssC	30 inch	240	17.7	57	3.4	31488	1.00
	scscscscscC	7.5 inch	198	19.9	55	1.1	33908	1.00
	scscscscscC	15 inch	233	17.9	57	1.2	32483	1.00
	scscscscscC	30 inch	236	17.9	57	0.6	31985	0.99
No-Till			221	18.4	56	1.1	32921	1.00
Conventional			215	17.8	57	2.2	32591	1.00
No-Till		7.5 inch	207	19.4	55	0.7	34827	1.00
No-Till		15 inch	228	18.0	56	1.3	32110	1.00
No-Till		30 inch	227	17.9	56	1.3	31825	1.00
Conventional		7.5 inch	199	18.3	56	1.5	33872	1.00
Conventional		15 inch	221	17.7	57	3.1	31861	1.00
Conventional		30 inch	224	17.5	57	1.9	32039	1.00
No-Till	ccccccccccC		211	18.0	56	0.9	34276	1.00
No-Till	ccccssssscC		221	18.8	56	1.9	32626	1.00
No-Till	ccccssssccC		212	18.4	56	1.4	34274	1.00
No-Till	ccssssccccC		217	18.6	56	1.1	32874	1.00
No-Till	ccssssccccC		207	18.3	56	1.4	31637	1.00
No-Till	sccccsssssC		250	18.1	57	0.7	32708	1.00
No-Till	scscscscscC		227	18.9	56	0.4	32049	1.00
Conventional	ccccccccccC		211	17.5	57	1.1	31715	0.99
Conventional	ccccssssscC		215	17.5	57	2.0	30478	1.00
Conventional	ccccssssccC		213	17.7	57	1.5	32876	1.00
Conventional	ccssssccccC		208	17.8	57	2.9	34441	1.00
Conventional	ccssssccccC		208	18.0	57	0.9	32216	1.00
Conventional	sccccsssssC		229	17.9	57	5.3	32873	1.00
Conventional	scscscscscC		218	18.2	57	1.5	33535	0.99

continued

**Table D-1. 20 Year Corn/Soybean Rotation Study - Corn.
Arlington, WI Experiment 9890.**

Tillage	Rotation	Row	Yield	Moisture	Test	Broken/	Final	Harvest
	16th Year	space			weight	lodged	population	ears
			bu/A	%	lbs/bu	%	plants/A	ears/plant
No-Till	ccccccccccC	7.5 inch	209	18.4	56	0.4	38858	1.00
No-Till	ccccccccccC	15 inch	212	17.8	56	0.8	32110	1.00
No-Till	ccccccccccC	30 inch	212	17.9	56	1.6	31861	1.00
No-Till	ccccsssccC	7.5 inch	197	21.1	54	1.1	33908	1.00
No-Till	ccccsssccC	15 inch	236	17.5	56	2.7	32359	1.00
No-Till	ccccsssccC	30 inch	231	17.8	57	2.0	31612	1.00
No-Till	ccccsssccC	7.5 inch	200	19.5	55	0.3	39848	1.00
No-Till	ccccsssccC	15 inch	217	17.9	56	1.8	31612	1.00
No-Till	ccccsssccC	30 inch	220	17.7	56	2.0	31363	0.99
No-Till	ccccsssccC	7.5 inch	206	18.9	56	1.7	34403	1.00
No-Till	ccccsssccC	15 inch	225	18.5	56	0.0	32359	1.00
No-Till	ccccsssccC	30 inch	220	18.4	56	1.6	31861	1.00
No-Till	ccssscccccC	7.5 inch	186	18.8	55	0.6	30443	1.00
No-Till	ccssscccccC	15 inch	217	18.4	56	2.4	32110	1.00
No-Till	ccssscccccC	30 inch	218	17.8	56	1.1	32359	1.00
No-Till	sccccsssccC	7.5 inch	247	18.5	56	0.5	34403	1.00
No-Till	sccccsssccC	15 inch	255	18.0	57	0.8	31861	1.00
No-Till	sccccsssccC	30 inch	247	17.9	57	0.8	31861	1.00
No-Till	scscscscscC	7.5 inch	204	20.7	54	0.4	31928	1.00
No-Till	scscscscscC	15 inch	234	17.9	56	0.4	32359	1.00
No-Till	scscscscscC	30 inch	243	18.1	56	0.4	31861	1.00
Conventional	ccccccccccC	7.5 inch	201	17.8	57	0.0	32918	1.00
Conventional	ccccccccccC	15 inch	218	17.2	57	1.0	30616	0.98
Conventional	ccccccccccC	30 inch	213	17.5	56	2.4	31612	1.00
Conventional	ccccsssccC	7.5 inch	203	18.4	56	0.4	28958	1.00
Conventional	ccccsssccC	15 inch	218	17.1	56	5.0	30368	1.00
Conventional	ccccsssccC	30 inch	226	17.1	57	0.8	32110	1.00
Conventional	ccccsssccC	7.5 inch	206	18.1	56	0.4	33165	1.00
Conventional	ccccsssccC	15 inch	215	17.7	56	1.5	32608	1.00
Conventional	ccccsssccC	30 inch	218	17.4	57	2.6	32857	1.00
Conventional	ccccsssccC	7.5 inch	186	18.3	56	2.6	39353	1.00
Conventional	ccccsssccC	15 inch	218	17.7	57	5.6	31612	1.00
Conventional	ccccsssccC	30 inch	219	17.5	57	0.4	32359	1.00
Conventional	ccssscccccC	7.5 inch	192	18.1	56	0.4	31680	1.00
Conventional	ccssscccccC	15 inch	206	18.1	56	1.9	32857	1.00
Conventional	ccssscccccC	30 inch	227	17.8	57	0.4	32110	1.00
Conventional	sccccsssccC	7.5 inch	214	18.3	56	4.9	35145	1.00
Conventional	sccccsssccC	15 inch	239	17.9	57	5.1	32359	1.00
Conventional	sccccsssccC	30 inch	234	17.6	57	6.1	31114	1.00
Conventional	scscscscscC	7.5 inch	191	19.0	56	1.8	35888	1.00
Conventional	scscscscscC	15 inch	232	17.9	57	1.9	32608	1.00
Conventional	scscscscscC	30 inch	230	17.8	57	0.7	32110	0.97
Mean			218	18.1	56	1.6	32756	1.00
Probability%								
Tillage (T)			12.5	1.0	9.7	12.8	44.5	57.0
Rotation (R)			0.1	23.0	10.7	58.7	42.2	51.8
T x R			19.8	48.1	8.9	10.2	38.9	73.1
Row Spacing (S)			0.0	0.0	0.0	18.9	0.2	43.6
T x S			71.2	4.7	6.4	50.5	0.7	73.1
R x S			19.6	2.1	3.8	85.9	48.2	43.3
T x R x S			70.2	72.6	16.4	93.4	44.0	36.0
LSD 10%								
Tillage (T)			NS	0.2	NS	NS	NS	NS
Rotation (R)			7.5	NS	NS	NS	NS	NS
T x R			NS	NS	1.1	NS	NS	NS
Row Spacing (S)			5.0	0.3	0.2	NS	1268	NS
T x S			NS	1.3	1.0	NS	5802	NS
R x S			NS	1.3	1.0	NS	NS	NS
T x R x S			NS	NS	NS	NS	NS	NS
CV%								
			7	5	1	192	12	1

FIELD EXPERIMENT HISTORY

Year: 1998

Expt. Number: 9891
Title: Four Year Corn/Soybean Rotation Study
Personnel: E.S. Oplinger, J.G. Lauer, J.M. Gaska, M.J. Martinka and K.D. Kohn
Location: Arlington Research Station, Arlington, WI
Supported by: HATCH Project 142-E018

FIELD INFORMATION

Field: 334E

Soil Type: Plano Silt Loam

Soil Test Results: Test Date: pH: 6.8 P (ppm): 37 K (ppm): 265 OM (%): 3.4

Fertilizer Applied: Soybean : None
Corn: 180 lb/a nitrogen preplant

Tillage Operations: No-till and
Fall chisel plowed
Spring field cultivated (2) and cultimulched

Previous Crop: Corn and soybean

Previous Herbicide: Dual, Basagran, Pursuit, Pinnacle

Irrigation: None

EXPERIMENTAL PROCEDURE

Exp. Design: RCB Split Plot

Replicates: 8

Variables: A: Tillage B: Rotation Sequence

	<u>Corn</u>	<u>Soybean</u>
Area Planted:	7.5' x 35'	7.5' x 35'
Area Harvested:	5' x 30'	5' x 30'
Row Spacing:	30"	7.5"
Planting Rate:	32,000 seeds/a	225,000 seeds/a
Hybrid/Variety:	DK493RR	AG2501
Planting Date:		11-May-98
Planting Equip:	White Air Planter	Tye No-till Drill
Harvesting Date:		
Harvesting Equip:	Kincaid plot combine	Almaco plot combine #

	<u>Date</u>	<u>Material</u>	<u>Crop</u>	<u>Rate</u>
Herbicides:	22-Apr	Round-Up	Both	2 qt/a
	22-Apr	2,4-D	Both	1 qt/a
	17-Jun	Round-Up	Both	1 qt/a

Insecticides: May Corn only

Results: Table D-3 and D-4.

**Table D-3. 20 Year Corn/Soybean/Wheat Rotation Study - Corn.
Arlington, WI Experiment 9891.**

Tillage	Rotation	Yield bu/A	Moisture %	Test weight lbs/bu	Broken/ lodged %	Final population plants/A
	ccccC	216	17.5	56	4.6	29994
	cwscC	219	17.5	55	3.8	29870
	sccscC	215	17.7	55	3.3	30368
	scscC	232	17.6	56	4.6	29870
	swcccC	213	18.2	55	4.4	27878
	swcscC	221	18.0	55	2.1	29994
	wscscC	242	17.4	56	2.9	29621
	wwccsC	234	17.4	56	4.6	29745
Conventional		222	17.4	56	3.7	29902
No-Till		227	17.9	55	3.9	29549
Conventional	ccccC	215	17.2	56	4.2	29870
Conventional	cwscC	219	16.9	56	2.5	29870
Conventional	sccscC	226	17.4	56	2.4	30616
Conventional	scscC	229	17.4	56	4.2	29870
Conventional	swcccC	214	17.6	56	3.3	29870
Conventional	swcscC	217	17.7	55	1.7	29870
Conventional	wscscC	234	17.4	57	5.1	29372
Conventional	wwccsC	217	17.5	56	5.8	29870
No-Till	ccccC	216	17.8	55	5.0	30119
No-Till	cwscC	218	18.2	54	5.0	29870
No-Till	sccscC	203	18.0	55	4.1	30119
No-Till	scscC	235	17.7	56	5.0	29870
No-Till	swcccC	213	18.7	55	5.6	25887
No-Till	swcscC	224	18.3	55	2.5	30119
No-Till	wscscC	249	17.3	56	0.8	29870
No-Till	wwccsC	251	17.3	56	3.3	29621
Mean		224	17.6	56	3.8	29725
Probability%						
Tillage (T)		14.3	0.0	0.0	75.3	28.9
Rotation (R)		0.0	6.2	8.9	88.8	25.0
T x R		0.7	10.3	28.9	65.5	36.5
LSD 10%						
Tillage (T)		NS	0.2	0.3	NS	NS
Rotation (R)		10.5	0.5	0.2	NS	NS
T x R		14.8	NS	NS	NS	NS
CV%						
		6	3	1	106	6

Field Experiment History

Title: Silage Era Trials - Comparison of Old Hybrids
Experiment: 01 Era Trial
Personnel: J.G. Lauer, P.J. Flannery, K.D. Kohn, and H.M. Darby
Supported by: Hatch

Year: 1998

Experimental Procedure

Exp. Design: RCB

Replicates 3

Variables	Genotypes: <u>Early</u>		<u>Late</u>	
	NWDent	W346	Pride of No.	W554
	Golden Glow	W415	Silver King	W545
	MINN #13	W434	Funks YD	W601
	W255	W2343	W456	W5472
	W335	A554XCM105	W531	A641XMO17
	W416	W4363	W645	W540XB73
	W270	Pioneer 3905	W463	Cargill 4327
	W273	Mycogen 4120	W513	Dairyland 1407
	W335A	Dekalb DK401	W613	Pioneer 3394

Area Planted: 5' x 25'

Planting Equip: 4-row Kinze plot planter

Planting Rate: 25,000 seeds/a

Row Spacing: 30"

Field Information

Location	Soil Type	Previous Crop	Row Width (in)	Planting Date	Harvest Dates	Ave. Final Stand (plants/A)	Tillage Operations	--Soil Test--			--Nitrogen Fertilizer--			Weed Control	Insecticides
								pH	P	K	actual	form	time		
Arlington	Plano Silt Loam	Soybean	30	14-May	E: 4-Sept L: 23-Sept	23400	Chisel Plow Field Cultivator	6.9	91	292	125 9	46-0-0 6-24-24	preplant planting	Lasso 2 qts/A Bladex 90DF 2.2 lbs/A	None
Fond du Lac	Virgil Silt Loam	Soybean	30	13-May	18-Sept	23300	Moldboard Plow Field Cultivator	6.7	38	100	160 9	82-0-0 6-24-24	preplant planting	Accent Gold 2.9 oz/A	None
Lancaster	Rozetta Silt Loam	Soybean	30	6-May	17-Sept	24200	Soil finisher (2x)	7.3	50	170	140 9	82-0-0 6-24-24	preplant planting	Roundup 1.5 qts/A Dual II 2 pts/A Buctril 1.5 pts/A Atrazine .75 pts/A	None
Marshfield	Loyal Silt Loam	Alfalfa	30	24-Apr	15-Sept	23000	Moldboard Plow Pulvimulch	7.3	63	183	9 50	6-24-24 33-0-0	planting post	Lasso 3 qts/A Buctril 1.5 pts/A Permit 1.3 oz/A	Lorsban 7lbs/A

Results: Table E-14 and E-15.

**Table E-14. Early Silage Era Trials- Comparison of Old Hybrids
Hybrid, Location, and Location by Hybrid - Harvest Data.
Arlington, Fond du Lac, Marshfield, WI - 1998.**

COMPANY	GENOTYPE	ENVIRONMENT	Whole Plant										Stover						
			Dry Matter		Kernel milk %	Crude Protein			Milk Per				Dry Matter		Crude				
			Yield T/A	Moisture %		%	%	ADF	NDF	IVD	CWD	Ton lb/T	Acre lb/A	Yield T/A	Moist %	Protein %	ADF %	NDF %	IVD %	CWD %
DEKALB	DK 401		7.74	58.1	44	7.6	21.9	43.7	77.8	49.1	2104	16431	3.67	68.7	5.6	36.5	64.9	67.4	49.8
MYCOGEN	4120		8.39	56.4	24	7.6	22.5	44.6	78.3	51.2	2091	17643	3.49	66.6	5.5	36.5	65.4	67.5	50.4
PIONEER	3905		6.69	56.6	15	7.4	23.0	43.3	76.4	45.6	2041	14280	3.47	66.7	5.6	35.5	62.7	67.2	47.7
WISCONSIN	A554xCM105		6.34	50.9	13	8.1	22.3	44.7	77.2	49.2	2028	12533	3.03	62.7	5.5	38.3	68.8	66.1	50.8
WISCONSIN	GOLDEN GLOW		4.90	58.6	27	8.0	26.2	49.0	74.2	47.5	1670	8514	3.09	66.2	5.8	34.6	60.5	66.8	45.1
WISCONSIN	MINN#13		2.53	51.8	8	8.7	26.8	49.9	73.2	46.7	1568	4495	1.63	60.0	6.3	36.0	64.3	67.7	49.8
WISCONSIN	NWDENT		1.77	53.5	5	9.6	28.6	52.2	71.6	45.6	1378	2656	1.49	55.1	6.8	34.9	61.7	67.8	47.8
WISCONSIN	W255		4.81	52.0	12	8.4	21.7	42.6	77.8	47.6	2152	10516	2.25	65.0	6.0	34.5	62.6	69.3	51.1
WISCONSIN	W270		3.36	53.1	11	8.6	26.6	49.0	74.0	47.1	1654	6269	1.88	60.7	7.0	33.3	60.2	70.5	51.1
WISCONSIN	W335		5.69	56.2	18	7.6	24.0	46.1	76.4	48.9	1918	11541	3.03	66.3	5.7	35.8	64.1	68.2	50.4
WISCONSIN	W416		5.60	59.1	29	7.7	26.2	49.4	74.3	48.2	1656	9692	3.15	65.9	6.4	34.6	62.8	69.3	51.1
WISCONSIN	W434		6.50	56.7	23	7.4	22.9	44.2	77.1	48.3	2043	13598	3.21	67.3	6.1	35.7	64.7	68.7	51.7
WISCONSIN FOUNDATION SEED	W2343		5.00	53.9	19	8.2	23.7	46.0	76.3	48.5	1918	10061	3.47	63.2	6.3	33.6	61.8	71.0	53.4
WISCONSIN FOUNDATION SEED	W273		5.31	59.0	12	7.9	24.1	45.2	76.7	48.4	1972	10802	2.80	66.4	5.9	35.0	62.5	68.6	49.7
WISCONSIN FOUNDATION SEED	W335A		6.15	53.8	20	7.7	23.3	44.7	76.4	47.3	1984	12352	2.92	63.0	5.7	36.9	65.6	67.2	50.0
WISCONSIN FOUNDATION SEED	W346		5.06	55.9	18	7.7	22.0	43.3	78.1	49.6	2138	11205	2.77	64.4	6.1	34.5	62.6	70.2	52.5
WISCONSIN FOUNDATION SEED	W415		6.16	59.3	31	7.9	23.2	44.7	76.2	46.7	1967	12088	3.00	68.2	6.0	35.7	64.0	67.8	49.7
WISCONSIN FOUNDATION SEED	W4363		7.92	58.1	26	7.8	22.8	44.4	77.4	49.0	2050	16097	3.67	67.5	6.3	34.2	62.4	69.7	51.6
		ARL	7.66	67.6	48	8.6	23.4	45.0	77.7	50.6	2042	15905	3.77	76.2	7.1	36.5	63.7	67.7	49.3
		FON	5.39	49.9	8	7.6	25.6	47.3	73.8	44.6	1719	10082	2.98	59.2	5.3	34.4	62.3	68.7	49.9
		MAR	3.56	49.7	4	7.8	23.0	45.5	76.7	48.8	1961	7331	1.88	58.5	5.7	35.1	64.3	68.7	51.4
DEKALB	DK 401	ARL	8.75	70.9	82	8.5	23.6	46.0	77.2	50.4	1969	17334	4.34	78.5	7.5	36.9	64.6	68.0	50.5
MYCOGEN	4120	ARL	9.75	68.2	45	8.1	25.0	47.8	77.1	52.2	1887	18439	4.56	76.4	7.0	36.9	64.3	67.8	49.9
PIONEER	3905	ARL	9.61	67.4	45	8.2	21.6	41.2	79.1	49.3	2286	21981	4.45	76.9	6.7	36.2	63.1	67.5	48.5
WISCONSIN	A554xCM105	ARL	7.15	67.3	35	9.4	24.1	47.4	75.9	49.2	1835	13460	3.59	77.3	6.8	41.8	72.0	63.1	48.7
WISCONSIN	GOLDEN GLOW	ARL	6.88	72.7	57	8.7	27.0	49.3	74.8	49.2	1688	12409	4.51	75.7	6.4	33.0	56.5	68.7	44.5
WISCONSIN	MINN#13	ARL	4.57	60.9	22	9.2	23.3	44.8	76.9	48.5	2004	9173	2.58	71.5	6.8	36.6	64.8	67.9	50.5
WISCONSIN	NWDENT	ARL	2.81	62.0	15	10.1	25.0	46.5	75.1	46.4	1829	5159	2.48	65.5	7.1	35.4	61.1	67.9	47.5
WISCONSIN	W255	ARL	7.30	62.8	33	8.5	21.4	42.0	78.9	49.8	2245	16441	3.02	75.1	6.4	37.7	65.6	66.3	48.5
WISCONSIN	W270	ARL	6.07	65.5	28	8.6	23.3	44.8	78.2	51.4	2080	12830	2.75	73.9	7.5	34.5	61.4	70.4	51.8
WISCONSIN	W335	ARL	8.69	67.3	55	7.8	23.0	44.5	79.0	52.8	2137	18492	4.48	76.5	6.4	35.4	61.7	68.2	48.4
WISCONSIN	W416	ARL	8.03	69.6	67	8.4	23.6	45.5	77.8	51.3	2028	16340	4.27	77.8	7.5	35.6	63.2	69.0	51.0
WISCONSIN	W434	ARL	8.86	69.8	48	7.8	20.7	41.2	80.3	52.3	2357	20874	3.94	80.3	7.9	37.6	66.0	66.7	49.5
WISCONSIN FOUNDATION SEED	W2343	ARL	7.41	65.9	50	8.5	23.9	46.8	77.5	51.9	1952	14776	3.68	73.9	6.9	35.8	63.1	69.3	51.4
WISCONSIN FOUNDATION SEED	W273	ARL	7.38	70.7	35	8.6	23.8	44.6	78.0	50.6	2076	15550	3.69	78.9	7.0	36.5	62.9	67.4	48.1
WISCONSIN FOUNDATION SEED	W335A	ARL	8.61	68.3	55	8.7	22.2	43.9	78.9	51.9	2161	18571	4.09	77.3	7.2	36.4	63.8	67.5	49.1
WISCONSIN FOUNDATION SEED	W346	ARL	8.15	66.4	47	8.3	20.7	41.7	80.2	52.6	2327	19307	3.28	76.9	6.8	36.8	65.2	68.7	51.9
WISCONSIN FOUNDATION SEED	W415	ARL	7.86	71.8	75	8.8	25.3	47.9	76.0	50.1	1816	14686	3.71	80.6	7.6	37.2	64.4	66.5	47.8
WISCONSIN FOUNDATION SEED	W4363	ARL	9.90	69.3	62	8.8	23.1	44.9	78.2	51.4	2072	20465	4.43	78.8	7.6	36.3	63.8	68.3	50.4
DEKALB	DK 401	FON	8.99	52.0	28	7.3	22.2	43.5	76.7	46.5	2051	19466	4.21	64.4	5.0	35.2	63.6	68.3	50.2
MYCOGEN	4120	FON	9.18	50.4	15	7.3	21.6	42.4	78.8	50.1	2220	20788	3.82	64.5	4.5	36.1	64.9	67.4	49.8
PIONEER	3905	FON	6.01	49.8	0	6.8	24.8	45.0	73.8	41.9	1819	11891	3.79	61.6	5.4	33.0	59.0	68.9	47.4
WISCONSIN	A554xCM105	FON	7.26	45.4	3	7.2	25.0	47.8	74.8	47.3	1757	12707	3.26	56.8	4.6	37.8	68.1	65.7	49.6
WISCONSIN	GOLDEN GLOW	FON	4.28	50.7	22	7.3	27.5	50.9	72.9	46.7	1509	6558	2.59	60.2	5.2	35.5	62.4	66.5	46.3
WISCONSIN	MINN#13	FON	1.57	48.7	0	8.7	34.0	59.5	65.8	42.5	726	1243	1.22	56.4	6.0	35.6	63.5	67.4	48.6

continued

**Table E-14. Early Silage Era Trials- Comparison of Old Hybrids
Hybrid, Location, and Location by Hybrid - Harvest Data.
Arlington, Fond du Lac, Marshfield, WI - 1998.**

COMPANY	GENOTYPE	ENVIRONMENT	Whole Plant										Stover							
			Dry Matter		Kernel milk	Crude				Milk Per		Dry Matter		Crude						
			Yield	Moisture		Protein	ADF	NDF	IVD	CWD	Ton	Acre	Yield	Moist	Protein	ADF	NDF	IVD	CWD	
T/A	%	%	%	%	%	%	lb/T	lb/A	T/A	%	%	%	%	%	%	%				
WISCONSIN	NWDENT	FON	1.34	55.1	0	9.4	33.0	57.4	67.5	43.4	917	1195	1.13	48.7	5.7	35.9	63.3	66.5	47.1	
WISCONSIN	W255	FON	4.25	44.2	2	8.2	22.3	42.3	76.4	43.6	2085	8887	2.49	56.6	5.5	33.4	61.0	69.8	50.5	
WISCONSIN	W270	FON	2.43	48.3	0	8.4	28.2	49.4	71.4	42.1	1490	3760	1.64	53.3	6.2	33.0	59.5	70.3	50.5	
WISCONSIN	W335	FON	4.92	48.5	0	6.9	25.1	46.7	74.3	44.7	1772	9307	2.85	61.1	5.3	35.6	64.5	68.4	51.0	
WISCONSIN	W416	FON	4.55	54.4	15	6.8	31.1	55.9	68.9	44.3	1062	4897	3.13	60.8	6.2	34.5	62.2	67.7	48.1	
WISCONSIN	W434	FON	6.44	52.4	18	7.1	23.9	43.8	74.8	42.5	1928	12352	3.96	62.8	4.8	34.4	62.6	69.4	51.1	
WISCONSIN FOUNDATION SEED	W2343	FON	5.09	46.9	8	8.0	22.8	43.7	76.6	46.4	2037	10477	3.73	55.5	6.1	30.5	58.8	74.0	56.7	
WISCONSIN FOUNDATION SEED	W273	FON	5.74	52.9	0	7.5	24.4	44.6	75.4	45.0	1925	11355	2.73	62.5	5.0	34.7	61.8	67.8	47.8	
WISCONSIN FOUNDATION SEED	W335A	FON	6.66	41.8	3	6.9	24.5	45.4	74.4	43.7	1836	12315	3.04	56.4	4.7	36.4	65.1	67.3	49.8	
WISCONSIN FOUNDATION SEED	W346	FON	4.08	52.3	5	7.2	24.1	45.1	75.9	46.4	1936	7962	2.80	61.2	5.3	33.8	60.9	70.2	51.2	
WISCONSIN FOUNDATION SEED	W415	FON	6.80	50.5	8	7.5	22.8	42.7	75.2	42.0	2001	13592	2.99	62.7	5.0	33.6	60.9	68.5	48.4	
WISCONSIN FOUNDATION SEED	W4363	FON	8.40	53.9	13	7.5	24.5	45.2	74.9	44.5	1877	15590	5.03	60.7	5.7	30.6	58.5	73.2	54.3	
DEKALB	DK 401	MAR	5.90	51.2	22	7.1	19.9	41.5	79.4	50.2	2291	13505	2.47	63.1	4.5	37.3	66.5	66.0	48.8	
MYCOGEN	4120	MAR	6.22	50.6	12	7.3	20.9	43.7	78.8	51.4	2166	13704	2.10	58.8	5.0	36.6	67.0	67.5	51.6	
PIONEER	3905	MAR	4.45	52.7	0	7.2	22.5	43.7	76.3	45.7	2018	8968	2.18	61.5	4.8	37.2	66.1	65.1	47.3	
WISCONSIN	A554xCM105	MAR	4.62	39.9	0	7.8	18.0	39.0	81.0	51.1	2493	11433	2.24	53.9	5.2	35.4	66.2	69.6	54.1	
WISCONSIN	GOLDEN GLOW	MAR	3.55	52.6	2	8.0	24.0	46.7	75.0	46.7	1813	6576	2.18	62.6	5.8	35.4	62.4	65.3	44.3	
WISCONSIN	MINN#13	MAR	1.46	45.8	3	8.2	23.2	45.5	76.8	49.1	1973	3067	1.10	52.0	6.1	35.7	64.6	67.8	50.2	
WISCONSIN	NWDENT	MAR	1.15	43.5	0	9.2	27.8	52.7	72.2	47.2	1389	1614	0.87	51.2	7.6	33.4	60.8	68.9	48.8	
WISCONSIN	W255	MAR	2.87	49.0	2	8.6	21.5	43.5	78.0	49.5	2127	6219	1.23	63.3	6.2	32.5	61.4	71.7	54.1	
WISCONSIN	W270	MAR	1.58	45.5	3	8.8	28.4	52.9	72.4	47.7	1393	2218	1.26	54.9	7.4	32.5	59.7	70.7	50.9	
WISCONSIN	W335	MAR	3.20	52.8	0	7.9	24.0	47.2	75.9	49.1	1846	6081	1.74	61.4	5.4	36.3	66.2	68.0	51.7	
WISCONSIN	W416	MAR	4.23	53.4	5	7.8	23.9	46.8	76.2	49.1	1877	7838	2.05	59.2	5.5	33.8	63.0	71.1	54.1	
WISCONSIN	W434	MAR	4.20	47.8	3	7.3	24.2	47.7	76.3	50.1	1846	7570	1.98	58.8	5.6	35.1	65.6	70.0	54.4	
WISCONSIN FOUNDATION SEED	W2343	MAR	2.49	48.9	0	8.1	24.3	47.5	74.8	47.2	1765	4931	2.16	60.3	5.9	34.4	63.6	69.5	52.1	
WISCONSIN FOUNDATION SEED	W273	MAR	2.80	53.6	0	7.7	24.0	46.5	76.6	49.7	1916	5501	1.99	57.7	5.7	33.8	62.8	70.5	53.2	
WISCONSIN FOUNDATION SEED	W335A	MAR	3.18	51.3	2	7.6	23.1	44.8	76.0	46.4	1954	6172	1.68	55.3	5.4	37.7	68.0	66.8	51.1	
WISCONSIN FOUNDATION SEED	W346	MAR	2.95	49.1	3	7.5	21.2	43.3	78.3	49.8	2151	6347	2.23	54.9	6.1	32.8	61.7	71.7	54.5	
WISCONSIN FOUNDATION SEED	W415	MAR	3.84	55.4	8	7.3	21.6	43.6	77.4	48.2	2085	7986	2.31	61.2	5.3	36.2	66.7	68.4	52.9	
WISCONSIN FOUNDATION SEED	W4363	MAR	5.46	51.1	3	7.1	20.7	43.0	79.0	51.0	2202	12235	2.01	63.1	5.6	35.9	64.9	67.7	50.2	
MEAN			5.54	55.7	20	8.0	24.0	46.0	76.1	48.0	1907	11119	2.86	64.7	6.0	35.3	63.4	68.4	50.2	
Probability (%)																				
Genotype			0.0	0.8	0.0	0.0	1.9	5.2	1.5	1.2	3.0	0.0	0.0	0.0	7.0	6.3	0.4	7.2	0.1	
Environment			0.0	0.0	0.0	0.0	1.2	4.9	0.5	0.0	1.3	0.0	0.0	0.0	0.0	0.3	10.4	5.8		
Genotype x Environment			1.9	2.4	0.6	3.7	0.0	0.2	0.2	40.6	0.1	1.3	6.8	16.7	2.5	24.6	16.2	51.4	70.3	
LSD (0.10)																				
Genotype			1.1	4.0	11.9	0.5	3.2	4.7	2.9	2.1	367	3479	0.6	3.2	0.8	2.2	2.9	2.4	2.5	
Environment			0.5	1.5	2.6	0.1	1.2	1.4	1.5	1.5	147	1300	0.2	0.9	0.2	0.5	0.7	NS	1.3	
Genotype x Environment			1.5	5.3	14.6	0.7	3.6	5.4	3.4	NS	418	4406	0.8	NS	1.0	NS	NS	NS	NS	
CV (%)			19	7	55	6	11	9	3	5	16	29	21	5	12	7	5	4	7	

**Table E-15. Late Silage Era Trials- Comparison of Old Hybrids
Hybrid, Location, and Location by Hybrid - Harvest Data.
Arlington, Fond du Lac, Lancaster, WI - 1998.**

COMPANY	GENOTYPE	ENVIRONMENT	Whole Plant										Stover						
			Dry Matter		Kernel milk	Crude Protein	ADF	NDF	IVD	CWD	Milk Per		Dry Matter		Crude		IVD	CWD	
			Yield	Moisture							Ton	Acre	Yield	Moist	Protein	ADF			NDF
T/A	%	%	%	%	%	lb/T	lb/A	T/A	%	%	%	%	%	%					
WISCONSIN	A641xMO17		9.4	52.2	7	7.3	22.2	42.7	77.6	47.5	2133	20337	4.41	61.6	4.8	38.4	67.1	65.7	48.8
CARGILL	4327		9.0	65.1	33	7.4	21.6	41.6	78.5	48.2	2238	20694	4.49	73.9	5.7	36.1	62.2	67.1	47.1
DAIRYLAND	STEALTH 1407		11.2	59.9	33	6.7	22.0	42.0	78.4	48.6	2215	25446	5.26	70.5	6.1	34.2	60.6	69.4	49.7
OPEN POLLINATED	FUNKS YELLOW DENT		6.0	66.3	31	8.1	25.4	47.6	75.7	49.2	1816	10914	3.97	69.9	6.5	33.7	60.0	69.0	48.4
WISCONSIN	PRIDE OF NO.		4.9	55.6	11	8.1	24.7	46.0	75.1	45.9	1853	9042	2.96	63.6	5.7	36.2	63.2	66.6	47.0
PIONEER	3394		11.1	63.3	33	7.1	21.5	41.7	79.7	51.3	2303	25914	6.13	72.7	5.6	37.0	64.0	67.0	48.5
WISCONSIN	SILVER KING		3.0	62.1	13	8.5	29.6	53.0	69.8	43.0	1236	4303	2.51	66.5	6.3	34.1	60.5	68.7	48.4
WISCONSIN	W456		6.2	52.2	8	7.5	24.8	46.3	75.5	47.0	1856	11607	3.40	63.6	5.1	37.1	65.1	66.7	48.9
WISCONSIN	W463		7.7	58.0	10	7.7	24.0	44.6	75.4	44.8	1928	15626	3.70	69.5	5.8	34.8	61.0	68.0	47.5
WISCONSIN	W513		8.1	58.1	11	8.1	22.9	43.5	76.3	45.6	2030	16548	3.87	71.4	5.9	35.4	62.3	67.4	47.6
WISCONSIN	W531		5.9	58.9	6	7.4	24.9	46.7	75.2	46.8	1825	10982	3.45	64.3	5.6	35.3	62.7	68.1	49.2
WISCONSIN	W540xB73		10.6	64.2	36	7.3	23.9	44.8	77.0	48.8	2012	21466	5.05	72.9	5.9	34.8	60.9	68.0	47.5
WISCONSIN	W545		7.9	59.8	12	7.7	22.7	43.2	77.4	47.8	2107	16782	4.24	68.8	6.3	33.8	61.0	69.9	51.0
WISCONSIN FOUNDATION SEED	W5472		9.5	55.2	4	7.9	21.7	42.0	77.6	46.8	2166	20790	4.14	68.3	5.6	36.3	63.9	66.9	48.2
WISCONSIN	W554		7.6	57.8	15	8.0	25.6	47.9	74.7	47.2	1743	13534	3.66	68.8	6.1	36.4	64.3	67.3	49.2
WISCONSIN	W601		6.9	56.8	17	7.7	22.8	43.7	77.2	47.8	2069	14313	3.64	68.4	5.6	36.3	64.0	67.2	48.8
WISCONSIN	W613		7.1	57.7	13	7.8	24.6	46.7	75.4	47.2	1836	13024	3.80	67.8	5.8	36.5	64.4	67.1	48.8
WISCONSIN	W645		7.5	50.7	9	7.2	22.1	44.1	77.5	49.2	2071	15684	3.29	61.7	5.0	36.7	65.6	67.7	50.7
		ARL	8.7	62.4	14	7.7	23.7	43.7	77.3	48.3	2077	18714	4.48	71.5	5.7	36.6	63.3	67.3	48.3
		FON	6.9	56.7	29	7.4	24.8	46.9	75.1	47.1	1814	13132	3.63	65.9	5.5	34.2	61.5	68.8	49.3
		LAN	7.7	56.6	7	7.7	22.7	44.0	76.5	46.7	2016	15935	3.91	66.7	6.0	36.4	64.0	66.9	48.3
WISCONSIN	A641xMO17	ARL	11.9	59.1	10	7.4	21.9	41.0	78.9	48.5	2283	26673	5.13	69.8	4.9	37.5	64.9	66.8	48.8
CARGILL	4327	ARL	10.8	64.3	33	7.3	21.7	40.2	79.4	48.6	2348	26059	4.91	76.3	4.9	36.4	61.6	67.6	47.3
DAIRYLAND	STEALTH 1407	ARL	12.1	62.8	40	7.1	22.2	41.6	79.1	49.7	2274	27858	5.53	73.7	5.6	36.8	63.3	67.2	48.1
OPEN POLLINATED	FUNKS YELLOW DENT	ARL	6.1	68.7	18	7.8	25.9	47.1	76.3	49.7	1866	11386	3.80	71.3	6.1	35.3	61.0	67.9	47.4
WISCONSIN	PRIDE OF NO.	ARL	4.8	58.1	7	8.0	25.2	45.7	76.4	48.4	1933	9282	3.52	67.3	5.8	36.2	62.6	66.3	46.2
PIONEER	3394	ARL	13.7	63.7	35	7.2	20.1	39.1	81.3	52.1	2507	34403	5.73	76.3	5.6	40.2	67.8	64.7	48.0
WISCONSIN	SILVER KING	ARL	2.7	68.4	8	9.1	29.5	50.7	70.9	42.7	1402	3829	2.91	69.6	6.8	32.0	56.4	70.9	48.4
WISCONSIN	W456	ARL	6.4	58.5	5	7.6	25.5	46.5	75.9	48.1	1872	12072	3.94	65.2	5.1	38.3	66.5	65.8	48.6
WISCONSIN	W463	ARL	10.0	63.4	13	7.7	22.9	42.2	77.4	46.4	2149	21783	4.89	73.2	5.7	35.5	61.2	67.8	47.4
WISCONSIN	W513	ARL	8.7	64.4	7	8.2	22.7	42.2	78.5	49.2	2212	19189	4.56	75.1	6.0	35.8	62.2	68.0	48.5
WISCONSIN	W531	ARL	7.0	60.0	3	7.7	23.7	43.7	77.1	47.7	2063	14483	3.94	65.9	5.7	35.8	62.8	68.2	49.3
WISCONSIN	W540xB73	ARL	12.0	67.5	33	7.3	25.5	45.8	75.7	47.0	1895	22842	6.23	74.7	5.3	37.0	63.6	66.7	47.6
WISCONSIN	W545	ARL	8.3	64.3	0	7.6	22.7	42.1	78.6	49.2	2221	18528	5.23	69.9	7.0	31.6	57.9	72.8	53.7
WISCONSIN FOUNDATION SEED	W5472	ARL	10.3	59.1	2	8.1	21.8	41.2	78.5	47.9	2251	23560	4.12	72.0	5.3	37.5	64.7	66.1	47.6
WISCONSIN	W554	ARL	8.2	63.7	13	8.0	25.4	46.4	76.2	48.8	1899	15583	4.25	72.7	5.9	38.9	67.5	65.6	49.1
WISCONSIN	W601	ARL	8.0	62.2	5	7.9	23.9	43.7	76.7	46.6	2041	16290	3.82	73.1	5.5	36.5	63.1	67.2	47.9
WISCONSIN	W613	ARL	8.6	61.5	7	7.7	25.1	46.4	75.8	47.9	1876	15464	4.59	74.4	5.7	37.5	64.6	65.8	47.0
WISCONSIN	W645	ARL	8.4	53.7	2	7.3	20.8	41.6	79.4	50.3	2287	19136	3.39	65.7	5.0	39.1	68.5	65.3	49.4
WISCONSIN	A641xMO17	FON	7.8	51.5	10	7.0	24.0	46.5	75.3	47.0	1840	15226	3.73	57.2	4.6	38.8	69.0	65.0	49.2
CARGILL	4327	FON	9.4	62.9	50	7.4	22.1	42.7	77.8	47.9	2148	20954	4.59	71.8	5.8	34.8	61.4	68.2	48.2
DAIRYLAND	STEALTH 1407	FON	10.0	60.0	35	6.2	23.4	43.2	77.2	47.3	2090	22035	5.34	66.9	6.1	29.9	55.8	74.0	53.7
OPEN POLLINATED	FUNKS YELLOW DENT	FON	6.1	62.2	58	7.9	22.2	43.5	78.4	50.3	2147	13094	3.93	68.9	6.3	31.2	57.5	71.4	50.4
WISCONSIN	PRIDE OF NO.	FON	4.7	54.1	20	7.9	24.2	45.9	75.4	46.5	1872	8972	2.51	62.9	6.0	34.6	61.3	67.8	47.3
PIONEER	3394	FON	8.0	64.3	50	6.6	22.9	43.4	78.9	51.4	2180	17312	6.87	71.3	4.9	34.8	60.5	68.6	48.1
WISCONSIN	SILVER KING	FON	2.3	54.1	32	8.2	34.1	60.7	65.6	43.4	662	2099	2.09	64.5	5.8	34.0	61.4	68.6	48.8
WISCONSIN	W456	FON	6.1	49.1	18	7.5	24.6	46.5	75.3	46.9	1838	11237	3.26	63.7	5.2	35.4	63.5	68.2	49.9
WISCONSIN	W463	FON	5.0	57.8	17	7.5	27.4	50.0	72.2	44.4	1509	7857	2.09	68.0	5.3	34.7	61.5	67.6	47.4
WISCONSIN	W513	FON	7.6	56.3	25	7.9	23.7	45.2	74.5	43.4	1851	13938	3.00	68.7	5.4	34.0	61.2	67.9	47.5

continued

**Table E-15. Late Silage Era Trials- Comparison of Old Hybrids
Hybrid, Location, and Location by Hybrid - Harvest Data.
Arlington, Fond du Lac, Lancaster, WI - 1998.**

COMPANY	GENOTYPE	ENVIRONMENT	Whole Plant										Stover							
			Dry Matter		Kernel milk	Crude Protein	ADF	NDF	IVD	CWD	Milk Per		Dry Matter		Crude					
			Yield	Moisture							lb/T	lb/A	Yield	Moist	Protein	ADF	NDF	IVD	CWD	
T/A	%	%	%	%	%	%	%	%	%	T/A	%	%	%	%	%	%				
WISCONSIN	W531	FON	6.6	55.0	10	7.2	26.6	50.5	73.6	47.7	1569	11000	3.28	62.6	5.2	34.3	61.6	69.0	49.6	
WISCONSIN	W540xB73	FON	8.9	62.6	55	7.1	24.1	45.2	76.4	47.8	1960	17631	3.58	69.2	5.9	31.6	57.2	71.0	49.5	
WISCONSIN	W545	FON	7.4	58.6	27	7.6	23.7	44.9	76.1	47.0	1958	14945	3.64	69.2	5.8	33.5	60.2	68.9	48.5	
WISCONSIN FOUNDATION SEED	W5472	FON	8.0	54.6	10	7.6	23.4	44.5	75.5	45.0	1938	15503	3.88	66.1	4.9	35.4	63.4	67.6	48.9	
WISCONSIN	W554	FON	7.5	51.9	25	8.0	27.3	50.8	71.9	44.8	1458	11513	3.35	66.0	6.2	34.1	62.0	69.0	49.9	
WISCONSIN	W601	FON	5.7	56.9	33	7.4	23.5	45.1	77.0	49.0	2001	11264	3.72	66.0	5.3	35.4	63.4	68.1	49.7	
WISCONSIN	W613	FON	5.7	56.9	33	8.0	24.9	47.9	75.5	48.7	1788	10532	2.96	63.5	6.0	34.5	62.7	68.3	49.4	
WISCONSIN	W645	FON	6.4	51.0	22	7.1	23.7	47.4	75.9	49.4	1835	11767	2.78	59.2	4.9	35.2	64.3	68.7	51.3	
WISCONSIN	A641xMO17	LAN	9.3	45.9	0	7.4	20.7	40.7	78.5	47.0	2276	21223	4.36	57.9	4.9	38.8	67.4	65.3	48.5	
CARGILL	4327	LAN	6.9	68.1	17	7.5	21.1	41.8	78.3	48.1	2219	15156	3.96	73.7	6.5	37.1	63.6	65.6	45.9	
DAIRYLAND	STEALTH 1407	LAN	11.1	56.9	23	6.7	20.4	41.1	78.9	48.7	2281	25308	5.00	71.0	6.6	35.8	62.6	67.0	47.2	
OPEN POLLINATED	FUNKS YELLOW DENT	LAN	5.7	67.9	15	8.5	28.1	52.2	72.6	47.6	1434	8261	4.17	69.4	7.1	34.7	61.4	67.8	47.5	
WISCONSIN	PRIDE OF NO.	LAN	5.1	54.5	7	8.6	24.6	46.3	73.6	43.0	1752	8848	2.83	60.7	5.3	38.0	65.8	65.6	47.6	
PIONEER	3394	LAN	11.7	61.8	15	7.5	21.6	42.4	78.9	50.3	2223	26027	5.81	70.5	6.3	36.0	63.8	67.7	49.4	
WISCONSIN	SILVER KING	LAN	3.8	63.8	0	8.3	25.2	47.7	72.8	43.0	1643	6247	2.52	64.8	6.2	37.6	65.4	65.8	47.6	
WISCONSIN	W456	LAN	6.2	49.1	0	7.5	24.1	45.9	75.2	46.0	1859	11513	2.99	62.0	5.2	37.5	65.3	66.1	48.0	
WISCONSIN	W463	LAN	8.1	53.0	0	7.9	21.9	41.6	76.6	43.6	2128	17239	3.58	67.4	6.5	34.1	60.2	68.5	47.7	
WISCONSIN	W513	LAN	8.1	53.5	0	8.1	22.3	43.1	76.0	44.2	2028	16516	3.74	70.4	6.3	36.3	63.6	66.3	46.9	
WISCONSIN	W531	LAN	4.1	61.7	3	7.3	24.5	45.8	74.8	45.0	1844	7463	3.14	64.4	6.0	36.0	63.8	67.2	48.6	
WISCONSIN	W540xB73	LAN	11.0	62.5	18	7.4	22.1	43.4	78.9	51.4	2182	23925	5.34	74.9	6.3	35.9	61.9	66.3	45.5	
WISCONSIN	W545	LAN	7.9	56.5	5	7.8	21.6	42.5	77.6	47.3	2142	16873	3.85	67.2	6.0	36.2	64.9	68.0	50.8	
WISCONSIN FOUNDATION SEED	W5472	LAN	10.1	51.9	0	8.1	19.9	40.4	78.8	47.5	2308	23305	4.34	66.8	6.5	36.0	63.7	66.9	48.1	
WISCONSIN	W554	LAN	7.2	57.6	7	8.1	24.2	46.5	75.8	48.1	1872	13505	3.39	67.6	6.3	36.1	63.5	67.4	48.6	
WISCONSIN	W601	LAN	7.1	51.4	12	7.9	21.1	42.4	77.8	47.6	2164	15385	3.49	66.0	5.9	37.1	65.5	66.4	48.7	
WISCONSIN	W613	LAN	7.4	54.6	0	7.6	23.8	45.8	74.9	45.0	1845	13890	3.87	65.5	5.6	37.3	65.8	67.1	50.0	
WISCONSIN	W645	LAN	7.7	47.5	5	7.3	21.9	43.4	77.3	47.7	2092	16148	3.71	60.2	5.3	35.8	64.0	69.0	51.5	
MEAN			7.8	58.5	17	7.6	23.7	44.9	76.3	47.4	1969	15963	4.00	68.0	5.7	35.7	63.0	67.6	48.6	
Probability (%)																				
Genotype			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	4.5	1.3	25.1	4.5	
Environment			0.0	0.4	0.0	9.2	1.4	0.7	0.8	6.5	0.6	0.3	0.0	0.8	5.2	0.3	4.5	0.4	13.4	
Genotype x Environment			1.7	53.7	4.7	92.0	4.8	5.4	4.5	25.8	4.2	3.5	6.5	13.1	6.4	0.8	0.5	10.0	90.4	
LSD (0.10)																				
Genotype			1.5	4.2	9.7	0.3	2.2	3.2	2.2	2.1	260	4027	0.7	2.6	0.6	2.1	3.0	2.2	1.9	
Environment			0.4	2.3	7.0	0.2	0.9	1.3	0.9	1.0	104	1701	0.2	2.4	0.3	0.8	1.5	0.7	0.9	
Genotype x Environment			1.9	NS	13.2	NS	3.0	4.4	3.0	NS	351	5371	1.0	3.8	0.8	2.7	3.7	3.2	3.9	
CV (%)			18	9	58	7	9	7	3	5	13	25	18	4	10	5	4	3	6	

FIELD EXPERIMENT HISTORY

Title: Determining Corn Hybrid Maturity - Comparison of Hybrids
Experiment: 01HTG&D **Trial ID** 1305 **Year:** 1998
Personnel: J.G. Lauer, K. D. Kohn, P.J. Flannery and H. M. Darby
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 6/3

	<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: 6/24/98 **Planting Depth:** 1.5" **Row Width:** 30"
Target Plant Density: 30000 plants per acre **Planting Method:** Kinze Plot Planter
Harvest Date: 10/2/98 **Harvest Method:** Kincaid Plot Combine
N/A

Experimental Design

Design: RCB **Replications:** 3
Plot Size Seeded: 5' x 25' **Experiment Size:** 5' x 22'
Harvest Plot Size: 2.5' x 22' **Harvest Plant Density:** 31000 plants per acre

Factors/Treatments:

14 Hybrids 7 Relative Maturities:
80, 85, 90, 95, 100,105, & 110 day.

Results: Table E-16 and E-17.

Table E-16. Determining Corn Hybrid Maturity - Comparison of Hybrids

Arlington, WI - 1998

Hybrid	Relative maturity	Grain yield bu/A	Grain moisture %	Test weight lbs/bu	Lodging %	Pollen shed day of year	Kernel Milk on Day of Year				
							248 % milk	253 % milk	257 % milk	264 % milk	268 % milk
Kaltenberg K2701	80	167	18.0	58	0.0	185	0	0	0	0	0
Pioneer 3963	80	143	16.9	58	1.6	187	7	5	0	0	0
Dairyland Stealth 1280	85	198	16.6	58	2.1	191	20	2	0	0	0
Renk RK272	85	192	16.7	56	1.2	189	23	3	0	0	0
Asgrow Rx355	90	215	17.5	59	0.0	197	18	3	0	0	0
NK Brand NK2555	90	221	18.6	59	0.8	195	18	2	0	0	0
Dekalb DK471	95	268	19.0	55	0.0	197	37	20	10	2	0
Lemke SL35	95	218	18.8	53	1.6	197	30	15	5	0	0
Dekalb DK493	100	242	18.9	54	1.6	197	52	20	8	2	0
Pioneer 3751	100	254	19.8	55	0.0	196	27	15	3	0	0
Dekalb DK512	105	261	22.3	53	0.4	198	75	50	20	3	0
Golden Harvest 2387	105	246	20.3	56	3.3	192	22	5	0	0	0
Pioneer 3578	110	261	21.8	54	0.8	196	37	20	3	0	0
Terra TR1087	110	263	26.1	52	0.0	199	72	55	23	8	0
Mean		225	19.4	56	1.0	194	31	15	5	1	0
Probability(%)											
Hybrid (H)		0.0	0.0	0.0	4.5	0.0	0.0	0.0	0.0	0.0	.
LSD(0.10)											
Hybrid (H)		26.4	1.0	1.2	1.6	2.2	53.1	8.3	6.4	2.0	.
CV(%)											
		8	4	2	122	1	23	39	87	137	.

**Table E-17. Determining Corn Hybrid Maturity - Comparison of Hybrids
Arlington, WI - 1998**

Hybrid	Relative maturity	Day of year	Leaf Development			Plant height inches
			Leaf collars	Hail adjusters' method	Total leaves	
Kaltenberg K2701	80		11.0	11.5	12.1	56
Pioneer 3963	80		12.0	12.7	13.3	61
Dairyland Stealth 1280	85		11.9	12.6	13.2	63
Renk RK272	85		11.9	12.5	13.0	61
Asgrow Rx355	90		11.5	11.9	12.7	62
NK Brand NK2555	90		11.5	11.9	12.9	62
Dekalb DK471	95		10.9	11.9	12.5	59
Lemke SL35	95		12.2	12.8	12.4	60
Dekalb DK493	100		10.9	12.0	12.9	59
Pioneer 3751	100		11.5	12.4	12.8	62
Dekalb DK512	105		11.2	12.2	12.7	63
Golden Harvest 2387	105		11.7	12.7	13.6	64
Pioneer 3578	110		11.3	12.2	13.5	66
Terra TR1087	110		11.3	11.9	12.5	63
		146	4.0	5.1	5.5	7
		161	6.2	6.8	8.7	18
		176	12.3	13.5	15.0	49
		188	16.3	16.9	16.9	85
		198	18.6	18.9	18.4	103
		222				107
Kaltenberg K2701	80	146	3.8	4.7	5.3	8
Pioneer 3963	80	146	4.2	5.3	6.0	8
Dairyland Stealth 1280	85	146	4.2	5.7	6.0	8
Renk RK272	85	146	4.2	5.0	5.8	5
Asgrow Rx355	90	146	4.7	5.5	6.0	7
NK Brand NK2555	90	146	4.0	5.0	5.3	7
Dekalb DK471	95	146	3.5	4.5	5.0	5
Lemke SL35	95	146	4.3	5.5	5.2	7
Dekalb DK493	100	146	3.7	4.7	5.0	7
Pioneer 3751	100	146	4.2	5.3	5.3	8
Dekalb DK512	105	146	3.7	4.8	5.0	7
Golden Harvest 2387	105	146	4.0	5.5	5.8	7
Pioneer 3578	110	146	4.0	4.8	5.7	7
Terra TR1087	110	146	3.7	4.8	5.0	7

continued

**Table E-17. Determining Corn Hybrid Maturity - Comparison of Hybrids
Arlington, WI - 1998**

Hybrid	Relative maturity	Day of year	Leaf Development			Plant height inches
			Leaf collars	Hail adjusters' method	Total leaves	
Kaltenberg K2701	80	161	5.7	6.2	8.5	18
Pioneer 3963	80	161	6.3	7.2	9.0	21
Dairyland Stealth 1280	85	161	6.0	6.7	9.2	19
Renk RK272	85	161	6.2	6.8	8.0	18
Asgrow Rx355	90	161	6.8	6.0	8.8	20
NK Brand NK2555	90	161	6.5	7.3	9.0	18
Dekalb DK471	95	161	5.8	6.3	8.3	17
Lemke SL35	95	161	6.0	6.8	8.5	17
Dekalb DK493	100	161	6.3	7.0	9.0	16
Pioneer 3751	100	161	6.3	7.2	9.2	20
Dekalb DK512	105	161	5.8	6.8	8.3	17
Golden Harvest 2387	105	161	7.0	7.3	9.3	18
Pioneer 3578	110	161	6.3	6.8	8.8	19
Terra TR1087	110	161	6.0	6.7	7.8	17
Kaltenberg K2701	80	176	12.5	13.0	14.0	48
Pioneer 3963	80	176	13.3	14.7	16.2	58
Dairyland Stealth 1280	85	176	12.8	14.0	15.3	53
Renk RK272	85	176	13.2	14.2	15.0	51
Asgrow Rx355	90	176	12.5	13.7	14.8	50
NK Brand NK2555	90	176	12.0	13.2	15.2	49
Dekalb DK471	95	176	11.2	12.8	14.5	44
Lemke SL35	95	176	13.2	14.2	15.5	48
Dekalb DK493	100	176	11.5	12.8	15.2	45
Pioneer 3751	100	176	12.3	13.7	14.7	48
Dekalb DK512	105	176	12.2	13.0	14.7	46
Golden Harvest 2387	105	176	12.3	13.5	15.3	51
Pioneer 3578	110	176	11.8	13.0	15.5	53
Terra TR1087	110	176	12.0	13.0	14.7	47
Kaltenberg K2701	80	188	16.0	16.7	16.2	82
Pioneer 3963	80	188	18.0	18.2	17.7	87
Dairyland Stealth 1280	85	188	17.3	17.8	17.5	88
Renk RK272	85	188	17.2	17.5	17.2	87
Asgrow Rx355	90	188	16.2	16.5	16.3	87
NK Brand NK2555	90	188	16.3	15.5	16.8	87
Dekalb DK471	95	188	15.7	16.3	16.5	79
Lemke SL35	95	188	17.5	18.0	18.0	82
Dekalb DK493	100	188	15.3	16.5	16.8	80
Pioneer 3751	100	188	15.8	16.7	16.5	86
Dekalb DK512	105	188	15.7	16.7	16.7	82
Golden Harvest 2387	105	188	15.8	17.3	17.3	90
Pioneer 3578	110	188	15.8	16.8	17.3	90
Terra TR1087	110	188	15.8	16.2	16.5	81

continued

**Table E-17. Determining Corn Hybrid Maturity - Comparison of Hybrids
Arlington, WI - 1998**

Hybrid	Relative maturity	Day of year	Leaf Development			Plant height inches
			Leaf collars	Hail adjusters' method	Total leaves	
Kaltenberg K2701	80	198	17.2	17.0	16.5	89
Pioneer 3963	80	198	18.2	18.2	17.8	91
Dairyland Stealth 1280	85	198	19.3	18.7	18.0	103
Renk RK272	85	198	19.0	19.0	18.8	102
Asgrow Rx355	90	198	17.5	18.0	17.7	100
NK Brand NK2555	90	198	18.5	18.7	18.2	106
Dekalb DK471	95	198	18.2	19.3	18.3	101
Lemke SL35	95	198	19.8	19.7	19.0	104
Dekalb DK493	100	198	17.8	19.2	18.3	102
Pioneer 3751	100	198	18.8	19.2	18.3	103
Dekalb DK512	105	198	18.7	19.7	18.8	107
Golden Harvest 2387	105	198	19.5	19.8	20.0	108
Pioneer 3578	110	198	18.5	19.5	20.0	113
Terra TR1087	110	198	18.8	18.8	18.3	109
Kaltenberg K2701	80	222				91
Pioneer 3963	80	222				97
Dairyland Stealth 1280	85	222				104
Renk RK272	85	222				105
Asgrow Rx355	90	222				110
NK Brand NK2555	90	222				108
Dekalb DK471	95	222				108
Lemke SL35	95	222				104
Dekalb DK493	100	222				107
Pioneer 3751	100	222				106
Dekalb DK512	105	222				117
Golden Harvest 2387	105	222				110
Pioneer 3578	110	222				115
Terra TR1087	110	222				115
Mean			11.5	12.2	12.9	62
Probability(%)						
Hybrid (H)			0.0	0.0	0.0	0.0
Day Of Year (D)			0.0	0.0	0.0	0.0
H x D			0.0	1.2	1.7	0.0
LSD(0.10)						
Hybrid (H)			0.4	0.4	0.4	1.5
Day Of Year (D)			0.2	0.3	0.2	1.0
H x D			1.0	1.0	0.9	3.6
CV(%)						
			5	6	5	4

Field Experiment History

Title: The Effects of Plot Size on Maize.
Experiment: 01 Plot Size
Personnel: J.G. Lauer, P.J. Flannery, K.D. Kohn, and H.M. Darby
Supported by: Hatch

Year: 1998

Experimental Procedure

Exp. Design: RCB Split Plot
Replicates 3
Variables Hybrids:

Asgrow Rx492	Lemke SL45
Carhart's Blue Top CX100A	Linco L4396
Dahlco 2540	NK Brand N4242
Dairyland Stealth 1402	Pioneer 36H36
Dekalb DK493	Renk RK543
Golden Harvest H2387	Spangler 4100

Plot Size:

2 Rows
4 Rows

Area Planted: 5' x 25' (2 row plot) and 10' x 25' (4 row plot)
Planting Equip: 4-row Kinze plot planter
Planting Rate: 28,900 seeds/A
Row Spacing: 30"
Harvest Equip: Kincaid Plot Combine

Field Information

Location	Soil Type	Previous Crop	Planting Date	Harvest Dates	Ave. Final Stand (plants/A)	Tillage Operations	--Soil Test-- pH P K --(ppm)--	--Nitrogen Fertilizer-- actual form time lbs/A	Weed Control	Insecticides	
Arlington	Plano Silt Loam	Soybean	24-Apr	29-Sep	30622	Chisel Plow Field Cultivator	6.9 91 292	125 9 46-0-0 6-24-24	preplant planting	Lasso 2 qts/A Bladex 90DF 2.2 lbs/A	None
Janesville	Plano Silt Loam	Corn	28-Apr	12-Oct	29146	Chisel Plow Field Cultivator	6.3 41 215	160 9 82-0-0 6-24-24	preplant planting	Harness 2.75 pt/A Hornet 4.5 oz/A	Lorsban 7lbs/A
Lancaster	Rozetta Silt Loam	Soybean	6-May	8-Oct	27205	Soil finisher (2x)	7.3 50 170	140 9 82-0-0 6-24-24	preplant planting	Roundup 1.5 qts/A Dual II 2 pts/A Buctril 1.5 pts/A Atrazine .75 pts/A	None

Results: Table E-18.

**Table E-18. Plot Size Effects on Maize.
Arlington, WI; Janesville, WI; and Lancaster, WI - 1998**

Location	Hybrid	Plot size	Grain yield bu/A	Grain moisture %	Test weight lbs/bu	Lodging %	Plant height inches
		2 Row	219	19.4	55	4.4	105
		4 Row	222	19.4	55	4.3	105
	Asgrow Rx492		212	20.0	59	3.7	107
	Carhart's Blue Top CX100A		218	18.7	54	3.4	103
	Dahlco 2540		202	20.6	54	0.8	104
	Dairyland Stealth 1402		227	20.6	54	2.3	101
	Dekalb DK493		232	19.1	55	5.6	106
	Golden Harvest H2387		219	20.8	55	9.9	106
	Lemke SL45		223	18.5	54	7.8	102
	Linco L4396		225	18.3	55	4.8	108
	NK Brand N4242		226	18.4	56	3.6	107
	Pioneer 36H36		228	19.9	56	3.9	107
	Renk RK543		218	20.7	57	0.9	107
	Spangler 4100		219	17.7	54	5.6	105
	Asgrow Rx492	2 Row	209	19.9	59	3.4	107
	Asgrow Rx492	4 Row	216	20.0	59	4.1	106
	Carhart's Blue Top CX100A	2 Row	219	18.7	54	3.7	103
	Carhart's Blue Top CX100A	4 Row	217	18.7	54	3.1	103
	Dahlco 2540	2 Row	196	20.4	55	0.7	104
	Dahlco 2540	4 Row	208	20.8	54	0.8	104
	Dairyland Stealth 1402	2 Row	222	21.0	54	3.0	101
	Dairyland Stealth 1402	4 Row	232	20.3	54	1.6	101
	Dekalb DK493	2 Row	234	19.1	55	4.1	104
	Dekalb DK493	4 Row	230	19.0	55	7.1	107
	Golden Harvest H2387	2 Row	216	20.7	55	11.9	106
	Golden Harvest H2387	4 Row	222	20.9	55	8.0	106
	Lemke SL45	2 Row	221	18.4	54	8.8	102
	Lemke SL45	4 Row	225	18.5	54	6.7	102
	Linco L4396	2 Row	223	18.2	55	3.0	108
	Linco L4396	4 Row	226	18.3	55	6.5	108
	NK Brand N4242	2 Row	224	18.4	57	3.1	109
	NK Brand N4242	4 Row	227	18.3	56	4.0	106
	Pioneer 36H36	2 Row	227	19.9	56	2.6	106
	Pioneer 36H36	4 Row	228	19.9	56	5.1	107
	Renk RK543	2 Row	213	20.8	56	0.9	108
	Renk RK543	4 Row	222	20.6	57	0.8	106
	Spangler 4100	2 Row	221	17.6	54	7.4	107
	Spangler 4100	4 Row	217	17.8	54	3.8	103

continued

**Table E-18. Plot Size Effects on Maize.
Arlington, WI; Janesville, WI; and Lancaster, WI - 1998**

Location	Hybrid	Plot size	Grain yield bu/A	Grain moisture %	Test weight lbs/bu	Lodging %	Plant height inches
Arlington			240	19.9	54	9.2	107
Janesville			206	17.8	58	2.3	103
Lancaster			216	20.5	54	1.5	105
Arlington		2 Row	238	19.9	54	8.7	108
Arlington		4 Row	242	20.0	54	9.7	106
Janesville		2 Row	204	18.0	58	2.9	103
Janesville		4 Row	208	17.7	58	1.7	103
Lancaster		2 Row	214	20.5	54	1.5	105
Lancaster		4 Row	217	20.6	54	1.5	105
Arlington	Asgrow Rx492		230	20.2	58	8.8	109
Arlington	Carhart's Blue Top CX100A		247	19.5	53	4.5	106
Arlington	Dahlco 2540		211	21.9	52	0.6	107
Arlington	Dairyland Stealth 1402		240	20.5	53	5.7	104
Arlington	Dekalb DK493		253	20.4	53	12.2	106
Arlington	Golden Harvest H2387		230	21.4	54	24.7	108
Arlington	Lemke SL45		252	19.1	53	16.0	106
Arlington	Linco L4396		248	18.3	54	9.2	111
Arlington	NK Brand N4242		245	18.5	56	8.3	108
Arlington	Pioneer 36H36		249	20.5	55	5.6	108
Arlington	Renk RK543		240	21.1	56	0.4	109
Arlington	Spangler 4100		231	17.8	54	14.0	108
Janesville	Asgrow Rx492		195	18.2	62	1.2	104
Janesville	Carhart's Blue Top CX100A		199	17.3	56	3.0	101
Janesville	Dahlco 2540		190	18.0	58	0.7	100
Janesville	Dairyland Stealth 1402		217	18.8	57	0.7	100
Janesville	Dekalb DK493		215	17.0	58	3.7	105
Janesville	Golden Harvest H2387		212	19.4	57	2.7	104
Janesville	Lemke SL45		205	17.3	56	4.4	101
Janesville	Linco L4396		208	17.1	57	3.9	105
Janesville	NK Brand N4242		210	17.2	59	0.9	106
Janesville	Pioneer 36H36		212	18.4	59	4.4	104
Janesville	Renk RK543		203	18.9	59	0.9	104
Janesville	Spangler 4100		208	16.5	56	1.6	105
Lancaster	Asgrow Rx492		211	21.6	57	1.2	108
Lancaster	Carhart's Blue Top CX100A		208	19.3	53	2.6	102
Lancaster	Dahlco 2540		205	21.9	53	1.0	104
Lancaster	Dairyland Stealth 1402		225	22.7	52	0.5	99
Lancaster	Dekalb DK493		228	19.8	54	1.0	106
Lancaster	Golden Harvest H2387		215	21.6	54	2.4	107
Lancaster	Lemke SL45		211	19.1	53	2.9	99
Lancaster	Linco L4396		218	19.4	53	1.2	108
Lancaster	NK Brand N4242		221	19.5	55	1.4	109
Lancaster	Pioneer 36H36		221	20.8	54	1.7	108
Lancaster	Renk RK543		209	22.2	55	1.2	108
Lancaster	Spangler 4100		218	18.7	52	1.2	102

continued

**Table E-18. Plot Size Effects on Maize.
Arlington, WI; Janesville, WI; and Lancaster, WI - 1998**

Location	Hybrid	Plot size	Grain yield bu/A	Grain moisture %	Test weight lbs/bu	Lodging %	Plant height inches
Arlington	Asgrow Rx492	2 Row	226	20.4	58	7.8	108
Arlington	Asgrow Rx492	4 Row	234	20.0	58	9.8	109
Arlington	Carhart's Blue Top CX100A	2 Row	243	19.6	53	6.0	107
Arlington	Carhart's Blue Top CX100A	4 Row	252	19.3	53	3.0	105
Arlington	Dahlco 2540	2 Row	203	21.4	53	1.3	107
Arlington	Dahlco 2540	4 Row	219	22.4	52	0.0	106
Arlington	Dairyland Stealth 1402	2 Row	238	20.8	53	7.6	106
Arlington	Dairyland Stealth 1402	4 Row	241	20.1	53	3.8	102
Arlington	Dekalb DK493	2 Row	256	20.4	53	6.0	102
Arlington	Dekalb DK493	4 Row	250	20.4	53	18.4	110
Arlington	Golden Harvest H2387	2 Row	227	21.2	54	29.1	108
Arlington	Golden Harvest H2387	4 Row	233	21.5	53	20.3	108
Arlington	Lemke SL45	2 Row	251	18.8	53	16.3	107
Arlington	Lemke SL45	4 Row	253	19.4	53	15.8	106
Arlington	Linco L4396	2 Row	246	18.2	54	4.3	114
Arlington	Linco L4396	4 Row	251	18.3	54	14.1	108
Arlington	NK Brand N4242	2 Row	249	18.5	56	5.5	109
Arlington	NK Brand N4242	4 Row	241	18.4	55	11.1	106
Arlington	Pioneer 36H36	2 Row	247	20.5	55	0.4	108
Arlington	Pioneer 36H36	4 Row	252	20.6	55	10.7	108
Arlington	Renk RK543	2 Row	233	21.4	56	0.9	114
Arlington	Renk RK543	4 Row	248	20.9	56	0.0	104
Arlington	Spangler 4100	2 Row	237	17.2	54	18.9	111
Arlington	Spangler 4100	4 Row	226	18.3	53	9.2	105
Janesville	Asgrow Rx492	2 Row	191	18.4	61	1.4	102
Janesville	Asgrow Rx492	4 Row	200	18.1	62	0.9	105
Janesville	Carhart's Blue Top CX100A	2 Row	200	17.4	56	3.7	101
Janesville	Carhart's Blue Top CX100A	4 Row	198	17.2	56	2.3	101
Janesville	Dahlco 2540	2 Row	186	18.1	58	0.0	101
Janesville	Dahlco 2540	4 Row	194	17.9	58	1.4	99
Janesville	Dairyland Stealth 1402	2 Row	209	19.1	58	1.4	99
Janesville	Dairyland Stealth 1402	4 Row	224	18.5	56	0.0	102
Janesville	Dekalb DK493	2 Row	218	17.0	58	5.5	104
Janesville	Dekalb DK493	4 Row	212	17.1	58	1.8	105
Janesville	Golden Harvest H2387	2 Row	216	19.5	57	3.2	103
Janesville	Golden Harvest H2387	4 Row	208	19.3	57	2.3	104
Janesville	Lemke SL45	2 Row	201	17.4	57	6.4	101
Janesville	Lemke SL45	4 Row	210	17.3	56	2.3	100
Janesville	Linco L4396	2 Row	204	17.3	57	3.7	104
Janesville	Linco L4396	4 Row	211	17.0	57	4.1	107
Janesville	NK Brand N4242	2 Row	204	17.2	59	1.4	109
Janesville	NK Brand N4242	4 Row	217	17.1	58	0.5	103
Janesville	Pioneer 36H36	2 Row	215	18.4	59	5.5	103
Janesville	Pioneer 36H36	4 Row	209	18.4	58	3.2	105
Janesville	Renk RK543	2 Row	196	19.2	59	0.9	103
Janesville	Renk RK543	4 Row	211	18.6	59	0.9	105
Janesville	Spangler 4100	2 Row	207	16.6	56	2.3	106
Janesville	Spangler 4100	4 Row	208	16.4	57	0.9	103

continued

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Arlington, WI; Janesville, WI; and Lancaster, WI - 1998**

Location	Hybrid	Plot size	Grain yield bu/A	Grain moisture %	Test weight lbs/bu	Lodging %	Plant height inches
Lancaster	Asgrow Rx492	2 Row	209	21.1	57	0.9	110
Lancaster	Asgrow Rx492	4 Row	213	22.0	57	1.5	105
Lancaster	Carhart's Blue Top CX100A	2 Row	215	19.2	54	1.4	100
Lancaster	Carhart's Blue Top CX100A	4 Row	202	19.5	53	3.8	105
Lancaster	Dahlco 2540	2 Row	199	21.8	53	1.0	103
Lancaster	Dahlco 2540	4 Row	210	21.9	53	1.0	106
Lancaster	Dairyland Stealth 1402	2 Row	220	23.0	52	0.0	98
Lancaster	Dairyland Stealth 1402	4 Row	230	22.4	53	0.9	100
Lancaster	Dekalb DK493	2 Row	227	20.0	54	1.0	107
Lancaster	Dekalb DK493	4 Row	229	19.5	54	1.0	105
Lancaster	Golden Harvest H2387	2 Row	205	21.4	54	3.3	107
Lancaster	Golden Harvest H2387	4 Row	225	21.9	54	1.5	107
Lancaster	Lemke SL45	2 Row	209	19.2	54	3.8	99
Lancaster	Lemke SL45	4 Row	212	18.9	53	1.9	99
Lancaster	Linco L4396	2 Row	220	19.1	52	0.9	106
Lancaster	Linco L4396	4 Row	216	19.6	53	1.4	109
Lancaster	NK Brand N4242	2 Row	219	19.5	55	2.4	109
Lancaster	NK Brand N4242	4 Row	223	19.6	55	0.5	108
Lancaster	Pioneer 36H36	2 Row	220	20.9	55	1.9	107
Lancaster	Pioneer 36H36	4 Row	223	20.8	54	1.4	110
Lancaster	Renk RK543	2 Row	211	21.9	55	1.0	108
Lancaster	Renk RK543	4 Row	207	22.4	55	1.4	108
Lancaster	Spangler 4100	2 Row	218	18.8	52	0.9	103
Lancaster	Spangler 4100	4 Row	218	18.6	52	1.4	101
Mean			221	19.4	55	4.3	105
Probability (%)							
Hybrid (H)			0.0	0.0	0.0	0.2	0.0
Size (S)			4.0	86.6	9.9	92.3	42.1
H x S			77.1	45.8	28.5	82.7	40.5
Location (L)			0.0	0.0	0.0	0.0	0.0
H x L			18.4	0.0	0.0	0.9	42.1
S x L			92.2	0.0	43.9	59.4	6.8
H x S x L			92.0	52.1	50.7	84.8	23.2
LSD(0.10)							
Hybrid (H)			7.3	0.3	0.4	3.6	2.1
Size (S)			3.0	NS	0.2	NS	NS
H x S			NS	NS	NS	NS	NS
Location (L)			3.6	0.2	0.2	1.8	1.1
H x L			NS	0.8	1.0	9.4	NS
S x L			NS	0.8	NS	NS	5.5
CV(%)			6	3	1	151	4

FIELD EXPERIMENT HISTORY

Title: Plant Density and Hybrid Influence on Corn Grain and Silage Performance
Experiment: 02PD **Trial ID** 1314 **Year:** 1998
Personnel: J.G. Lauer, K.D. Kohn, P.J. Flannery and H.M. Darby
Location: Arlington, WI **County:** Columbia
Supported By: Hatch

Site Information

Field: 407 East **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 6/17/98
Analysis: **Rate lbs/A:** **Date:**
Fertilizer: **Preplant :** 46-0-0 325 4 /22/98
Starter : 6-24-24 150 5 /12/98
Post plant : N/A N/A N/A
Manure: None
Herbicide: Lasso @ 2 qts/A; Bladex **Insecticide:** Lorsban @ 7 lbs/A
90DF @ 2.2 lb/A; **Hybrid:**
Irrigation: None
Planting Date: 5/12/98 **Planting Depth:** 1.5" **Row Width:** 30"
Target Plant Density: See Factors **Planting Method:** Kinze Plot Planter
Harvest Date: G:10/19/98 **Harvest Method:** G:Kincaid Plot Combine
S: 9/25/98 S: NH 707 Chopper
Notes: N/A

Experimental Design

Design: RCB **Replications:** 3
Plot Size Seeded: 25' x 5' **Experiment Size:** 22' x 5'
Harvest Plot Size: 22' x 5' **Harvest Plant Density:** N/A plants per acre

Factors/Treatments:

Hybrid: Density:
Dekalb 493, Dekalb 493BT, 15000, 20000, 25000,
Mycogen TMF 106 and 30000, 35000, 40000, and
Mycogen TMF 108 45000 plants/A

Results: Tables E-19.

Table E-19. Plant Density and Hybrid Influence on Corn Grain and Silage Performance.
Arlington, WI - 1998.

Density	Hybrid	Silage																		
		Grain				Plant height inches	Seeds planted plants/A	Stand		Harvest ears/A	Dry Matter		Kernel milk stage %	Crude protein %	In Vitro		Cell Wall Digest %	Milk per		
		Yield bu/A	Moist %	Test Wt lbs/bu	Lodge %			Emerg plants/A	Harvest plants/A		yield tons/A	Moist %			ADF %	NDF %		Digest %	Ton lbs/T	Acres lbs/A
15000		187	23.5	52	3.6	117	17425	16778	17186	21859	9.7	62.7	16.3	7.4	21.3	40.3	79.1	48.1	2329	22710
20000		203	23.7	53	6.0	117	22728	21450	22176	24288	10.3	63.6	15.0	7.4	21.8	41.2	78.6	48.0	2261	23406
25000		207	23.5	53	6.7	115	28789	27510	26120	27225	10.9	63.2	14.2	7.2	21.8	41.0	78.1	46.7	2242	24869
30000		209	23.1	53	9.9	117	34092	31638	29057	29898	10.5	64.0	9.6	7.1	23.3	42.9	76.7	45.7	2081	21890
35000		215	23.1	53	8.0	116	40153	37012	33000	33875	11.4	62.2	6.3	7.0	22.4	41.6	77.2	45.2	2164	24789
40000		203	23.8	53	12.9	116	46214	41936	35772	36020	11.4	63.4	9.2	6.9	23.8	43.4	76.0	44.7	2017	23092
45000		198	23.6	53	15.3	119	52274	47279	39369	39600	11.6	63.0	8.3	7.1	23.1	42.4	76.4	44.3	2081	24513
	Dekalb DK493	218	20.5	54	7.9	112	34525	31932	31793	33349	10.4	64.1	8.8	6.9	22.0	41.1	78.0	46.3	2228	23272
	Dekalb DK493BT	224	19.7	55	9.1	113	34525	32369	31416	33330	11.0	63.0	10.2	6.9	21.1	39.7	78.6	46.2	2329	25583
	Mycogen TMF106	171	25.9	50	17.1	123	34525	30868	25495	26815	10.9	62.7	11.2	7.5	23.8	43.6	76.4	45.8	2029	22420
	Mycogen TMF108	201	27.6	52	1.5	120	34525	32604	28012	29002	11.0	62.7	14.8	7.2	23.1	42.9	76.8	46.0	2086	22953
15000	Dekalb DK493	202	21.0	54	2.3	111	17425	16415	17094	21648	10.1	61.9	8.3	7.3	19.9	38.5	80.0	47.8	2461	24658
20000	Dekalb DK493	204	20.3	54	1.5	111	22728	21434	26070	28182	10.3	64.5	18.3	7.3	21.7	40.3	79.0	47.9	2318	24010
25000	Dekalb DK493	218	20.6	54	5.9	111	28789	27053	28710	29898	10.5	63.0	8.3	7.1	21.2	40.3	78.5	46.5	2293	24232
30000	Dekalb DK493	235	20.3	55	5.5	113	34092	31535	31350	31878	9.7	67.0	13.3	6.9	23.0	42.8	77.2	46.7	2112	20399
35000	Dekalb DK493	234	19.9	55	6.5	110	40153	36838	34584	35244	10.5	64.3	5.0	6.7	21.9	41.2	77.5	45.5	2199	23256
40000	Dekalb DK493	218	20.8	55	14.0	112	46214	41005	36498	37092	11.3	62.8	5.0	6.5	22.4	41.7	77.5	46.0	2174	24590
45000	Dekalb DK493	215	20.6	54	19.3	115	52274	49244	41910	42372	10.6	64.9	3.3	6.7	23.6	42.8	76.0	43.9	2038	21759
15000	Dekalb DK493BT	196	20.3	53	4.9	111	17425	16983	18084	25146	10.6	62.4	20.0	7.1	20.0	37.2	80.5	47.7	2544	26967
20000	Dekalb DK493BT	228	20.6	54	3.7	110	22728	21402	25146	27258	10.6	63.6	15.0	7.3	20.4	39.2	79.9	48.8	2422	25762
25000	Dekalb DK493BT	228	19.7	55	1.8	112	28789	28031	28182	30162	10.7	64.2	8.3	6.9	20.2	38.5	79.6	47.0	2434	26060
30000	Dekalb DK493BT	232	19.4	55	8.5	112	34092	32230	30888	32274	10.6	64.3	6.7	6.9	21.6	40.6	78.4	46.8	2277	23982
35000	Dekalb DK493BT	236	18.7	55	10.3	114	40153	37343	35112	36366	11.3	62.2	6.7	7.0	20.6	39.1	78.6	45.3	2352	26862
40000	Dekalb DK493BT	221	19.9	55	11.9	112	46214	42615	37752	37884	11.3	61.8	13.3	6.6	22.6	42.2	76.6	44.6	2104	23751
45000	Dekalb DK493BT	226	19.6	55	22.3	118	52274	47981	40788	41052	11.8	62.7	1.7	6.7	22.0	41.0	76.8	43.5	2170	25695
15000	Mycogen TMF106	165	25.2	50	4.5	123	17425	16036	14652	17886	8.9	63.6	8.3	7.7	22.8	42.8	77.8	48.2	2144	19081
20000	Mycogen TMF106	186	25.7	50	18.8	123	22728	20960	18282	20262	10.1	63.2	10.0	7.6	23.3	43.1	77.5	47.8	2114	21371
25000	Mycogen TMF106	175	26.3	50	18.9	119	28789	27242	22968	23958	11.4	64.0	20.0	7.6	24.4	44.7	75.8	45.8	1944	22590
30000	Mycogen TMF106	166	25.2	50	24.0	124	34092	30304	26268	27126	11.3	60.2	10.0	7.6	23.5	42.9	76.1	44.4	2043	23087
35000	Mycogen TMF106	172	26.4	50	13.5	124	40153	35355	29238	30030	11.6	60.4	6.7	7.4	24.0	43.7	76.0	45.0	2000	23502
40000	Mycogen TMF106	168	25.6	50	21.3	123	46214	41384	32406	32802	11.4	64.8	11.7	7.3	25.4	45.3	75.0	44.8	1873	21264
45000	Mycogen TMF106	163	26.8	50	18.9	123	52274	44793	34650	35640	12.2	63.0	11.7	7.6	23.2	42.5	76.5	44.7	2085	25717
15000	Mycogen TMF108	185	27.4	52	2.6	124	17425	17677	14916	18876	9.1	62.9	28.3	7.4	22.4	42.7	78.1	48.6	2167	18845
20000	Mycogen TMF108	196	28.3	52	0.0	124	22728	22002	19206	21450	10.2	63.0	16.7	7.4	21.8	42.0	78.0	47.6	2191	22481
25000	Mycogen TMF108	206	27.3	52	0.0	117	28789	27716	24618	24882	11.2	61.5	20.0	7.2	21.3	40.6	78.7	47.5	2296	25833
30000	Mycogen TMF108	205	27.5	52	1.5	121	34092	32482	27720	28314	10.6	64.4	8.3	7.2	25.0	45.2	75.2	45.1	1892	20092
35000	Mycogen TMF108	217	27.4	52	1.6	116	40153	38511	33066	33858	12.1	61.7	6.7	6.8	23.0	42.3	76.7	44.8	2106	25537
40000	Mycogen TMF108	208	27.8	52	4.3	119	46214	42741	36432	36300	11.6	64.1	6.7	7.1	24.6	44.2	74.9	43.3	1919	22155
45000	Mycogen TMF108	187	27.3	52	0.6	119	52274	47097	40128	39336	12.0	61.2	16.7	7.2	23.7	43.3	76.2	45.0	2030	25065
	Mean	203	23.5	53	8.9	117	34525	31943	29179	30624	10.8	63.1	11.3	7.1	22.5	41.8	77.5	46.1	2168	23601
Probability(%)																				
Plant Density (D)		0.2	15.7	7.0	0.0	55.8	.	0.0	0.0	0.0	0.0	56.3	4.8	0.1	2.7	12.5	0.0	0.0	0.5	32.8
Hybrid (H)		0.0	0.0	0.0	0.0	0.1	.	0.3	0.0	0.0	20.2	38.7	58.7	0.2	2.9	1.0	3.2	71.4	1.7	15.6
D x H		48.2	2.7	5.8	0.1	77.5	.	3.8	2.0	0.6	25.6	18.0	29.5	83.4	96.2	96.4	82.6	89.8	92.3	73.7
LSD (0.10)																				
Plant Density (D)		4.7	NS	0.2	3.2	NS	.	673	1133	1171	0.4	NS	6.0	0.2	1.4	NS	1.1	1.2	143	NS
Hybrid (H)		7.8	0.3	0.0	2.4	2.5	.	508	857	886	NS	NS	NS	0.2	1.0	1.5	0.8	NS	108	NS
D x H		NS	0.9	0.8	6.3	NS	.	1341	2258	2335	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
CV(%)																				
		7	3	1	52	4	.	3	6	6	8	4	77	4	9	7	2	4	10	16

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:

Planting Date

Hybrid

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 %	Dry Matter		Ear:Stover ratio %	Crude protein %	Stover		<i>In Vitro</i> digestibility %	Cell Wall digestibility %
					yield tons/A	Moisture %			ADF %	NDF %		
.	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 %	Stover			Cell Wall digestibility %	
					yield tons/A	Moisture %		Crude protein %	ADF %	NDF %		<i>In Vitro</i> digestibility %
.	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								
					Dry Matter yield tons/A	Moisture %	Crude protein %	ADF %	NDF %	<i>In Vitro</i> digestibility %	Cell Wall digestibility %	Milk Per	
												ton lbs/T	acre 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

FIELD EXPERIMENT HISTORY

Title: Plant Density, Planting Date, and Hybrid Influence on Corn Grain and Silage
Experiment: 04PDxDOP **Trial ID** 1315 **Year:** 1998
Personnel: J.G. Lauer, K.D. Kohn, P.J. Flannery and H.M. Darby
Location: Arlington, WI **County:** Columbia
Supported By: Hatch

Site Information

Field: 392 West **Previous Crop:** Soybean **Soil Type:** Plano
Soil Test: **Date:** 10/1 /96 **pH** 6.8 **OM (%)** 3 **P (ppm)** 42 **K (ppm)** 165

Plot Management

Tillage Operations: Fall Chisel Plow Field Cultivator

	<u>Analysis:</u>	<u>Rate lbs/A:</u>	<u>Date:</u>
Fertilizer:			
Preplant :	33-0-0	300	4 /29/98
Starter :	6-24-24	150	N/A
Post plant :	N/A	N/A	N/A
Manure:		None	

Herbicide: Lasso @ 2qts/A; Bladex 90DF @ 2.2 lb/A **Insecticide:** None
Hybrid:

Irrigation: None

Planting Date: Varies **Planting Depth:** 1.5" **Row Width:** 30"

Target Plant Density: See Factors **Planting Method:** Kinze Plot Planter

Harvest Date: G:10/20/98 **Harvest Method:** G:Kincaid Plot Combine
S: 9/23/98 S:NH 707 Chopper

Notes: N/A

Experimental Design

Design: RCB Split Plot **Replications:** 3
Plot Size Seeded: 20' x 25' **Experiment Size:** 5' x 22'
Harvest Plot Size: 5' x 22' **Harvest Plant Density:** Varies
Factors/Treatments:

Planting Date:
May 1 and May 20

Density:
20000, 30000 and 40000 plants/A

Hybrids:
Mycogen TMF 106,
Mycogen TMF 108,
Pioneer 3563 and
Pioneer 35N05

Results: Table E-28.

**Table E-28. Plant Density, Planting Date, and Hybrid Influence on Corn Silage Yield and Quality and Corn Grain
Arlington, WI - 1998**

Date of planting	Target plant density	Hybrid	Grain				Plant height inches	Seeds planted seeds/A	Stand		Harvest ears ears/A
			Yield bu/A	Moisture %	Test Wt lbs/bu	Lodging %			Emerg seeds/A	Harvest plants/A	
May 1			219	19.9	58	9.7	111	35904	32329	28309	29244
May 20			207	27.1	53	7.8	120	35904	33421	27946	28556
	20000		199	23.7	55	3.5	114	23760	21924	19553	22019
	30000		221	23.5	56	8.0	117	35640	32880	28529	28784
	40000		217	23.3	55	14.6	116	48312	43820	36300	35896
May 1	20000		204	19.7	57	4.1	109	23760	21557	19784	22886
May 20	20000		195	27.7	53	3.0	119	23760	22292	19322	21153
May 1	30000		226	20.0	58	9.5	112	35640	32282	28760	29156
May 20	30000		216	27.0	53	6.6	121	35640	33479	28298	28413
May 1	40000		226	19.9	58	15.5	113	48312	43148	36383	35690
May 20	40000		209	26.8	53	13.7	120	48312	44492	36218	36102
		Mycogen TMF106	193	24.9	52	16.6	121	35904	30641	26235	26697
		Mycogen TMF108	205	25.4	55	14.4	115	35904	33066	27863	28974
		Pioneer 3563	222	22.0	57	1.0	113	35904	33440	29150	29931
		Pioneer 35N05	231	21.9	57	2.8	114	35904	34353	29260	29997
May 1		Mycogen TMF106	204	20.1	54	15.8	117	35904	30481	26664	27478
May 20		Mycogen TMF106	182	29.6	50	17.4	125	35904	30800	25806	25916
May 1		Mycogen TMF108	206	21.0	57	17.7	110	35904	32351	27940	28996
May 20		Mycogen TMF108	204	29.8	52	11.2	120	35904	33781	27786	28952
May 1		Pioneer 3563	227	19.1	60	1.2	109	35904	32527	29304	29678
May 20		Pioneer 3563	216	24.8	55	0.9	117	35904	34353	28996	30184
May 1		Pioneer 35N05	237	19.4	59	4.0	110	35904	33957	29326	30822
May 20		Pioneer 35N05	225	24.4	55	1.6	118	35904	34749	29194	29172
	20000	Mycogen TMF106	196	24.8	52	7.2	117	23760	20493	19272	21186
	30000	Mycogen TMF106	198	24.7	52	12.6	124	35640	31680	26961	26829
	40000	Mycogen TMF106	184	25.1	52	30.0	121	48312	39749	32472	32076
	20000	Mycogen TMF108	197	26.2	54	3.3	117	23760	22127	19602	22737
	30000	Mycogen TMF108	217	25.2	55	18.0	113	35640	33000	28182	29073
	40000	Mycogen TMF108	202	24.7	55	22.0	115	48312	44072	35805	35112
	20000	Pioneer 3563	199	21.6	57	0.3	111	23760	22572	19602	21945
	30000	Pioneer 3563	233	22.5	57	0.9	115	35640	33083	29403	29667
	40000	Pioneer 3563	232	21.8	58	1.9	113	48312	44666	38445	38181
	20000	Pioneer 35N05	205	22.1	57	3.2	112	23760	22506	19734	22209
	30000	Pioneer 35N05	237	21.7	57	0.6	115	35640	33759	29568	29568
	40000	Pioneer 35N05	250	21.8	57	4.5	116	48312	46794	38478	38214

continued

**Table E-28. Plant Density, Planting Date, and Hybrid Influence on Corn Silage Yield and Quality and Corn Grain
Arlington, WI - 1998**

Date of planting	Target plant density	Hybrid	Grain				Plant height inches	Seeds planted seeds/A	Stand		Harvest ears ears/A
			Yield bu/A	Moisture %	Test Wt lbs/bu	Lodging %			Emerg'd seeds/A	Harvest plants/A	
May 1	20000	Mycogen TMF106	211	20.1	54	3.9	112	23760	20361	19932	22176
May 20	20000	Mycogen TMF106	180	29.5	51	10.5	123	23760	20625	18612	20196
May 1	30000	Mycogen TMF106	203	20.4	54	10.8	122	35640	31251	27192	27786
May 20	30000	Mycogen TMF106	193	29.0	51	14.4	127	35640	32109	26730	25872
May 1	40000	Mycogen TMF106	198	19.9	55	32.8	117	48312	39831	32868	32472
May 20	40000	Mycogen TMF106	171	30.2	50	27.2	125	48312	39666	32076	31680
May 1	20000	Mycogen TMF108	197	20.9	56	6.0	112	23760	21483	19734	24354
May 20	20000	Mycogen TMF108	197	31.5	52	0.7	122	23760	22770	19470	21120
May 1	30000	Mycogen TMF108	217	21.0	57	25.4	105	35640	32934	28314	28182
May 20	30000	Mycogen TMF108	218	29.3	52	10.6	120	35640	33066	28050	29964
May 1	40000	Mycogen TMF108	205	21.0	57	21.8	113	48312	42636	35772	34452
May 20	40000	Mycogen TMF108	198	28.4	53	22.2	118	48312	45507	35838	35772
May 1	20000	Pioneer 3563	196	18.8	60	0.7	106	23760	22143	19404	21054
May 20	20000	Pioneer 3563	203	24.5	55	0.0	116	23760	23001	19800	22836
May 1	30000	Pioneer 3563	242	19.4	60	0.5	110	35640	31977	29568	30162
May 20	30000	Pioneer 3563	223	25.6	55	1.4	120	35640	34188	29238	29172
May 1	40000	Pioneer 3563	243	19.1	60	2.4	111	48312	43461	38940	37818
May 20	40000	Pioneer 3563	222	24.5	55	1.4	115	48312	45870	37950	38544
May 1	20000	Pioneer 35N05	210	19.0	60	5.7	109	23760	22242	20064	23958
May 20	20000	Pioneer 35N05	200	25.2	54	0.7	114	23760	22770	19404	20460
May 1	30000	Pioneer 35N05	243	19.4	59	1.3	112	35640	32967	29964	30492
May 20	30000	Pioneer 35N05	231	24.0	55	0.0	118	35640	34551	29172	28644
May 1	40000	Pioneer 35N05	256	19.7	59	4.9	110	48312	46662	37950	38016
May 20	40000	Pioneer 35N05	244	23.9	55	4.1	122	48312	46926	39006	38412
		Mean	213	23.5	55	8.7	116	35904	32875	28127	28900
Probability(%)											
Date of Planting (DOP)			13.5	0.1	0.2	48.6	0.8	42.3	1.1	53.7	25.4
Hybrid (H)			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Plant Density (PD)			0.0	24.6	34.3	0.0	8.8	0.0	0.0	0.0	0.0
H x PD			0.0	1.5	87.7	0.0	8.0	0.0	0.0	0.0	1.5
DOP x H			11.3	0.0	25.0	21.7	84.1	0.0	18.4	79.4	24.0
DOP x PD			45.9	1.3	84.7	86.8	67.5	0.0	60.5	89.0	16.2
DOP x H x PD			41.6	1.5	10.4	22.6	20.7	0.0	30.7	76.9	28.7
LSD(0.10)											
Date of Planting (DOP)			NS	0.4	0.3	NS	1.7	NS	433	NS	NS
Hybrid (H)			6.8	0.4	0.4	3.4	2.4	0.0	612	688	1068
Plant Density (PD)			5.9	NS	NS	2.9	2.1	0.0	530	595	925
H x PD			17.6	1.0	NS	8.7	6.3	0.0	1592	1788	2777
DOP x H			NS	21.1	NS	NS	NS	0.0	NS	NS	NS
DOP x PD			NS	25.9	NS	NS	NS	0.0	NS	NS	NS
CV(%)			6	3	1	69	4	0	3	4	7

**Table E-28. Plant Density, Planting Date, and Hybrid Influence on Corn Silage Yield and Quality and Corn Grain
Arlington, WI - 1998**

Date of planting	Density	Hybrid	Silage									
			Dry matter		Kernel Milk	Crude			<i>In Vitro</i> Digest	Cell Wall Digest	Milk Per	
			yield tons/A	Moisture %		Protien %	ADF %	NDF %			Ton lbs/T	Acre lbs/A
May 1			10.9	55.3	34	6.7	19.0	39.5	80.4	50.2	2436	26697
May 20			10.7	58.9	46	6.7	21.3	41.7	79.2	50.1	2274	24393
	20000		10.5	58.0	43	6.8	20.0	40.3	80.1	50.8	2386	25155
	30000		10.8	57.0	39	6.7	20.0	40.5	80.1	51.0	2376	25989
	40000		11.0	56.3	38	6.6	20.5	40.9	79.1	48.8	2302	25491
May 1	20000		10.2	56.9	40	6.7	18.8	39.2	80.6	50.6	2461	25119
May 20	20000		10.8	59.0	46	6.8	21.2	41.4	79.7	50.9	2311	25191
May 1	30000		11.1	55.3	32	6.7	18.9	39.5	80.6	50.8	2447	27564
May 20	30000		10.6	58.8	46	6.7	21.1	41.6	79.7	51.1	2305	24413
May 1	40000		11.4	53.5	28	6.5	19.3	39.7	79.9	49.3	2398	27406
May 20	40000		10.6	59.1	48	6.6	21.8	42.0	78.3	48.4	2206	23576
		Mycogen TMF106	10.5	59.1	34	7.2	20.7	41.5	79.8	51.4	2321	24594
		Mycogen TMF108	10.9	57.4	44	6.4	20.2	40.8	79.8	50.4	2342	25745
		Pioneer 3563	10.5	56.2	43	6.5	19.6	39.9	80.0	49.8	2396	25044
		Pioneer 35N05	11.2	55.6	39	6.6	20.1	40.2	79.6	49.2	2360	26797
May 1		Mycogen TMF106	11.0	57.2	28	7.1	19.7	40.5	80.2	51.1	2382	26306
May 20		Mycogen TMF106	10.1	61.1	41	7.3	21.8	42.4	79.5	51.7	2259	22883
May 1		Mycogen TMF108	11.3	54.5	34	6.4	18.3	38.8	80.7	50.1	2484	28444
May 20		Mycogen TMF108	10.4	60.4	53	6.5	22.1	42.9	78.9	50.7	2201	23046
May 1		Pioneer 3563	10.3	54.1	38	6.6	18.4	38.7	80.6	50.1	2486	25575
May 20		Pioneer 3563	10.6	58.3	48	6.4	20.8	41.0	79.3	49.5	2307	24512
May 1		Pioneer 35N05	10.9	55.3	33	6.5	19.5	39.9	79.9	49.7	2391	26462
May 20		Pioneer 35N05	11.6	56.0	44	6.6	20.6	40.4	79.2	48.6	2329	27132
	20000	Mycogen TMF106	9.7	61.0	28	7.3	20.8	41.4	79.9	51.4	2326	22669
	30000	Mycogen TMF106	11.3	58.2	43	7.2	20.1	40.9	80.4	52.1	2380	27195
	40000	Mycogen TMF106	10.6	58.2	33	7.2	21.3	42.1	79.2	50.7	2256	23919
	20000	Mycogen TMF108	10.6	59.9	52	6.5	20.6	41.3	79.6	50.7	2316	24767
	30000	Mycogen TMF108	11.3	56.3	41	6.5	19.9	40.7	80.3	51.6	2383	27278
	40000	Mycogen TMF108	10.7	56.2	39	6.3	20.1	40.6	79.3	49.0	2329	25190
	20000	Pioneer 3563	10.3	54.8	49	6.6	17.6	37.7	81.8	51.7	2596	26718
	30000	Pioneer 3563	10.3	58.5	40	6.6	20.6	41.1	79.7	50.6	2330	23886
	40000	Pioneer 3563	10.8	55.3	40	6.3	20.5	40.8	78.4	47.0	2263	24526
	20000	Pioneer 35N05	11.3	56.2	44	6.9	20.9	41.0	79.2	49.3	2306	26467
	30000	Pioneer 35N05	10.6	55.1	32	6.4	19.1	39.6	80.0	49.6	2412	25596
	40000	Pioneer 35N05	11.9	55.5	40	6.5	20.1	40.0	79.4	48.6	2361	28328

continued

Table E-28. Plant Density, Planting Date, and Hybrid Influence on Corn Silage Yield and Quality and Corn Grain Arlington, WI - 1998

Date of planting	Density	Hybrid	Silage									
			Dry matter		Kernel Milk	Crude			In Vitro Digest	Cell Wall Digest	Milk Per	
			yield tons/A	Moisture %		Protien %	ADF %	NDF %			Ton lbs/T	Acre lbs/A
May 1	20000	Mycogen TMF106	9.9	59.7	22	7.2	19.8	40.3	80.2	50.7	2390	23678
May 20	20000	Mycogen TMF106	9.5	62.3	33	7.3	21.9	42.5	79.6	52.1	2262	21661
May 1	30000	Mycogen TMF106	12.2	57.0	43	7.0	18.5	39.2	81.2	52.1	2497	30713
May 20	30000	Mycogen TMF106	10.4	59.5	43	7.5	21.8	42.5	79.6	52.1	2263	23676
May 1	40000	Mycogen TMF106	11.0	54.9	20	7.1	20.7	42.0	79.2	50.6	2260	24525
May 20	40000	Mycogen TMF106	10.3	61.5	45	7.2	21.8	42.2	79.2	50.9	2251	23313
May 1	20000	Mycogen TMF108	10.7	57.5	50	6.2	19.2	40.2	79.8	49.9	2376	25579
May 20	20000	Mycogen TMF108	10.6	62.3	53	6.7	21.9	42.4	79.5	51.6	2256	23955
May 1	30000	Mycogen TMF108	12.3	52.6	28	6.7	18.1	38.7	81.1	51.0	2511	31230
May 20	30000	Mycogen TMF108	10.3	60.0	53	6.4	21.8	42.6	79.6	52.1	2255	23325
May 1	40000	Mycogen TMF108	11.1	53.4	25	6.3	17.6	37.5	81.1	49.5	2565	28523
May 20	40000	Mycogen TMF108	10.3	59.0	53	6.3	22.5	43.6	77.5	48.6	2092	21856
May 1	20000	Pioneer 3563	9.7	52.4	50	6.5	16.1	36.2	82.6	51.8	2703	26185
May 20	20000	Pioneer 3563	10.9	57.3	48	6.6	19.0	39.1	81.0	51.5	2490	27251
May 1	30000	Pioneer 3563	9.7	57.6	33	6.8	20.4	41.0	79.6	50.2	2322	22480
May 20	30000	Pioneer 3563	10.8	59.4	47	6.4	20.9	41.1	79.9	51.0	2338	25293
May 1	40000	Pioneer 3563	11.6	52.3	32	6.5	18.6	38.9	79.8	48.1	2432	28060
May 20	40000	Pioneer 3563	10.1	58.3	48	6.2	22.5	42.8	76.9	45.9	2093	20993
May 1	20000	Pioneer 35N05	10.4	58.2	40	7.1	20.1	40.2	79.9	50.0	2375	25035
May 20	20000	Pioneer 35N05	12.1	54.3	48	6.7	21.8	41.7	78.6	48.6	2236	27898
May 1	30000	Pioneer 35N05	10.4	54.1	23	6.2	18.5	39.1	80.5	50.0	2460	25833
May 20	30000	Pioneer 35N05	10.7	56.2	40	6.6	19.8	40.1	79.6	49.2	2365	25359
May 1	40000	Pioneer 35N05	12.0	53.5	37	6.4	20.1	40.5	79.4	49.0	2337	28516
May 20	40000	Pioneer 35N05	11.8	57.5	43	6.5	20.2	39.5	79.5	48.2	2386	28141
		Mean	10.8	57.1	40	6.7	20.1	40.6	79.8	50.2	2355	25545
Probability(%)												
Date of Planting (DOP)			80.6	7.2	6.3	50.5	6.8	9.4	18.7	87.0	12.9	49.2
Hybrid (H)			34.8	6.3	1.0	0.0	55.0	41.3	93.0	0.8	80.3	60.1
Plant Density (PD)			38.5	36.8	11.8	0.1	67.0	83.1	9.6	0.1	41.2	85.3
H x PD			42.5	42.2	0.5	54.6	25.7	49.0	27.9	21.3	38.0	56.6
DOP x H			25.0	28.8	40.5	24.3	40.6	38.3	77.0	50.6	55.4	31.9
DOP x PD			19.0	34.9	3.7	94.5	97.9	99.0	77.7	46.3	92.4	38.0
DOP x H x PD			68.5	79.1	14.8	10.2	78.7	70.1	56.8	88.2	61.7	67.9
LSD(0.10)												
Date of Planting (DOP)			NS	1.6	3.6	NS	1.0	1.2	NS	NS	NS	NS
Hybrid (H)			NS	2.3	5.1	0.2	NS	NS	NS	0.1	NS	NS
Plant Density (PD)			NS	NS	NS	0.2	NS	NS	0.9	0.9	NS	NS
H x PD			NS	NS	13.1	NS	NS	NS	NS	NS	NS	NS
DOP x H			NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
DOP x PD			NS	NS	13.1	NS	NS	NS	NS	NS	NS	NS
CV(%)			13	7	23	5	12	8	2	4	10	20

FIELD EXPERIMENT HISTORY

Title: Row Spacing Influence on Grain Yield
Experiment: 05RS **Trial ID** 1316 **Year:** 1998
Personnel: J.G. Lauer, K.D. Kohn, P.J. Flannery and H.M. Darby
Location: Arlington, WI **County:** Columbia
Supported By: Hatch

Site Information

Field: 375 **Previous Crop:** Soybean **Soil Type:** Plano
Soil Test: **Date:** 10/1 /98 **pH** 7.1 **OM (%)** 3 **P (ppm)** 55 **K (ppm)** 225

Plot Management

Tillage Operations: Fall Chisel Plow Field Cultivator
Analysis: **Rate lbs/A:** **Date:**
Fertilizer: **Preplant :** 46-0-0 325 5 /1 /98
Starter : N/A N/A N/A
Post plant : N/A N/A N/A
Manure: None
Herbicide: Lasso @ 2qts/A; Bladex 90 DF 2.2 **Insecticide:** None
lb/A **Hybrid:** Pioneer 3751
Irrigation: None
Planting Date: 5/6/98 **Planting Depth:** 1.5" **Row Width:** Varies
Target Plant Density: 30000 plants per acre **Planting Method:** Kinze Inter-Row Planter
Harvest Date: 10/19/98 **Harvest Method:** Kincaid Plot Combine
N/A

Experimental Design

Design: RCB **Replications:** 4
Plot Size Seeded: 10' x 75' **Experiment Size:** 5' x 75'
Harvest Plot Size: 5' x 75' **Harvest Plant Density:** 31300 plants per acre
Factors/Treatments:

Row Spacing:
15 ", 30 ", 15 " plantback w
30", 7.5" plantback w 15",
7.5" plantback w 30", and
7.5" drill

Results: Table E-29.

**Table E-29. Row Spacing Influence on Grain Yield
Arlington, WI - 1998**

Row spacing	Yield bu/A	Moisture %	Test weight lbs/bu	Population plants/A	Lodging %	Ears per plant
7.5 inch	190	19.9	55	30368	1.5	1.00
7.5 plantback w/15 planter	196	19.5	55	27381	0.9	1.00
7.5 plantback w/30 planter	187	21.3	53	36093	0.0	1.01
15 inch	196	20.1	55	29621	0.9	1.01
15 plantback w/30 planter	187	21.2	54	34599	2.2	1.01
30 inch	198	19.9	55	29870	0.0	1.01
Mean	192	20.3	54	31322	0.9	1.01
<u>Probability(%)</u>						
Row Space(R)	65.8	0.0	0.3	5.2	50.2	82.3
<u>LSD(0.10)</u>						
Row Space(R)	NS	0.5	0.7	4852	NS	NS
<u>CV(%)</u>						
	6	2	1	13	196	2

FIELD EXPERIMENT HISTORY

Title: Plant Density and Row Spacing Effects on Grain and Silage Yield and Quality
Experiment: 06RSxPD **Trial ID** 1292 **Year:** 1998
Personnel: J.G. Lauer, K.D. Kohn, P.J. Flannery and H.M. Darby
Location: Arlington, WI **County:** Columbia
Supported By: Hatch

Site Information

Field: Field 375 South **Previous Crop:** Soybean **Soil Type:** Plano
Soil Test: **Date:** 10/1 /98 **pH** 7.1 **OM (%)** 3 **P (ppm)** 55 **K (ppm)** 225

Plot Management

Tillage Operations: Fall Chisel Plow Field Cultivator

	<u>Analysis:</u>	<u>Rate lbs/A:</u>	<u>Date:</u>
Fertilizer:			
Preplant :	46-0-0	325	5 /1 /98
Starter :	N/A	N/A	N/A
Post plant :	N/A	N/A	N/A
Manure:			
Herbicide:	Lasso 2qts/A; Bladex 90DF 2.2 lb/A	Insecticide: None	
Irrigation:	None	Hybrid: Pioneer 3751	
Planting Date:	5/6/98	Planting Depth: 1.5"	Row Width: Varies
Target Plant Density:	See Factors	Planting Method:	Kinze Inter-Row Planter
Harvest Date:	G:10/19/98 S: 9/22/98	Harvest Method:	G: Kincaid Plot Combine S: NH 707 Chopper

Notes N/A

Experimental Design

Design: RCB Factorial **Replications:** 4
Plot Size Seeded: 10' x 75' **Experiment Size:** 10' x 75'
Harvest Plot Size: 5' x 75' **Harvest Plant Density:** Varies

Factors/Treatments:

Row spacing: 15" and 30"	Plant density: 25,000; 30,000; 35,000; 40,000 plants/A
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Results: Table E-30.

**Table E-30. Plant Density and Row Spacing Effects on Corn Grain And Silage Yield and Quality
Arlington, WI - 1998**

Row spacing inches	Density plants/A	Grain					Silage										
		Harvest pop plants/A	Broken stalks %	Yield bu/A	Moist %	Test weight lbs/bu	Harvest pop plants/A	Yield tons/A	Moist %	Kernel milk %	Crude protien %	ADF %	NDF %	<i>In Vitro</i> Digest %	Cell Wall Digest %	Milk per Ton Acre	
																lbs/T	lbs/A
	25000	21875	0.0	181	20.1	53	23500	10.6	51.7	5.6	6.6	16.0	34.6	82.6	50.0	2779	29768
	30000	26625	0.4	190	20.0	52	26875	10.6	54.3	4.4	6.2	18.2	36.9	80.6	47.7	2563	27912
	35000	30500	1.6	199	20.4	53	32250	10.4	56.9	4.4	5.6	20.7	39.4	78.6	46.4	2337	25207
	40000	35125	1.0	205	20.7	53	36125	10.6	55.1	3.8	5.9	19.4	38.2	79.7	47.2	2455	26328
15		25938	0.8	192	20.1	52	28500	10.5	55.2	5.3	6.1	18.7	37.4	80.2	47.4	2518	26939
30		31125	0.8	195	20.6	53	30875	10.6	53.8	3.8	6.0	18.4	37.2	80.6	48.2	2548	27668
15	25000	19000	0.0	177	20.3	53	23000	10.6	52.8	5.0	6.6	16.1	34.6	82.4	49.6	2765	29948
15	30000	23500	0.0	191	19.3	52	25250	10.3	54.0	6.3	6.3	18.3	37.3	80.8	48.6	2559	26712
15	35000	29000	1.6	201	20.0	52	31250	10.7	57.0	6.3	5.9	20.6	39.3	78.7	46.3	2346	25767
15	40000	32250	1.4	200	20.6	53	34500	10.3	56.9	3.8	5.7	19.9	38.3	78.9	45.1	2402	25329
30	25000	24750	0.0	185	19.9	52	24000	10.6	50.6	6.3	6.6	15.9	34.6	82.9	50.4	2793	29588
30	30000	29750	0.8	189	20.7	53	28500	10.9	54.6	2.5	6.1	18.1	36.4	80.3	46.7	2566	29113
30	35000	32000	1.6	196	20.8	53	33250	10.2	56.8	2.5	5.4	20.7	39.6	78.5	46.5	2327	24646
30	40000	38000	0.7	210	20.8	53	37750	10.8	53.3	3.8	6.0	18.9	38.1	80.6	49.2	2508	27327
Mean		28531	0.8	194	20.3	53	29688	10.5	54.5	4.5	6.1	18.6	37.3	80.4	47.8	2533	27304
Probability(%)																	
	Plant Density (D)	0.0	9.6	0.0	47.2	1.1	0.0	99.7	55.2	8.1	2.0	37.8	40.1	36.5	36.4	37.9	79.0
	Row Space (S)	0.0	96.8	30.3	17.8	8.3	1.5	84.0	59.5	26.8	55.0	87.0	92.3	81.6	58.7	86.7	83.0
	D x S	66.9	70.2	13.8	32.4	5.3	77.8	94.0	93.3	46.7	58.7	99.7	99.8	96.4	55.2	99.5	97.7
LSD(0.10)																	
	Plant Density (D)	2478	1.1	6.4	NS	0.4	2193	NS	NS	3.3	0.5	NS	NS	NS	NS	NS	NS
	Row Space (S)	1752	NS	NS	NS	0.3	1550	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	D x S	NS	NS	NS	NS	0.4	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
CV(%)																	
		10	170	4	5	1	9	18	13	86	10	29	16	6	9	20	35

FIELD EXPERIMENT HISTORY

Title: Plant Density and Row Spacing Effects on Grain and Silage Yield and Quality
Experiment: 06RSxPD **Trial ID** 1294 **Year:** 1998
Personnel: J.G. Lauer, M. Rankin, K.D. Kohn, and P.J. Flannery
Location: Fond du Lac, WI **County:** Fond du lac
Supported By: Hatch

Site Information

Field: Boelke Farm **Previous Crop:** Soybean **Soil Type:** Virgil
Soil Test: **Date:** 11/00/97 **pH** 6.7 **OM (%)** 5 **P (ppm)** 38 **K (ppm)** 100

Plot Management

Tillage Operations: Spring Field Cultivator

	<u>Analysis:</u>	<u>Rate lbs/A:</u>	<u>Date:</u>
Fertilizer:			
Preplant :	82-0-0	195	N/A
Starter :	N/A	N/A	N/A
Post plant :	N/A	N/A	N/A
Manure:			

Herbicide: Accent Gold 2.9 oz/A **Insecticide:** None
Irrigation: None **Hybrid:** Pioneer 3751

Planting Date: 5/14/98 **Planting Depth:** 1.5" **Row Width:** Varies
Target Plant Density: See Factors **Planting Method:** Kinze Inter-Row Planter
Harvest Date: G:10/16/98 **Harvest Method:** G: Kincaid Plot Combine
S: 9/21/98 S: NH 707 Chopper

Notes 2nd of 15" rows did not plant

Experimental Design

Design: RCB Factorial **Replications:** 4
Plot Size Seeded: 10' x 100' **Experiment Size:** 10' x 100'
Harvest Plot Size: 5' x 100' **Harvest Plant Density:** Varies

Factors/Treatments:

Row spacing: 15" and 30"	Plant density: 25,000; 30,000; 35,000; 40,000 plants/A
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Results: Table E-31.

Table E-31. Plant Density and Row Spacing Effects on Corn Grain And Silage Yield and Quality
Fond du Lac, WI - 1998

Row spacing inches	Density plants/A	Grain					Silage										
		Harvest pop plants/A	Broken stalks %	Yield bu/A	Moist %	Test weight lbs/bu	Harvest pop plants/A	Yield tons/A	Moist %	Kernel milk %	Crude protien %	ADF %	NDF %	<i>In Vitro</i> Digest %	Cell Wall Digest %	Milk per	
																lbs/T	lbs/A
	25000	27125	0.0	204	19.8	53	26750	9.9	53.0	15.0	6.6	18.6	37.7	81.5	51.0	2577	25828
	30000	32000	1.6	216	19.7	54	31500	10.1	52.1	15.0	6.3	19.1	38.7	81.0	50.8	2505	25322
	35000	37250	1.4	222	19.7	54	36125	9.9	48.8	17.5	6.1	19.6	39.1	79.7	48.4	2413	24081
	40000	42375	2.1	221	19.8	54	40125	10.0	50.2	7.5	6.3	19.9	39.2	79.9	48.8	2420	24352
15		33563	1.4	231	19.4	54	33938	10.6	51.3	11.3	6.4	19.4	38.9	80.3	49.5	2453	26160
30		35813	1.1	200	20.1	54	33313	9.4	50.7	16.3	6.2	19.1	38.4	80.8	50.0	2504	23631
15	25000	26000	0.0	214	19.4	53	27750	11.0	52.6	20.0	6.7	18.4	37.6	81.6	51.3	2587	28977
15	30000	30500	1.6	229	19.4	54	32250	11.1	52.5	10.0	6.5	18.7	38.4	81.2	51.2	2533	28398
15	35000	36250	2.1	235	19.5	54	36500	10.1	50.2	10.0	6.2	20.3	39.5	78.9	46.8	2356	23687
15	40000	41500	1.8	246	19.3	54	39250	10.0	49.9	5.0	6.3	20.4	40.3	79.3	48.6	2338	23580
30	25000	28250	0.0	194	20.1	53	25750	8.8	53.4	10.0	6.4	18.8	37.8	81.4	50.7	2568	22680
30	30000	33500	1.5	202	20.1	54	30750	9.0	51.6	20.0	6.1	19.4	38.9	80.7	50.4	2478	22247
30	35000	38250	0.6	209	19.9	54	35750	9.7	47.3	25.0	6.1	18.9	38.8	80.4	49.9	2470	24474
30	40000	43250	2.3	196	20.2	54	41000	10.0	50.6	10.0	6.2	19.4	38.2	80.5	49.0	2501	25124
		34688	1.3	216	19.7	54	33625	10.0	51.0	13.8	6.3	19.3	38.7	80.5	49.7	2479	24896
Probability(%)																	
Plant Density (D)		0.0	5.6	0.0	99.7	0.1	0.0	99.5	6.0		5.7	87.5	86.0	48.8	7.3	70.0	92.7
Row Space (S)		0.8	59.7	0.0	0.0	61.0	64.3	3.0	62.9		4.8	80.0	71.6	60.1	53.9	65.7	24.1
D x S		94.6	59.1	1.0	78.3	14.5	76.0	33.8	61.1		81.9	91.0	91.0	82.5	32.2	88.6	39.5
LSD(0.10)																	
Plant Density (D)		1876	1.3	7.2	NS	0.4	3234	NS	2.7		0.3	NS	NS	NS	2.0	NS	NS
Row Space(S)		1329	NS	5.1	0.3	NS	NS	0.9	NS		0.2	NS	NS	NS	NS	NS	NS
D x S		NS	NS	7.8	NS	NS	NS	NS	NS		NS	NS	NS	NS	NS	NS	NS
CV(%)		6	116	4	2	1	11	15	6		5	18	10	3	5	13	24

FIELD EXPERIMENT HISTORY

Title: Plant Density and Row Spacing Effects on Grain and Silage Yield and Quality
Experiment: 06RSxPD **Trial ID** 1293 **Year:** 1998
Personnel: J.G. Lauer, D Nehring and B. Jaynes
Location: Janesville, WI **County:** Rock
Supported By: Hatch

Site Information

Field: R-5C **Previous Crop:** Soybean **Soil Type:** Plano
Soil Test: **Date:** 11/20/97 **pH** 6.5 **OM (%)** 3 **P (ppm)** 55 **K (ppm)** 197

Plot Management

Tillage Operations: Fall Chisel Plow Field Cultivator

	<u>Analysis:</u>	<u>Rate lbs/A:</u>	<u>Date:</u>
Fertilizer:			
Preplant :	28-0-0	570	N/A
Starter :	N/A	N/A	N/A
Post plant :	N/A	N/A	N/A
Manure:			
Herbicide:	Harness 2.75 pt/A; Hornet 4.5 oz/A	Insecticide: None	
Irrigation:	None	Hybrid: Pioneer 3751	
Planting Date:	5/12/98	Planting Depth: 1.5"	Row Width: Varies
Target Plant Density:	See Factors	Planting Method:	Kinze Inter-Row Planter
Harvest Date:	10/19/98	Harvest Method:	Kincaid Plot Combine

Notes N/A

Experimental Design

Design: RCB Factorial **Replications:** 4
Plot Size Seeded: 20' x 200' **Experiment Size:** 20' x 200'
Harvest Plot Size: 15' x 200' **Harvest Plant Density:** Varies

Factors/Treatments:

Row spacing: 15" and 30"	Plant density: 25,000; 30,000; 35,000; 40,000 plants/A
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Results: Table E-32.

**Table E-32. Plant Density and Row Spacing Effects on Corn Grain And Silage Yield and Quality
Janesville, WI - 1998**

Row spacing inches	Density plants/A	Harvest population plants/A	Broken stalks %	Yield bu/A	Moisture %
	25000	24430	1.3	202	16.6
	30000	28624	1.3	209	17.6
	35000	34628	1.3	216	16.9
	40000	38393	2.4	206	17.9
15		30179	1.0	210	17.5
30		32858	2.2	206	17.0
15	25000	22774	0.8	201	17.3
15	30000	27255	1.1	208	17.9
15	35000	33726	0.5	220	17.1
15	40000	36962	1.5	212	17.8
30	25000	26085	1.9	202	16.0
30	30000	29992	1.5	210	17.3
30	35000	35530	2.1	212	16.8
30	40000	39824	3.3	199	18.1
		31519	1.6	208	17.3
Probability(%)					
		0.0	14.1	0.6	4.3
		0.0	0.5	11.3	17.1
		77.3	54.1	12.9	39.8
LSD(0.10)					
		1259	NS	6.4	0.8
		890	0.7	NS	NS
		NS	NS	NS	NS
CV(%)					
		5	68	4	5

FIELD EXPERIMENT HISTORY

Title: Plant Density and Row Spacing Effects on Grain and Silage Yield and Quality
Experiment: 06RSxPD **Trial ID** 1295 **Year:** 1998
Personnel: J.G. Lauer, S. Hendrickson, T. Maney, K.D. Kohn, and P.J. Flannery
Location: Valders, WI **County:** Manitowoc
Supported By: Hatch

Site Information

Field: **Previous Crop:** Wheat **Soil Type:** Kewaunee clay loam
Soil Test: **Date:** 10/1 /98 **pH** 7.2 **OM (%)** 3 **P (ppm)** 49 **K (ppm)** 115

Plot Management

Tillage Operations: Moldboard Field Cultivator

	<u>Analysis:</u>	<u>Rate lbs/A:</u>	<u>Date:</u>
Fertilizer:			
Preplant :	46-0-0	300	
Starter :	N/A	N/A	N/A
Post plant :	N/A	N/A	N/A
Manure:			

Herbicide: Accent @ 0.33 oz/A; Beacon @ 0.38 oz/A; Banvel 2 oz/A **Insecticide:** None
Hybrid: Pioneer 3751

Irrigation: None

Planting Date: 5/14/98 **Planting Depth:** 1.5" **Row Width:** Varies

Target Plant Density: See Factors **Planting Method:** Kinze Inter-Row Planter

Harvest Date: G:10/13/98 **Harvest Method:** G: Kincaid Plot Combine
S: 9/9/98 S: NH 707 Chopper

Notes N/A

Experimental Design

Design: RCB Factorial **Replications:** 4
Plot Size Seeded: 10' x 100' **Experiment Size:** 10' x 100'
Harvest Plot Size: 5' x 100' **Harvest Plant Density:** Varies

Factors/Treatments:

Row spacing: 15" and 30"	Plant density: 25,000; 30,000; 35,000; 40,000 plants/A
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Results: Table E-33.

**Table E-33. Plant Density and Row Spacing Effects on Corn Grain And Silage Yield and Quality
Valders, WI - 1998**

Row spacing inches	Density plants/A	Grain					Silage										
		Harvest pop plants/A	Broken stalks %	Yield bu/A	Moist %	Test weight lbs/bu	Harvest pop plants/A	Yield tons/A	Moist %	Kernel milk %	Crude protien %	ADF %	NDF %	<i>In Vitro</i> Digest %	Cell Wall Digest %	Milk per	
																lbs/T	lbs/A
	25000	28250	1.8	181	26.8	51	28250	8.1	67.1	69.4	7.6	21.2	43.0	80.4	54.3	2285	18649
	30000	32125	0.8	187	26.1	51	31500	8.2	65.7	70.6	7.4	20.7	42.9	81.2	56.3	2337	19234
	35000	39000	1.9	203	25.2	52	40000	8.6	64.8	65.6	7.1	20.4	41.4	80.8	53.8	2378	20610
	40000	41000	0.6	200	26.2	51	42250	8.9	64.6	70.0	7.4	19.4	40.1	81.7	54.5	2488	22072
15		33500	1.3	184	26.5	51	34000	8.7	65.7	67.5	7.5	20.5	42.0	81.1	55.0	2370	20647
30		36688	1.2	201	25.7	51	37000	8.3	65.4	70.3	7.2	20.4	41.7	81.0	54.4	2374	19635
15	25000	26750	2.7	169	27.2	50	28500	8.4	67.5	70.0	7.7	22.1	44.5	79.8	54.6	2186	18483
15	30000	31000	0.0	174	26.9	51	29500	8.2	67.1	67.5	7.5	21.2	43.5	81.1	56.6	2306	19002
15	35000	38250	1.9	200	25.5	52	40000	9.0	64.3	65.0	7.3	19.6	40.3	81.4	53.7	2457	22100
15	40000	38000	0.7	194	26.5	51	38000	9.1	63.8	67.5	7.4	18.9	39.6	82.1	55.1	2531	23004
30	25000	29750	0.8	193	26.5	51	28000	7.9	66.7	68.8	7.5	20.3	41.4	80.9	54.0	2384	18815
30	30000	33250	1.5	200	25.3	51	33500	8.2	64.2	73.8	7.2	20.2	42.3	81.3	55.9	2369	19465
30	35000	39750	1.8	206	25.0	52	40000	8.3	65.2	66.3	7.0	21.2	42.5	80.3	53.8	2300	19121
30	40000	44000	0.6	205	25.9	51	46500	8.7	65.4	72.5	7.3	19.8	40.5	81.3	53.9	2444	21140
		35094	1.3	192	26.1	51	35500	8.5	65.5	68.9	7.4	20.4	41.8	81.0	54.7	2372	20141
Probability(%)																	
Plant Density (D)		0.0	49.8	0.1	0.1	0.0	0.0	4.9	32.6	32.1	3.2	56.5	24.6	64.0	16.1	46.4	9.7
Row Space (S)		0.0	85.6	0.0	0.2	1.9	0.2	5.5	77.6	17.8	2.1	92.5	79.9	84.6	43.7	96.5	31.6
D x S		17.9	44.3	20.6	41.6	3.5	0.4	67.6	44.7	54.8	77.6	53.5	39.2	72.4	94.8	53.5	54.3
LSD(0.10)																	
Plant Density (D)		1790	NS	9.2	0.6	0.3	2065	0.5	NS	NS	0.2	NS	NS	NS	NS	NS	2400
Row Space (S)		1266	NS	6.5	0.4	0.2	1460	0.3	NS	NS	0.2	NS	NS	NS	NS	NS	NS
D x S		NS	NS	NS	NS	0.4	2246	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
CV(%)		6	164	6	3	1	7	7	4	8	4	13	8	3	4	11	14

FIELD EXPERIMENT HISTORY

Title: Corn Seed Decay and Seedling Blight in Reduced Tillage Systems
Experiment: Trial ID 1297 **Year:** 1998
Personnel: J.G. Lauer and K.D. Kohn
Location: Seymour, WI **County:** Outagamie
Supported By: Gustafson, Inc., Hatch Project 1890

Site Information

Field: Vanden Heuvel **Previous Crop:** Corn **Soil Type:** Clay loam
Soil Test: **Date:** 10/1 /98 **pH** 7.3 **OM (%)** 4.0 **P (ppm)** 34 **K (ppm)** 130

Plot Management

Tillage Operations: Moldboard Plow Landoll-Tilloll 1 Cultivation 6/16/98
Fertilizer:

	<u>Analysis</u>	<u>Rate</u>	<u>Date</u>
Preplant	N/A	N/A	N/A
Starter	6-24-24	150	5 /1 /98
Post plant	N/A	N/A	N/A
Manure:		9000 gal/A	

Herbicide: Banvel .75 pt/A, Bladex 90W 1.62 lb/A **Insecticide:** Lorsban 7 lbs/A
Irrigation: None **Hybrid:**
Planting Date: 5/1/98 **Planting Depth:** 1.5" **Row Width:** 30"
Target Plant Density: 29000 plants per acre **Planting Method:** Kinze Plot Planter
Harvest Date: 10/13/98 **Harvest Method:** Kincaid Plot Combine

N/A

Experimental Design

Design: RCB **Replications:** 3
Plot Size Seeded: 10' x 22' **Experiment Size:** 5' x 22'
Harvest Plot Size: 5' x 22' **Harvest Plant Density:** 28200 plants per acre
Factors/Treatments:

Hybrid:
Pioneer 3905
Pioneer 3921

Treatments:
Captan 400C+CTS+FA12
Captan+CTS+FA12+Raxil 2.6
Untreated Check
LS022+FA12+Raxil 2.6
Maxim
Maxim+Apron XL

Rates:
1.75+1.75+0.1 fl. oz/cwt
1.75+1.5+0.1+0.075 fl. oz/cwt
0.13+0.1+0.075 fl. oz/cwt
0.08 fl. oz/cwt
0.08+0.0425 fl. oz/cwt

Results: Table E-34.1

**Table: E-34. Corn Seed Decay and Seedling Blight in Difficult Emergence Environments
Seymour, WI - 1998**

Seed treatment	Hybrid	Stand population at V6 plants/A	Harvest population plants/A	Lodging %	Grain yield bu/A	Grain moisture %	Test weight lb/bu
	P3905	31202	27786	10.0	148	17.6	58
	P3921	33594	28743	10.1	148	18.3	59
Captan 400C+CTS+FA12		32164	28688	9.5	149	17.9	59
Captan+CTS+FA12+Raxil 2.6		32406	27984	7.5	150	17.9	58
Control		31812	27522	13.0	145	18.0	59
LS022+FA12+Raxil 2.6		33792	28710	9.4	147	18.0	58
Maxim		32340	27060	11.2	149	17.9	59
Maxim+Apron XL		32340	28776	10.9	147	18.0	59
Captan 400C+CTS+FA12	P3905	30800	28336	10.1	149	17.6	58
Captan 400C+CTS+FA12	P3921	33528	29040	8.9	149	18.2	59
Captan+CTS+FA12+Raxil 2.6	P3905	31680	28380	4.6	150	17.7	58
Captan+CTS+FA12+Raxil 2.6	P3921	33132	27588	10.4	149	18.2	59
Control	P3905	30756	27324	15.6	144	17.7	58
Control	P3921	32868	27720	10.4	146	18.3	59
LS022+FA12+Raxil 2.6	P3905	33000	27852	8.5	147	17.5	58
LS022+FA12+Raxil 2.6	P3921	34584	29568	10.3	147	18.5	58
Maxim	P3905	31152	25608	13.5	144	17.4	59
Maxim	P3921	33528	28512	8.9	154	18.4	59
Maxim+Apron XL	P3905	30624	28116	7.5	149	17.9	58
Maxim+Apron XL	P3921	34056	29436	14.3	144	18.2	59
Mean		32398	28265	10.1	148	18.0	59
Probability (%)							
Seed treatment (S)		31.1	38.9	7.8	89.3	97.6	2.8
Hybrid (H)		0.0	88.2	90.9	73.4	0.0	0.0
S x H		85.6	62.2	0.6	72.9	55.5	44
LSD (0.10)							
Seed treatment (S)		NS	NS	3.1	NS	NS	0.4
Hybrid (H)		752	NS	NS	NS	0.2	0.2
S x H		NS	NS	4.4	NS	NS	NS
CV (%)							
		5	7	32	5	2	1

FIELD EXPERIMENT HISTORY

Title: Planter Speed Effects on Stand Variability
Experiment: 11Planter Speed **Trial ID** 1317 **Year:** 1998
Personnel: J.G. Lauer and K. D. Kohn
Location: Arlington, WI **County:** Columbia
Supported By: Hatch

Site Information

Field: 375 **Previous Crop:** Soybean **Soil Type:** Plano Silt Loam
Soil Test: **Date:** 10/1 /98 **pH** 7.1 **OM (%)** 3.0 **P (ppm)** 55 **K (ppm)** 225

Plot Management

Tillage Operations: Fall Chisel Plow Field Cultivator

Fertilizer:	Analysis	Rate	Date
Preplant	46-0-0	300	5 /1 /98
Starter	N/A	N/A	N/A
Post plant	N/A	N/A	N/A
Manure:		None	

Herbicide: Lasso @ 2 qts/A; Bladex 90DF @ 2.2 lb/A **Insecticide:** None

Irrigation: None **Hybrid:** Pioneer 3751

Planting Date: 5/6/98 **Planting Depth:** 1.5" **Row Width:** 30"

Target Plant Density: 31000 plants per acre **Planting Method:** Kinze Inter-Row Planter

Harvest Date: 10/19/98 **Harvest Method:** Kincaid Plot Combine

Notes: N/A

Experimental Design

Design: RCB **Replications:** 3
Plot Size Seeded: 10' x 75' **Experiment Size:** 10' x 75'
Harvest Plot Size: 5' x 75' **Harvest Plant Density:** 33000 plants per acre

Factors/Treatments:

Planter Speed:
4 mph
6 mph
8 mph

Results: Table E-35.

**Table E-35. Planter Speed Effects on Stand Variability
Arlington, WI - 1998**

Planter speed	Yield		Test		Population plants/A	Ears ears/A	Spacing		Number of doubles ($\geq 12''$ spacing) per 1/1000th A	Percent of doubles ($\geq 12''$ spacing) %	Number of skips ($\leq 2''$ spacing) per 1/1000th A	Percent of skips ($\leq 2''$ spacing) %
	bu/A	%	weight lbs/bu	Lodging %			Average inches	Standard deviation				
4 mph	208	21.4	53	3.9	33852	33852	6.3	± 2.5	2.1	4.3	2.2	4.4
6 mph	209	21.6	54	1.0	33520	33520	6.4	± 2.6	1.6	3.2	1.8	3.7
8 mph	199	21.9	53	2.1	32193	32525	6.4	± 3.1	2.8	5.8	2.3	4.6
Mean	205	21.6	53	2.4	33189	33299	6.4	± 2.7	2.2	4.4	2.1	4.3
<u>Probability(%)</u>												
Planter Speed (S)	24.3	6.8	48.9	30.3	13.2	32.1	62.6	14.0	4.3	4.3	77.7	77.7
<u>LSD(0.10)</u>												
Planter Speed (S)	NS	0.3	NS	NS	NS	NS	NS	NS	0.7	1.4	NS	NS
<u>CV(%)</u>												
	4	1	1	83	2	3	3	10	18	18	35	35

FIELD EXPERIMENT HISTORY

Title: The Interaction of Planting Date, Hybrid Maturity and Nitrogen, and their effect on Corn
Experiment: 12 Planting Date x Hybrid Maturity x Nitrogen Rate
Personnel: L.G. Bundy, J.G. Lauer, K.D. Kohn, and T.W. Andraski **Year: 1998**
Location: Arlington Research Station, Arlington, WI
Supported by: Hatch

Field Information

Soil Type: Plano Silt Loam
Soil Test Results: pH: 7.1 P (ppm): 30 K (ppm) 100 O.M.(%): 3.6
Tillage Operations: Spring chisel plow
Soil finisher prior to planting date
Cultivated
Starter Fertilizer: 150 lbs/A of 6-24-24 in a 2x2 placement
Previous Crop: Corn
Irrigation: None

Experimental Procedure

Design: RCB-Split **Replicates:** 4
Variables: Planting Dates: 30-Apr, 1-June, 15-June, 22-June
Hybrids: Pioneer 3394 (110 day) for 30-Apr only,
Pioneer 3751 (100 day), and Pioneer 3905 (90 day)
N Application Dates: 28-Apr for planting date 30-Apr,
26-May, for planting date 1-June,
4-June, for planting date 15-June,
17-June, for planting date 22-June.
Seeding Density: 27580 plants/A
Row Spacing: 30"
Insecticide: Lorsban 7 lbs/A
Herbicide: Dual/Bladex-preemerge and Accent/Buctril-postemerge
Date Harvested: Whole Plant: 16- Sept, 24- Sept, 8-Oct and 14-Oct
Grain: 2- Nov, 3-Nov and 11-Nov

Results: Table E-36.

**Table E-36. The Interaction of Planting Date, Hybrid Maturity and Nitrogen, and Their Effect on Corn
Arlington, WI - 1997**

Day Of year	Hybrid	Nitrogen rate lbs/A	Grain			Whole Plant	
			Yield bu/A	Moisture %	Test Wt lbs/bu	Yield T/A	Moisture %
	Pioneer 3394		224	18.1	59	11.4	57.3
	Pioneer 3751		183	23.4	54	9.4	59.4
	Pioneer 3941		164	20.2	57	8.3	54.2
		0	174	21.5	56	9.0	56.9
		40	176	21.3	56	8.8	57.2
		80	182	21.6	56	9.4	55.6
		120	185	21.0	56	9.2	57.0
		160	182	21.4	56	9.2	57.3
		200	180	21.3	56	9.4	57.0
	Pioneer 3394	0	215	17.9	59	11.3	57.5
	Pioneer 3751	0	172	23.3	54	9.0	59.6
	Pioneer 3941	0	163	20.7	56	8.3	53.7
	Pioneer 3394	40	208	17.9	59	10.2	58.0
	Pioneer 3751	40	182	23.5	54	9.2	59.8
	Pioneer 3941	40	161	20.1	57	7.9	54.4
	Pioneer 3394	80	231	18.0	58	11.3	54.8
	Pioneer 3751	80	186	23.8	54	9.8	57.8
	Pioneer 3941	80	164	20.5	56	8.4	53.7
	Pioneer 3394	120	218	18.7	58	11.3	58.4
	Pioneer 3751	120	188	23.2	54	9.6	59.0
	Pioneer 3941	120	171	19.5	57	8.0	54.5
	Pioneer 3394	160	234	18.0	59	12.5	57.6
	Pioneer 3751	160	188	23.7	54	9.0	60.3
	Pioneer 3941	160	164	20.1	56	8.5	54.5
	Pioneer 3394	200	238	18.3	59	11.7	57.7
	Pioneer 3751	200	183	23.2	54	9.5	59.7
	Pioneer 3941	200	161	20.1	57	8.6	54.3
121			199	16.6	58	10.2	51.6
152			195	20.9	57	9.6	62.4
161			177	24.0	55	8.5	58.9
173			145	26.2	52	7.9	59.9

continued

**Table E-36. The Interaction of Planting Date, Hybrid Maturity and Nitrogen, and Their Effect on Corn
Arlington, WI - 1997**

Day Of year	Hybrid	Nitrogen rate lbs/A	Grain			Whole Plant	
			Yield bu/A	Moisture %	Test Wt lbs/bu	Yield T/A	Moisture %
121	Pioneer 3394		224	18.1	59	11.4	57.3
121	Pioneer 3751		211	16.4	57	10.4	50.7
121	Pioneer 3941		163	15.2	59	8.9	46.9
152	Pioneer 3751		209	22.6	56	9.7	65.3
152	Pioneer 3941		181	19.2	58	9.5	59.5
161	Pioneer 3751		180	26.1	54	9.1	61.9
161	Pioneer 3941		174	21.9	56	8.0	55.9
173	Pioneer 3751		144	28.4	51	8.4	62.7
173	Pioneer 3941		147	24.0	54	7.5	57.2
121		0	188	16.6	58	9.8	51.7
121		40	192	16.6	58	9.6	51.8
121		80	204	16.6	58	10.6	49.4
121		120	202	16.6	58	10.5	52.9
121		160	204	16.4	58	10.5	52.2
121		200	205	16.5	59	10.4	51.8
152		0	196	21.1	56	9.9	63.1
152		40	194	21.0	57	9.1	60.9
152		80	196	21.7	57	9.8	60.8
152		120	205	20.6	57	9.5	61.9
152		160	187	21.1	57	9.6	63.6
152		200	196	20.6	57	9.7	62.9
161		0	174	24.1	55	8.8	58.1
161		40	173	23.7	55	8.6	60.4
161		80	182	24.1	55	8.6	59.0
161		120	184	23.6	55	8.4	59.1
161		160	177	24.0	55	8.4	59.0
161		200	176	24.4	55	8.5	58.2
173		0	145	26.6	52	7.7	61.0
173		40	147	26.2	52	7.7	60.5
173		80	147	26.4	52	8.2	60.3
173		120	148	25.9	52	7.6	58.9
173		160	153	26.3	52	7.9	59.5
173		200	132	25.7	53	8.5	59.4

continued

**Table E-36. The Interaction of Planting Date, Hybrid Maturity and Nitrogen, and Their Effect on Corn
Arlington, WI - 1997**

Day Of year	Hybrid	Nitrogen rate lbs/A	Grain			Whole Plant	
			Yield bu/A	Moisture %	Test Wt lbs/bu	Yield T/A	Moisture %
121	Pioneer 3394	0	215	17.9	59	11.3	57.5
121	Pioneer 3751	0	183	16.3	57	9.6	50.7
121	Pioneer 3941	0	165	15.4	59	8.6	46.8
121	Pioneer 3394	40	208	17.9	59	10.2	58.0
121	Pioneer 3751	40	211	16.7	58	9.7	51.4
121	Pioneer 3941	40	157	15.2	59	8.8	45.8
121	Pioneer 3394	80	231	18.0	58	11.3	54.8
121	Pioneer 3751	80	216	16.4	57	11.0	48.1
121	Pioneer 3941	80	167	15.5	59	9.6	45.2
121	Pioneer 3394	120	218	18.7	58	11.3	58.4
121	Pioneer 3751	120	220	16.2	57	11.0	51.9
121	Pioneer 3941	120	169	15.1	59	9.1	48.4
121	Pioneer 3394	160	234	18.0	59	12.5	57.6
121	Pioneer 3751	160	220	16.4	57	10.2	50.9
121	Pioneer 3941	160	158	14.9	59	8.8	48.0
121	Pioneer 3394	200	238	18.3	59	11.7	57.7
121	Pioneer 3751	200	219	16.2	57	10.9	50.9
121	Pioneer 3941	200	160	15.0	59	8.4	46.8
152	Pioneer 3751	0	210	22.3	56	10.1	64.4
152	Pioneer 3941	0	167	18.8	57	9.4	60.4
152	Pioneer 3751	40	204	22.4	56	9.2	65.2
152	Pioneer 3941	40	183	19.5	58	8.9	56.6
152	Pioneer 3751	80	211	24.0	56	9.4	64.5
152	Pioneer 3941	80	181	19.3	58	10.3	57.1
152	Pioneer 3751	120	207	22.5	56	9.9	64.5
152	Pioneer 3941	120	202	18.7	59	9.1	59.4
152	Pioneer 3751	160	205	23.2	56	10.1	66.7
152	Pioneer 3941	160	175	19.7	58	9.2	61.5
152	Pioneer 3751	200	217	22.3	55	9.3	65.7
152	Pioneer 3941	200	175	18.8	58	10.1	60.0
161	Pioneer 3751	0	172	26.0	54	9.3	62.9
161	Pioneer 3941	0	176	22.2	56	8.2	53.3
161	Pioneer 3751	40	176	25.7	54	9.5	62.7
161	Pioneer 3941	40	169	21.6	57	7.6	58.0
161	Pioneer 3751	80	191	26.1	54	9.1	61.2
161	Pioneer 3941	80	173	22.1	56	8.0	56.7
161	Pioneer 3751	120	190	25.7	55	9.0	61.6
161	Pioneer 3941	120	177	21.5	56	7.9	56.6
161	Pioneer 3751	160	179	26.5	54	8.5	63.3

continued

**Table E-36. The Interaction of Planting Date, Hybrid Maturity and Nitrogen, and Their Effect on Corn
Arlington, WI - 1997**

Day Of year	Hybrid	Nitrogen rate lbs/A	Grain			Whole Plant	
			Yield bu/A	Moisture %	Test Wt lbs/bu	Yield T/A	Moisture %
	Pioneer 3941	160	175	21.4	56	8.2	54.7
161	Pioneer 3751	200	175	26.2	54	9.2	60.0
161	Pioneer 3941	200	177	22.5	55	7.9	56.4
173	Pioneer 3751	0	142	28.2	50	7.4	62.8
173	Pioneer 3941	0	147	24.9	54	7.9	59.3
173	Pioneer 3751	40	148	28.5	51	8.4	62.7
173	Pioneer 3941	40	145	23.9	53	7.1	58.4
173	Pioneer 3751	80	145	28.7	50	9.5	62.3
173	Pioneer 3941	80	148	24.1	54	7.0	58.4
173	Pioneer 3751	120	144	28.8	51	8.6	61.2
173	Pioneer 3941	120	153	23.0	54	6.6	56.7
173	Pioneer 3751	160	155	28.3	51	7.8	63.4
173	Pioneer 3941	160	150	24.4	54	7.9	55.6
173	Pioneer 3751	200	129	27.8	51	8.6	63.5
173	Pioneer 3941	200	136	23.6	54	8.3	55.2
Mean			180	21.3	56	9.2	56.9
<u>Probability(%)</u>							
Date Of Planting (PD)			0.00	0.00	0.00	0.90	0.00
Hybrid (H)			0.00	0.00	0.00	0.00	0.00
PD x H			0.00	0.00	0.00	6.10	12.6
Nitrogen Rate (N)			27.8	89.2	88.6	14.0	56.0
PD x N			37.8	85.2	64.3	76.9	35.5
H x N			43.2	95.4	96.6	19.6	99.9
PD x H x N			35.3	82.2	91.5	21.5	51.0
<u>LSD(0.10)</u>							
Date Of Planting (PD)			6.70	0.70	0.30	0.60	1.90
Hybrid (H)			6.80	0.50	0.40	0.40	1.30
PD x H			23.4	1.90	0.30	1.70	NS
Nitrogen Rate (N)			NS	NS	NS	NS	NS
PD x N			NS	NS	NS	NS	NS
H x N			NS	NS	NS	NS	NS
PD x H x N			NS	NS	NS	NS	NS
<u>CV (%)</u>			8	5	1	10	5

**Table: E-36. Corn Seed Decay and Seedling Blight in Difficult Emergence Environments
Marshfield, WI - 1998**

Seed treatment	Hybrid	Grain Yield bu/A	Grain Moisture %
	P3905	130	20.7
	P3921	135	21.2
Captan 400C+CTS+FA12		133	20.7
Captan+CTS+FA12+Raxil 2.6		132	20.4
Control		133	21.8
LS022+FA12+Raxil 2.6		134	21.3
Maxim		134	21.7
Maxim+Apron XL		132	20.7
Captan 400C+CTS+FA12	P3905	130	20.8
Captan 400C+CTS+FA12	P3921	135	20.6
Captan+CTS+FA12+Raxil 2.6	P3905	130	19.1
Captan+CTS+FA12+Raxil 2.6	P3921	134	21.7
Control	P3905	131	20.8
Control	P3921	135	22.9
LS022+FA12+Raxil 2.6	P3905	132	21.3
LS022+FA12+Raxil 2.6	P3921	135	21.2
Maxim	P3905	132	21.5
Maxim	P3921	136	21.8
Maxim+Apron XL	P3905	129	21.0
Maxim+Apron XL	P3921	135	20.5
Mean		133	21.0
Probability (%)			
Seed treatment (S)		74.9	79.1
Hybrid (H)		0.0	23.4
S x H		94.0	59.3
LSD (0.10)			
Seed treatment (S)		NS	NS
Hybrid (H)		1.3	NS
S x H		NS	NS
CV (%)			
		2	10