

**Table D-1. 20 Year Corn/Soybean Rotation Study - Corn.  
Arlington, WI Experiment 9690.**

Tillage	Rotation 14th Year	Seeding Rate x 1000	Final Population plants/a	Broken/ Lodged %	Moist %	Yield bu/a
No-Till			27692	32.8	21.3	160.7
Conv			29207	38.0	21.1	174.1
	c s s s s s c c c c C		28185	49.3	21.1	158.3
	c c s s s s s c c c C		27026	47.0	21.6	161.6
	c c c s s s s s c C		28829	57.7	21.6	163.7
	c c c c s s s s s C		29239	5.9	20.4	186.1
	s s s s s c c c c c C		27822	56.5	21.7	157.4
	c c c c c c c c c c C		28794	23.5	20.9	163.7
	s c s c s c s c s c C		29251	8.0	21.1	181.3
No-Till	c s s s s s c c c c C		27681	44.1	21.5	156.5
No-Till	c c s s s s s c c c C		25550	52.9	21.5	146.6
No-Till	c c c s s s s s c C		28806	56.0	21.6	163.7
No-Till	c c c c s s s s s C		28642	5.5	20.2	180.9
No-Till	s s s s s c c c c c C		27400	45.0	21.7	154.3
No-Till	c c c c c c c c c c C		27728	18.3	21.2	152.1
No-Till	s c s c s c s c s c C		28033	7.7	21.5	172.1
Conv	c s s s s s c c c c C		28689	54.5	20.7	160.4
Conv	c c s s s s s c c c C		28501	41.1	21.7	176.5
Conv	c c c s s s s s c C		28852	59.3	21.6	163.8
Conv	c c c c s s s s s C		29836	6.3	20.6	190.9
Conv	s s s s s c c c c c C		28244	68.1	21.7	160.3
Conv	c c c c c c c c c c C		29859	28.8	20.7	175.4
Conv	s c s c s c s c s c C		30468	8.3	20.8	190.4
		25	24510	26.0	21.5	166.3
		30	28344	37.1	21.4	166.6
		35	32494	43.1	20.8	169.5
No-Till		25	23837	22.6	21.7	158.9
No-Till		30	27270	35.4	21.7	160.2
No-Till		35	31967	40.3	20.7	163.0
Conv		25	25182	29.4	21.2	173.4
Conv		30	29418	38.8	21.2	172.8
Conv		35	33021	46.0	20.8	176.2
	c s s s s s c c c c C	25	24133	37.6	21.3	159.3
	c s s s s s c c c c C	30	28068	47.5	21.2	160.0
	c s s s s s c c c c C	35	32354	62.7	20.7	155.3
	c c s s s s s c c c C	25	23009	33.8	21.8	153.1
	c c s s s s s c c c C	30	27787	55.2	22.2	162.8
	c c s s s s s c c c C	35	30281	52.0	20.8	168.7
	c c c s s s s s c C	25	25152	44.9	21.7	172.4
	c c c s s s s s c C	30	28806	57.9	21.9	160.2
	c c c s s s s s c C	35	32529	70.2	21.2	158.7
	c c c c s s s s s C	25	25152	5.1	20.8	181.8
	c c c c s s s s s C	30	28806	5.3	20.3	177.1
	c c c c s s s s s C	35	33759	7.2	20.2	198.3
	s s s s s c c c c c C	25	23923	35.9	22.2	159.5
	s s s s s c c c c c C	30	28244	65.1	21.9	158.8
	s s s s s c c c c c C	35	31300	68.5	21.1	154.3
	c c c c c c c c c c C	25	24766	17.8	21.1	163.3
	c c c c c c c c c c C	30	27681	21.1	21.1	166.5
	c c c c c c c c c c C	35	33934	31.7	20.6	161.3
	s c s c s c s c s c C	25	25433	6.6	21.4	173.5
	s c s c s c s c s c C	30	29016	7.8	21.3	182.1
	s c s c s c s c s c C	35	33302	9.6	20.7	188.2

**Table D-1. 20 Year Corn/Soybean Rotation Study - Corn.  
Arlington, WI Experiment 9690.**

Tillage	Rotation 14th Year	Seeding Rate x 1000	Final Population plants/a	Broken/ Lodged %	Moist %	Yield bu/a
No-Till	csssscccC	25	23747	28.1	22.0	152.2
No-Till	csssscccC	30	26768	46.2	21.7	157.7
No-Till	csssscccC	35	32529	57.9	20.8	159.6
No-Till	ccsssscccC	25	21007	44.2	21.8	136.6
No-Till	ccsssscccC	30	26206	63.9	22.6	143.9
No-Till	ccsssscccC	35	29438	50.6	20.3	159.2
No-Till	ccsssscccC	25	25012	35.1	21.2	170.4
No-Till	ccsssscccC	30	29297	59.4	22.5	168.3
No-Till	ccsssscccC	35	32108	73.5	21.2	152.6
No-Till	ccccsssssC	25	24520	4.5	20.8	173.3
No-Till	ccccsssssC	30	27681	5.9	19.7	175.1
No-Till	ccccsssssC	35	33724	6.1	20.0	192.8
No-Till	sssscccccC	25	23817	25.9	22.4	160.9
No-Till	sssscccccC	30	27260	51.1	21.9	155.7
No-Till	sssscccccC	35	31124	57.9	20.9	148.0
No-Till	cccccccccC	25	24028	14.7	21.3	154.8
No-Till	cccccccccC	30	26136	12.9	21.3	150.2
No-Till	cccccccccC	35	33021	27.3	21.1	151.1
No-Till	scscscscsC	25	24731	5.5	22.2	164.6
No-Till	scscscscsC	30	27541	8.7	21.6	173.9
No-Till	scscscscsC	35	31827	8.9	20.7	177.9
Conv	csssscccC	25	24520	47.2	20.6	166.5
Conv	csssscccC	30	29368	48.8	20.8	162.3
Conv	csssscccC	35	32178	67.4	20.6	149.7
Conv	ccsssscccC	25	25012	23.4	21.9	169.7
Conv	ccsssscccC	30	29368	46.5	21.8	181.7
Conv	ccsssscccC	35	31124	53.3	21.4	178.3
Conv	ccsssscccC	25	25293	54.7	22.1	174.4
Conv	ccsssscccC	30	28314	56.3	21.4	152.2
Conv	ccsssscccC	35	32951	67.0	21.2	164.7
Conv	ccccsssssC	25	25785	5.8	20.7	190.4
Conv	ccccsssssC	30	29930	4.7	20.8	178.6
Conv	ccccsssssC	35	33794	8.4	20.4	203.8
Conv	sssscccccC	25	24028	45.8	22.0	158.4
Conv	sssscccccC	30	29227	79.2	21.8	161.9
Conv	sssscccccC	35	31475	79.2	21.4	160.5
Conv	cccccccccC	25	25504	21.0	20.9	171.8
Conv	cccccccccC	30	29227	29.3	20.9	182.9
Conv	cccccccccC	35	34848	36.1	20.2	171.4
Conv	scscscscsC	25	26136	7.8	20.6	182.4
Conv	scscscscsC	30	30492	6.9	21.0	190.2
Conv	scscscscsC	35	34778	10.3	20.8	198.6
Mean			28449	35.4	21.2	167.5
<b>Probability%</b>						
Tillage (T)			5.1	10.4	4.8	0.2
Rotation (R)			< 0.1	< 0.1	35.3	< 0.1
T x R			8.1	29.5	> 50	14.8
Seeding Rate (S)			< 0.1	< 0.1	< 0.1	43.2
T x S			24.2	> 50	16.6	> 50
R x S			43	< 0.1	> 50	7.6
T x R x S			> 50	22.5	29.9	> 50
<b>LSD 10%</b>						
Tillage (T)			1126	NS	0.2	2.8
Rotation (R)			847	11.5	NS	9.9
Seeding Rate (S)			555	3.4	0.3	NS
<b>CV%</b>						
			6.2	30.6	4.2	9.0

**Table D-3. 4-Year Corn/Soybean/Wheat Rotation Study.  
Arlington, WI Experiment 9691.**

<u>Tillage</u>	<u>Rotation</u>	<u>Moist</u>	<u>Yield</u>
		%	bu/a
	Conv	21.5	149.8
	No-Till	21.8	143.7
ccccCc		22.2	136.8
wwwcCs		21.8	145.6
swcsCc		21.5	156.8
wcscCc		21.9	138.8
cwscCs		22.4	134.7
scwsCc		20.5	160.4
cswcCc		21.2	143.1
cscsCs		21.6	157.3
ccccCc	Conv	21.8	142.9
ccccCc	No-Till	22.7	130.6
wwwcCs	Conv	21.6	142.3
wwwcCs	No-Till	21.9	149.0
swcsCc	Conv	21.1	160.4
swcsCc	No-Till	21.9	153.1
wcscCc	Conv	22.0	141.6
wcscCc	No-Till	21.8	135.9
cwscCs	Conv	22.5	136.1
cwscCs	No-Till	22.3	133.3
scwsCc	Conv	20.3	165.0
scwsCc	No-Till	20.7	155.7
cswcCc	Conv	21.4	146.0
cswcCc	No-Till	21.1	140.1
cscsCs	Conv	21.4	163.4
cscsCs	No-Till	21.8	151.3
<u>Mean</u>		21.7	146.8
<b><u>Probability %</u></b>			
	<u>Tillage (T)</u>	16.3	3.9
	<u>Rotation (R)</u>	< 0.1	< 0.1
	<u>T x R</u>	> 50	49.0
<b><u>LSD(0.10)</u></b>			
	<u>Tillage (T)</u>	NS	4.2
	<u>Rotation (R)</u>	0.6	7.5
<b><u>CV %</u></b>			
		5.0	8.7



**Table E-1.**

**Determining Corn Hybrid Maturity - Comparison of Hybrids.  
Growth and Development  
Arlington, WI - 1996.**

Hybrid	Relative Maturity	Day of Year	Leaf Development			Plant Height cm
			Leaf Collars	Hail Adjuster's Method	Total Leaves	
Carhart's CX92A	90	.	8.3	10.0	11.4	101.4
Dairyland ST-1180	80	.	7.7	9.2	10.7	95.3
Dairyland ST-1289	90	.	8.5	10.3	11.6	102.4
Dairyland ST-1400	100	.	8.0	9.7	11.1	104.2
Dairyland ST-1412	110	.	7.9	9.5	10.8	96.7
Dekalb DK 580	108	.	8.5	10.4	11.7	103.3
Dekalb DK306	80	.	7.9	9.4	10.8	98.6
Dekalb DK385	88	.	7.8	9.3	10.7	98.9
Dekalb DK493	99	.	8.2	9.8	11.3	97.6
Golden H2387	100	.	8.4	10.3	11.6	108.3
Golden H2441	105	.	8.5	10.1	11.7	102.6
NK PX9060	80	.	7.9	9.6	10.9	96.1
Pioneer 3394	110	.	8.4	10.0	11.3	108.4
Pioneer 3730	100	.	8.0	9.9	11.2	106.5
Pioneer 3845	90	.	8.6	10.5	11.8	115.0
Pioneer 3947	80	.	8.2	9.9	11.4	111.7
		151	0.8	1.1	3.0	4.1
		161	2.3	3.7	4.7	7.8
		170	4.5	6.4	7.6	26.8
		182	7.4	10.2	12.2	66.5
		193	10.5	14.0	15.9	137.9
		200	13.1	15.2	17.0	180.9
		225	18.5	18.5	18.5	296.6
Carhart's CX92A	90	151	1.0	1.2	3.2	4.2
Carhart's CX92A	90	161	2.8	4.0	5.0	7.2
Carhart's CX92A	90	170	4.7	6.1	7.9	26.7
Carhart's CX92A	90	182	7.4	10.7	12.4	65.6
Carhart's CX92A	90	193	11.0	14.6	16.0	132.1
Carhart's CX92A	90	200	13.2	15.1	16.8	176.1
Carhart's CX92A	90	225	18.1	18.1	18.1	298.0
Dairyland ST-1180	80	151	0.9	0.8	2.7	3.0
Dairyland ST-1180	80	161	2.1	3.0	4.4	5.9
Dairyland ST-1180	80	170	4.3	6.3	7.3	23.3
Dairyland ST-1180	80	182	7.0	10.0	12.1	64.4
Dairyland ST-1180	80	193	10.4	13.6	15.9	126.0
Dairyland ST-1180	80	200	12.7	14.2	15.9	173.6
Dairyland ST-1180	80	225	16.3	16.3	16.3	270.9
Dairyland ST-1289	90	151	0.8	1.0	2.9	3.8
Dairyland ST-1289	90	161	1.9	3.7	4.3	6.4

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**Determining Corn Hybrid Maturity - Comparison of Hybrids.  
Growth and Development  
Arlington, WI - 1996.**

Hybrid	Relative Maturity	Day of Year	Leaf Development			Plant Height cm
			Leaf Collars	Hail Adjuster's Method	Total Leaves	
Dairyland ST-1289	90	170	4.9	6.4	7.8	25.0
Dairyland ST-1289	90	182	7.6	10.3	12.4	60.5
Dairyland ST-1289	90	193	10.7	14.8	16.6	125.0
Dairyland ST-1289	90	200	14.2	16.3	17.9	184.6
Dairyland ST-1289	90	225	19.2	19.2	19.2	311.6
Dairyland ST-1400	100	151	0.8	0.9	3.0	3.8
Dairyland ST-1400	100	161	2.1	3.7	4.7	8.5
Dairyland ST-1400	100	170	4.3	6.0	7.2	25.8
Dairyland ST-1400	100	182	7.1	9.4	11.6	61.0
Dairyland ST-1400	100	193	10.2	13.4	15.4	129.0
Dairyland ST-1400	100	200	12.2	15.1	16.8	178.7
Dairyland ST-1400	100	225	19.0	19.0	19.0	322.6
Dairyland ST-1412	110	151	0.8	0.8	2.8	3.6
Dairyland ST-1412	110	161	2.0	2.8	3.8	6.8
Dairyland ST-1412	110	170	3.8	5.3	6.8	22.9
Dairyland ST-1412	110	182	6.8	9.2	11.1	58.0
Dairyland ST-1412	110	193	10.2	13.9	15.2	121.9
Dairyland ST-1412	110	200	12.1	15.1	16.3	164.3
Dairyland ST-1412	110	225	19.4	19.4	19.4	299.7
Dekalb DK 580	108	151	1.0	1.4	3.0	4.2
Dekalb DK 580	108	161	2.3	4.1	5.0	7.6
Dekalb DK 580	108	170	5.0	6.9	7.9	27.5
Dekalb DK 580	108	182	7.4	10.0	12.0	66.9
Dekalb DK 580	108	193	10.2	14.1	15.9	133.1
Dekalb DK 580	108	200	13.1	15.4	17.7	178.7
Dekalb DK 580	108	225	20.4	20.4	20.4	304.8
Dekalb DK306	80	151	0.8	0.8	2.9	3.4
Dekalb DK306	80	161	2.0	3.7	4.6	6.8
Dekalb DK306	80	170	4.6	6.3	7.6	25.8
Dekalb DK306	80	182	7.1	9.9	12.0	68.2
Dekalb DK306	80	193	11.0	13.9	15.8	141.2
Dekalb DK306	80	200	13.6	15.0	16.4	181.2
Dekalb DK306	80	225	16.4	16.4	16.4	263.3
Dekalb DK385	88	151	0.2	0.1	2.2	3.1
Dekalb DK385	88	161	2.1	3.0	4.0	7.2
Dekalb DK385	88	170	4.1	5.8	6.9	19.9
Dekalb DK385	88	182	7.2	9.8	11.6	62.2
Dekalb DK385	88	193	10.1	13.6	15.8	146.3
Dekalb DK385	88	200	13.0	14.9	16.7	171.0
Dekalb DK385	88	225	17.7	17.7	17.7	282.8
Dekalb DK493	99	151	0.7	0.7	2.7	3.8

**Table E-1. Determining Corn Hybrid Maturity - Comparison of Hybrids.  
Growth and Development  
Arlington, WI - 1996.**

Hybrid	Relative Maturity	Day of Year	Leaf Development			Plant Height cm
			Leaf Collars	Hail Adjuster's Method	Total Leaves	
Dekalb DK493	99	161	2.1	3.7	4.2	7.2
Dekalb DK493	99	170	4.2	6.0	7.2	24.6
Dekalb DK493	99	182	7.2	9.6	12.2	65.2
Dekalb DK493	99	193	10.7	14.2	16.2	122.9
Dekalb DK493	99	200	13.0	15.3	17.3	165.1
Dekalb DK493	99	225	19.4	19.4	19.4	294.6
Golden H2387	100	151	1.1	1.9	3.3	4.7
Golden H2387	100	161	2.7	3.8	4.9	8.5
Golden H2387	100	170	4.8	6.8	8.0	28.8
Golden H2387	100	182	7.9	10.8	12.8	69.4
Golden H2387	100	193	10.4	14.2	15.8	146.3
Golden H2387	100	200	13.1	15.3	17.4	193.0
Golden H2387	100	225	19.1	19.1	19.1	307.3
Golden H2441	105	151	1.0	1.4	3.3	3.8
Golden H2441	105	161	2.7	4.0	5.2	8.5
Golden H2441	105	170	5.0	6.7	8.0	24.1
Golden H2441	105	182	7.9	10.4	12.8	63.1
Golden H2441	105	193	10.8	13.9	16.4	136.1
Golden H2441	105	200	12.6	14.7	16.9	184.6
Golden H2441	105	225	19.4	19.4	19.4	298.0
NK PX9060	80	151	0.7	0.9	3.1	3.8
NK PX9060	80	161	2.6	3.6	4.4	5.9
NK PX9060	80	170	4.2	6.6	7.6	22.4
NK PX9060	80	182	7.3	10.2	12.3	61.4
NK PX9060	80	193	10.4	14.0	15.4	130.1
NK PX9060	80	200	13.2	15.0	16.3	179.5
NK PX9060	80	225	16.9	16.9	16.9	269.2
Pioneer 3394	110	151	0.7	1.0	3.1	5.1
Pioneer 3394	110	161	2.4	3.8	4.9	8.9
Pioneer 3394	110	170	4.9	6.6	7.9	34.3
Pioneer 3394	110	182	7.6	9.8	11.4	69.9
Pioneer 3394	110	193	10.7	14.2	15.6	147.3
Pioneer 3394	110	200	12.7	14.8	16.7	185.4
Pioneer 3394	110	225	19.7	19.7	19.7	308.2
Pioneer 3730	100	151	1.0	1.2	3.1	4.7
Pioneer 3730	100	161	2.0	4.0	4.7	9.3
Pioneer 3730	100	170	4.2	6.1	7.3	29.2
Pioneer 3730	100	182	7.3	10.1	11.9	71.1
Pioneer 3730	100	193	10.2	14.0	16.0	140.2
Pioneer 3730	100	200	13.0	15.2	17.2	170.2

**Table E-1. Determining Corn Hybrid Maturity - Comparison of Hybrids.  
Growth and Development  
Arlington, WI - 1996.**

Hybrid	Relative Maturity	Day of Year	Leaf Development			Plant Height cm
			Leaf Collars	Hail Adjuster's Method	Total Leaves	
Pioneer 3730	100	225	18.3	18.3	18.3	320.9
Pioneer 3845	90	151	1.1	1.9	3.7	6.4
Pioneer 3845	90	161	2.7	4.4	5.2	11.9
Pioneer 3845	90	170	4.9	7.1	8.1	35.6
Pioneer 3845	90	182	7.8	11.3	13.2	83.4
Pioneer 3845	90	193	10.4	13.7	15.4	159.5
Pioneer 3845	90	200	14.3	15.7	17.4	194.7
Pioneer 3845	90	225	19.2	19.2	19.2	313.3
Pioneer 3947	80	151	0.9	1.0	3.0	3.4
Pioneer 3947	80	161	2.0	3.7	5.0	8.5
Pioneer 3947	80	170	4.6	6.6	7.9	32.2
Pioneer 3947	80	182	7.8	10.9	13.1	74.5
Pioneer 3947	80	193	10.9	14.2	16.1	169.7
Pioneer 3947	80	200	14.1	15.8	17.4	214.2
Pioneer 3947	80	225	17.4	17.4	17.4	279.4
Mean		.	8.2	9.9	11.3	102.9
<b><u>Probability %</u></b>						
Hybrid (H)			0.5	< 0.1	< 0.1	< 0.1
Days (D)			< 0.1	< 0.1	< 0.1	< 0.1
H x D			< 0.1	< 0.1	< 0.1	< 0.1
<b><u>LSD (0.10)</u></b>						
Hybrid (H)			0.4	0.5	0.4	4.3
Day of Year (D)			0.1	0.2	0.1	2.1
<b><u>CV %</u></b>						
			8.5	7.7	6.9	6.1



**Table E-2. Determining Corn Hybrid Maturity.  
Comparison of Hybrids - Harvest Data.  
Arlington, WI - 1996.**

Hybrid	Relative Maturity	Broken Stalks %	Moisture %	Yield bu/a
Carhart's CX92A	90	0.5	24.2	184.3
Dairyland ST-1180	80	3.3	22.6	143.3
Dairyland ST-1289	90	1.4	23.9	171.7
Dairyland ST-1400	100	0.5	24.5	185.2
Dairyland ST-1412	110	0.5	34.2	191.0
Dekalb DK 580	108	1.4	32.8	223.3
Dekalb DK306	80	10.5	20.6	128.1
Dekalb DK385	88	1.9	22.1	150.5
Dekalb DK493	99	1.4	25.2	204.1
Golden H2387	100	3.8	27.3	236.2
Golden H2441	105	3.3	26.6	229.3
NK PX9060	80	5.2	21.6	124.5
Pioneer 3394	110	4.8	29.9	186.1
Pioneer 3730	100	2.9	27.4	187.5
Pioneer 3845	90	1.4	24.0	185.3
Pioneer 3947	80	4.3	22.5	162.8
Mean		3.0	25.6	180.8
<b><u>Probability %</u></b>				
Hybrid (H)		0.5	< 0.1	< 0.1
<b><u>LSD (0.10)</u></b>				
Hybrid (H)		3.5	1.7	26.1
<b><u>CV %</u></b>				
		86.4	4.7	10.4

**Table E-3.**

**Determining Corn Hybrid Maturity - Comparison of Hybrids.  
Growth and Development  
Fond du Lac, WI - 1996.**

Hybrid	Relative Maturity	Day of Year	Leaf Development			Plant Height cm
			Leaf Collars	Hail Adjuster's Method	Total Leaves	
Carhart's CX92A	90	.	9.3	11.6	13.1	97.9
Dairyland ST-1180	80	.	8.1	9.9	11.3	89.6
Dairyland ST-1289	90	.	9.2	11.1	12.4	94.7
Dairyland ST-1400	100	.	9.4	11.5	12.9	99.6
Dairyland ST-1412	110	.	9.0	10.9	12.2	99.6
Dekalb DK 580	108	.	9.5	11.6	13.0	96.7
Dekalb DK306	80	.	9.3	10.9	12.2	95.3
Dekalb DK385	88	.	9.3	11.2	12.6	96.0
Dekalb DK493	99	.	9.1	10.8	12.4	90.8
Golden H2387	100	.	8.9	10.8	12.3	95.8
Golden H2441	105	.	9.4	11.2	12.8	95.7
NK PX9060	80	.	8.7	10.7	12.0	92.6
Pioneer 3394	110	.	9.4	11.3	12.9	113.0
Pioneer 3730	100	.	8.9	10.9	12.3	102.5
Pioneer 3845	90	.	9.1	10.8	12.5	100.5
Pioneer 3947	80	.	9.3	11.1	12.6	107.9
		163	1.0	1.8	3.0	6.9
		180	5.0	6.9	8.4	30.4
		189	7.5	10.7	12.6	61.8
		199	10.3	13.5	15.5	103.9
		206	12.5	14.7	16.8	148.7
		241	18.8	18.8	18.8	236.3
Carhart's CX92A	90	163	1.0	1.9	3.1	7.2
Carhart's CX92A	90	180	5.1	7.1	8.9	27.9
Carhart's CX92A	90	189	7.8	11.2	13.3	62.7
Carhart's CX92A	90	199	10.3	14.8	16.3	106.7
Carhart's CX92A	90	206	12.6	15.8	17.7	149.0
Carhart's CX92A	90	241	19.9	19.9	19.9	233.7
Dairyland ST-1180	80	163	1.0	1.7	2.9	6.4
Dairyland ST-1180	80	180	4.7	6.4	7.9	27.1
Dairyland ST-1180	80	189	7.0	10.0	11.8	51.2
Dairyland ST-1180	80	199	9.6	12.6	14.7	97.4
Dairyland ST-1180	80	206	11.5	13.4	15.4	143.9
Dairyland ST-1180	80	241	16.3	16.3	16.3	211.7
Dairyland ST-1289	90	163	0.8	1.3	2.8	6.4
Dairyland ST-1289	90	180	5.1	6.7	8.1	26.3
Dairyland ST-1289	90	189	7.6	11.0	12.3	52.9
Dairyland ST-1289	90	199	10.2	13.9	15.7	102.5
Dairyland ST-1289	90	206	12.4	14.9	17.0	138.9
Dairyland ST-1289	90	241	18.8	18.8	18.8	241.3
Dairyland ST-1400	100	163	1.0	2.0	3.0	6.8
Dairyland ST-1400	100	180	5.0	7.0	8.7	32.2
Dairyland ST-1400	100	189	7.7	10.8	12.4	59.3

**Table E-3. Determining Corn Hybrid Maturity - Comparison of Hybrids.  
Growth and Development  
Fond du Lac, WI - 1996.**

Hybrid	Relative Maturity	Day of Year	Leaf Development			Plant Height cm
			Leaf Collars	Hail Adjuster's Method	Total Leaves	
Dairyland ST-1400	100	199	10.0	14.0	15.7	104.1
Dairyland ST-1400	100	206	12.2	14.8	17.6	143.9
Dairyland ST-1400	100	241	20.3	20.3	20.3	251.5
Dairyland ST-1412	110	163	1.0	1.8	2.9	6.8
Dairyland ST-1412	110	180	4.8	6.8	7.8	27.9
Dairyland ST-1412	110	189	7.0	9.8	11.6	63.9
Dairyland ST-1412	110	199	9.8	12.7	14.6	96.5
Dairyland ST-1412	110	206	11.8	14.2	16.4	147.3
Dairyland ST-1412	110	241	19.9	19.9	19.9	254.9
Dekalb DK 580	108	163	1.0	2.0	3.0	5.9
Dekalb DK 580	108	180	5.0	7.1	8.3	31.3
Dekalb DK 580	108	189	7.8	11.2	12.7	59.3
Dekalb DK 580	108	199	10.4	13.9	16.0	103.3
Dekalb DK 580	108	206	12.2	14.8	17.3	142.2
Dekalb DK 580	108	241	20.7	20.7	20.7	237.9
Dekalb DK306	80	163	1.0	1.7	3.0	7.6
Dekalb DK306	80	180	5.0	6.9	8.6	28.8
Dekalb DK306	80	189	8.0	11.0	13.1	65.2
Dekalb DK306	80	199	11.2	14.0	15.9	103.3
Dekalb DK306	80	206	14.0	15.0	16.3	165.1
Dekalb DK306	80	241	16.6	16.6	16.6	201.5
Dekalb DK385	88	163	1.0	2.0	3.0	6.4
Dekalb DK385	88	180	5.1	7.1	8.4	28.8
Dekalb DK385	88	189	7.6	11.1	13.4	58.4
Dekalb DK385	88	199	11.0	13.9	15.8	108.4
Dekalb DK385	88	206	13.4	15.2	17.0	152.4
Dekalb DK385	88	241	17.9	17.9	17.9	221.8
Dekalb DK493	99	163	0.9	1.3	2.8	6.8
Dekalb DK493	99	180	4.8	6.6	8.1	27.1
Dekalb DK493	99	189	7.3	10.1	12.0	50.4
Dekalb DK493	99	199	10.1	13.2	15.2	97.4
Dekalb DK493	99	206	12.0	14.2	16.7	122.8
Dekalb DK493	99	241	19.4	19.4	19.4	240.5
Golden H2387	100	163	0.9	1.6	3.0	6.8
Golden H2387	100	180	4.9	6.7	8.3	27.1
Golden H2387	100	189	7.6	10.6	12.1	59.3
Golden H2387	100	199	9.9	12.9	14.9	106.7
Golden H2387	100	206	12.0	14.5	17.0	141.4
Golden H2387	100	241	19.9	19.9	19.9	233.7
Golden H2441	105	163	0.9	1.7	2.9	6.8
Golden H2441	105	180	5.0	7.0	8.2	28.8
Golden H2441	105	189	7.9	10.9	12.7	55.9
Golden H2441	105	199	10.4	13.6	15.9	97.4
Golden H2441	105	206	12.3	14.3	17.1	148.2
Golden H2441	105	241	19.9	19.9	19.9	237.1

**Table E-3. Determining Corn Hybrid Maturity - Comparison of Hybrids.  
Growth and Development  
Fond du Lac, WI - 1996.**

Hybrid	Relative Maturity	Day of Year	Leaf Development			Plant Height cm
			Leaf Collars	Hail Adjuster's Method	Total Leaves	
NK PX9060	80	163	1.0	2.1	3.4	6.8
NK PX9060	80	180	5.1	7.0	8.7	32.2
NK PX9060	80	189	7.4	11.0	13.2	54.2
NK PX9060	80	199	10.2	13.8	15.0	99.1
NK PX9060	80	206	12.7	14.4	15.8	148.2
NK PX9060	80	241	16.0	16.0	16.0	215.1
Pioneer 3394	110	163	1.0	1.9	3.0	8.0
Pioneer 3394	110	180	5.1	6.9	8.2	36.4
Pioneer 3394	110	189	7.6	10.7	12.7	100.8
Pioneer 3394	110	199	10.1	13.2	15.6	118.5
Pioneer 3394	110	206	12.1	14.2	17.0	156.6
Pioneer 3394	110	241	20.8	20.8	20.8	257.4
Pioneer 3730	100	163	1.0	2.0	3.0	7.6
Pioneer 3730	100	180	4.9	7.0	8.3	35.6
Pioneer 3730	100	189	7.3	10.3	12.4	64.4
Pioneer 3730	100	199	10.0	13.3	15.2	106.7
Pioneer 3730	100	206	12.0	14.7	16.9	149.0
Pioneer 3730	100	241	17.9	17.9	17.9	251.5
Pioneer 3845	90	163	1.0	1.8	3.4	7.2
Pioneer 3845	90	180	5.0	7.1	8.4	33.9
Pioneer 3845	90	189	7.4	10.3	12.4	61.8
Pioneer 3845	90	199	10.1	12.9	15.3	98.2
Pioneer 3845	90	206	13.0	14.6	16.9	153.3
Pioneer 3845	90	241	18.2	18.2	18.2	248.9
Pioneer 3947	80	163	1.0	2.0	3.2	6.4
Pioneer 3947	80	180	5.0	7.0	8.6	35.6
Pioneer 3947	80	189	7.3	10.9	13.0	69.4
Pioneer 3947	80	199	10.9	13.9	16.2	116.8
Pioneer 3947	80	206	13.7	15.2	17.1	177.0
Pioneer 3947	80	241	17.7	17.7	17.7	242.2
Mean		.	9.1	11.0	12.5	98.0
<b>Probability %</b>						
Hybrid (H)			< 0.1	< 0.1	< 0.1	< 0.1
Days (D)			< 0.1	< 0.1	< 0.1	< 0.1
H x D			< 0.1	< 0.1	< 0.1	< 0.1
<b>LSD (0.10)</b>						
Hybrid (H)			0.3	0.4	0.5	7.4
Day of Year (D)			0.1	0.1	0.1	2.9
<b>CV %</b>			5.8	5.9	5.5	8.8

**Table E-4. Determining Corn Hybrid Maturity.  
Comparison of Hybrids - Harvest Data.  
Fond du Lac, WI - 1996.**

Hybrid	Relative Maturity	Broken Stalks %	Moisture %	Yield bu/a
Carhart's CX92A	90	8.2	23.3	141.0
Dairyland ST-1180	80	12.1	22.2	119.3
Dairyland ST-1289	90	7.3	22.3	136.4
Dairyland ST-1400	100	7.3	25.0	134.7
Dairyland ST-1412	110	10.6	33.8	145.5
Dekalb DK 580	108	8.0	34.6	138.8
Dekalb DK306	80	7.7	21.1	109.0
Dekalb DK385	88	8.7	23.0	124.2
Dekalb DK493	99	7.3	25.4	142.5
Golden H2387	100	33.9	26.5	155.3
Golden H2441	105	16.5	27.0	149.6
NK PX9060	80	12.1	22.0	87.9
Pioneer 3394	110	1.5	30.7	120.6
Pioneer 3730	100	6.3	25.4	163.2
Pioneer 3845	90	10.2	24.1	115.0
Pioneer 3947	80	38.2	23.6	75.7
		12.9	25.2	129.6
<b><u>Probability %</u></b>				
Hybrid (H)		6.7	< 0.1	0.6
<b><u>LSD (0.10)</u></b>				
Hybrid (H)		16.4	1.8	29.1
<b><u>CV %</u></b>				
		91.3	3.9	16.0

**Table E-5. Determining Corn Hybrid Maturity - Comparison of Hybrids.  
Growth and Development  
Hancock, WI - 1996.**

Hybrid	Relative Maturity	Day of Year	Leaf Development			Plant Height cm
			Leaf Collars	Hail Adjuster's Method	Total Leaves	
Carhart's CX92A	90	.	8.2	10.2	11.4	87.7
Dairyland ST-1180	80	.	7.4	9.3	10.4	80.1
Dairyland ST-1289	90	.	8.2	10.0	11.3	86.8
Dairyland ST-1400	100	.	8.0	10.1	11.2	87.2
Dairyland ST-1412	110	.	7.5	9.3	10.5	87.8
Dekalb DK 580	108	.	8.2	10.2	11.3	83.6
Dekalb DK306	80	.	7.9	9.6	10.9	82.7
Dekalb DK385	88	.	7.9	9.9	11.1	82.6
Dekalb DK493	99	.	8.0	9.9	11.1	85.3
Golden H2387	100	.	8.0	10.2	11.3	89.6
Golden H2441	105	.	8.3	10.1	11.4	87.8
NK PX9060	80	.	7.8	9.8	10.7	82.5
Pioneer 3394	110	.	8.3	10.2	11.6	90.8
Pioneer 3730	100	.	7.7	9.7	10.8	91.4
Pioneer 3845	90	.	8.1	10.1	11.4	92.5
Pioneer 3947	80	.	8.1	9.9	11.1	91.3
		154	2.0	3.2	4.2	6.4
		162	3.1	4.9	6.0	13.4
		170	5.1	7.7	8.8	26.5
		177	6.2	8.9	10.1	31.3
		187	9.2	12.0	14.1	92.8
		196	12.1	14.7	16.4	153.0
		240	18.1	18.1	18.1	284.7
Carhart's CX92A	90	154	2.0	3.0	4.2	6.4
Carhart's CX92A	90	162	3.1	4.9	5.9	13.1
Carhart's CX92A	90	170	5.0	7.4	8.6	27.1
Carhart's CX92A	90	177	6.4	9.1	10.1	34.7
Carhart's CX92A	90	187	9.4	12.8	15.0	90.6
Carhart's CX92A	90	196	12.4	15.4	17.0	144.8
Carhart's CX92A	90	240	18.7	18.7	18.7	297.2
Dairyland ST-1180	80	154	2.0	3.1	4.0	5.9
Dairyland ST-1180	80	162	3.0	4.7	5.8	12.3
Dairyland ST-1180	80	170	5.0	7.4	8.4	23.3
Dairyland ST-1180	80	177	6.0	8.4	9.6	28.4
Dairyland ST-1180	80	187	8.8	11.9	13.9	85.5
Dairyland ST-1180	80	196	11.4	14.0	15.9	149.9
Dairyland ST-1180	80	240	16.0	16.0	16.0	255.7
Dairyland ST-1289	90	154	2.0	2.9	4.3	7.2
Dairyland ST-1289	90	162	3.0	4.8	5.8	11.0
Dairyland ST-1289	90	170	5.2	7.9	9.1	22.4
Dairyland ST-1289	90	177	6.7	8.9	10.3	31.8
Dairyland ST-1289	90	187	9.4	12.3	14.3	83.8
Dairyland ST-1289	90	196	12.3	15.0	16.6	149.0

**Table E-5. Determining Corn Hybrid Maturity - Comparison of Hybrids.  
Growth and Development  
Hancock, WI - 1996.**

Hybrid	Relative Maturity	Day of Year	Leaf Development			Plant Height cm
			Leaf Collars	Hail Adjuster's Method	Total Leaves	
Dairyland ST-1289	90	240	18.4	18.4	18.4	302.3
Dairyland ST-1400	100	154	2.0	3.4	4.1	6.4
Dairyland ST-1400	100	162	3.0	5.0	6.0	14.0
Dairyland ST-1400	100	170	5.1	7.7	8.7	23.7
Dairyland ST-1400	100	177	6.0	8.8	9.9	29.2
Dairyland ST-1400	100	187	9.0	11.9	13.8	85.1
Dairyland ST-1400	100	196	12.0	15.0	16.7	146.5
Dairyland ST-1400	100	240	19.1	19.1	19.1	305.7
Dairyland ST-1412	110	154	1.9	3.4	4.2	6.8
Dairyland ST-1412	110	162	3.0	4.4	5.4	13.6
Dairyland ST-1412	110	170	4.9	6.9	8.0	24.6
Dairyland ST-1412	110	177	5.6	7.6	8.8	32.2
Dairyland ST-1412	110	187	8.4	10.8	13.1	86.4
Dairyland ST-1412	110	196	11.3	14.6	16.4	154.9
Dairyland ST-1412	110	240	18.4	18.4	18.4	296.3
Dekalb DK 580	108	154	2.0	3.2	4.0	6.8
Dekalb DK 580	108	162	3.2	5.1	6.1	12.7
Dekalb DK 580	108	170	5.1	7.6	8.6	25.4
Dekalb DK 580	108	177	6.2	8.7	9.8	33.9
Dekalb DK 580	108	187	9.3	12.1	14.0	87.6
Dekalb DK 580	108	196	11.9	15.0	16.9	130.4
Dekalb DK 580	108	240	19.8	19.8	19.8	288.7
Dekalb DK306	80	154	2.0	2.4	4.3	4.9
Dekalb DK306	80	162	3.2	5.0	6.0	13.6
Dekalb DK306	80	170	5.1	8.0	9.1	27.5
Dekalb DK306	80	177	6.6	9.1	10.4	32.2
Dekalb DK306	80	187	9.6	12.1	14.1	100.8
Dekalb DK306	80	196	12.6	14.6	16.0	159.2
Dekalb DK306	80	240	16.1	16.1	16.1	240.5
Dekalb DK385	88	154	2.0	3.0	4.2	6.4
Dekalb DK385	88	162	3.0	4.9	5.9	13.1
Dekalb DK385	88	170	5.0	7.9	9.0	24.6
Dekalb DK385	88	177	6.1	8.7	9.8	29.6
Dekalb DK385	88	187	9.3	12.2	14.6	89.8
Dekalb DK385	88	196	12.2	15.0	16.6	151.6
Dekalb DK385	88	240	17.3	17.3	17.3	263.3
Dekalb DK493	99	154	2.0	2.9	4.0	6.4
Dekalb DK493	99	162	3.0	4.9	5.9	13.6
Dekalb DK493	99	170	5.0	7.6	8.7	24.1
Dekalb DK493	99	177	6.3	8.9	10.1	31.8
Dekalb DK493	99	187	9.0	11.7	13.8	88.5
Dekalb DK493	99	196	11.4	14.4	16.6	148.2
Dekalb DK493	99	240	19.0	19.0	19.0	284.5

**Table E-5. Determining Corn Hybrid Maturity - Comparison of Hybrids.  
Growth and Development  
Hancock, WI - 1996.**

Hybrid	Relative Maturity	Day of Year	Leaf Development			Plant Height cm
			Leaf Collars	Hail Adjuster's Method	Total Leaves	
Golden H2387	100	154	2.0	3.7	4.2	4.9
Golden H2387	100	162	3.0	5.2	6.2	12.3
Golden H2387	100	170	5.0	8.0	9.0	25.8
Golden H2387	100	177	6.1	9.0	10.3	26.3
Golden H2387	100	187	9.0	11.6	13.9	94.8
Golden H2387	100	196	11.7	14.4	16.4	162.6
Golden H2387	100	240	19.2	19.2	19.2	300.6
Golden H2441	105	154	2.0	3.0	4.1	4.9
Golden H2441	105	162	3.3	5.0	6.0	13.1
Golden H2441	105	170	5.4	7.9	9.0	25.8
Golden H2441	105	177	6.0	9.1	10.7	31.3
Golden H2441	105	187	9.7	12.1	14.4	93.1
Golden H2441	105	196	12.2	14.4	16.4	152.4
Golden H2441	105	240	19.3	19.3	19.3	293.8
NK PX9060	80	154	2.0	3.8	4.0	4.9
NK PX9060	80	162	3.0	5.0	6.1	13.6
NK PX9060	80	170	5.0	7.6	8.6	25.0
NK PX9060	80	177	6.1	8.9	9.9	32.2
NK PX9060	80	187	9.1	12.7	14.2	94.8
NK PX9060	80	196	12.6	14.4	15.7	150.7
NK PX9060	80	240	16.2	16.2	16.2	256.5
Pioneer 3394	110	154	2.0	3.3	4.7	9.3
Pioneer 3394	110	162	3.4	4.9	6.7	12.7
Pioneer 3394	110	170	5.0	8.0	9.0	30.5
Pioneer 3394	110	177	6.6	8.9	10.0	32.2
Pioneer 3394	110	187	9.3	12.1	14.1	99.9
Pioneer 3394	110	196	11.7	14.6	16.8	156.6
Pioneer 3394	110	240	19.8	19.8	19.8	294.6
Pioneer 3730	100	154	2.0	3.4	4.1	8.9
Pioneer 3730	100	162	3.0	4.4	5.6	14.0
Pioneer 3730	100	170	5.0	7.7	8.7	33.4
Pioneer 3730	100	177	6.0	9.1	10.3	30.9
Pioneer 3730	100	187	8.6	11.4	13.6	94.0
Pioneer 3730	100	196	12.1	14.7	16.1	151.6
Pioneer 3730	100	240	17.3	17.3	17.3	307.3
Pioneer 3845	90	154	2.1	2.7	4.3	6.8
Pioneer 3845	90	162	3.1	5.6	6.6	16.5
Pioneer 3845	90	170	5.1	7.8	9.0	29.6
Pioneer 3845	90	177	6.3	9.2	10.3	33.9
Pioneer 3845	90	187	9.2	12.0	14.4	99.9
Pioneer 3845	90	196	12.0	14.6	16.4	152.4
Pioneer 3845	90	240	18.7	18.7	18.7	308.2
Pioneer 3947	80	154	2.1	3.1	3.9	5.3



**Table E-5. Determining Corn Hybrid Maturity - Comparison of Hybrids.  
Growth and Development  
Hancock, WI - 1996.**

Hybrid	Relative Maturity	Day of Year	Leaf Development			Plant Height cm
			Leaf Collars	Hail Adjuster's Method	Total Leaves	
Pioneer 3947	80	162	3.0	4.9	6.0	14.8
Pioneer 3947	80	170	5.1	7.8	8.9	31.3
Pioneer 3947	80	177	6.7	9.6	10.9	30.5
Pioneer 3947	80	187	9.8	12.7	14.9	110.1
Pioneer 3947	80	196	13.3	14.4	16.2	187.1
Pioneer 3947	80	240	16.7	16.7	16.7	259.9
Mean		.	8.0	9.9	11.1	86.9
<b><u>Probability %</u></b>						
Hybrid (H)			< 0.1	< 0.1	< 0.1	< 0.1
Days (D)			< 0.1	< 0.1	< 0.1	< 0.1
H x D			< 0.1	< 0.1	< 0.1	< 0.1
<b><u>LSD (0.10)</u></b>						
Hybrid (H)			0.2	0.3	0.2	3.5
Day of Year (D)			0.1	0.2	0.1	1.9
<b><u>CV %</u></b>						
			6.2	5.5	4.9	6.6

**Table E-6. Determining Corn Hybrid Maturity.  
Comparison of Hybrids - Harvest Data.  
Hancock, WI - 1996.**

Hybrid	Relative Maturity	Broken Stalks %	Moisture %	Yield bu/a
Carhart's CX92A	90	2.5	26.4	183.0
Dairyland ST-1180	80	3.0	24.7	131.8
Dairyland ST-1289	90	2.5	24.0	150.9
Dairyland ST-1400	100	1.5	29.7	185.5
Dairyland ST-1412	110	1.5	37.2	179.4
Dekalb DK 580	108	1.5	41.4	164.2
Dekalb DK306	80	3.0	19.8	129.7
Dekalb DK385	88	2.0	21.8	172.5
Dekalb DK493	99	0.5	27.0	222.6
Golden H2387	100	1.0	28.2	241.1
Golden H2441	105	3.0	30.4	215.1
NK PX9060	80	0.0	21.8	121.6
Pioneer 3394	110	3.0	37.5	179.2
Pioneer 3730	100	0.5	25.6	199.1
Pioneer 3845	90	1.0	23.2	191.8
Pioneer 3947	80	2.0	22.3	128.1
Mean		1.8	27.6	174.7
<b><u>Probability %</u></b>				
Hybrid (H)		> 50	< 0.1	< 0.1
<b><u>LSD (0.10)</u></b>				
Hybrid (H)		NS	2.6	24.9
<b><u>CV %</u></b>				
		99.9	6.9	10.3

**Table E-7.**

**Determining Corn Hybrid Maturity - Comparison of Hybrids.  
Growth and Development  
Janesville, WI - 1996.**

Hybrid	Relative Maturity	Day of Year	Leaf Development			Plant Height cm
			Leaf Collars	Hail Adjuster's Method	Total Leaves	
Carhart's CX92A	90	.	8.3	9.9	11.2	91.9
Dairyland ST-1180	80	.	7.8	9.4	10.6	82.9
Dairyland ST-1289	90	.	8.5	10.3	11.6	95.6
Dairyland ST-1400	100	.	8.3	10.1	11.3	90.3
Dairyland ST-1412	110	.	8.0	9.4	10.8	95.3
Dekalb DK 580	108	.	8.3	10.1	11.4	88.5
Dekalb DK306	80	.	8.4	9.8	11.0	89.4
Dekalb DK385	88	.	8.3	9.8	11.1	91.6
Dekalb DK493	99	.	8.3	9.8	11.0	91.7
Golden H2387	100	.	8.4	10.1	11.5	91.3
Golden H2441	105	.	8.6	10.2	11.5	94.0
NK PX9060	80	.	8.2	10.0	11.1	89.1
Pioneer 3394	110	.	8.3	9.9	11.4	95.6
Pioneer 3730	100	.	8.2	9.9	11.2	100.0
Pioneer 3845	90	.	8.5	10.2	11.6	101.6
Pioneer 3947	80	.	8.5	9.9	11.1	96.6
		155	1.9	2.9	3.9	7.0
		163	3.0	4.2	5.3	12.3
		171	5.0	7.6	8.7	33.7
		180	7.0	9.6	11.6	66.4
		190	9.7	12.5	14.9	113.7
		199	13.5	14.8	16.3	157.7
		239	17.9	17.9	17.9	259.1
Carhart's CX92A	90	155	1.8	2.8	3.9	6.4
Carhart's CX92A	90	163	3.0	4.1	5.2	11.9
Carhart's CX92A	90	171	4.9	7.2	8.7	31.3
Carhart's CX92A	90	180	7.2	9.9	11.8	65.2
Carhart's CX92A	90	190	9.8	12.7	15.2	103.3
Carhart's CX92A	90	199	13.2	14.6	16.0	159.2
Carhart's CX92A	90	239	17.9	17.9	17.9	265.9
Dairyland ST-1180	80	155	1.9	2.8	3.8	6.4
Dairyland ST-1180	80	163	2.9	4.0	5.0	9.3
Dairyland ST-1180	80	171	4.7	7.2	8.2	30.1
Dairyland ST-1180	80	180	6.6	9.3	11.2	60.1
Dairyland ST-1180	80	190	9.3	12.4	14.6	94.0
Dairyland ST-1180	80	199	13.4	14.3	15.6	154.1
Dairyland ST-1180	80	239	15.9	15.9	15.9	226.1
Dairyland ST-1289	90	155	1.6	2.9	3.9	5.9
Dairyland ST-1289	90	163	3.0	4.1	5.2	11.4
Dairyland ST-1289	90	171	5.0	8.3	9.3	31.3
Dairyland ST-1289	90	180	7.1	10.2	11.8	62.7

Table E-7.

**Determining Corn Hybrid Maturity - Comparison of Hybrids.  
Growth and Development  
Janesville, WI - 1996.**

Hybrid	Relative Maturity	Day of Year	Leaf Development			Plant Height cm
			Leaf Collars	Hail Adjuster's Method	Total Leaves	
Dairyland ST-1289	90	190	10.0	12.8	15.3	116.0
Dairyland ST-1289	90	199	14.1	15.3	17.0	170.2
Dairyland ST-1289	90	239	18.4	18.4	18.4	271.8
Dairyland ST-1400	100	155	1.8	3.1	4.0	7.2
Dairyland ST-1400	100	163	3.0	4.1	5.2	12.3
Dairyland ST-1400	100	171	5.0	7.3	8.3	30.5
Dairyland ST-1400	100	180	7.0	9.3	11.2	62.2
Dairyland ST-1400	100	190	9.3	12.7	15.2	104.1
Dairyland ST-1400	100	199	13.1	15.0	16.4	132.1
Dairyland ST-1400	100	239	18.8	18.8	18.8	283.6
Dairyland ST-1412	110	155	1.9	2.4	3.6	6.8
Dairyland ST-1412	110	163	2.7	3.6	4.7	11.4
Dairyland ST-1412	110	171	4.9	6.9	8.2	32.2
Dairyland ST-1412	110	180	6.4	8.9	10.7	63.9
Dairyland ST-1412	110	190	9.1	11.9	14.2	112.6
Dairyland ST-1412	110	199	12.4	14.1	15.7	160.9
Dairyland ST-1412	110	239	18.2	18.2	18.2	279.4
Dekalb DK 580	108	155	1.8	2.9	3.9	6.4
Dekalb DK 580	108	163	3.0	3.9	4.9	10.2
Dekalb DK 580	108	171	5.2	8.0	9.0	31.3
Dekalb DK 580	108	180	7.0	9.2	11.2	58.4
Dekalb DK 580	108	190	9.2	12.4	14.9	103.7
Dekalb DK 580	108	199	12.6	14.4	16.8	142.2
Dekalb DK 580	108	239	19.4	19.4	19.4	267.6
Dekalb DK306	80	155	2.0	2.9	4.0	7.6
Dekalb DK306	80	163	3.1	4.4	5.8	11.9
Dekalb DK306	80	171	5.1	7.6	8.6	33.9
Dekalb DK306	80	180	7.2	10.0	12.3	66.0
Dekalb DK306	80	190	10.8	13.1	15.0	123.6
Dekalb DK306	80	199	14.8	14.9	15.7	160.0
Dekalb DK306	80	239	15.6	15.6	15.6	222.7
Dekalb DK385	88	155	1.9	2.7	3.8	5.9
Dekalb DK385	88	163	3.0	4.2	5.2	12.3
Dekalb DK385	88	171	5.0	7.3	8.3	33.9
Dekalb DK385	88	180	6.9	9.0	11.3	69.0
Dekalb DK385	88	190	9.7	12.3	14.7	112.6
Dekalb DK385	88	199	13.8	14.9	16.6	159.2
Dekalb DK385	88	239	17.9	17.9	17.9	248.1
Dekalb DK493	99	155	1.7	2.6	3.4	6.4
Dekalb DK493	99	163	2.9	3.9	4.9	12.3
Dekalb DK493	99	171	5.0	7.4	8.6	30.5
Dekalb DK493	99	180	7.0	9.3	11.1	63.9
Dekalb DK493	99	190	9.6	12.1	14.2	109.2

**Table E-7. Determining Corn Hybrid Maturity - Comparison of Hybrids.  
Growth and Development  
Janesville, WI - 1996.**

Hybrid	Relative Maturity	Day of Year	Leaf Development			Plant Height cm
			Leaf Collars	Hail Adjuster's Method	Total Leaves	
Dekalb DK493	99	199	12.9	14.6	16.2	153.3
Dekalb DK493	99	239	18.8	18.8	18.8	266.7
Golden H2387	100	155	1.9	3.0	4.0	7.2
Golden H2387	100	163	3.0	4.2	5.4	12.3
Golden H2387	100	171	5.0	7.6	8.8	33.9
Golden H2387	100	180	6.9	9.4	11.8	63.9
Golden H2387	100	190	9.6	12.3	14.6	113.9
Golden H2387	100	199	12.9	14.6	16.7	147.3
Golden H2387	100	239	19.2	19.2	19.2	260.8
Golden H2441	105	155	2.0	3.2	4.0	7.2
Golden H2441	105	163	3.0	4.1	5.2	11.0
Golden H2441	105	171	5.6	7.9	8.9	31.8
Golden H2441	105	180	7.7	9.8	11.8	69.9
Golden H2441	105	190	10.0	12.4	15.1	116.0
Golden H2441	105	199	13.3	15.2	16.7	161.7
Golden H2441	105	239	18.9	18.9	18.9	260.8
NK PX9060	80	155	2.0	3.3	4.3	7.6
NK PX9060	80	163	3.0	4.6	5.7	12.3
NK PX9060	80	171	5.2	8.3	9.3	33.9
NK PX9060	80	180	7.1	10.1	12.2	64.4
NK PX9060	80	190	10.0	12.9	14.9	113.5
NK PX9060	80	199	14.1	14.7	15.6	154.1
NK PX9060	80	239	15.9	15.9	15.9	237.9
Pioneer 3394	110	155	1.9	3.0	4.0	7.6
Pioneer 3394	110	163	3.0	4.3	5.4	14.4
Pioneer 3394	110	171	5.0	7.7	8.8	39.0
Pioneer 3394	110	180	6.9	9.1	11.0	70.3
Pioneer 3394	110	190	9.4	11.7	14.4	116.4
Pioneer 3394	110	199	12.4	14.1	16.6	149.9
Pioneer 3394	110	239	19.3	19.3	19.3	271.8
Pioneer 3730	100	155	1.9	3.0	4.0	7.6
Pioneer 3730	100	163	2.9	4.0	5.1	14.8
Pioneer 3730	100	171	4.9	7.4	8.6	39.8
Pioneer 3730	100	180	7.1	9.6	11.4	69.9
Pioneer 3730	100	190	9.7	12.6	15.0	118.5
Pioneer 3730	100	199	13.2	14.8	16.3	164.3
Pioneer 3730	100	239	17.8	17.8	17.8	285.3
Pioneer 3845	90	155	2.0	3.2	4.1	9.3
Pioneer 3845	90	163	3.0	4.6	5.7	16.5
Pioneer 3845	90	171	5.2	8.0	9.1	42.3
Pioneer 3845	90	180	7.1	9.8	12.0	82.6
Pioneer 3845	90	190	9.9	12.4	15.1	129.5
Pioneer 3845	90	199	14.0	15.0	16.6	170.2

**Table E-7. Determining Corn Hybrid Maturity - Comparison of Hybrids.  
Growth and Development  
Janesville, WI - 1996.**

Hybrid	Relative Maturity	Day of Year	Leaf Development			Plant Height cm
			Leaf Collars	Hail Adjuster's Method	Total Leaves	
Pioneer 3845	90	239	18.6	18.6	18.6	260.8
Pioneer 3947	80	155	1.9	3.1	4.0	6.8
Pioneer 3947	80	163	3.0	4.3	5.4	12.7
Pioneer 3947	80	171	5.0	7.4	8.7	34.3
Pioneer 3947	80	180	7.3	10.0	12.2	69.4
Pioneer 3947	80	190	10.6	12.8	15.3	132.1
Pioneer 3947	80	199	15.3	15.7	16.1	184.6
Pioneer 3947	80	239	16.1	16.1	16.1	236.2
Mean		.	8.3	9.9	11.2	92.8
<b><u>Probability %</u></b>						
Hybrid (H)			1.7	4.4	1.7	< 0.1
Days (D)			< 0.1	< 0.1	< 0.1	< 0.1
H x D			< 0.1	< 0.1	< 0.1	< 0.1
<b><u>LSD (0.10)</u></b>						
Hybrid (H)			0.3	0.4	0.4	3.8
Day of Year (D)			0.1	0.1	0.1	1.7
<b><u>CV %</u></b>						
			6.7	6.6	5.9	5.6

**Table E-8. Determining Corn Hybrid Maturity.  
Comparison of Hybrids - Harvest Data.  
Janesville, WI - 1996.**

Hybrid	Relative Maturity	Broken Stalks %	Moisture %	Yield bu/a
Carhart's CX92A	90	2.7	19.0	168.7
Dairyland ST-1180	80	2.7	19.2	93.0
Dairyland ST-1289	90	11.2	19.7	171.3
Dairyland ST-1400	100	7.5	19.1	169.4
Dairyland ST-1412	110	2.7	24.4	217.8
Dekalb DK 580	108	3.2	24.3	215.4
Dekalb DK306	80	25.7	17.3	114.0
Dekalb DK385	88	11.8	17.8	134.3
Dekalb DK493	99	5.4	19.0	212.8
Golden H2387	100	13.4	21.7	220.0
Golden H2441	105	10.7	22.1	210.7
NK PX9060	80	8.0	17.7	112.1
Pioneer 3394	110	2.7	23.8	196.7
Pioneer 3730	100	4.3	20.8	211.9
Pioneer 3845	90	6.4	19.3	163.8
Pioneer 3947	80	5.4	18.6	119.3
Mean		7.7	20.2	170.7
<b><u>Probability %</u></b>				
Hybrid (H)		< 0.1	< 0.1	< 0.1
<b><u>LSD (0.10)</u></b>				
Hybrid (H)		6.2	1.1	28.3
<b><u>CV %</u></b>				
		58.3	4.1	12.0

**Table E-9.**

**Determining Corn Hybrid Maturity - Comparison of Hybrids.  
Growth and Development  
Lancaster, WI - 1996.**

Hybrid	Relative Maturity	Day of Year	Leaf Development			Plant Height cm
			Leaf Collars	Hail Adjuster's Method	Total Leaves	
Carhart's CX92A	90	.	7.5	9.1	10.3	82.2
Dairyland ST-1180	80	.	7.0	8.7	10.0	79.9
Dairyland ST-1289	90	.	7.4	8.9	10.2	85.7
Dairyland ST-1400	100	.	7.6	9.0	10.3	86.9
Dairyland ST-1412	110	.	7.4	8.6	10.0	85.4
Dekalb DK 580	108	.	7.7	9.3	10.7	84.7
Dekalb DK306	80	.	7.5	8.9	10.2	82.0
Dekalb DK385	88	.	7.3	8.9	10.2	79.3
Dekalb DK493	99	.	7.6	9.0	10.4	85.8
Golden H2387	100	.	7.7	9.2	10.8	90.5
Golden H2441	105	.	7.7	9.0	10.5	84.8
NK PX9060	80	.	6.9	8.6	9.8	81.2
Pioneer 3394	110	.	7.7	9.2	10.7	94.0
Pioneer 3730	100	.	7.5	8.9	10.4	91.9
Pioneer 3845	90	.	7.9	9.5	10.9	94.1
Pioneer 3947	80	.	7.0	8.6	10.1	87.9
		157	1.9	2.7	3.9	6.1
		165	3.0	4.6	5.6	12.4
		173	4.2	6.0	7.2	22.5
		178	5.8	8.2	9.7	54.4
		190	9.1	11.9	14.2	116.9
		197	11.6	12.6	15.2	144.4
		220	17.2	17.2	17.2	245.5
Carhart's CX92A	90	157	2.1	2.8	3.9	5.5
Carhart's CX92A	90	165	3.0	4.9	5.9	12.7
Carhart's CX92A	90	173	4.3	6.2	7.3	24.1
Carhart's CX92A	90	178	6.2	8.6	9.9	51.7
Carhart's CX92A	90	190	9.7	12.7	14.2	108.4
Carhart's CX92A	90	197	11.7	13.0	15.4	139.0
Carhart's CX92A	90	220	17.1	17.1	17.1	233.7
Dairyland ST-1180	80	157	1.9	2.8	4.0	5.9
Dairyland ST-1180	80	165	2.9	4.4	5.6	11.4
Dairyland ST-1180	80	173	3.8	5.7	6.8	20.3
Dairyland ST-1180	80	178	5.4	7.9	9.2	50.8
Dairyland ST-1180	80	190	8.8	12.0	13.8	111.8
Dairyland ST-1180	80	197	10.7	12.0	15.0	136.7
Dairyland ST-1180	80	220	15.8	15.8	15.8	222.7
Dairyland ST-1289	90	157	2.0	2.7	3.7	5.9
Dairyland ST-1289	90	165	3.0	4.4	5.4	11.0
Dairyland ST-1289	90	173	3.7	5.1	6.3	19.9
Dairyland ST-1289	90	178	5.6	7.9	9.0	50.8
Dairyland ST-1289	90	190	8.6	12.1	13.9	121.1
Dairyland ST-1289	90	197	11.3	12.4	15.0	145.0



**Table E-9. Determining Corn Hybrid Maturity - Comparison of Hybrids.  
Growth and Development  
Lancaster, WI - 1996.**

Hybrid	Relative Maturity	Day of Year	Leaf Development			Plant Height cm
			Leaf Collars	Hail Adjuster's Method	Total Leaves	
Dairyland ST-1289	90	220	18.2	18.2	18.2	246.4
Dairyland ST-1400	100	157	2.0	2.9	3.7	6.4
Dairyland ST-1400	100	165	3.0	4.3	5.2	12.3
Dairyland ST-1400	100	173	4.2	5.4	7.0	23.3
Dairyland ST-1400	100	178	5.8	8.1	9.4	50.0
Dairyland ST-1400	100	190	8.8	11.8	14.0	105.0
Dairyland ST-1400	100	197	11.3	12.4	14.9	142.3
Dairyland ST-1400	100	220	18.0	18.0	18.0	269.2
Dairyland ST-1412	110	157	1.9	2.6	3.4	6.8
Dairyland ST-1412	110	165	2.9	3.9	4.9	11.0
Dairyland ST-1412	110	173	3.8	5.6	6.6	19.1
Dairyland ST-1412	110	178	5.8	7.6	9.2	50.0
Dairyland ST-1412	110	190	8.6	11.3	13.4	103.3
Dairyland ST-1412	110	197	12.0	12.7	15.4	155.7
Dairyland ST-1412	110	220	16.9	16.9	16.9	252.3
Dekalb DK 580	108	157	1.9	2.7	3.9	5.9
Dekalb DK 580	108	165	3.0	4.6	5.6	13.1
Dekalb DK 580	108	173	4.1	5.9	7.1	22.4
Dekalb DK 580	108	178	6.1	8.3	9.8	51.7
Dekalb DK 580	108	190	9.1	12.0	14.6	110.9
Dekalb DK 580	108	197	11.6	13.1	15.8	138.4
Dekalb DK 580	108	220	18.3	18.3	18.3	250.6
Dekalb DK306	80	157	2.0	2.6	3.9	5.9
Dekalb DK306	80	165	3.0	4.8	5.9	10.6
Dekalb DK306	80	173	3.9	5.6	6.7	22.0
Dekalb DK306	80	178	5.6	7.9	9.3	55.0
Dekalb DK306	80	190	9.2	11.9	13.6	122.8
Dekalb DK306	80	197	12.0	12.9	15.2	155.1
Dekalb DK306	80	220	16.6	16.6	16.6	202.4
Dekalb DK385	88	157	1.7	2.6	3.7	5.1
Dekalb DK385	88	165	3.0	4.4	5.4	10.2
Dekalb DK385	88	173	3.9	5.7	6.7	20.3
Dekalb DK385	88	178	5.8	8.3	9.4	50.0
Dekalb DK385	88	190	8.8	12.3	14.6	105.8
Dekalb DK385	88	197	11.6	12.7	15.2	138.4
Dekalb DK385	88	220	16.6	16.6	16.6	225.2
Dekalb DK493	99	157	2.0	2.7	3.7	5.1
Dekalb DK493	99	165	3.0	4.3	5.3	12.3
Dekalb DK493	99	173	4.4	6.1	7.3	22.0
Dekalb DK493	99	178	5.7	7.8	9.7	59.3
Dekalb DK493	99	190	8.9	12.1	14.4	111.8
Dekalb DK493	99	197	11.3	12.4	14.8	134.3
Dekalb DK493	99	220	17.7	17.7	17.7	255.7

**Table E-9. Determining Corn Hybrid Maturity - Comparison of Hybrids.  
Growth and Development  
Lancaster, WI - 1996.**

Hybrid	Relative Maturity	Day of Year	Leaf Development			Plant Height cm
			Leaf Collars	Hail Adjuster's Method	Total Leaves	
Golden H2387	100	157	2.0	2.6	4.0	6.8
Golden H2387	100	165	3.0	4.6	5.8	12.3
Golden H2387	100	173	4.4	7.1	8.0	24.1
Golden H2387	100	178	6.1	8.7	10.3	55.9
Golden H2387	100	190	9.4	11.8	14.4	127.0
Golden H2387	100	197	11.4	12.4	15.6	150.0
Golden H2387	100	220	17.3	17.3	17.3	257.4
Golden H2441	105	157	1.9	2.3	3.8	5.9
Golden H2441	105	165	3.0	4.4	5.4	10.6
Golden H2441	105	173	4.6	6.4	7.4	20.7
Golden H2441	105	178	6.4	8.4	10.0	53.3
Golden H2441	105	190	9.6	12.0	14.4	114.3
Golden H2441	105	197	11.4	12.4	15.5	146.0
Golden H2441	105	220	17.3	17.3	17.3	243.0
NK PX9060	80	157	2.0	3.0	3.9	5.5
NK PX9060	80	165	3.0	4.7	5.7	11.0
NK PX9060	80	173	4.0	6.2	7.1	19.5
NK PX9060	80	178	5.0	7.7	9.0	48.3
NK PX9060	80	190	8.4	11.3	13.2	105.8
NK PX9060	80	197	11.4	12.7	15.1	138.9
NK PX9060	80	220	15.5	15.5	15.5	239.6
Pioneer 3394	110	157	2.0	2.9	4.1	5.9
Pioneer 3394	110	165	3.0	4.9	6.0	16.5
Pioneer 3394	110	173	4.6	6.3	7.4	26.3
Pioneer 3394	110	178	5.9	8.2	9.7	62.7
Pioneer 3394	110	190	8.9	11.2	14.1	133.8
Pioneer 3394	110	197	12.1	13.3	16.0	151.0
Pioneer 3394	110	220	17.7	17.7	17.7	261.6
Pioneer 3730	100	157	2.0	2.4	4.0	7.2
Pioneer 3730	100	165	3.0	4.6	5.6	15.7
Pioneer 3730	100	173	4.1	6.3	7.8	25.8
Pioneer 3730	100	178	6.0	8.3	10.0	63.5
Pioneer 3730	100	190	8.9	11.3	13.9	118.5
Pioneer 3730	100	197	11.3	12.1	14.1	145.0
Pioneer 3730	100	220	17.3	17.3	17.3	267.6
Pioneer 3845	90	157	2.0	2.7	4.0	6.8
Pioneer 3845	90	165	3.1	5.1	6.2	14.4
Pioneer 3845	90	173	4.6	6.2	7.7	26.3
Pioneer 3845	90	178	6.1	8.8	10.2	59.3
Pioneer 3845	90	190	9.7	12.6	15.0	129.5
Pioneer 3845	90	197	12.3	12.9	15.1	149.9
Pioneer 3845	90	220	18.3	18.3	18.3	272.6
Pioneer 3947	80	157	1.7	2.8	4.0	6.8

**Table E-9. Determining Corn Hybrid Maturity - Comparison of Hybrids.  
Growth and Development  
Lancaster, WI - 1996.**

Hybrid	Relative Maturity	Day of Year	Leaf Development			Plant Height cm
			Leaf Collars	Hail Adjuster's Method	Total Leaves	
Pioneer 3947	80	165	3.0	4.7	5.7	13.1
Pioneer 3947	80	173	4.0	6.0	7.3	24.6
Pioneer 3947	80	178	6.0	8.8	10.1	58.0
Pioneer 3947	80	190	9.8	12.1	14.9	140.6
Pioneer 3947	80	197	12.0	12.8	15.1	144.0
Pioneer 3947	80	220	16.3	16.3	16.3	228.6
Mean		.	7.5	9.0	10.3	86.0
<b><u>Probability %</u></b>						
Hybrid (H)			4.2	10.3	6.9	< 0.1
Days (D)			< 0.1	< 0.1	< 0.1	< 0.1
H x D			32.7	24.5	25.0	< 0.1
<b><u>LSD (0.10)</u></b>						
Hybrid (H)			0.4	NS	0.5	5.6
Day of Year (D)			0.2	0.2	0.2	3.2
<b><u>CV %</u></b>						
			9.0	9.0	8.4	11.0

**Table E-10. Determining Corn Hybrid Maturity.  
Comparison of Hybrids - Harvest Data.  
Lancaster, WI - 1996.**

Hybrid	Relative Maturity	Broken Stalks %	Moisture %	Yield bu/a
Carhart's CX92A	90	8.9	21.7	120.2
Dairyland ST-1180	80	27.5	18.9	36.0
Dairyland ST-1289	90	1.9	22.0	164.0
Dairyland ST-1400	100	3.8	22.0	153.9
Dairyland ST-1412	110	0.9	32.5	169.4
Dekalb DK 580	108	2.1	31.1	171.9
Dekalb DK306	80	4.9	21.8	75.3
Dekalb DK385	88	2.1	21.2	120.2
Dekalb DK493	99	4.7	23.1	156.6
Golden H2387	100	14.8	25.3	134.7
Golden H2441	105	6.3	25.7	169.4
NK PX9060	80	4.2	21.0	98.1
Pioneer 3394	110	3.3	32.0	157.4
Pioneer 3730	100	3.5	26.2	136.4
Pioneer 3845	90	2.4	22.6	128.3
Pioneer 3947	80	34.5	21.6	106.3
Mean		7.0	24.6	138.6
<b><u>Probability %</u></b>				
Hybrid (H)		5.6	< 0.1	< 0.1
<b><u>LSD (0.10)</u></b>				
Hybrid (H)		16.0	1.6	28.6
<b><u>CV %</u></b>				
		133.3	4.7	14.6

**Table E-11.**

**Determining Corn Hybrid Maturity - Comparison of Hybrids.  
Growth and Development  
West Madison, WI - 1996.**

Hybrid	Relative Maturity	Day of Year	Leaf Development			Plant Height cm
			Leaf Collars	Hail Adjuster's Method	Total Leaves	
Carhart's CX92A	90	.	7.8	9.7	11.1	89.1
Dairyland ST-1180	80	.	7.4	9.3	10.7	86.4
Dairyland ST-1289	90	.	7.7	9.5	11.0	92.8
Dairyland ST-1400	100	.	7.8	9.7	11.0	91.2
Dairyland ST-1412	110	.	7.7	9.5	10.8	93.3
Dekalb DK 580	108	.	7.9	9.9	11.2	92.4
Dekalb DK306	80	.	7.5	9.1	10.5	86.2
Dekalb DK385	88	.	7.6	9.5	10.8	91.2
Dekalb DK493	99	.	7.9	9.6	11.0	92.6
Golden H2387	100	.	7.9	9.9	11.2	95.0
Golden H2441	105	.	7.9	9.7	11.1	88.5
NK PX9060	80	.	7.3	9.3	10.5	88.2
Pioneer 3394	110	.	8.0	9.9	11.2	93.2
Pioneer 3730	100	.	7.5	9.4	10.8	95.7
Pioneer 3845	90	.	7.7	9.7	10.9	97.6
Pioneer 3947	80	.	7.6	9.6	10.9	94.8
		164	1.4	2.7	3.8	6.6
		172	3.9	5.7	6.7	21.3
		179	5.0	7.4	8.6	39.4
		188	7.9	10.9	13.3	86.5
		196	10.3	13.2	15.3	127.8
		219	17.6	17.6	17.6	269.0
Carhart's CX92A	90	164	1.6	2.6	3.8	6.4
Carhart's CX92A	90	172	4.1	5.8	7.0	22.9
Carhart's CX92A	90	179	4.9	7.6	8.9	39.0
Carhart's CX92A	90	188	8.1	11.7	14.0	79.6
Carhart's CX92A	90	196	10.6	13.6	15.3	125.3
Carhart's CX92A	90	219	17.3	17.3	17.3	261.6
Dairyland ST-1180	80	164	1.1	2.7	4.0	6.8
Dairyland ST-1180	80	172	3.9	5.9	7.0	22.0
Dairyland ST-1180	80	179	5.0	7.6	9.0	38.1
Dairyland ST-1180	80	188	7.9	10.8	13.1	81.3
Dairyland ST-1180	80	196	10.1	13.0	15.2	121.1
Dairyland ST-1180	80	219	16.1	16.1	16.1	248.9
Dairyland ST-1289	90	164	1.3	2.7	4.0	5.9
Dairyland ST-1289	90	172	4.0	5.4	6.4	19.9
Dairyland ST-1289	90	179	4.8	7.2	8.2	39.0
Dairyland ST-1289	90	188	7.9	10.9	13.7	81.3
Dairyland ST-1289	90	196	10.4	13.0	15.8	128.7
Dairyland ST-1289	90	219	17.7	17.7	17.7	281.9
Dairyland ST-1400	100	164	1.6	2.8	4.0	6.8
Dairyland ST-1400	100	172	4.0	5.4	6.8	17.8
Dairyland ST-1400	100	179	5.0	6.8	7.9	40.6

**Table E-11. Determining Corn Hybrid Maturity - Comparison of Hybrids.  
Growth and Development  
West Madison, WI - 1996.**

Hybrid	Relative Maturity	Day of Year	Leaf Development			Plant Height cm
			Leaf Collars	Hail Adjuster's Method	Total Leaves	
Dairyland ST-1400	100	188	7.7	10.9	13.2	79.6
Dairyland ST-1400	100	196	9.9	13.6	15.3	116.0
Dairyland ST-1400	100	219	18.6	18.6	18.6	286.2
Dairyland ST-1412	110	164	1.2	2.7	3.4	6.8
Dairyland ST-1412	110	172	3.4	5.2	6.2	19.5
Dairyland ST-1412	110	179	5.0	7.1	8.3	36.4
Dairyland ST-1412	110	188	7.4	10.1	13.0	83.0
Dairyland ST-1412	110	196	10.1	13.1	15.1	123.6
Dairyland ST-1412	110	219	18.4	18.4	18.4	290.4
Dekalb DK 580	108	164	1.3	3.0	4.0	6.4
Dekalb DK 580	108	172	4.0	5.4	6.4	20.7
Dekalb DK 580	108	179	5.0	7.6	8.8	38.1
Dekalb DK 580	108	188	8.0	10.9	13.0	85.5
Dekalb DK 580	108	196	10.1	13.3	15.8	126.2
Dekalb DK 580	108	219	19.2	19.2	19.2	277.7
Dekalb DK306	80	164	1.6	2.3	3.9	5.9
Dekalb DK306	80	172	4.1	6.0	7.1	21.6
Dekalb DK306	80	179	5.0	7.6	8.8	42.3
Dekalb DK306	80	188	8.0	10.8	13.2	85.5
Dekalb DK306	80	196	10.6	12.7	14.3	134.6
Dekalb DK306	80	219	15.2	15.2	15.2	226.9
Dekalb DK385	88	164	1.4	2.2	3.7	6.4
Dekalb DK385	88	172	3.9	5.4	6.4	23.7
Dekalb DK385	88	179	4.8	7.4	8.4	39.0
Dekalb DK385	88	188	7.9	11.2	13.4	80.4
Dekalb DK385	88	196	10.6	13.3	15.6	127.9
Dekalb DK385	88	219	17.1	17.1	17.1	270.1
Dekalb DK493	99	164	1.3	2.7	3.7	5.9
Dekalb DK493	99	172	3.8	5.3	6.6	19.1
Dekalb DK493	99	179	5.0	6.9	8.3	37.3
Dekalb DK493	99	188	8.0	10.4	13.3	86.4
Dekalb DK493	99	196	10.1	13.0	15.2	126.2
Dekalb DK493	99	219	19.1	19.1	19.1	281.1
Golden H2387	100	164	1.6	2.8	3.8	5.9
Golden H2387	100	172	4.0	5.9	6.8	19.9
Golden H2387	100	179	5.0	7.7	8.8	41.5
Golden H2387	100	188	7.9	10.9	13.3	91.4
Golden H2387	100	196	10.2	13.2	15.2	129.5
Golden H2387	100	219	19.0	19.0	19.0	281.9
Golden H2441	105	164	1.3	2.3	3.3	5.9
Golden H2441	105	172	4.0	5.8	7.0	16.9
Golden H2441	105	179	4.8	7.4	8.5	35.6
Golden H2441	105	188	7.9	10.7	13.1	82.1
Golden H2441	105	196	10.1	13.0	15.8	121.9
Golden H2441	105	219	18.8	18.8	18.8	268.4

**Table E-11. Determining Corn Hybrid Maturity - Comparison of Hybrids.  
Growth and Development  
West Madison, WI - 1996.**

Hybrid	Relative Maturity	Day of Year	Leaf Development			Plant Height cm
			Leaf Collars	Hail Adjuster's Method	Total Leaves	
NK PX9060	80	164	1.7	2.8	4.0	6.8
NK PX9060	80	172	4.0	6.0	7.0	20.3
NK PX9060	80	179	5.0	7.4	8.8	38.1
NK PX9060	80	188	7.9	11.2	13.4	88.1
NK PX9060	80	196	10.4	13.4	14.9	134.6
NK PX9060	80	219	14.8	14.8	14.8	241.3
Pioneer 3394	110	164	1.2	2.4	3.9	8.0
Pioneer 3394	110	172	4.0	5.8	6.8	25.4
Pioneer 3394	110	179	5.0	7.6	8.9	41.5
Pioneer 3394	110	188	8.0	10.7	13.0	91.4
Pioneer 3394	110	196	10.3	13.3	15.4	131.2
Pioneer 3394	110	219	19.3	19.3	19.3	261.6
Pioneer 3730	100	164	1.6	2.6	3.9	7.6
Pioneer 3730	100	172	3.7	5.4	6.7	25.8
Pioneer 3730	100	179	5.0	7.6	8.6	40.6
Pioneer 3730	100	188	7.7	10.9	13.0	94.0
Pioneer 3730	100	196	10.1	12.9	15.2	121.1
Pioneer 3730	100	219	17.2	17.2	17.2	285.3
Pioneer 3845	90	164	1.8	3.1	4.1	8.5
Pioneer 3845	90	172	4.0	6.1	7.1	24.1
Pioneer 3845	90	179	5.0	7.6	8.7	44.9
Pioneer 3845	90	188	8.0	11.0	13.4	88.1
Pioneer 3845	90	196	10.4	13.3	15.2	135.5
Pioneer 3845	90	219	16.8	16.8	16.8	284.5
Pioneer 3947	80	164	1.2	2.9	3.8	6.4
Pioneer 3947	80	172	3.6	5.6	6.6	21.6
Pioneer 3947	80	179	5.1	7.3	8.6	38.1
Pioneer 3947	80	188	8.1	11.0	13.9	105.8
Pioneer 3947	80	196	10.8	13.8	16.0	141.4
Pioneer 3947	80	219	16.8	16.8	16.8	255.7
Mean		.	7.7	9.6	10.9	91.8
<b>Probability %</b>						
Hybrid (H)			< 0.1	< 0.1	< 0.1	< 0.1
Days (D)			< 0.1	< 0.1	< 0.1	< 0.1
H x D			< 0.1	< 0.1	< 0.1	< 0.1
<b>LSD (0.10)</b>						
Hybrid (H)			0.2	0.3	0.3	3.5
Day of Year (D)			0.1	0.1	0.1	1.6
<b>CV %</b>						
			5.6	5.7	4.8	5.2

## FIELD EXPERIMENT HISTORY

**Title:** Determining Corn Hybrid Maturity - Date of Planting by Hybrid. **Year:** 1996  
**Personnel:** J.G. Lauer, K.D. Hudelson  
**Location:** Arlington Research Station, Arlington, WI  
**Supported by:** Hatch

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### FIELD INFORMATION

Field: 410W  
Soil Type: Plano Silt Loam  
Soil Test Results: Test Date: 7/95    pH: 6.8    P (ppm): 76    K (ppm): 215    OM (%): 3.3  
Fertilizer: Each Planting Date: 150 lbs/a 6-24-24 starter  
Preplant - 150 lbs N/a 46-0-0  
Tillage Operations: Chisel Plow, Field Cultivate(2x)  
Field Cultivate before each planting  
Previous Crop: Soybean  
Irrigation: None

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### EXPERIMENTAL PROCEDURE

Exp. Design: RCB Split Plot  
Replicates: 4  
Variables: A: Date of Planting, B: Hybrid  
Date of Planting: April 26  
May 1  
May 15  
May 20  
May 30  
June 13  
Hybrids: Northrup King 9060  
Pioneer 3845  
Dekalb DK493  
Pioneer 3394  
Area Planted: 10' x 25'  
Area Harvested: 5.0' x 22'  
Row Spacing: 30"  
Planting Date: See above  
Planting Equip: Kinze Plot Planter w/seed cones  
Planting Rate: ~40,000 plants/a thinned to 28,000 plants/a  
Harvesting Date: 8-Nov  
Harvesting Equip: Gleaner Plot Combine  
Herbicides: 

<u>Material</u>	<u>Rate</u>	<u>Method</u>
Bladex	2 qts/a	preemerge
Lasso	2 qts/a	preemerge

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Results: Tables E-12 and E-13.



**Table E-12. Determining Corn Hybrid Maturity - Date of Planting by Hybrid.  
Growth and Development  
Arlington, WI - 1996.**

Planting Date	Hybrid	Day of Year	Leaf Development			Plant Height cm
			Leaf Collars	Hail Adjuster's Method	Total Leaves	
April 26		.	7.9	9.8	11.2	97.1
May 1		.	7.3	9.1	10.4	87.9
May 15		.	7.3	9.1	10.4	88.5
May 20		.	7.6	9.5	10.8	93.4
May 30		.	8.5	10.4	11.7	115.8
June 13		.	9.2	11.2	12.8	127.3
	Dekalb DK493	.	7.9	9.7	11.2	98.0
	NK PX9060	.	7.7	9.7	10.9	97.2
	Pioneer 3394	.	7.8	9.6	10.9	97.2
	Pioneer 3845	.	8.1	10.1	11.5	106.5
April 26	Dekalb DK493	.	7.8	9.6	11.1	93.7
April 26	NK PX9060	.	7.7	9.7	10.9	92.0
April 26	Pioneer 3394	.	8.3	10.0	11.3	97.4
April 26	Pioneer 3845	.	7.9	9.9	11.4	105.2
May 1	Dekalb DK493	.	7.2	8.8	10.2	87.4
May 1	NK PX9060	.	7.2	9.2	10.4	86.2
May 1	Pioneer 3394	.	6.9	8.6	10.0	81.8
May 1	Pioneer 3845	.	7.7	9.6	11.0	96.2
May 15	Dekalb DK493	.	7.4	9.1	10.6	89.6
May 15	NK PX9060	.	7.0	8.9	10.2	86.0
May 15	Pioneer 3394	.	7.1	8.8	10.0	87.7
May 15	Pioneer 3845	.	7.7	9.6	11.0	90.7
May 20	Dekalb DK493	.	7.8	9.4	10.8	92.4
May 20	NK PX9060	.	7.4	9.5	10.6	90.1
May 20	Pioneer 3394	.	7.4	9.2	10.5	90.5
May 20	Pioneer 3845	.	7.9	9.8	11.1	100.7
May 30	Dekalb DK493	.	8.7	10.5	12.0	116.9
May 30	NK PX9060	.	8.4	10.4	11.4	111.1
May 30	Pioneer 3394	.	8.4	10.2	11.6	113.1
May 30	Pioneer 3845	.	8.7	10.5	11.9	122.1
June 13	Dekalb DK493	.	9.1	11.4	12.9	117.0
June 13	NK PX9060	.	9.1	11.0	12.5	131.9
June 13	Pioneer 3394	.	9.1	11.0	12.6	124.0
June 13	Pioneer 3845	.	9.5	11.5	13.0	136.5
		151	0.6	0.9	2.8	4.1
		161	1.9	3.1	4.2	6.9
		170	3.6	5.4	6.5	22.7
		177	4.9	7.3	8.5	39.2
		182	6.0	8.5	10.2	55.3
		193	8.9	12.2	14.1	107.0
		200	11.1	13.6	15.5	149.7
		211	12.2	13.8	15.8	192.1
		239	17.9	17.9	17.9	280.5

**Table E-12. Determining Corn Hybrid Maturity - Date of Planting by Hybrid.  
Growth and Development  
Arlington, WI - 1996.**

Planting Date	Hybrid	Day of Year	Leaf Development			Plant Height cm
			Leaf Collars	Hail Adjuster's Method	Total Leaves	
April 26		151	1.0	1.6	3.4	5.0
April 26		161	2.6	4.1	5.1	8.8
April 26		170	4.8	6.9	8.2	32.6
April 26		177	5.8	8.8	10.0	52.7
April 26		182	7.6	10.6	12.7	85.9
April 26		193	10.6	13.7	15.4	139.5
April 26		200	12.7	14.7	16.4	174.4
April 26		211	.	.	.	.
April 26		239	18.5	18.5	18.5	277.6
May 1		151	0.4	0.7	2.8	3.9
May 1		161	2.1	3.3	4.3	6.5
May 1		170	4.2	5.8	7.0	24.2
May 1		177	5.1	7.6	8.8	41.7
May 1		182	6.9	9.6	11.4	58.8
May 1		193	9.9	13.5	15.4	119.4
May 1		200	12.2	14.5	16.0	164.9
May 1		211	.	.	.	.
May 1		239	18.0	18.0	18.0	283.8
May 15		151	0.2	0.3	2.3	3.4
May 15		161	2.0	3.4	4.3	7.9
May 15		170	4.1	6.0	7.2	26.7
May 15		177	5.3	8.0	9.1	43.0
May 15		182	6.9	9.6	11.3	68.3
May 15		193	9.7	13.1	15.1	119.1
May 15		200	12.2	14.4	16.3	165.3
May 15		211	.	.	.	.
May 15		239	17.9	17.9	17.9	274.3
May 20		151	.	.	.	.
May 20		161	1.0	1.8	3.0	4.3
May 20		170	2.9	4.5	5.6	18.8
May 20		177	4.4	6.8	7.8	33.7
May 20		182	6.3	8.6	10.2	54.9
May 20		193	9.3	12.8	14.7	108.7
May 20		200	11.3	13.8	16.0	148.0
May 20		211	.	.	.	.
May 20		239	18.0	18.0	18.0	285.5
May 30		151	.	.	.	.
May 30		161	.	.	.	.
May 30		170	2.0	3.6	4.6	11.2
May 30		177	3.8	5.6	6.6	25.0
May 30		182	4.9	7.3	8.9	44.2
May 30		193	8.1	11.4	13.5	92.0
May 30		200	9.7	12.7	14.7	144.2
May 30		211	13.6	14.5	16.2	208.7
May 30		239	17.7	17.7	17.7	285.3

**Table E-12. Determining Corn Hybrid Maturity - Date of Planting by Hybrid.  
Growth and Development  
Arlington, WI - 1996.**

Planting Date	Hybrid	Day of Year	Leaf Development			Plant Height cm
			Leaf Collars	Hail Adjuster's Method	Total Leaves	
June 13		151	.	.	.	.
June 13		161	.	.	.	.
June 13		170	.	.	.	.
June 13		177	.	.	.	.
June 13		182	3.7	5.5	6.7	19.5
June 13		193	5.5	8.6	10.4	63.5
June 13		200	8.2	11.4	13.5	101.6
June 13		211	10.9	13.1	15.5	175.5
June 13		239	17.7	17.7	17.7	276.6
	Dekalb DK493	151	0.5	0.6	2.4	3.8
	Dekalb DK493	161	1.7	2.7	3.8	6.4
	Dekalb DK493	170	3.5	4.9	6.1	20.9
	Dekalb DK493	177	4.8	7.1	8.2	36.8
	Dekalb DK493	182	6.1	8.3	10.1	53.3
	Dekalb DK493	193	8.6	11.9	14.1	103.6
	Dekalb DK493	200	10.9	13.6	15.7	150.1
	Dekalb DK493	211	11.9	13.8	16.3	183.7
	Dekalb DK493	239	19.1	19.1	19.1	280.1
	NK PX9060	151	0.4	1.0	3.1	4.1
	NK PX9060	161	2.0	3.5	4.3	6.5
	NK PX9060	170	3.6	5.8	6.8	20.2
	NK PX9060	177	5.0	7.7	8.8	37.3
	NK PX9060	182	6.1	9.0	10.7	54.6
	NK PX9060	193	9.0	12.2	14.0	104.7
	NK PX9060	200	11.5	13.7	15.3	146.1
	NK PX9060	211	12.6	13.9	15.2	198.5
	NK PX9060	239	15.7	15.7	15.7	271.2
	Pioneer 3394	151	0.4	0.5	2.6	3.7
	Pioneer 3394	161	1.9	2.7	3.9	6.4
	Pioneer 3394	170	3.6	4.9	6.0	21.3
	Pioneer 3394	177	4.6	6.8	7.9	36.8
	Pioneer 3394	182	5.7	7.9	9.5	53.0
	Pioneer 3394	193	8.9	12.2	13.9	102.6
	Pioneer 3394	200	10.7	13.6	15.5	144.5
	Pioneer 3394	211	11.4	13.5	15.7	173.1
	Pioneer 3394	239	18.6	18.6	18.6	284.3
	Pioneer 3845	151	0.9	1.3	3.2	4.8
	Pioneer 3845	161	2.1	3.7	4.7	8.4
	Pioneer 3845	170	3.8	5.8	7.0	28.5
	Pioneer 3845	177	5.2	7.7	8.9	46.1
	Pioneer 3845	182	6.2	8.8	10.5	60.3
	Pioneer 3845	193	8.9	12.4	14.4	117.2
	Pioneer 3845	200	11.2	13.5	15.4	158.2
	Pioneer 3845	211	12.9	14.1	16.1	212.9
	Pioneer 3845	239	18.4	18.4	18.4	286.6

**Table E-12. Determining Corn Hybrid Maturity - Date of Planting by Hybrid.  
Growth and Development  
Arlington, WI - 1996.**

Planting Date	Hybrid	Day of Year	Leaf Development			Plant Height cm
			Leaf Collars	Hail Adjuster's Method	Total Leaves	
April 26	Dekalb DK493	151	0.9	1.2	3.0	4.2
April 26	Dekalb DK493	161	2.0	3.6	4.6	7.2
April 26	Dekalb DK493	170	4.3	6.3	7.7	30.5
April 26	Dekalb DK493	177	5.8	8.3	9.4	47.4
April 26	Dekalb DK493	182	7.4	9.7	12.0	77.1
April 26	Dekalb DK493	193	9.9	13.4	15.9	129.0
April 26	Dekalb DK493	200	13.0	15.4	17.0	165.1
April 26	Dekalb DK493	211	.	.	.	.
April 26	Dekalb DK493	239	19.0	19.0	19.0	288.7
April 26	NK PX9060	151	0.8	1.9	3.6	4.2
April 26	NK PX9060	161	2.8	4.2	5.2	7.6
April 26	NK PX9060	170	4.8	7.2	8.3	27.9
April 26	NK PX9060	177	5.9	9.3	10.6	48.3
April 26	NK PX9060	182	7.6	11.3	13.4	78.7
April 26	NK PX9060	193	10.9	13.4	14.7	137.2
April 26	NK PX9060	200	12.8	14.6	15.8	172.7
April 26	NK PX9060	211	.	.	.	.
April 26	NK PX9060	239	15.9	15.9	15.9	259.0
April 26	Pioneer 3394	151	1.1	1.4	3.3	5.5
April 26	Pioneer 3394	161	2.8	4.3	5.3	9.7
April 26	Pioneer 3394	170	5.1	7.0	8.2	33.9
April 26	Pioneer 3394	177	5.9	8.6	9.7	58.4
April 26	Pioneer 3394	182	7.6	10.1	12.0	92.3
April 26	Pioneer 3394	193	11.0	14.0	15.1	140.2
April 26	Pioneer 3394	200	13.0	14.9	16.8	177.0
April 26	Pioneer 3394	211	.	.	.	.
April 26	Pioneer 3394	239	19.9	19.9	19.9	262.3
April 26	Pioneer 3845	151	1.3	2.0	3.6	5.9
April 26	Pioneer 3845	161	2.8	4.3	5.4	10.6
April 26	Pioneer 3845	170	5.0	7.2	8.4	38.1
April 26	Pioneer 3845	177	5.7	8.8	10.2	56.7
April 26	Pioneer 3845	182	7.8	11.2	13.2	95.7
April 26	Pioneer 3845	193	10.8	13.8	15.9	151.4
April 26	Pioneer 3845	200	12.1	13.9	15.9	182.9
April 26	Pioneer 3845	211	.	.	.	.
April 26	Pioneer 3845	239	19.1	19.1	19.1	300.6
May 1	Dekalb DK493	151	0.3	0.4	2.4	3.8
May 1	Dekalb DK493	161	1.9	2.8	3.8	6.4
May 1	Dekalb DK493	170	4.0	5.2	6.4	21.2
May 1	Dekalb DK493	177	4.7	6.9	8.0	34.7
May 1	Dekalb DK493	182	7.0	9.4	11.1	55.0
May 1	Dekalb DK493	193	10.0	13.1	15.4	116.8
May 1	Dekalb DK493	200	12.0	14.7	16.4	175.3
May 1	Dekalb DK493	211	.	.	.	.
May 1	Dekalb DK493	239	19.0	19.0	19.0	286.2

**Table E-12. Determining Corn Hybrid Maturity - Date of Planting by Hybrid.  
Growth and Development  
Arlington, WI - 1996.**

Planting Date	Hybrid	Day of Year	Leaf Development			Plant Height cm
			Leaf Collars	Hail Adjuster's Method	Total Leaves	
May 1	NK PX9060	151	0.3	0.9	3.1	4.2
May 1	NK PX9060	161	2.1	3.9	4.8	5.9
May 1	NK PX9060	170	4.3	6.6	7.6	20.7
May 1	NK PX9060	177	5.4	8.3	9.3	42.3
May 1	NK PX9060	182	7.0	10.1	11.9	64.8
May 1	NK PX9060	193	10.0	13.1	14.8	131.1
May 1	NK PX9060	200	12.3	14.1	15.4	164.3
May 1	NK PX9060	211	.	.	.	.
May 1	NK PX9060	239	16.3	16.3	16.3	256.3
May 1	Pioneer 3394	151	0.1	0.1	2.4	3.0
May 1	Pioneer 3394	161	2.0	2.7	3.9	5.5
May 1	Pioneer 3394	170	4.0	5.2	6.3	20.3
May 1	Pioneer 3394	177	4.3	6.8	7.8	35.6
May 1	Pioneer 3394	182	6.8	9.0	11.0	52.5
May 1	Pioneer 3394	193	9.8	13.7	15.4	103.6
May 1	Pioneer 3394	200	11.8	14.7	16.1	147.3
May 1	Pioneer 3394	211	.	.	.	.
May 1	Pioneer 3394	239	18.0	18.0	18.0	286.2
May 1	Pioneer 3845	151	0.8	1.2	3.1	4.7
May 1	Pioneer 3845	161	2.2	3.9	4.9	8.0
May 1	Pioneer 3845	170	4.3	6.0	7.7	34.7
May 1	Pioneer 3845	177	5.9	8.4	9.9	54.2
May 1	Pioneer 3845	182	7.0	9.7	11.6	63.1
May 1	Pioneer 3845	193	9.9	14.1	15.9	126.0
May 1	Pioneer 3845	200	12.8	14.4	16.0	172.7
May 1	Pioneer 3845	211	.	.	.	.
May 1	Pioneer 3845	239	18.8	18.8	18.8	306.5
May 15	Dekalb DK493	151	0.2	0.1	1.9	3.4
May 15	Dekalb DK493	161	2.0	3.0	4.0	6.8
May 15	Dekalb DK493	170	4.0	5.8	7.0	24.6
May 15	Dekalb DK493	177	5.3	8.0	9.1	43.2
May 15	Dekalb DK493	182	7.0	9.6	11.6	69.4
May 15	Dekalb DK493	193	9.9	13.1	15.4	118.9
May 15	Dekalb DK493	200	11.4	14.0	16.4	171.0
May 15	Dekalb DK493	211	.	.	.	.
May 15	Dekalb DK493	239	19.6	19.6	19.6	279.4
May 15	NK PX9060	151	0.0	0.1	2.6	3.8
May 15	NK PX9060	161	2.0	3.4	4.3	8.0
May 15	NK PX9060	170	4.0	6.4	7.4	24.6
May 15	NK PX9060	177	5.2	8.2	9.3	40.6
May 15	NK PX9060	182	6.8	9.8	11.7	66.0
May 15	NK PX9060	193	9.7	13.0	15.0	119.9
May 15	NK PX9060	200	12.6	14.2	15.6	156.6
May 15	NK PX9060	211	.	.	.	.
May 15	NK PX9060	239	15.7	15.7	15.7	268.4

**Table E-12. Determining Corn Hybrid Maturity - Date of Planting by Hybrid.  
Growth and Development  
Arlington, WI - 1996.**

Planting Date	Hybrid	Day of Year	Leaf Development			Plant Height cm
			Leaf Collars	Hail Adjuster's Method	Total Leaves	
May 15	Pioneer 3394	151	0.0	0.0	2.0	2.5
May 15	Pioneer 3394	161	1.7	2.9	3.8	7.2
May 15	Pioneer 3394	170	3.8	5.3	6.6	23.7
May 15	Pioneer 3394	177	5.0	7.6	8.6	37.3
May 15	Pioneer 3394	182	6.4	8.7	10.0	67.7
May 15	Pioneer 3394	193	9.3	12.9	14.7	106.7
May 15	Pioneer 3394	200	12.2	14.9	16.4	168.5
May 15	Pioneer 3394	211	.	.	.	.
May 15	Pioneer 3394	239	18.0	18.0	18.0	287.9
May 15	Pioneer 3845	151	0.7	0.8	2.9	3.8
May 15	Pioneer 3845	161	2.3	4.1	5.1	9.7
May 15	Pioneer 3845	170	4.7	6.6	7.8	33.9
May 15	Pioneer 3845	177	5.5	8.1	9.4	50.8
May 15	Pioneer 3845	182	7.2	10.2	12.0	69.9
May 15	Pioneer 3845	193	10.0	13.6	15.4	131.1
May 15	Pioneer 3845	200	12.6	14.7	16.6	165.1
May 15	Pioneer 3845	211	.	.	.	.
May 15	Pioneer 3845	239	18.3	18.3	18.3	261.5
May 20	Dekalb DK493	151	.	.	.	.
May 20	Dekalb DK493	161	1.0	1.3	2.9	5.1
May 20	Dekalb DK493	170	3.0	4.0	5.2	17.8
May 20	Dekalb DK493	177	4.1	6.6	7.6	34.7
May 20	Dekalb DK493	182	6.3	8.3	10.1	56.7
May 20	Dekalb DK493	193	8.7	12.1	14.0	101.6
May 20	Dekalb DK493	200	11.3	13.6	16.2	149.9
May 20	Dekalb DK493	211	.	.	.	.
May 20	Dekalb DK493	239	19.8	19.8	19.8	281.1
May 20	NK PX9060	151	.	.	.	.
May 20	NK PX9060	161	1.0	2.3	3.0	4.2
May 20	NK PX9060	170	2.7	4.9	5.9	16.9
May 20	NK PX9060	177	4.6	6.9	8.0	30.5
May 20	NK PX9060	182	6.3	9.2	10.9	50.4
May 20	NK PX9060	193	9.4	12.9	14.7	109.7
May 20	NK PX9060	200	11.7	14.0	16.0	140.6
May 20	NK PX9060	211	.	.	.	.
May 20	NK PX9060	239	16.0	16.0	16.0	278.6
May 20	Pioneer 3394	151	.	.	.	.
May 20	Pioneer 3394	161	1.0	1.0	2.8	3.0
May 20	Pioneer 3394	170	3.0	4.0	5.0	17.8
May 20	Pioneer 3394	177	4.2	6.2	7.2	29.6
May 20	Pioneer 3394	182	6.0	8.2	9.8	48.3
May 20	Pioneer 3394	193	9.2	13.0	14.8	93.5
May 20	Pioneer 3394	200	10.3	13.4	15.7	151.6
May 20	Pioneer 3394	211	.	.	.	.
May 20	Pioneer 3394	239	18.2	18.2	18.2	289.6

**Table E-12. Determining Corn Hybrid Maturity - Date of Planting by Hybrid.  
Growth and Development  
Arlington, WI - 1996.**

Planting Date	Hybrid	Day of Year	Leaf Development			Plant Height cm
			Leaf Collars	Hail Adjuster's Method	Total Leaves	
May 20	Pioneer 3845	151	.	.	.	.
May 20	Pioneer 3845	161	1.0	2.4	3.4	5.1
May 20	Pioneer 3845	170	3.1	5.1	6.1	22.9
May 20	Pioneer 3845	177	4.9	7.4	8.4	39.8
May 20	Pioneer 3845	182	6.3	8.4	10.1	64.4
May 20	Pioneer 3845	193	9.9	13.1	15.3	130.1
May 20	Pioneer 3845	200	11.8	14.2	16.1	149.9
May 20	Pioneer 3845	211	.	.	.	.
May 20	Pioneer 3845	239	18.0	18.0	18.0	293.0
May 30	Dekalb DK493	151	.	.	.	.
May 30	Dekalb DK493	161	.	.	.	.
May 30	Dekalb DK493	170	2.0	3.3	4.2	10.6
May 30	Dekalb DK493	177	4.0	5.8	6.8	23.7
May 30	Dekalb DK493	182	5.1	7.4	9.2	44.5
May 30	Dekalb DK493	193	7.8	10.8	13.3	104.7
May 30	Dekalb DK493	200	10.0	12.9	14.9	148.2
May 30	Dekalb DK493	211	13.3	14.4	16.8	202.4
May 30	Dekalb DK493	239	18.7	18.7	18.7	284.5
May 30	NK PX9060	151	.	.	.	.
May 30	NK PX9060	161	.	.	.	.
May 30	NK PX9060	170	2.0	4.0	5.0	11.0
May 30	NK PX9060	177	3.8	5.7	6.7	24.6
May 30	NK PX9060	182	5.2	7.9	9.2	45.7
May 30	NK PX9060	193	8.2	12.0	13.8	75.2
May 30	NK PX9060	200	10.0	12.9	14.4	138.9
May 30	NK PX9060	211	14.0	14.9	15.6	202.4
May 30	NK PX9060	239	15.2	15.2	15.2	280.3
May 30	Pioneer 3394	151	.	.	.	.
May 30	Pioneer 3394	161	.	.	.	.
May 30	Pioneer 3394	170	2.0	3.0	4.0	10.6
May 30	Pioneer 3394	177	3.6	5.1	6.3	22.9
May 30	Pioneer 3394	182	4.4	6.6	8.2	40.2
May 30	Pioneer 3394	193	8.7	11.8	13.3	90.4
May 30	Pioneer 3394	200	8.9	12.4	14.7	134.6
May 30	Pioneer 3394	211	12.7	13.9	16.0	199.8
May 30	Pioneer 3394	239	18.9	18.9	18.9	293.0
May 30	Pioneer 3845	151	.	.	.	.
May 30	Pioneer 3845	161	.	.	.	.
May 30	Pioneer 3845	170	2.1	4.0	5.0	12.7
May 30	Pioneer 3845	177	4.0	5.8	6.8	28.8
May 30	Pioneer 3845	182	5.0	7.2	9.0	46.6
May 30	Pioneer 3845	193	7.6	11.1	13.6	97.5
May 30	Pioneer 3845	200	10.0	12.7	14.9	154.9
May 30	Pioneer 3845	211	14.2	14.9	16.4	230.3
May 30	Pioneer 3845	239	17.9	17.9	17.9	283.6

**Table E-12. Determining Corn Hybrid Maturity - Date of Planting by Hybrid.  
Growth and Development  
Arlington, WI - 1996.**

Planting Date	Hybrid	Day of Year	Leaf Development			Plant Height cm
			Leaf Collars	Hail Adjuster's Method	Total Leaves	
June 13	Dekalb DK493	151	.	.	.	.
June 13	Dekalb DK493	161	.	.	.	.
June 13	Dekalb DK493	170	.	.	.	.
June 13	Dekalb DK493	177	.	.	.	.
June 13	Dekalb DK493	182	3.4	5.4	6.4	16.9
June 13	Dekalb DK493	193	5.4	8.7	10.3	50.8
June 13	Dekalb DK493	200	7.3	11.1	13.2	91.4
June 13	Dekalb DK493	211	10.6	13.1	15.8	165.1
June 13	Dekalb DK493	239	18.7	18.7	18.7	260.6
June 13	NK PX9060	151	.	.	.	.
June 13	NK PX9060	161	.	.	.	.
June 13	NK PX9060	170	.	.	.	.
June 13	NK PX9060	177	.	.	.	.
June 13	NK PX9060	182	3.9	5.9	7.2	22.0
June 13	NK PX9060	193	5.7	9.0	11.0	54.9
June 13	NK PX9060	200	9.4	12.2	14.3	103.3
June 13	NK PX9060	211	11.2	12.9	14.9	194.7
June 13	NK PX9060	239	15.2	15.2	15.2	284.5
June 13	Pioneer 3394	151	.	.	.	.
June 13	Pioneer 3394	161	.	.	.	.
June 13	Pioneer 3394	170	.	.	.	.
June 13	Pioneer 3394	177	.	.	.	.
June 13	Pioneer 3394	182	3.2	4.8	6.1	16.9
June 13	Pioneer 3394	193	5.4	7.7	9.8	81.3
June 13	Pioneer 3394	200	8.0	11.0	13.2	88.1
June 13	Pioneer 3394	211	10.2	13.1	15.4	146.5
June 13	Pioneer 3394	239	18.6	18.6	18.6	287.0
June 13	Pioneer 3845	151	.	.	.	.
June 13	Pioneer 3845	161	.	.	.	.
June 13	Pioneer 3845	170	.	.	.	.
June 13	Pioneer 3845	177	.	.	.	.
June 13	Pioneer 3845	182	4.1	5.9	7.1	22.0
June 13	Pioneer 3845	193	5.6	8.9	10.6	67.1
June 13	Pioneer 3845	200	7.9	11.1	13.1	123.6
June 13	Pioneer 3845	211	11.7	13.2	15.8	195.6
June 13	Pioneer 3845	239	18.2	18.2	18.2	274.2



**Table E-12. Determining Corn Hybrid Maturity - Date of Planting by Hybrid.  
Growth and Development  
Arlington, WI - 1996.**

Planting Date	Hybrid	Day of Year	Leaf Development			Plant Height cm
			Leaf Collars	Hail Adjuster's Method	Total Leaves	
Mean		.	7.9	9.7	11.1	99.7
<b><u>Probability %</u></b>						
Date of Planting (D)			< 0.1	< 0.1	< 0.1	< 0.1
Hybrid (H)			< 0.1	< 0.1	< 0.1	< 0.1
D x H			8.7	21.6	24.3	46.4
Days (T)			< 0.1	< 0.1	< 0.1	< 0.1
D x T			< 0.1	< 0.1	< 0.1	< 0.1
H x T			< 0.1	< 0.1	< 0.1	< 0.1
D x H x T			> 50	10.9	5.9	35.0
<b><u>LSD (0.10)</u></b>						
Date of Planting (D)			0.4	0.4	0.4	5.4
Hybrid (H)			0.1	0.1	0.2	3.5
Days (T)			0.2	0.2	0.1	6.5
<b><u>CV %</u></b>						
			8.0	7.3	6.7	23.6

**Table E-13. Determining Corn Hybrid Maturity.  
Date of Planting by Hybrid - Harvest Data.  
Arlington, WI - 1996.**

Planting Date	Hybrid	Broken		Yield
		Stalks	Moisture	
		%	%	bu/a
April 26		3.2	25.2	178.3
May 1		2.8	25.4	168.7
May 15		3.4	26.3	160.5
May 20		3.6	26.6	172.6
May 30		4.6	25.7	140.8
June 13		3.9	30.3	140.9
	Dekalb DK493	3.4	26.8	175.2
	NK PX9060	4.4	22.3	147.6
	Pioneer 3394	3.2	32.3	154.3
	Pioneer 3845	3.3	24.8	164.0
April 26	Dekalb DK493	5.6	23.5	195.7
April 26	NK PX9060	2.8	20.8	154.2
April 26	Pioneer 3394	2.4	28.7	176.8
April 26	Pioneer 3845	1.9	27.9	186.3
May 1	Dekalb DK493	4.2	25.2	179.0
May 1	NK PX9060	1.4	21.7	154.8
May 1	Pioneer 3394	2.8	30.9	159.0
May 1	Pioneer 3845	2.8	23.9	181.8
May 15	Dekalb DK493	2.4	25.6	195.3
May 15	NK PX9060	4.7	22.6	133.4
May 15	Pioneer 3394	4.2	33.5	151.5
May 15	Pioneer 3845	2.4	23.4	162.0
May 20	Dekalb DK493	0.9	27.0	183.9
May 20	NK PX9060	3.8	21.8	167.3
May 20	Pioneer 3394	5.6	32.8	168.2
May 20	Pioneer 3845	4.2	24.6	171.2
May 30	Dekalb DK493	3.8	26.5	157.2
May 30	NK PX9060	8.9	22.5	135.1
May 30	Pioneer 3394	1.9	31.0	136.5
May 30	Pioneer 3845	3.8	22.8	134.6
June 13	Dekalb DK493	3.8	33.0	140.2
June 13	NK PX9060	4.7	24.6	140.9
June 13	Pioneer 3394	2.4	37.1	134.1
June 13	Pioneer 3845	4.7	26.3	148.2
Mean		3.6	26.6	160.3
<b>Probability %</b>				
Date of Planting (DOP)		> 50	1.6	0.1
Hybrid (H)		24.9	< 0.1	< 0.1
DOP x H		0.4	0.3	> 50
<b>LSD (0.10)</b>				
Date of Planting (DOP)		NS	2.2	12.9
Hybrid (H)		NS	1.0	10.5
<b>CV %</b>		53.7	6.9	11.7

## FIELD EXPERIMENT HISTORY

Year: 1996

**Title:** Determining Corn Hybrid Maturity - Date of Planting by Hybrid and Plant Density.  
**Personnel:** J.G. Lauer, K.D. Hudelson  
**Location:** Arlington Research Station, Arlington, WI  
**Supported by:** Hatch

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### FIELD INFORMATION

Field: 410W  
Soil Type: Plano Silt Loam  
Soil Test Results: Test Date: 7/95    pH: 6.8    P (ppm): 76    K (ppm): 215    OM (%): 3.3  
Fertilizer: Each Planting Date: 150 lbs/a 6-24-24 starter  
Preplant - 150 lbs N/a 46-0-0  
Tillage Operations: Chisel Plow, Field Cultivate(2x)  
Field Cultivate before each planting  
Previous Crop: Soybean  
Irrigation: None

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### EXPERIMENTAL PROCEDURE

Exp. Design: RCB Split Plot Factorial  
Replicates: 4  
Variables: Date of Planting: May 1 and May 22  
Hybrids: Pioneer 3394 and 3845  
Plant Densities: 18,000 and 30,000 plants/a  
Area Planted: 10' x 25'  
Area Harvested: 5.0' x 22'  
Row Spacing: 30"  
Planting Date: May 1 and May 22  
Planting Equip: Kinze Plot Planter w/seed cones  
Planting Rate: variable  
Harvesting Date: 8-Nov  
Harvesting Equip: Gleaner Plot Combine

	<u>Material</u>	<u>Rate</u>	<u>Method</u>
Herbicides:	Bladex	2 qts/a	preemerg
	Lasso	2 qts/a	preemerg

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Results: Tables E-14 and E-15.

**Table E-14. Determining Corn Hybrid Maturity - Date of Planting by Hybrid by Plant Density.  
Growth and Development  
Arlington, WI - 1996.**

Planting Date	Hybrid	Plant Density plants/a	Day of Year	Leaf Development			Plant Height cm
				Leaf Collars	Hail Adjuster's Method	Total Leaves	
May 1			.	7.4	9.2	10.5	87.9
May 22			.	7.6	9.4	10.8	94.6
	Pioneer 3394		.	7.2	8.9	10.3	83.7
	Pioneer 3845		.	7.8	9.6	11.0	98.3
May 1	Pioneer 3394		.	7.0	8.8	10.1	79.2
May 1	Pioneer 3845		.	7.8	9.6	11.0	96.5
May 22	Pioneer 3394		.	7.4	9.1	10.6	88.8
May 22	Pioneer 3845		.	7.8	9.6	11.0	100.3
		18,000	.	7.5	9.3	10.7	90.2
		30,000	.	7.5	9.2	10.6	91.8
May 1		18,000	.	7.4	9.2	10.5	86.7
May 1		30,000	.	7.5	9.2	10.6	89.0
May 22		18,000	.	7.7	9.5	10.9	94.1
May 22		30,000	.	7.5	9.3	10.7	95.0
	Pioneer 3394	18,000	.	7.2	8.9	10.3	83.0
	Pioneer 3394	30,000	.	7.2	9.0	10.4	84.5
	Pioneer 3845	18,000	.	7.9	9.7	11.1	97.3
	Pioneer 3845	30,000	.	7.7	9.5	10.9	99.2
May 1	Pioneer 3394	18,000	.	6.9	8.7	10.0	78.6
May 1	Pioneer 3394	30,000	.	7.2	8.9	10.2	79.9
May 1	Pioneer 3845	18,000	.	7.9	9.7	11.0	94.9
May 1	Pioneer 3845	30,000	.	7.8	9.5	10.9	98.1
May 22	Pioneer 3394	18,000	.	7.5	9.2	10.6	87.9
May 22	Pioneer 3394	30,000	.	7.3	9.1	10.5	89.7
May 22	Pioneer 3845	18,000	.	7.9	9.8	11.1	100.2
May 22	Pioneer 3845	30,000	.	7.7	9.5	10.9	100.4
			151	0.6	1.0	3.1	3.5
			161	1.4	1.9	3.4	7.3
			170	3.5	4.8	6.2	22.6
			177	4.9	7.3	8.5	35.0
			182	6.1	8.6	10.4	58.7
			193	10.0	13.6	15.4	110.2
			200	11.6	14.3	16.0	157.0
			239	18.5	18.5	18.5	289.8
May 1			151	0.6	1.0	3.1	3.5
May 1			161	2.2	3.3	4.3	9.3
May 1			170	3.9	5.4	7.0	26.1
May 1			177	5.4	8.0	9.2	39.0
May 1			182	6.6	9.1	10.9	65.4
May 1			193	10.2	13.8	15.4	117.4
May 1			200	12.2	14.6	16.0	160.7
May 1			239	18.4	18.4	18.4	281.5
May 22			151	.	.	.	.
May 22			161	0.5	0.6	2.6	5.3

**Table E-14. Determining Corn Hybrid Maturity - Date of Planting by Hybrid by Plant Density.  
Growth and Development  
Arlington, WI - 1996.**

Planting Date	Hybrid	Plant Density plants/a	Day of Year	Leaf Development			Plant Height cm
				Leaf Collars	Hail Adjuster's Method	Total Leaves	
May 22			170	3.0	4.2	5.5	19.1
May 22			177	4.4	6.7	7.8	31.1
May 22			182	5.7	8.2	9.9	52.0
May 22			193	9.9	13.4	15.4	103.1
May 22			200	11.0	14.0	15.9	153.3
May 22			239	18.6	18.6	18.6	298.0
	Pioneer 3394		151	0.2	0.2	2.7	2.8
	Pioneer 3394		161	1.0	1.5	3.0	5.9
	Pioneer 3394		170	3.4	4.5	5.7	19.2
	Pioneer 3394		177	4.7	6.9	8.0	28.2
	Pioneer 3394		182	5.8	8.1	9.9	56.9
	Pioneer 3394		193	9.9	13.5	15.3	96.3
	Pioneer 3394		200	10.8	14.1	15.8	137.4
	Pioneer 3394		239	18.4	18.4	18.4	282.6
	Pioneer 3845		151	0.9	1.7	3.5	4.2
	Pioneer 3845		161	1.7	2.4	3.8	8.7
	Pioneer 3845		170	3.6	5.1	6.8	26.0
	Pioneer 3845		177	5.1	7.7	8.9	41.9
	Pioneer 3845		182	6.5	9.2	10.9	60.4
	Pioneer 3845		193	10.2	13.7	15.5	124.2
	Pioneer 3845		200	12.4	14.6	16.2	176.5
	Pioneer 3845		239	18.6	18.6	18.6	297.0
May 1	Pioneer 3394		151	0.2	0.2	2.7	2.8
May 1	Pioneer 3394		161	1.9	2.9	3.9	7.4
May 1	Pioneer 3394		170	3.7	5.1	6.3	21.8
May 1	Pioneer 3394		177	5.1	7.4	8.4	30.5
May 1	Pioneer 3394		182	6.2	8.4	10.3	57.2
May 1	Pioneer 3394		193	10.0	13.7	15.3	101.1
May 1	Pioneer 3394		200	11.1	14.3	15.8	139.3
May 1	Pioneer 3394		239	18.1	18.1	18.1	273.9
May 1	Pioneer 3845		151	0.9	1.7	3.5	4.2
May 1	Pioneer 3845		161	2.4	3.6	4.6	11.2
May 1	Pioneer 3845		170	4.2	5.7	7.6	30.5
May 1	Pioneer 3845		177	5.8	8.6	9.9	47.4
May 1	Pioneer 3845		182	6.9	9.8	11.6	73.7
May 1	Pioneer 3845		193	10.4	13.9	15.6	133.6
May 1	Pioneer 3845		200	13.3	14.9	16.3	182.0
May 1	Pioneer 3845		239	18.7	18.7	18.7	289.1
May 22	Pioneer 3394		151	.	.	.	.
May 22	Pioneer 3394		161	0.1	0.1	2.1	4.5
May 22	Pioneer 3394		170	3.0	3.8	5.0	16.5
May 22	Pioneer 3394		177	4.4	6.5	7.5	25.8

**Table E-14. Determining Corn Hybrid Maturity - Date of Planting by Hybrid by Plant Density.  
Growth and Development  
Arlington, WI - 1996.**

Planting Date	Hybrid	Plant Density plants/a	Day of Year	Leaf Development			Plant Height cm
				Leaf Collars	Hail Adjuster's Method	Total Leaves	
May 22	Pioneer 3394		182	5.4	7.8	9.5	56.7
May 22	Pioneer 3394		193	9.7	13.3	15.3	91.4
May 22	Pioneer 3394		200	10.4	13.8	15.8	135.5
May 22	Pioneer 3394		239	18.7	18.7	18.7	291.3
May 22	Pioneer 3845		151	.	.	.	.
May 22	Pioneer 3845		161	1.0	1.1	3.0	6.1
May 22	Pioneer 3845		170	3.1	4.6	5.9	21.6
May 22	Pioneer 3845		177	4.3	6.9	8.0	36.4
May 22	Pioneer 3845		182	6.0	8.6	10.3	47.2
May 22	Pioneer 3845		193	10.0	13.4	15.4	114.8
May 22	Pioneer 3845		200	11.6	14.2	16.1	171.0
May 22	Pioneer 3845		239	18.6	18.6	18.6	304.8
		18,000	151	0.6	1.1	3.1	3.4
		18,000	161	1.3	1.9	3.4	7.0
		18,000	170	3.4	4.8	6.2	22.5
		18,000	177	4.9	7.3	8.4	34.3
		18,000	182	6.1	8.7	10.4	61.5
		18,000	193	10.2	13.8	15.6	109.5
		18,000	200	11.8	14.4	16.0	149.9
		18,000	239	18.5	18.5	18.5	289.8
		30,000	151	0.6	0.9	3.1	3.6
		30,000	161	1.4	1.9	3.4	7.6
		30,000	170	3.6	4.9	6.3	22.7
		30,000	177	4.8	7.4	8.5	35.8
		30,000	182	6.2	8.6	10.4	55.9
		30,000	193	9.9	13.3	15.2	111.0
		30,000	200	11.4	14.3	15.9	164.0
		30,000	239	18.6	18.6	18.6	289.8
May 1		18,000	151	0.6	1.1	3.1	3.4
May 1		18,000	161	2.1	3.2	4.2	9.1
May 1		18,000	170	3.8	5.4	6.8	26.7
May 1		18,000	177	5.4	7.9	9.1	38.1
May 1		18,000	182	6.4	9.0	10.8	68.8
May 1		18,000	193	10.2	13.8	15.4	114.3
May 1		18,000	200	12.3	14.7	16.0	150.3
May 1		18,000	239	18.4	18.4	18.4	283.2
May 1		30,000	151	0.6	0.9	3.1	3.6
May 1		30,000	161	2.3	3.3	4.3	9.5
May 1		30,000	170	4.1	5.4	7.1	25.6
May 1		30,000	177	5.4	8.1	9.2	39.8
May 1		30,000	182	6.7	9.2	11.1	62.0
May 1		30,000	193	10.2	13.8	15.5	120.4
May 1		30,000	200	12.0	14.6	16.1	171.0
May 1		30,000	239	18.4	18.4	18.4	279.8
May 22		18,000	151	.	.	.	.

**Table E-14. Determining Corn Hybrid Maturity - Date of Planting by Hybrid by Plant Density.  
Growth and Development  
Arlington, WI - 1996.**

Planting Date	Hybrid	Plant Density plants/a	Day of Year	Leaf Development			Plant Height cm
				Leaf Collars	Hail Adjuster's Method	Total Leaves	
May 22		18,000	161	0.5	0.6	2.5	4.9
May 22		18,000	170	3.1	4.1	5.5	18.4
May 22		18,000	177	4.5	6.7	7.8	30.5
May 22		18,000	182	5.8	8.4	10.1	54.2
May 22		18,000	193	10.2	13.9	15.8	104.7
May 22		18,000	200	11.2	14.1	16.1	149.4
May 22		18,000	239	18.5	18.5	18.5	296.3
May 22		30,000	151	.	.	.	.
May 22		30,000	161	0.6	0.6	2.6	5.7
May 22		30,000	170	3.0	4.3	5.4	19.7
May 22		30,000	177	4.2	6.7	7.7	31.8
May 22		30,000	182	5.7	8.0	9.7	49.7
May 22		30,000	193	9.5	12.9	14.9	101.6
May 22		30,000	200	10.8	13.9	15.8	157.1
May 22		30,000	239	18.7	18.7	18.7	299.7
	Pioneer 3394	18,000	151	0.1	0.2	2.7	2.5
	Pioneer 3394	18,000	161	0.9	1.4	2.9	5.5
	Pioneer 3394	18,000	170	3.3	4.4	5.6	20.5
	Pioneer 3394	18,000	177	4.8	7.0	8.1	27.1
	Pioneer 3394	18,000	182	5.8	8.2	9.8	56.9
	Pioneer 3394	18,000	193	9.8	13.5	15.3	100.6
	Pioneer 3394	18,000	200	10.8	14.0	15.8	133.4
	Pioneer 3394	18,000	239	18.2	18.2	18.2	276.9
	Pioneer 3394	30,000	151	0.3	0.2	2.8	3.0
	Pioneer 3394	30,000	161	1.1	1.6	3.1	6.4
	Pioneer 3394	30,000	170	3.4	4.6	5.7	17.8
	Pioneer 3394	30,000	177	4.6	6.9	7.9	29.2
	Pioneer 3394	30,000	182	5.8	8.1	9.9	56.9
	Pioneer 3394	30,000	193	9.9	13.5	15.2	92.0
	Pioneer 3394	30,000	200	10.7	14.1	15.8	141.4
	Pioneer 3394	30,000	239	18.6	18.6	18.6	288.3
	Pioneer 3845	18,000	151	1.0	1.9	3.6	4.2
	Pioneer 3845	18,000	161	1.7	2.4	3.8	8.5
	Pioneer 3845	18,000	170	3.6	5.1	6.7	24.6
	Pioneer 3845	18,000	177	5.1	7.6	8.8	41.5
	Pioneer 3845	18,000	182	6.4	9.2	11.1	66.0
	Pioneer 3845	18,000	193	10.6	14.2	15.8	118.4
	Pioneer 3845	18,000	200	12.7	14.7	16.3	166.4
	Pioneer 3845	18,000	239	18.7	18.7	18.7	302.7
	Pioneer 3845	30,000	151	0.9	1.6	3.4	4.2
	Pioneer 3845	30,000	161	1.8	2.3	3.8	8.9
	Pioneer 3845	30,000	170	3.7	5.2	6.8	27.5
	Pioneer 3845	30,000	177	5.1	7.8	9.1	42.3
	Pioneer 3845	30,000	182	6.6	9.1	10.8	54.8
	Pioneer 3845	30,000	193	9.8	13.2	15.2	130.1

**Table E-14. Determining Corn Hybrid Maturity - Date of Planting by Hybrid by Plant Density.  
Growth and Development  
Arlington, WI - 1996.**

Planting Date	Hybrid	Plant Density plants/a	Day of Year	Leaf Development			Plant Height cm
				Leaf Collars	Hail Adjuster's Method	Total Leaves	
	Pioneer 3845	30,000	200	12.1	14.4	16.1	186.7
	Pioneer 3845	30,000	239	18.6	18.6	18.6	291.3
May 1	Pioneer 3394	18,000	151	0.1	0.2	2.7	2.5
May 1	Pioneer 3394	18,000	161	1.8	2.8	3.8	6.8
May 1	Pioneer 3394	18,000	170	3.6	5.0	6.2	25.4
May 1	Pioneer 3394	18,000	177	5.0	7.2	8.3	29.6
May 1	Pioneer 3394	18,000	182	6.0	8.3	10.1	61.0
May 1	Pioneer 3394	18,000	193	9.7	13.4	15.0	104.7
May 1	Pioneer 3394	18,000	200	11.1	14.3	15.8	131.2
May 1	Pioneer 3394	18,000	239	17.9	17.9	17.9	267.6
May 1	Pioneer 3394	30,000	151	0.3	0.2	2.8	3.0
May 1	Pioneer 3394	30,000	161	2.0	3.0	4.0	8.0
May 1	Pioneer 3394	30,000	170	3.9	5.2	6.4	18.2
May 1	Pioneer 3394	30,000	177	5.1	7.6	8.6	31.3
May 1	Pioneer 3394	30,000	182	6.3	8.4	10.4	53.3
May 1	Pioneer 3394	30,000	193	10.3	13.9	15.6	97.5
May 1	Pioneer 3394	30,000	200	11.0	14.3	15.8	147.3
May 1	Pioneer 3394	30,000	239	18.3	18.3	18.3	280.3
May 1	Pioneer 3845	18,000	151	1.0	1.9	3.6	4.2
May 1	Pioneer 3845	18,000	161	2.3	3.7	4.7	11.4
May 1	Pioneer 3845	18,000	170	4.0	5.8	7.4	27.9
May 1	Pioneer 3845	18,000	177	5.8	8.6	9.9	46.6
May 1	Pioneer 3845	18,000	182	6.8	9.7	11.6	76.6
May 1	Pioneer 3845	18,000	193	10.7	14.1	15.8	124.0
May 1	Pioneer 3845	18,000	200	13.6	15.0	16.2	169.3
May 1	Pioneer 3845	18,000	239	19.0	19.0	19.0	298.9
May 1	Pioneer 3845	30,000	151	0.9	1.6	3.4	4.2
May 1	Pioneer 3845	30,000	161	2.6	3.6	4.6	11.0
May 1	Pioneer 3845	30,000	170	4.3	5.7	7.8	33.0
May 1	Pioneer 3845	30,000	177	5.8	8.6	9.9	48.3
May 1	Pioneer 3845	30,000	182	7.1	9.9	11.7	70.7
May 1	Pioneer 3845	30,000	193	10.1	13.7	15.4	143.3
May 1	Pioneer 3845	30,000	200	13.0	14.9	16.3	194.7
May 1	Pioneer 3845	30,000	239	18.4	18.4	18.4	279.4
May 22	Pioneer 3394	18,000	151	.	.	.	.
May 22	Pioneer 3394	18,000	161	0.0	0.0	2.0	4.2
May 22	Pioneer 3394	18,000	170	3.0	3.8	5.0	15.7
May 22	Pioneer 3394	18,000	177	4.7	6.8	7.8	24.6
May 22	Pioneer 3394	18,000	182	5.6	8.0	9.6	52.9
May 22	Pioneer 3394	18,000	193	10.0	13.6	15.7	96.5
May 22	Pioneer 3394	18,000	200	10.4	13.7	15.8	135.5
May 22	Pioneer 3394	18,000	239	18.6	18.6	18.6	286.2
May 22	Pioneer 3394	30,000	151	.	.	.	.



**Table E-14. Determining Corn Hybrid Maturity - Date of Planting by Hybrid by Plant Density.  
Growth and Development  
Arlington, WI - 1996.**

Planting Date	Hybrid	Plant Density plants/a	Day of Year	Leaf Development			Plant Height cm
				Leaf Collars	Hail Adjuster's Method	Total Leaves	
May 22	Pioneer 3394	30,000	161	0.1	0.1	2.2	4.7
May 22	Pioneer 3394	30,000	170	3.0	3.9	5.0	17.4
May 22	Pioneer 3394	30,000	177	4.1	6.2	7.2	27.1
May 22	Pioneer 3394	30,000	182	5.3	7.7	9.4	60.5
May 22	Pioneer 3394	30,000	193	9.4	13.1	14.9	86.4
May 22	Pioneer 3394	30,000	200	10.4	13.9	15.8	135.5
May 22	Pioneer 3394	30,000	239	18.8	18.8	18.8	296.3
May 22	Pioneer 3845	18,000	151	.	.	.	.
May 22	Pioneer 3845	18,000	161	1.0	1.2	3.0	5.5
May 22	Pioneer 3845	18,000	170	3.1	4.4	6.0	21.2
May 22	Pioneer 3845	18,000	177	4.3	6.7	7.8	36.4
May 22	Pioneer 3845	18,000	182	6.0	8.8	10.6	55.5
May 22	Pioneer 3845	18,000	193	10.4	14.2	15.9	112.8
May 22	Pioneer 3845	18,000	200	11.9	14.4	16.3	163.4
May 22	Pioneer 3845	18,000	239	18.4	18.4	18.4	306.5
May 22	Pioneer 3845	30,000	151	.	.	.	.
May 22	Pioneer 3845	30,000	161	1.0	1.0	3.0	6.8
May 22	Pioneer 3845	30,000	170	3.0	4.7	5.9	22.0
May 22	Pioneer 3845	30,000	177	4.3	7.1	8.2	36.4
May 22	Pioneer 3845	30,000	182	6.0	8.3	10.0	39.0
May 22	Pioneer 3845	30,000	193	9.6	12.7	15.0	116.8
May 22	Pioneer 3845	30,000	200	11.2	13.9	15.8	178.7
May 22	Pioneer 3845	30,000	239	18.7	18.7	18.7	303.1
Mean				7.5	9.3	10.7	91.0
<b>Probability %</b>							
Date of Planting (DOP)				< 0.1	0.3	0.4	17.7
Hybrid (H)				< 0.1	< 0.1	< 0.1	< 0.1
Plant Density (PD)				> 50	45.8	> 50	47.5
H x PD				23.9	22.3	26.8	> 50
H x DOP				4.5	22.6	4.2	8.9
PD x DOP				18.8	33.6	12.7	> 50
H x PD x DOP				39.2	> 50	42.8	> 50
Days (D)				< 0.1	< 0.1	< 0.1	< 0.1
D x DOP				< 0.1	< 0.1	< 0.1	< 0.1
D x H				< 0.1	0.4	0.8	< 0.1
D x PD				21.9	40.3	> 50	26.8
D x H x PD				38.8	44.1	> 50	8.9
D x H x DOP				5.4	29.5	> 50	> 50
D x PD x DOP				43.1	32.3	48.3	> 50
D x H x PD x DOP				> 50	> 50	> 50	> 50
<b>LSD (0.10)</b>							
Date of Planting (DOP)				0.1	0.2	0.1	NS
Hybrid (H)				0.2	0.2	0.1	3.7
Plant Density (PD)				0.2	0.2	0.1	3.7
Day of Year (D)				0.2	0.2	0.2	7.1
<b>CV %</b>							
				7.2	7.3	6.3	13.3

**Table E-15. Determining Corn Hybrid Maturity.**  
**Date of Planting by Hybrid by Plant Density - Harvest Data.**  
**Arlington, WI - 1996.**

Planting Date	Hybrid	Plant Density	Broken Stalks %	Moisture %	Yield bu/a
May 1			3.4	28.5	147.9
May 22			1.2	29.6	147.4
	Pioneer 3394		2.5	32.8	139.3
	Pioneer 3845		2.1	25.3	155.9
May 1	Pioneer 3394		3.3	32.0	136.4
May 1	Pioneer 3845		3.6	24.9	159.4
May 22	Pioneer 3394		1.8	33.5	142.3
May 22	Pioneer 3845		0.6	25.7	152.5
		18,000	2.6	29.1	139.0
		30,000	2.0	29.0	156.2
May 1		18,000	3.7	28.6	135.9
May 1		30,000	3.1	28.3	159.9
May 22		18,000	1.5	29.6	142.2
May 22		30,000	0.9	29.6	152.5
	Pioneer 3394	18,000	2.6	32.7	126.0
	Pioneer 3394	30,000	2.4	32.8	152.7
	Pioneer 3845	18,000	2.6	25.5	152.1
	Pioneer 3845	30,000	1.6	25.1	159.7
May 1	Pioneer 3394	18,000	3.0	32.0	119.9
May 1	Pioneer 3394	30,000	3.6	32.0	152.9
May 1	Pioneer 3845	18,000	4.4	25.2	151.8
May 1	Pioneer 3845	30,000	2.7	24.6	166.9
May 22	Pioneer 3394	18,000	2.2	33.4	132.1
May 22	Pioneer 3394	30,000	1.3	33.6	152.5
May 22	Pioneer 3845	18,000	0.7	25.8	152.3
May 22	Pioneer 3845	30,000	0.4	25.6	152.6
Mean			2.3	29.1	147.6
<b>Probability %</b>					
Date of Planting (DOP)			1.7	7.6	> 50
Hybrid (H)			> 50	< 0.1	2.8
Plant Density (PD)			> 50	> 50	2.3
H x PD			> 50	48.3	17.6
DOP x H			42.9	28.3	35.5
DOP x PD			> 50	> 50	32.0
DOP x H x PD			42.9	> 50	> 50
<b>LSD (0.10)</b>					
Date of Planting (DOP)			0.9	1.0	NS
Hybrid (H)			NS	0.6	11.8
Plant Density (PD)			NS	NS	11.8
<b>CV %</b>			94.5	2.8	11.0

# FIELD EXPERIMENT HISTORY

**Title:** Determining Corn Hybrid Maturity - Plant Density by Hybrid.

**Year:** 1996

**Personnel:** J.G. Lauer, K.D. Hudelson

**Supported by:** Hatch

## EXPERIMENTAL PROCEDURE

Exp. Design: RCB

Replicates: 3

Variables: 6 Densities: 12,000, 18,000, 24,000, 30,000, 36,000, 42,000  
 4 Hybrids: Dekalb DK493, NK PX9060, Pioneer 3394, Pioneer 3845

Area Planted: 10' x 25'  
 Planting Equip: Kinze Plot Planter w/seed cones  
 Planting Rate: 40,000 thinned to 28,000 plants/a

Area Harvested: 5' x 22'  
 Harvesting Equip: Gleaner Plot Combine  
 Row Spacing: 30"

## FIELD INFORMATION

Location	Results in Tables	Soil Type	Previous Crop	Plant- ing Date	Harvest Dates	Tillage Operations	--Soil Test--			--Nitrogen Fertilizer--			Weed Control	Insect- icides
							pH	P	K	actual (lb/a)	form	time		
Arlington	E-16, E-17.	Plano Silt Loam	Soybean	26-Apr	8-Nov	Chisel Plow Field Cult.(2x)	6.8	76	215	150 9	46-0-0 6-24-24	preplant planting	Bladex 2qts/A Lasso 2qts/A	None
Hancock Irrigated	E-18, E-19.	Plainfield Sand	Cucumber	13-May	21-Oct	Dyna Drive Moldboard Plow Disk	6.3	110	110	200 9	33-0-0 6-24-24	post planting	Saddle 2qts/A Aatrex 4L 0.75qts/A	None
Lancaster	E-20, E-21.	Rozetta Silt Loam	Corn	6-May	25-Oct	Chisel Plow Soil finisher	7.1	90	275	200 9	82-0-0 8-32-17	preplant planting	Dual II 2pts/A Banvel 1pt/A	Lorsban 7lbs/A Pounce 6oz/A

**Table E-16. Determining Corn Hybrid Maturity - Plant Density by Hybrid.  
Growth and Development  
Arlington, WI - 1996.**

Plant Density	Hybrid	Day of Year	Leaf Development			Plant Height cm
			Leaf Collars	Hail Adjuster's Method	Total Leaves	
12,000		.	8.1	9.8	11.2	87.0
18,000		.	8.0	9.9	11.2	91.6
24,000		.	8.0	9.7	11.2	93.6
30,000		.	8.0	9.8	11.2	94.1
36,000		.	7.9	9.7	11.1	96.6
42,000		.	7.8	9.6	11.0	97.4
	Dekalb DK493	.	7.9	9.5	10.9	89.6
	NK PX9060	.	7.7	9.7	11.0	88.5
	Pioneer 3394	.	8.1	9.8	11.2	95.2
	Pioneer 3845	.	8.2	10.0	11.4	100.2
12,000	Dekalb DK493	.	8.0	9.7	11.1	83.8
12,000	NK PX9060	.	7.9	9.9	11.1	82.0
12,000	Pioneer 3394	.	8.1	9.7	11.3	92.0
12,000	Pioneer 3845	.	8.4	9.9	11.5	90.3
18,000	Dekalb DK493	.	7.8	9.5	10.8	89.1
18,000	NK PX9060	.	7.8	9.8	11.1	86.6
18,000	Pioneer 3394	.	8.2	9.9	11.2	92.5
18,000	Pioneer 3845	.	8.4	10.4	11.8	98.3
24,000	Dekalb DK493	.	8.1	9.5	11.4	89.2
24,000	NK PX9060	.	7.8	9.7	11.0	89.2
24,000	Pioneer 3394	.	8.2	9.8	11.2	92.5
24,000	Pioneer 3845	.	8.1	9.9	11.3	103.4
30,000	Dekalb DK493	.	7.9	9.4	11.0	89.7
30,000	NK PX9060	.	7.8	9.6	11.0	90.7
30,000	Pioneer 3394	.	8.1	9.8	11.2	94.3
30,000	Pioneer 3845	.	8.2	10.2	11.7	101.7
36,000	Dekalb DK493	.	7.8	9.3	10.6	92.3
36,000	NK PX9060	.	7.5	9.5	10.9	90.1
36,000	Pioneer 3394	.	8.1	9.9	11.4	100.5
36,000	Pioneer 3845	.	8.2	9.9	11.4	103.6
42,000	Dekalb DK493	.	7.9	9.5	10.8	93.7
42,000	NK PX9060	.	7.5	9.6	10.9	92.4
42,000	Pioneer 3394	.	8.0	9.5	11.1	99.5
42,000	Pioneer 3845	.	7.9	9.8	11.0	104.0
		151	0.9	1.4	3.3	4.9
		161	2.6	3.9	4.9	10.3
		170	4.7	6.5	7.8	28.3
		177	5.8	8.4	9.6	41.1
		182	7.4	10.2	12.2	68.9
		193	10.5	13.5	15.6	126.3
		200	13.2	15.3	17.0	178.8
		238	18.9	18.9	18.9	288.5

**Table E-16. Determining Corn Hybrid Maturity - Plant Density by Hybrid.  
Growth and Development  
Arlington, WI - 1996.**

Plant Density	Hybrid	Day of Year	Leaf Development			Plant Height cm
			Leaf Collars	Hail Adjuster's Method	Total Leaves	
12,000		151	1.0	1.4	3.3	4.7
12,000		161	2.7	3.9	4.9	10.1
12,000		170	4.6	6.4	7.8	26.3
12,000		177	5.8	8.4	9.6	38.0
12,000		182	7.6	10.3	12.4	60.6
12,000		193	10.6	13.6	15.8	115.6
12,000		200	13.4	15.4	17.0	165.7
12,000		238	18.9	18.9	18.9	275.4
18,000		151	0.9	1.4	3.4	4.8
18,000		161	2.6	4.0	5.0	10.4
18,000		170	4.6	6.5	7.7	28.4
18,000		177	5.9	8.6	9.7	41.5
18,000		182	7.5	10.3	12.2	69.9
18,000		193	10.5	13.7	15.8	119.9
18,000		200	13.3	15.6	17.2	175.9
18,000		238	19.0	19.0	19.0	282.4
24,000		151	0.8	1.2	3.1	4.8
24,000		161	2.6	3.8	4.8	10.4
24,000		170	4.6	6.2	7.6	28.2
24,000		177	5.8	8.3	9.5	39.4
24,000		182	7.5	10.2	12.5	68.3
24,000		193	10.8	13.7	15.9	127.5
24,000		200	13.6	15.5	17.4	182.5
24,000		238	18.9	18.9	18.9	287.7
30,000		151	1.0	1.6	3.4	4.9
30,000		161	2.6	3.8	4.8	10.0
30,000		170	4.7	6.5	7.8	27.7
30,000		177	5.9	8.4	9.7	40.2
30,000		182	7.6	10.4	12.4	68.4
30,000		193	10.4	13.4	15.8	130.6
30,000		200	13.1	15.2	16.9	181.0
30,000		238	19.0	19.0	19.0	290.2
36,000		151	0.9	1.4	3.5	5.1
36,000		161	2.7	3.8	4.8	10.7
36,000		170	4.7	6.8	7.9	29.0
36,000		177	5.8	8.3	9.6	44.0
36,000		182	7.2	10.1	12.0	71.4
36,000		193	10.5	13.4	15.4	132.6
36,000		200	12.9	15.0	16.7	182.5
36,000		238	18.8	18.8	18.8	297.6
42,000		151	0.9	1.3	3.3	5.2
42,000		161	2.6	4.1	4.9	10.4
42,000		170	4.7	6.7	7.8	30.4
42,000		177	5.8	8.2	9.4	43.6
42,000		182	7.2	10.0	11.9	74.8
42,000		193	10.2	13.1	15.1	131.8
42,000		200	12.8	15.0	16.8	185.4
42,000		238	18.7	18.7	18.7	297.6

**Table E-16. Determining Corn Hybrid Maturity - Plant Density by Hybrid.  
Growth and Development  
Arlington, WI - 1996.**

Plant Density	Hybrid	Day of Year	Leaf Development			Plant Height cm
			Leaf Collars	Hail Adjuster's Method	Total Leaves	
	Dekalb DK493	151	0.9	0.8	2.8	4.3
	Dekalb DK493	161	2.3	3.4	4.3	9.0
	Dekalb DK493	170	4.4	6.2	7.4	23.8
	Dekalb DK493	177	5.8	7.9	9.2	36.9
	Dekalb DK493	182	7.3	9.6	11.9	65.1
	Dekalb DK493	193	10.4	13.4	15.5	119.0
	Dekalb DK493	200	13.0	15.2	17.1	170.7
	Dekalb DK493	238	19.4	19.4	19.4	288.3
	NK PX9060	151	0.9	1.5	3.5	4.7
	NK PX9060	161	2.6	4.1	5.0	8.5
	NK PX9060	170	4.7	6.8	7.9	25.0
	NK PX9060	177	5.7	8.7	9.8	41.4
	NK PX9060	182	7.4	10.9	12.9	65.0
	NK PX9060	193	10.5	13.6	15.6	124.3
	NK PX9060	200	13.3	15.2	16.6	175.1
	NK PX9060	238	16.9	16.9	16.9	264.3
	Pioneer 3394	151	1.0	1.5	3.2	5.1
	Pioneer 3394	161	2.7	3.8	4.9	10.7
	Pioneer 3394	170	4.7	6.4	7.6	30.1
	Pioneer 3394	177	5.8	8.1	9.2	41.5
	Pioneer 3394	182	7.3	9.7	11.6	69.7
	Pioneer 3394	193	10.4	13.2	15.6	128.7
	Pioneer 3394	200	12.8	15.2	17.3	177.0
	Pioneer 3394	238	20.3	20.3	20.3	298.9
	Pioneer 3845	151	1.0	1.8	3.8	5.5
	Pioneer 3845	161	2.9	4.3	5.3	13.1
	Pioneer 3845	170	4.9	6.8	8.1	34.4
	Pioneer 3845	177	5.9	8.8	10.1	44.7
	Pioneer 3845	182	7.8	10.7	12.6	75.9
	Pioneer 3845	193	10.7	13.7	15.9	133.3
	Pioneer 3845	200	13.7	15.4	16.9	192.5
	Pioneer 3845	238	19.0	19.0	19.0	302.4
12,000	Dekalb DK493	151	1.0	0.9	2.9	3.8
12,000	Dekalb DK493	161	2.4	3.3	4.2	8.9
12,000	Dekalb DK493	170	4.4	6.3	7.4	22.0
12,000	Dekalb DK493	177	5.8	7.9	9.2	29.6
12,000	Dekalb DK493	182	7.6	10.1	12.1	54.2
12,000	Dekalb DK493	193	10.4	13.9	15.9	105.7
12,000	Dekalb DK493	200	12.8	15.6	17.0	163.4
12,000	Dekalb DK493	238	19.8	19.8	19.8	282.8
12,000	NK PX9060	151	1.0	1.8	3.6	5.1
12,000	NK PX9060	161	2.9	4.4	5.4	8.0
12,000	NK PX9060	170	4.4	6.6	7.9	22.0
12,000	NK PX9060	177	5.8	9.1	10.2	36.4
12,000	NK PX9060	182	7.6	11.1	13.3	55.9

**Table E-16. Determining Corn Hybrid Maturity - Plant Density by Hybrid.  
Growth and Development  
Arlington, WI - 1996.**

Plant Density	Hybrid	Day of Year	Leaf Development			Plant Height cm
			Leaf Collars	Hail Adjuster's Method	Total Leaves	
12,000	NK PX9060	193	10.9	14.0	15.3	117.9
12,000	NK PX9060	200	13.7	15.2	16.6	161.7
12,000	NK PX9060	238	16.7	16.7	16.7	248.9
12,000	Pioneer 3394	151	1.0	1.3	3.1	4.7
12,000	Pioneer 3394	161	2.6	3.6	4.8	10.2
12,000	Pioneer 3394	170	4.6	6.3	7.6	27.9
12,000	Pioneer 3394	177	5.9	8.1	9.3	42.8
12,000	Pioneer 3394	182	7.3	9.4	11.4	68.6
12,000	Pioneer 3394	193	10.0	13.0	15.9	118.9
12,000	Pioneer 3394	200	13.2	15.6	17.6	176.1
12,000	Pioneer 3394	238	20.3	20.3	20.3	287.0
12,000	Pioneer 3845	151	1.0	1.8	3.8	5.1
12,000	Pioneer 3845	161	3.0	4.1	5.2	13.1
12,000	Pioneer 3845	170	5.0	6.4	8.1	33.0
12,000	Pioneer 3845	177	5.8	8.7	9.8	43.2
12,000	Pioneer 3845	182	8.0	10.6	12.9	63.9
12,000	Pioneer 3845	193	10.9	13.7	16.1	119.9
12,000	Pioneer 3845	200	14.1	15.2	17.0	161.7
12,000	Pioneer 3845	238	19.0	19.0	19.0	282.8
18,000	Dekalb DK493	151	0.9	0.7	2.9	3.8
18,000	Dekalb DK493	161	2.0	3.2	4.2	8.5
18,000	Dekalb DK493	170	4.2	6.1	7.2	23.3
18,000	Dekalb DK493	177	5.7	7.9	9.0	40.6
18,000	Dekalb DK493	182	7.0	9.4	11.3	66.9
18,000	Dekalb DK493	193	10.3	13.7	15.2	115.8
18,000	Dekalb DK493	200	13.1	15.3	17.4	171.9
18,000	Dekalb DK493	238	19.3	19.3	19.3	281.9
18,000	NK PX9060	151	0.9	1.8	3.6	4.2
18,000	NK PX9060	161	2.6	3.9	4.8	8.5
18,000	NK PX9060	170	4.7	6.7	7.8	23.3
18,000	NK PX9060	177	5.9	8.9	10.2	36.4
18,000	NK PX9060	182	7.4	10.9	12.9	69.4
18,000	NK PX9060	193	10.3	13.2	15.4	121.9
18,000	NK PX9060	200	13.3	15.6	16.9	174.4
18,000	NK PX9060	238	17.1	17.1	17.1	254.9
18,000	Pioneer 3394	151	1.0	1.2	3.0	5.1
18,000	Pioneer 3394	161	2.8	3.9	5.0	10.6
18,000	Pioneer 3394	170	4.7	6.2	7.7	32.2
18,000	Pioneer 3394	177	5.9	8.1	9.1	43.2
18,000	Pioneer 3394	182	7.4	10.0	11.7	71.1
18,000	Pioneer 3394	193	10.6	13.6	15.8	122.9
18,000	Pioneer 3394	200	12.9	15.7	17.4	160.9
18,000	Pioneer 3394	238	20.2	20.2	20.2	293.8
18,000	Pioneer 3845	151	1.0	2.0	4.0	5.9
18,000	Pioneer 3845	161	3.0	4.9	5.9	14.0
18,000	Pioneer 3845	170	4.9	7.0	8.1	34.7

**Table E-16. Determining Corn Hybrid Maturity - Plant Density by Hybrid.  
Growth and Development  
Arlington, WI - 1996.**

Plant Density	Hybrid	Day of Year	Leaf Development			Plant Height cm
			Leaf Collars	Hail Adjuster's Method	Total Leaves	
18,000	Pioneer 3845	177	6.0	9.4	10.6	45.7
18,000	Pioneer 3845	182	8.1	10.9	13.0	72.0
18,000	Pioneer 3845	193	10.8	14.3	16.7	118.9
18,000	Pioneer 3845	200	13.8	15.7	17.0	196.4
18,000	Pioneer 3845	238	19.3	19.3	19.3	298.9
24,000	Dekalb DK493	151	0.7	1.0	2.7	3.8
24,000	Dekalb DK493	161	2.6	3.4	4.6	9.7
24,000	Dekalb DK493	170	4.6	5.9	7.4	24.1
24,000	Dekalb DK493	177	5.9	7.9	9.4	38.1
24,000	Dekalb DK493	182	7.7	9.2	12.9	65.6
24,000	Dekalb DK493	193	10.6	13.6	16.4	120.9
24,000	Dekalb DK493	200	13.4	15.3	17.7	166.8
24,000	Dekalb DK493	238	19.7	19.7	19.7	284.5
24,000	NK PX9060	151	0.8	0.8	3.1	4.7
24,000	NK PX9060	161	2.3	4.0	4.7	8.0
24,000	NK PX9060	170	4.6	6.7	7.7	24.1
24,000	NK PX9060	177	5.4	8.4	9.4	42.8
24,000	NK PX9060	182	7.4	10.8	12.7	61.8
24,000	NK PX9060	193	10.8	14.0	16.1	122.9
24,000	NK PX9060	200	13.9	15.8	17.3	179.5
24,000	NK PX9060	238	16.8	16.8	16.8	270.1
24,000	Pioneer 3394	151	1.0	1.7	3.1	4.7
24,000	Pioneer 3394	161	3.0	3.9	4.9	11.0
24,000	Pioneer 3394	170	4.4	6.1	7.3	29.6
24,000	Pioneer 3394	177	5.9	7.9	9.2	37.3
24,000	Pioneer 3394	182	7.1	9.7	11.4	59.3
24,000	Pioneer 3394	193	10.8	13.6	15.4	128.0
24,000	Pioneer 3394	200	12.9	15.1	17.6	172.7
24,000	Pioneer 3394	238	20.2	20.2	20.2	297.2
24,000	Pioneer 3845	151	0.9	1.4	3.6	5.9
24,000	Pioneer 3845	161	2.7	4.0	5.0	12.7
24,000	Pioneer 3845	170	4.7	6.2	7.9	34.7
24,000	Pioneer 3845	177	5.9	8.9	10.0	39.4
24,000	Pioneer 3845	182	7.7	11.1	12.9	86.4
24,000	Pioneer 3845	193	11.2	13.7	15.7	138.2
24,000	Pioneer 3845	200	14.1	15.7	16.9	210.8
24,000	Pioneer 3845	238	19.1	19.1	19.1	298.9
30,000	Dekalb DK493	151	1.0	1.0	2.9	4.7
30,000	Dekalb DK493	161	2.1	3.1	4.1	8.5
30,000	Dekalb DK493	170	4.6	5.9	7.3	23.7
30,000	Dekalb DK493	177	5.9	8.0	9.7	35.6
30,000	Dekalb DK493	182	7.6	9.9	12.0	66.0
30,000	Dekalb DK493	193	10.1	13.1	15.7	121.9
30,000	Dekalb DK493	200	12.8	14.9	16.9	174.4
30,000	Dekalb DK493	238	19.1	19.1	19.1	282.8
30,000	NK PX9060	151	0.9	1.7	3.7	4.7



**Table E-16. Determining Corn Hybrid Maturity - Plant Density by Hybrid.  
Growth and Development  
Arlington, WI - 1996.**

Plant Density	Hybrid	Day of Year	Leaf Development			Plant Height cm
			Leaf Collars	Hail Adjuster's Method	Total Leaves	
30,000	NK PX9060	161	2.8	3.8	4.8	8.5
30,000	NK PX9060	170	4.8	6.6	8.0	26.3
30,000	NK PX9060	177	5.8	8.8	9.8	41.5
30,000	NK PX9060	182	7.6	10.8	12.9	66.5
30,000	NK PX9060	193	10.6	13.6	15.7	129.0
30,000	NK PX9060	200	13.1	14.7	16.1	177.8
30,000	NK PX9060	238	17.2	17.2	17.2	271.8
30,000	Pioneer 3394	151	1.0	1.7	3.3	5.1
30,000	Pioneer 3394	161	2.6	3.8	4.9	10.2
30,000	Pioneer 3394	170	4.7	6.2	7.4	26.3
30,000	Pioneer 3394	177	5.8	8.0	9.0	39.0
30,000	Pioneer 3394	182	7.2	9.7	11.4	65.6
30,000	Pioneer 3394	193	10.2	13.4	15.7	128.0
30,000	Pioneer 3394	200	12.7	15.6	17.3	177.8
30,000	Pioneer 3394	238	20.3	20.3	20.3	302.3
30,000	Pioneer 3845	151	1.0	2.0	3.9	5.1
30,000	Pioneer 3845	161	3.0	4.4	5.6	12.7
30,000	Pioneer 3845	170	4.8	7.3	8.4	34.7
30,000	Pioneer 3845	177	6.0	9.0	10.4	44.9
30,000	Pioneer 3845	182	8.0	11.1	13.2	75.4
30,000	Pioneer 3845	193	10.6	13.7	16.0	143.3
30,000	Pioneer 3845	200	13.8	15.6	17.1	193.9
30,000	Pioneer 3845	238	19.4	19.4	19.4	304.0
36,000	Dekalb DK493	151	0.9	0.3	3.0	4.7
36,000	Dekalb DK493	161	2.2	3.2	4.2	8.9
36,000	Dekalb DK493	170	4.3	6.4	7.4	23.3
36,000	Dekalb DK493	177	5.6	7.6	8.8	39.8
36,000	Dekalb DK493	182	6.9	9.4	11.4	69.0
36,000	Dekalb DK493	193	10.2	13.1	14.7	121.9
36,000	Dekalb DK493	200	12.9	15.2	16.4	170.2
36,000	Dekalb DK493	238	19.1	19.1	19.1	300.6
36,000	NK PX9060	151	0.8	1.6	3.6	4.7
36,000	NK PX9060	161	2.6	3.9	4.9	8.9
36,000	NK PX9060	170	4.7	7.0	8.0	25.8
36,000	NK PX9060	177	5.9	8.8	10.3	44.0
36,000	NK PX9060	182	7.2	10.9	12.8	65.2
36,000	NK PX9060	193	10.6	13.6	15.6	131.1
36,000	NK PX9060	200	13.0	14.6	16.1	174.4
36,000	NK PX9060	238	16.6	16.6	16.6	266.7
36,000	Pioneer 3394	151	1.0	1.9	3.4	5.5
36,000	Pioneer 3394	161	3.0	4.0	5.0	11.9
36,000	Pioneer 3394	170	4.8	6.7	8.0	32.2
36,000	Pioneer 3394	177	5.7	8.4	9.4	47.0
36,000	Pioneer 3394	182	7.2	9.8	11.8	74.9
36,000	Pioneer 3394	193	10.6	13.6	15.9	137.2
36,000	Pioneer 3394	200	12.4	14.9	17.2	187.1

**Table E-16. Determining Corn Hybrid Maturity - Plant Density by Hybrid.  
Growth and Development  
Arlington, WI - 1996.**

Plant Density	Hybrid	Day of Year	Leaf Development			Plant Height cm
			Leaf Collars	Hail Adjuster's Method	Total Leaves	
36,000	Pioneer 3394	238	20.2	20.2	20.2	308.2
36,000	Pioneer 3845	151	1.0	1.7	3.9	5.5
36,000	Pioneer 3845	161	3.0	4.2	5.2	13.1
36,000	Pioneer 3845	170	5.0	7.0	8.1	34.7
36,000	Pioneer 3845	177	6.0	8.4	9.8	45.3
36,000	Pioneer 3845	182	7.6	10.4	12.1	76.6
36,000	Pioneer 3845	193	10.6	13.2	15.6	140.2
36,000	Pioneer 3845	200	13.3	15.2	17.1	198.1
36,000	Pioneer 3845	238	19.1	19.1	19.1	315.0
42,000	Dekalb DK493	151	0.8	0.8	2.7	5.1
42,000	Dekalb DK493	161	2.2	3.9	4.4	9.3
42,000	Dekalb DK493	170	4.4	6.2	7.3	26.3
42,000	Dekalb DK493	177	5.8	7.9	9.1	37.7
42,000	Dekalb DK493	182	7.1	9.7	11.7	68.6
42,000	Dekalb DK493	193	10.4	13.3	15.2	128.0
42,000	Dekalb DK493	200	13.0	15.1	16.9	177.8
42,000	Dekalb DK493	238	19.2	19.2	19.2	297.2
42,000	NK PX9060	151	0.8	1.3	3.7	4.7
42,000	NK PX9060	161	2.7	4.6	5.6	8.9
42,000	NK PX9060	170	4.9	7.2	8.3	28.4
42,000	NK PX9060	177	5.3	8.0	9.0	47.0
42,000	NK PX9060	182	7.2	10.7	12.6	71.1
42,000	NK PX9060	193	10.1	13.3	15.2	122.9
42,000	NK PX9060	200	13.0	15.4	16.8	182.9
42,000	NK PX9060	238	16.9	16.9	16.9	273.5
42,000	Pioneer 3394	151	0.9	1.1	3.1	5.5
42,000	Pioneer 3394	161	2.6	3.6	4.8	10.6
42,000	Pioneer 3394	170	4.8	6.6	7.8	32.2
42,000	Pioneer 3394	177	5.9	8.2	9.3	39.8
42,000	Pioneer 3394	182	7.2	9.7	11.6	78.7
42,000	Pioneer 3394	193	10.0	12.3	14.8	137.2
42,000	Pioneer 3394	200	12.4	14.4	16.9	187.1
42,000	Pioneer 3394	238	20.4	20.4	20.4	304.8
42,000	Pioneer 3845	151	1.0	1.9	3.7	5.5
42,000	Pioneer 3845	161	2.9	4.2	5.0	12.7
42,000	Pioneer 3845	170	4.8	6.8	7.8	34.7
42,000	Pioneer 3845	177	6.0	8.6	10.2	50.0
42,000	Pioneer 3845	182	7.3	9.9	11.7	80.9
42,000	Pioneer 3845	193	10.1	13.3	15.1	139.2
42,000	Pioneer 3845	200	12.9	15.1	16.6	193.9
42,000	Pioneer 3845	238	18.2	18.2	18.2	315.0

**Table E-16. Determining Corn Hybrid Maturity - Plant Density by Hybrid.  
Growth and Development  
Arlington, WI - 1996.**

Plant Density	Hybrid	Day of Year	Leaf Development			Plant Height cm
			Leaf Collars	Hail Adjuster's Method	Total Leaves	
Mean			8.0	9.7	11.2	93.4
<b><u>Probability %</u></b>						
	Plant Density (PD)		29.0	43.8	42.0	< 0.1
	Hybrid (H)		< 0.1	< 0.1	< 0.1	< 0.1
	PD x H		49.8	6.6	2.4	2.9
	Days (T)		< 0.1	< 0.1	< 0.1	< 0.1
	PD x T		0.4	9.2	1.9	< 0.1
	H x T		< 0.1	< 0.1	< 0.1	< 0.1
	PD x H x T		> 50	42.6	27.3	10.3
<b><u>LSD (0.10)</u></b>						
	Plant Density (PD)		NS	NS	NS	2.0
	Hybrid (H)		0.1	0.1	0.1	1.3
	Days (T)		0.1	0.1	0.1	1.9
<b><u>CV %</u></b>						
			6.9	7.5	6.2	7.4

**Table E-17. Determining Corn Hybrid Maturity.**  
**Plant Density by Hybrid - Harvest Data.**  
**Arlington, WI - 1996.**

Plant Density	Hybrid	Final Population plants/a	Broken Stalks %	Moisture %	Yield bu/a
12,000		11615	6.7	25.7	127.7
18,000		17588	7.4	25.1	145.6
24,000		23330	3.8	25.8	175.2
30,000		29269	2.9	24.8	170.5
36,000		35077	3.2	24.6	179.7
42,000		39862	3.2	24.8	181.1
	Dekalb DK493	25936	4.1	24.3	190.1
	NK PX9060	25540	4.4	21.3	132.9
	Pioneer 3394	26816	4.2	31.6	163.0
	Pioneer 3845	26200	5.4	23.3	167.3
12,000	Dekalb DK493	11087	8.6	26.4	148.2
12,000	NK PX9060	11483	2.2	21.5	103.1
12,000	Pioneer 3394	12143	5.6	31.7	134.1
12,000	Pioneer 3845	11747	10.5	23.2	125.2
18,000	Dekalb DK493	17159	5.4	23.7	174.2
18,000	NK PX9060	17951	11.5	21.3	108.4
18,000	Pioneer 3394	18083	8.2	31.4	145.5
18,000	Pioneer 3845	17159	4.6	24.0	154.2
24,000	Dekalb DK493	22835	5.2	23.9	195.6
24,000	NK PX9060	23099	3.4	21.2	146.0
24,000	Pioneer 3394	23891	2.7	35.3	171.1
24,000	Pioneer 3845	23495	3.8	22.7	188.0
30,000	Dekalb DK493	29038	1.4	24.1	208.7
30,000	NK PX9060	28510	2.8	20.8	126.8
30,000	Pioneer 3394	30094	3.5	30.9	168.3
30,000	Pioneer 3845	29434	4.1	23.2	178.3
36,000	Dekalb DK493	34846	1.9	23.5	193.3
36,000	NK PX9060	33790	2.7	21.7	156.0
36,000	Pioneer 3394	35770	4.1	30.4	178.1
36,000	Pioneer 3845	35902	4.0	22.9	191.5
42,000	Dekalb DK493	40654	2.0	24.2	220.4
42,000	NK PX9060	38410	3.8	21.1	156.8
42,000	Pioneer 3394	40918	1.3	30.1	181.1
42,000	Pioneer 3845	39466	5.6	23.7	166.3
Mean		26123	4.5	25.1	163.3
<b>Probability %</b>					
Plant Density (PD)		< 0.1	12.6	25.5	< 0.1
Hybrid (H)		3.5	> 50	< 0.1	< 0.1
PD x H		> 50	38.1	5.9	27.5
<b>LSD (0.10)</b>					
Plant Density (PD)		1133	NS	NS	11.0
Hybrid (H)		714	NS	0.8	8.7
<b>CV %</b>		4.9	85.8	5.8	9.5

**Table E-18. Determining Corn Hybrid Maturity - Plant Density by Hybrid.  
Growth and Development  
Hancock, WI - 1996.**

Plant Density	Hybrid	Day of Year	Leaf Development			Plant Height cm
			Leaf Collars	Hail Adjuster's Method	Total Leaves	
12,000		.	8.1	10.0	11.3	84.7
18,000		.	7.9	9.8	11.1	86.2
24,000		.	8.1	10.0	11.3	87.7
30,000		.	7.9	9.8	11.1	87.1
36,000		.	7.7	9.6	10.8	87.6
42,000		.	7.7	9.6	10.9	88.8
	Dekalb DK493	.	8.0	9.9	11.1	83.3
	NK PX9060	.	7.5	9.5	10.8	83.3
	Pioneer 3394	.	7.9	9.7	11.0	87.7
	Pioneer 3845	.	8.1	10.0	11.4	93.8
12,000	Dekalb DK493	.	8.2	10.1	11.4	79.2
12,000	NK PX9060	.	7.7	9.8	11.1	82.4
12,000	Pioneer 3394	.	8.1	9.9	11.2	87.0
12,000	Pioneer 3845	.	8.2	10.1	11.5	90.2
18,000	Dekalb DK493	.	8.1	10.0	11.2	81.6
18,000	NK PX9060	.	7.5	9.5	10.6	82.8
18,000	Pioneer 3394	.	7.9	9.6	11.1	88.1
18,000	Pioneer 3845	.	8.3	10.0	11.4	92.2
24,000	Dekalb DK493	.	8.0	9.8	11.1	84.0
24,000	NK PX9060	.	7.7	9.8	10.9	82.6
24,000	Pioneer 3394	.	8.2	10.0	11.4	88.0
24,000	Pioneer 3845	.	8.4	10.4	11.8	96.3
30,000	Dekalb DK493	.	8.0	9.8	11.1	84.0
30,000	NK PX9060	.	7.6	9.6	10.8	84.1
30,000	Pioneer 3394	.	7.9	9.7	11.1	86.5
30,000	Pioneer 3845	.	8.1	10.0	11.5	93.9
36,000	Dekalb DK493	.	8.0	9.8	11.0	86.5
36,000	NK PX9060	.	7.3	9.2	10.5	82.2
36,000	Pioneer 3394	.	7.8	9.5	10.7	87.4
36,000	Pioneer 3845	.	7.9	9.8	11.2	94.3
42,000	Dekalb DK493	.	7.9	9.6	11.0	84.1
42,000	NK PX9060	.	7.6	9.5	10.8	86.0
42,000	Pioneer 3394	.	7.6	9.3	10.5	89.1
42,000	Pioneer 3845	.	8.0	9.8	11.1	95.9
		154	2.0	3.1	4.3	7.7
		162	3.2	4.3	6.1	16.4
		170	5.0	7.6	8.6	27.3
		177	5.9	8.6	9.9	46.0
		187	9.2	12.0	14.1	92.5
		196	12.0	14.6	16.3	152.1
		218	18.2	18.2	18.2	267.1

**Table E-18. Determining Corn Hybrid Maturity - Plant Density by Hybrid.  
Growth and Development  
Hancock, WI - 1996.**

Plant Density	Hybrid	Day of Year	Leaf Development			Plant Height cm
			Leaf Collars	Hail Adjuster's Method	Total Leaves	
12,000		154	2.0	3.0	4.3	7.6
12,000		162	3.2	4.3	6.1	15.6
12,000		170	5.0	7.7	8.7	27.0
12,000		177	5.9	8.8	10.1	44.0
12,000		187	9.4	12.6	14.7	89.3
12,000		196	12.5	15.1	16.8	146.5
12,000		218	18.4	18.4	18.4	262.9
18,000		154	1.9	3.0	4.3	7.6
18,000		162	3.1	4.4	6.1	16.4
18,000		170	5.0	7.6	8.6	27.1
18,000		177	6.0	8.6	9.8	47.0
18,000		187	9.2	12.1	14.3	93.5
18,000		196	12.2	14.7	16.4	143.1
18,000		218	18.2	18.2	18.2	268.6
24,000		154	2.0	3.2	4.4	7.7
24,000		162	3.3	4.3	6.3	16.6
24,000		170	5.0	7.7	8.7	27.8
24,000		177	6.0	8.8	10.1	46.9
24,000		187	9.4	12.4	14.6	95.7
24,000		196	12.3	14.9	16.5	152.8
24,000		218	18.5	18.5	18.5	266.5
30,000		154	2.0	2.9	4.2	7.6
30,000		162	3.1	4.4	6.1	16.6
30,000		170	4.9	7.6	8.7	26.3
30,000		177	5.8	8.6	9.9	45.5
30,000		187	9.2	12.0	14.2	92.4
30,000		196	12.0	14.7	16.4	154.5
30,000		218	18.3	18.3	18.3	266.9
36,000		154	2.0	3.2	4.3	7.9
36,000		162	3.1	4.4	6.0	16.7
36,000		170	5.0	7.4	8.4	27.8
36,000		177	5.8	8.4	9.8	47.0
36,000		187	8.9	11.7	13.7	92.0
36,000		196	11.5	14.2	16.0	154.7
36,000		218	18.1	18.1	18.1	266.9
42,000		154	2.0	3.0	4.4	7.8
42,000		162	3.2	4.3	6.2	16.4
42,000		170	4.9	7.4	8.5	27.5
42,000		177	5.9	8.6	9.8	45.7
42,000		187	8.9	11.6	13.4	92.1
42,000		196	11.4	14.0	15.7	161.1
42,000		218	17.8	17.8	17.8	270.7

**Table E-18. Determining Corn Hybrid Maturity - Plant Density by Hybrid.  
Growth and Development  
Hancock, WI - 1996.**

Plant Density	Hybrid	Day of Year	Leaf Development			Plant Height cm
			Leaf Collars	Hail Adjuster's Method	Total Leaves	
	Dekalb DK493	154	2.0	2.9	4.0	7.2
	Dekalb DK493	162	3.0	4.1	5.8	14.1
	Dekalb DK493	170	5.0	7.4	8.5	23.5
	Dekalb DK493	177	5.9	8.7	9.9	41.4
	Dekalb DK493	187	9.2	12.0	14.1	83.1
	Dekalb DK493	196	12.1	14.8	16.6	142.5
	Dekalb DK493	218	19.1	19.1	19.1	270.9
	NK PX9060	154	2.0	3.0	4.2	7.2
	NK PX9060	162	3.1	4.5	6.1	14.8
	NK PX9060	170	5.0	7.7	8.7	25.6
	NK PX9060	177	5.9	8.8	10.0	43.9
	NK PX9060	187	9.2	12.7	14.6	91.8
	NK PX9060	196	12.0	14.4	15.9	153.1
	NK PX9060	218	15.9	15.9	15.9	246.9
	Pioneer 3394	154	2.0	3.1	4.2	8.0
	Pioneer 3394	162	3.1	4.3	6.1	16.8
	Pioneer 3394	170	4.9	7.4	8.4	28.8
	Pioneer 3394	177	5.9	8.3	9.6	49.5
	Pioneer 3394	187	8.9	11.2	13.4	95.5
	Pioneer 3394	196	11.4	14.3	16.1	153.1
	Pioneer 3394	218	19.1	19.1	19.1	262.0
	Pioneer 3845	154	2.0	3.2	4.8	8.5
	Pioneer 3845	162	3.4	4.5	6.6	19.8
	Pioneer 3845	170	5.0	7.8	8.8	31.1
	Pioneer 3845	177	5.9	8.7	10.0	49.4
	Pioneer 3845	187	9.4	12.3	14.4	99.6
	Pioneer 3845	196	12.5	14.9	16.7	159.7
	Pioneer 3845	218	18.7	18.7	18.7	288.4
12,000	Dekalb DK493	154	2.0	3.1	4.1	7.2
12,000	Dekalb DK493	162	3.0	4.2	5.9	13.6
12,000	Dekalb DK493	170	5.0	7.6	8.6	25.0
12,000	Dekalb DK493	177	5.9	9.1	10.2	39.0
12,000	Dekalb DK493	187	9.2	12.4	14.6	72.8
12,000	Dekalb DK493	196	12.8	15.3	17.0	127.0
12,000	Dekalb DK493	218	19.2	19.2	19.2	270.1
12,000	NK PX9060	154	2.0	2.9	4.2	7.2
12,000	NK PX9060	162	3.1	4.7	6.2	14.0
12,000	NK PX9060	170	5.0	8.0	9.1	24.6
12,000	NK PX9060	177	6.1	9.0	10.7	40.6
12,000	NK PX9060	187	9.6	13.2	15.2	90.6
12,000	NK PX9060	196	12.3	14.9	16.4	156.6
12,000	NK PX9060	218	16.0	16.0	16.0	243.0

**Table E-18. Determining Corn Hybrid Maturity - Plant Density by Hybrid.  
Growth and Development  
Hancock, WI - 1996.**

Plant Density	Hybrid	Day of Year	Leaf Development			Plant Height cm
			Leaf Collars	Hail Adjuster's Method	Total Leaves	
12,000	Pioneer 3394	154	2.0	3.1	4.0	8.0
12,000	Pioneer 3394	162	3.2	4.2	6.0	15.7
12,000	Pioneer 3394	170	5.0	7.4	8.4	27.1
12,000	Pioneer 3394	177	5.7	8.1	9.2	48.7
12,000	Pioneer 3394	187	9.1	11.9	14.1	94.8
12,000	Pioneer 3394	196	12.2	15.1	17.0	152.4
12,000	Pioneer 3394	218	19.6	19.6	19.6	262.5
12,000	Pioneer 3845	154	2.0	3.0	4.7	8.0
12,000	Pioneer 3845	162	3.4	4.1	6.3	19.1
12,000	Pioneer 3845	170	5.0	7.8	8.8	31.3
12,000	Pioneer 3845	177	5.9	8.9	10.2	47.8
12,000	Pioneer 3845	187	9.7	12.8	14.9	99.1
12,000	Pioneer 3845	196	12.7	15.1	16.8	149.9
12,000	Pioneer 3845	218	18.7	18.7	18.7	276.0
18,000	Dekalb DK493	154	1.9	3.0	4.0	7.2
18,000	Dekalb DK493	162	3.0	4.2	5.7	12.7
18,000	Dekalb DK493	170	5.0	7.4	8.4	22.4
18,000	Dekalb DK493	177	5.9	8.7	9.9	41.5
18,000	Dekalb DK493	187	9.3	12.3	14.3	83.8
18,000	Dekalb DK493	196	12.3	15.0	17.0	130.4
18,000	Dekalb DK493	218	19.3	19.3	19.3	273.5
18,000	NK PX9060	154	1.9	3.0	4.1	7.2
18,000	NK PX9060	162	2.9	4.2	5.8	15.2
18,000	NK PX9060	170	4.9	7.7	8.7	25.0
18,000	NK PX9060	177	5.8	8.6	9.6	45.7
18,000	NK PX9060	187	9.2	12.8	14.7	95.3
18,000	NK PX9060	196	12.0	14.6	15.6	149.0
18,000	NK PX9060	218	15.7	15.7	15.7	242.2
18,000	Pioneer 3394	154	2.0	2.9	4.1	7.6
18,000	Pioneer 3394	162	3.0	4.4	6.2	16.9
18,000	Pioneer 3394	170	4.9	7.3	8.3	28.8
18,000	Pioneer 3394	177	5.9	8.2	9.8	49.1
18,000	Pioneer 3394	187	8.9	11.2	13.6	94.8
18,000	Pioneer 3394	196	11.7	14.0	16.1	149.0
18,000	Pioneer 3394	218	19.2	19.2	19.2	270.1
18,000	Pioneer 3845	154	2.0	3.2	4.8	8.5
18,000	Pioneer 3845	162	3.6	4.6	6.7	20.7
18,000	Pioneer 3845	170	5.1	7.8	8.9	32.2
18,000	Pioneer 3845	177	6.3	8.8	9.9	51.7
18,000	Pioneer 3845	187	9.3	11.9	14.6	99.9
18,000	Pioneer 3845	196	12.9	15.1	16.8	143.9
18,000	Pioneer 3845	218	18.6	18.6	18.6	288.7



**Table E-18. Determining Corn Hybrid Maturity - Plant Density by Hybrid.  
Growth and Development  
Hancock, WI - 1996.**

Plant Density	Hybrid	Day of Year	Leaf Development			Plant Height cm
			Leaf Collars	Hail Adjuster's Method	Total Leaves	
24,000	Dekalb DK493	154	2.0	3.0	4.0	6.8
24,000	Dekalb DK493	162	3.0	3.7	5.9	14.4
24,000	Dekalb DK493	170	5.0	7.4	8.4	22.9
24,000	Dekalb DK493	177	6.0	8.7	9.9	42.3
24,000	Dekalb DK493	187	9.3	12.0	14.2	88.5
24,000	Dekalb DK493	196	11.7	14.4	16.0	146.5
24,000	Dekalb DK493	218	19.1	19.1	19.1	266.7
24,000	NK PX9060	154	1.9	3.1	4.3	7.6
24,000	NK PX9060	162	3.1	4.6	6.2	15.7
24,000	NK PX9060	170	5.0	7.8	8.7	27.1
24,000	NK PX9060	177	5.9	9.0	10.1	44.9
24,000	NK PX9060	187	9.2	13.0	14.9	93.1
24,000	NK PX9060	196	12.4	14.8	16.0	138.9
24,000	NK PX9060	218	16.0	16.0	16.0	250.6
24,000	Pioneer 3394	154	2.0	3.4	4.4	8.5
24,000	Pioneer 3394	162	3.3	4.1	6.2	17.8
24,000	Pioneer 3394	170	5.0	7.7	8.7	29.6
24,000	Pioneer 3394	177	6.1	8.7	10.0	50.8
24,000	Pioneer 3394	187	9.2	11.4	14.0	100.3
24,000	Pioneer 3394	196	11.9	14.9	16.9	154.9
24,000	Pioneer 3394	218	19.7	19.7	19.7	254.0
24,000	Pioneer 3845	154	2.0	3.1	5.0	8.0
24,000	Pioneer 3845	162	3.7	4.8	6.7	18.6
24,000	Pioneer 3845	170	4.9	7.9	8.9	31.8
24,000	Pioneer 3845	177	6.1	9.0	10.3	49.5
24,000	Pioneer 3845	187	9.8	13.0	15.1	100.8
24,000	Pioneer 3845	196	13.1	15.4	17.1	171.0
24,000	Pioneer 3845	218	19.2	19.2	19.2	294.6
30,000	Dekalb DK493	154	1.9	2.7	3.9	6.8
30,000	Dekalb DK493	162	3.0	4.0	5.8	12.7
30,000	Dekalb DK493	170	5.0	7.4	8.6	23.7
30,000	Dekalb DK493	177	5.7	8.7	9.9	40.6
30,000	Dekalb DK493	187	9.2	12.1	14.2	82.6
30,000	Dekalb DK493	196	12.4	15.0	16.7	147.3
30,000	Dekalb DK493	218	18.9	18.9	18.9	274.3
30,000	NK PX9060	154	2.0	2.9	4.0	7.2
30,000	NK PX9060	162	3.0	4.7	6.1	14.4
30,000	NK PX9060	170	4.9	7.4	8.6	23.7
30,000	NK PX9060	177	5.7	8.6	9.9	44.0
30,000	NK PX9060	187	9.0	12.6	14.7	88.9
30,000	NK PX9060	196	12.0	14.4	15.9	160.0
30,000	NK PX9060	218	16.3	16.3	16.3	250.6

**Table E-18. Determining Corn Hybrid Maturity - Plant Density by Hybrid.  
Growth and Development  
Hancock, WI - 1996.**

Plant Density	Hybrid	Day of Year	Leaf Development			Plant Height cm
			Leaf Collars	Hail Adjuster's Method	Total Leaves	
30,000	Pioneer 3394	154	2.0	2.9	4.2	8.0
30,000	Pioneer 3394	162	3.0	4.3	6.0	17.8
30,000	Pioneer 3394	170	4.7	7.7	8.7	27.5
30,000	Pioneer 3394	177	6.1	8.6	9.7	49.1
30,000	Pioneer 3394	187	8.9	11.0	13.3	95.7
30,000	Pioneer 3394	196	11.4	14.3	16.3	144.8
30,000	Pioneer 3394	218	19.1	19.1	19.1	262.5
30,000	Pioneer 3845	154	2.0	3.2	4.8	8.5
30,000	Pioneer 3845	162	3.4	4.4	6.7	21.6
30,000	Pioneer 3845	170	5.0	7.7	8.9	30.1
30,000	Pioneer 3845	177	5.7	8.8	10.0	48.3
30,000	Pioneer 3845	187	9.6	12.3	14.4	102.5
30,000	Pioneer 3845	196	12.1	14.9	16.9	166.0
30,000	Pioneer 3845	218	18.8	18.8	18.8	280.3
36,000	Dekalb DK493	154	2.0	3.0	4.0	8.0
36,000	Dekalb DK493	162	3.0	4.4	5.6	17.4
36,000	Dekalb DK493	170	5.0	7.4	8.4	25.4
36,000	Dekalb DK493	177	5.9	8.6	9.9	44.9
36,000	Dekalb DK493	187	9.1	11.8	13.9	88.9
36,000	Dekalb DK493	196	11.7	14.7	16.2	148.2
36,000	Dekalb DK493	218	19.0	19.0	19.0	272.6
36,000	NK PX9060	154	2.0	3.3	4.2	7.2
36,000	NK PX9060	162	3.0	4.3	6.0	14.4
36,000	NK PX9060	170	5.0	7.2	8.2	27.1
36,000	NK PX9060	177	5.9	8.6	9.9	44.9
36,000	NK PX9060	187	8.8	12.0	14.0	90.6
36,000	NK PX9060	196	11.2	13.6	15.7	154.9
36,000	NK PX9060	218	15.9	15.9	15.9	236.2
36,000	Pioneer 3394	154	2.0	2.8	4.0	8.0
36,000	Pioneer 3394	162	3.0	4.4	6.0	15.2
36,000	Pioneer 3394	170	5.0	7.2	8.2	28.8
36,000	Pioneer 3394	177	5.8	8.1	9.4	48.3
36,000	Pioneer 3394	187	8.8	11.0	12.9	93.1
36,000	Pioneer 3394	196	11.2	14.1	15.6	154.1
36,000	Pioneer 3394	218	18.7	18.7	18.7	264.2
36,000	Pioneer 3845	154	2.0	3.7	4.9	8.5
36,000	Pioneer 3845	162	3.2	4.3	6.3	19.9
36,000	Pioneer 3845	170	5.0	7.7	8.7	30.1
36,000	Pioneer 3845	177	5.7	8.3	9.8	50.0
36,000	Pioneer 3845	187	9.1	11.9	13.9	95.3
36,000	Pioneer 3845	196	12.0	14.4	16.4	161.7
36,000	Pioneer 3845	218	18.4	18.4	18.4	294.6

**Table E-18. Determining Corn Hybrid Maturity - Plant Density by Hybrid.  
Growth and Development  
Hancock, WI - 1996.**

Plant Density	Hybrid	Day of Year	Leaf Development			Plant Height cm
			Leaf Collars	Hail Adjuster's Method	Total Leaves	
42,000	Dekalb DK493	154	2.0	2.4	4.0	7.2
42,000	Dekalb DK493	162	3.0	4.2	6.0	14.0
42,000	Dekalb DK493	170	4.9	7.1	8.3	21.6
42,000	Dekalb DK493	177	5.9	8.4	9.8	39.8
42,000	Dekalb DK493	187	8.9	11.6	13.4	82.1
42,000	Dekalb DK493	196	11.4	14.3	16.6	155.8
42,000	Dekalb DK493	218	18.9	18.9	18.9	268.4
42,000	NK PX9060	154	2.0	3.0	4.4	6.8
42,000	NK PX9060	162	3.3	4.3	6.1	15.2
42,000	NK PX9060	170	5.0	7.8	8.8	26.3
42,000	NK PX9060	177	5.9	8.9	10.1	43.2
42,000	NK PX9060	187	9.2	12.4	14.2	92.3
42,000	NK PX9060	196	11.9	14.2	15.9	159.2
42,000	NK PX9060	218	15.8	15.8	15.8	259.1
42,000	Pioneer 3394	154	2.0	3.7	4.6	8.0
42,000	Pioneer 3394	162	3.2	4.1	6.1	17.4
42,000	Pioneer 3394	170	4.8	7.0	8.0	30.9
42,000	Pioneer 3394	177	6.0	8.3	9.7	50.8
42,000	Pioneer 3394	187	8.6	10.6	12.3	94.0
42,000	Pioneer 3394	196	10.1	13.1	14.4	163.4
42,000	Pioneer 3394	218	18.2	18.2	18.2	259.1
42,000	Pioneer 3845	154	2.0	3.0	4.8	9.3
42,000	Pioneer 3845	162	3.3	4.7	6.7	19.1
42,000	Pioneer 3845	170	5.0	7.9	8.9	31.3
42,000	Pioneer 3845	177	6.0	8.7	9.7	49.1
42,000	Pioneer 3845	187	9.0	11.8	13.7	99.9
42,000	Pioneer 3845	196	12.0	14.4	15.9	166.0
42,000	Pioneer 3845	218	18.4	18.4	18.4	296.3
Mean		.	7.9	9.8	11.1	87.0
<b>Probability %</b>						
Plant Density (PD)			2.1	5.1	0.8	3.4
Hybrid (H)			< 0.1	< 0.1	< 0.1	< 0.1
PD x H			32.2	> 50	29.9	> 50
Days (T)			< 0.1	< 0.1	< 0.1	< 0.1
PD x T			< 0.1	0.1	< 0.1	9.7
H x T			< 0.1	< 0.1	< 0.1	< 0.1
PD x H x T			> 50	> 50	39.4	> 50
<b>LSD (0.10)</b>						
Plant Density (PD)			0.2	0.3	0.2	1.9
Hybrid (H)			0.1	0.1	0.1	2.2
Days (T)			0.1	0.1	0.1	2.1
<b>CV %</b>						
			7.1	6.7	6.0	8.8

**Table E-19. Determining Corn Hybrid Maturity.  
Plant Density by Hybrid - Harvest Data.  
Hancock, WI - 1996.**

Plant Density	Hybrid	Final Population plants/a	Broken Stalks %	Moisture %	Yield bu/a
12,000		13661	14.0	26.8	126.0
18,000		17357	3.9	27.5	137.4
24,000		21812	3.8	26.5	162.6
30,000		26860	3.5	26.5	167.3
36,000		30688	3.9	27.3	164.5
42,000		36067	4.7	27.6	167.0
	Dekalb DK493	24793	10.2	26.9	184.4
	NK PX9060	22461	5.5	21.7	108.0
	Pioneer 3394	24924	2.6	36.4	161.3
	Pioneer 3845	25452	4.3	23.2	162.7
12,000	Dekalb DK493	14519	38.1	26.7	148.5
12,000	NK PX9060	12539	10.6	21.2	84.5
12,000	Pioneer 3394	13067	2.0	35.5	133.1
12,000	Pioneer 3845	14519	5.3	23.7	137.7
18,000	Dekalb DK493	17687	6.0	25.4	168.1
18,000	NK PX9060	16631	6.1	22.9	100.3
18,000	Pioneer 3394	16367	0.8	39.6	132.9
18,000	Pioneer 3845	18743	2.8	22.0	148.3
24,000	Dekalb DK493	22439	5.4	25.7	197.4
24,000	NK PX9060	19667	2.7	21.7	116.3
24,000	Pioneer 3394	22571	3.0	36.5	168.5
24,000	Pioneer 3845	22571	4.2	22.1	168.0
30,000	Dekalb DK493	28378	2.9	26.4	202.0
30,000	NK PX9060	23627	3.6	21.4	116.6
30,000	Pioneer 3394	28642	1.6	34.7	174.2
30,000	Pioneer 3845	26794	5.7	23.6	176.2
36,000	Dekalb DK493	29302	3.1	27.4	191.8
36,000	NK PX9060	30094	4.4	20.5	127.9
36,000	Pioneer 3394	33526	4.0	37.8	168.3
36,000	Pioneer 3845	29830	4.2	23.7	169.9
42,000	Dekalb DK493	36430	5.5	29.8	198.6
42,000	NK PX9060	32206	5.8	22.3	102.4
42,000	Pioneer 3394	35374	4.1	34.3	190.8
42,000	Pioneer 3845	40258	3.5	24.2	176.2
Mean		24408	5.6	27.0	154.1
<b>Probability %</b>					
Plant Density (PD)		< 0.1	40.8	14.4	< 0.1
Hybrid (H)		15.0	18.5	< 0.1	< 0.1
PD x H		> 50	33.4	0.4	> 50
<b>LSD (0.10)</b>					
Plant Density (PD)		2938	NS	NS	13.4
Hybrid (H)		NS	NS	0.9	9.6
<b>CV %</b>		16.8	187.9	5.7	11.1

**Table E-20. Determining Corn Hybrid Maturity - Plant Density by Hybrid.  
Growth and Development  
Lancaster, WI - 1996.**

Plant Density	Hybrid	Day of Year	Leaf Development			Plant Height cm
			Leaf Collars	Hail Adjuster's Method	Total Leaves	
12,000		.	7.6	9.3	10.6	83.8
18,000		.	7.4	9.0	10.4	87.3
24,000		.	7.5	9.2	10.4	87.6
30,000		.	7.4	9.0	10.3	91.0
36,000		.	7.7	9.3	10.7	92.8
42,000		.	7.7	9.4	10.7	92.0
	Dekalb DK493	.	7.4	8.8	10.2	84.3
	NK PX9060	.	7.4	9.2	10.4	83.2
	Pioneer 3394	.	7.7	9.2	10.6	92.9
	Pioneer 3845	.	7.8	9.5	10.9	95.7
12,000	Dekalb DK493	.	7.4	8.8	10.3	79.8
12,000	NK PX9060	.	7.5	9.3	10.5	79.3
12,000	Pioneer 3394	.	7.8	9.4	10.8	87.9
12,000	Pioneer 3845	.	7.8	9.6	10.9	88.0
18,000	Dekalb DK493	.	6.8	8.3	9.6	82.6
18,000	NK PX9060	.	7.3	9.1	10.2	80.8
18,000	Pioneer 3394	.	7.5	8.9	10.3	88.3
18,000	Pioneer 3845	.	8.1	9.8	11.2	97.3
24,000	Dekalb DK493	.	7.4	8.9	10.3	83.2
24,000	NK PX9060	.	7.3	9.2	10.2	82.3
24,000	Pioneer 3394	.	7.7	9.2	10.6	92.2
24,000	Pioneer 3845	.	7.7	9.4	10.7	92.7
30,000	Dekalb DK493	.	7.3	8.7	10.0	84.9
30,000	NK PX9060	.	7.3	9.2	10.3	84.9
30,000	Pioneer 3394	.	7.3	8.7	10.0	96.3
30,000	Pioneer 3845	.	7.7	9.5	10.8	98.0
36,000	Dekalb DK493	.	7.7	9.1	10.6	86.4
36,000	NK PX9060	.	7.5	9.4	10.5	86.5
36,000	Pioneer 3394	.	7.7	9.2	10.7	97.1
36,000	Pioneer 3845	.	7.8	9.6	10.8	101.0
42,000	Dekalb DK493	.	7.7	9.1	10.5	89.2
42,000	NK PX9060	.	7.5	9.3	10.4	85.5
42,000	Pioneer 3394	.	7.9	9.6	11.0	95.9
42,000	Pioneer 3845	.	7.7	9.5	10.8	97.6
		157	1.8	3.3	4.0	7.0
		165	3.0	4.7	5.6	14.0
		173	4.3	6.1	7.3	24.5
		178	6.0	8.6	9.8	55.1
		190	9.2	11.8	14.1	121.1
		197	11.6	12.8	15.5	143.8
		220	17.6	17.6	17.6	258.1

**Table E-20. Determining Corn Hybrid Maturity - Plant Density by Hybrid.  
Growth and Development  
Lancaster, WI - 1996.**

Plant Density	Hybrid	Day of Year	Leaf Development			Plant Height
			Leaf Collars	Hail Adjuster's Method	Total Leaves	
12,000		157	1.8	3.1	4.0	6.8
12,000		165	3.0	4.8	5.8	13.8
12,000		173	4.3	6.1	7.3	22.9
12,000		178	5.9	8.4	9.8	49.7
12,000		190	9.1	11.9	14.2	109.2
12,000		197	11.8	13.0	15.7	132.9
12,000		220	17.6	17.6	17.6	251.0
18,000		157	1.7	3.1	3.9	6.4
18,000		165	2.9	4.6	5.6	13.0
18,000		173	4.1	5.9	7.1	23.7
18,000		178	6.0	8.4	9.6	53.1
18,000		190	9.3	11.8	14.0	114.1
18,000		197	11.7	12.9	15.8	138.6
18,000		220	17.4	17.4	17.4	261.8
24,000		157	1.8	3.3	4.1	6.8
24,000		165	2.9	4.6	5.6	13.8
24,000		173	4.3	6.3	7.5	23.6
24,000		178	6.0	8.6	9.8	54.4
24,000		190	9.1	11.7	14.0	115.4
24,000		197	11.5	12.6	15.3	139.3
24,000		220	17.4	17.4	17.4	259.7
30,000		157	1.8	3.1	3.9	7.2
30,000		165	2.9	4.5	5.4	14.6
30,000		173	4.3	6.1	7.3	24.8
30,000		178	5.9	8.4	9.6	55.1
30,000		190	8.9	11.6	13.9	125.5
30,000		197	11.6	12.8	15.2	147.1
30,000		220	17.5	17.5	17.5	262.7
36,000		157	1.7	3.3	4.0	7.5
36,000		165	3.0	4.7	5.7	14.7
36,000		173	4.3	6.3	7.5	25.6
36,000		178	6.1	8.7	10.0	59.2
36,000		190	9.3	11.9	14.3	132.5
36,000		197	11.7	12.8	15.6	152.2
36,000		220	17.8	17.8	17.8	257.6
42,000		157	2.0	3.5	4.1	7.1
42,000		165	3.0	4.8	5.8	14.1
42,000		173	4.3	6.2	7.4	26.1
42,000		178	6.1	8.8	10.0	58.7
42,000		190	9.2	11.9	14.3	130.0
42,000		197	11.6	12.6	15.3	152.4
42,000		220	17.8	17.8	17.8	255.9

**Table E-20. Determining Corn Hybrid Maturity - Plant Density by Hybrid.  
Growth and Development  
Lancaster, WI - 1996.**

Plant Density	Hybrid	Day of Year	Leaf Development			Plant Height cm
			Leaf Collars	Hail Adjuster's Method	Total Leaves	
	Dekalb DK493	157	1.7	2.9	3.7	6.3
	Dekalb DK493	165	2.9	4.2	5.2	12.4
	Dekalb DK493	173	3.9	5.5	6.7	22.6
	Dekalb DK493	178	5.9	8.1	9.5	48.7
	Dekalb DK493	190	9.1	11.4	13.9	108.7
	Dekalb DK493	197	11.5	12.7	15.6	131.0
	Dekalb DK493	220	18.2	18.2	18.2	260.9
	NK PX9060	157	1.7	3.2	4.0	5.5
	NK PX9060	165	2.9	4.8	5.7	12.1
	NK PX9060	173	4.4	6.5	7.6	22.1
	NK PX9060	178	5.9	8.9	10.0	49.4
	NK PX9060	190	9.1	12.5	14.2	115.2
	NK PX9060	197	11.8	12.9	15.1	140.6
	NK PX9060	220	15.8	15.8	15.8	237.8
	Pioneer 3394	157	1.9	3.4	4.0	7.9
	Pioneer 3394	165	3.0	4.8	5.8	14.6
	Pioneer 3394	173	4.2	5.8	7.1	25.2
	Pioneer 3394	178	6.0	8.3	9.5	60.3
	Pioneer 3394	190	8.9	11.1	13.8	128.3
	Pioneer 3394	197	11.1	12.3	15.4	148.5
	Pioneer 3394	220	18.8	18.8	18.8	265.9
	Pioneer 3845	157	1.9	3.6	4.3	8.1
	Pioneer 3845	165	3.0	4.9	5.9	16.9
	Pioneer 3845	173	4.6	6.7	8.0	27.9
	Pioneer 3845	178	6.1	8.9	10.2	61.8
	Pioneer 3845	190	9.5	12.2	14.6	132.4
	Pioneer 3845	197	12.1	13.2	15.8	155.1
	Pioneer 3845	220	17.6	17.6	17.6	268.0
12,000	Dekalb DK493	157	1.2	2.2	3.6	5.9
12,000	Dekalb DK493	165	2.9	4.1	5.0	12.3
12,000	Dekalb DK493	173	3.3	4.7	6.2	21.6
12,000	Dekalb DK493	178	5.8	7.9	9.3	43.2
12,000	Dekalb DK493	190	8.8	11.8	13.9	95.7
12,000	Dekalb DK493	197	11.4	12.8	15.8	120.2
12,000	Dekalb DK493	220	18.3	18.3	18.3	259.9
12,000	NK PX9060	157	1.9	3.2	4.1	6.4
12,000	NK PX9060	165	3.0	5.0	6.1	12.3
12,000	NK PX9060	173	4.8	6.9	8.0	23.3
12,000	NK PX9060	178	5.9	8.6	10.0	45.7
12,000	NK PX9060	190	9.3	12.4	14.2	105.8
12,000	NK PX9060	197	12.0	13.2	15.2	132.9
12,000	NK PX9060	220	15.6	15.6	15.6	228.6

**Table E-20. Determining Corn Hybrid Maturity - Plant Density by Hybrid.  
Growth and Development  
Lancaster, WI - 1996.**

Plant Density	Hybrid	Day of Year	Leaf Development			Plant Height
			Leaf Collars	Hail Adjuster's Method	Total Leaves	
						cm
12,000	Pioneer 3394	157	2.0	3.7	4.2	7.6
12,000	Pioneer 3394	165	3.0	4.9	5.9	14.8
12,000	Pioneer 3394	173	4.2	5.9	6.9	23.3
12,000	Pioneer 3394	178	6.0	8.4	9.7	58.4
12,000	Pioneer 3394	190	8.9	11.3	14.2	116.0
12,000	Pioneer 3394	197	11.7	13.0	15.8	138.9
12,000	Pioneer 3394	220	18.8	18.8	18.8	256.5
12,000	Pioneer 3845	157	1.9	3.4	4.0	7.2
12,000	Pioneer 3845	165	3.0	5.0	6.0	15.7
12,000	Pioneer 3845	173	4.7	6.9	8.1	23.3
12,000	Pioneer 3845	178	5.9	8.8	10.0	51.7
12,000	Pioneer 3845	190	9.2	12.2	14.6	119.4
12,000	Pioneer 3845	197	11.9	13.1	15.9	139.7
12,000	Pioneer 3845	220	17.7	17.7	17.7	259.1
18,000	Dekalb DK493	157	1.4	2.9	3.8	5.9
18,000	Dekalb DK493	165	2.9	4.1	5.1	12.3
18,000	Dekalb DK493	173	3.8	5.9	6.9	23.3
18,000	Dekalb DK493	178	5.9	8.1	9.4	49.1
18,000	Dekalb DK493	190	9.2	11.0	13.0	98.2
18,000	Dekalb DK493	197	11.8	13.2	16.4	126.2
18,000	Dekalb DK493	220	17.1	17.1	17.1	263.3
18,000	NK PX9060	157	1.4	2.9	3.8	5.1
18,000	NK PX9060	165	2.9	4.7	5.6	11.4
18,000	NK PX9060	173	4.1	5.8	7.1	19.9
18,000	NK PX9060	178	6.0	8.7	9.7	47.4
18,000	NK PX9060	190	9.1	12.8	14.4	110.9
18,000	NK PX9060	197	11.6	12.9	15.2	132.1
18,000	NK PX9060	220	15.7	15.7	15.7	238.8
18,000	Pioneer 3394	157	1.9	3.2	3.8	6.4
18,000	Pioneer 3394	165	3.0	4.6	5.6	12.3
18,000	Pioneer 3394	173	4.0	5.6	6.8	22.0
18,000	Pioneer 3394	178	5.8	7.8	9.0	54.2
18,000	Pioneer 3394	190	8.7	10.7	13.2	118.5
18,000	Pioneer 3394	197	10.6	11.8	15.2	136.3
18,000	Pioneer 3394	220	18.8	18.8	18.8	268.4
18,000	Pioneer 3845	157	1.9	3.4	4.3	8.0
18,000	Pioneer 3845	165	3.0	5.0	6.1	16.1
18,000	Pioneer 3845	173	4.4	6.4	7.8	29.6
18,000	Pioneer 3845	178	6.4	9.0	10.4	61.8
18,000	Pioneer 3845	190	10.3	12.7	15.3	128.7
18,000	Pioneer 3845	197	12.8	13.8	16.4	160.0
18,000	Pioneer 3845	220	18.0	18.0	18.0	276.9



**Table E-20. Determining Corn Hybrid Maturity - Plant Density by Hybrid.  
Growth and Development  
Lancaster, WI - 1996.**

Plant Density	Hybrid	Day of Year	Leaf Development			Plant Height cm
			Leaf Collars	Hail Adjuster's Method	Total Leaves	
24,000	Dekalb DK493	157	1.9	3.4	4.0	5.9
24,000	Dekalb DK493	165	3.0	4.3	5.3	11.9
24,000	Dekalb DK493	173	4.1	5.9	7.0	21.6
24,000	Dekalb DK493	178	6.0	8.4	9.7	48.3
24,000	Dekalb DK493	190	9.0	11.4	13.8	106.7
24,000	Dekalb DK493	197	11.3	12.4	15.5	130.4
24,000	Dekalb DK493	220	17.9	17.9	17.9	257.4
24,000	NK PX9060	157	1.4	3.0	3.9	5.5
24,000	NK PX9060	165	2.8	4.8	5.6	11.9
24,000	NK PX9060	173	4.4	6.6	7.6	22.4
24,000	NK PX9060	178	5.9	9.0	10.0	50.8
24,000	NK PX9060	190	8.8	12.3	13.9	108.4
24,000	NK PX9060	197	11.6	12.6	14.7	134.6
24,000	NK PX9060	220	15.7	15.7	15.7	242.2
24,000	Pioneer 3394	157	1.8	3.3	4.0	7.6
24,000	Pioneer 3394	165	3.0	4.9	5.9	14.4
24,000	Pioneer 3394	173	4.1	5.7	7.1	23.7
24,000	Pioneer 3394	178	6.0	8.2	9.7	59.3
24,000	Pioneer 3394	190	9.1	11.0	14.0	121.9
24,000	Pioneer 3394	197	11.1	12.5	15.4	148.2
24,000	Pioneer 3394	220	18.9	18.9	18.9	270.1
24,000	Pioneer 3845	157	2.0	3.6	4.3	8.0
24,000	Pioneer 3845	165	3.0	4.4	5.6	16.9
24,000	Pioneer 3845	173	4.8	6.9	8.1	26.7
24,000	Pioneer 3845	178	6.0	8.9	9.9	59.3
24,000	Pioneer 3845	190	9.3	12.1	14.4	124.5
24,000	Pioneer 3845	197	12.0	13.0	15.6	143.9
24,000	Pioneer 3845	220	17.1	17.1	17.1	269.2
30,000	Dekalb DK493	157	1.8	2.7	3.3	6.4
30,000	Dekalb DK493	165	2.9	4.1	5.0	12.3
30,000	Dekalb DK493	173	3.8	5.3	6.6	21.6
30,000	Dekalb DK493	178	5.9	7.9	9.2	45.7
30,000	Dekalb DK493	190	8.9	11.2	13.8	111.8
30,000	Dekalb DK493	197	11.5	12.8	15.4	133.8
30,000	Dekalb DK493	220	18.4	18.4	18.4	262.5
30,000	NK PX9060	157	1.8	3.3	4.0	5.5
30,000	NK PX9060	165	2.9	4.7	5.6	12.7
30,000	NK PX9060	173	4.3	6.6	7.6	20.7
30,000	NK PX9060	178	5.9	8.8	9.9	47.4
30,000	NK PX9060	190	8.9	12.4	14.4	121.9
30,000	NK PX9060	197	11.6	12.9	15.0	140.6
30,000	NK PX9060	220	15.9	15.9	15.9	245.5

**Table E-20. Determining Corn Hybrid Maturity - Plant Density by Hybrid.  
Growth and Development  
Lancaster, WI - 1996.**

Plant Density	Hybrid	Day of Year	Leaf Development			Plant Height
			Leaf Collars	Hail Adjuster's Method	Total Leaves	
						cm
30,000	Pioneer 3394	157	1.7	2.8	4.0	7.6
30,000	Pioneer 3394	165	3.0	4.3	5.3	14.8
30,000	Pioneer 3394	173	4.2	5.8	6.9	27.1
30,000	Pioneer 3394	178	5.9	8.1	9.1	61.4
30,000	Pioneer 3394	190	8.6	10.7	12.9	132.1
30,000	Pioneer 3394	197	11.0	12.1	14.5	154.1
30,000	Pioneer 3394	220	18.5	18.5	18.5	276.9
30,000	Pioneer 3845	157	2.0	3.7	4.3	9.3
30,000	Pioneer 3845	165	3.0	4.9	5.9	18.6
30,000	Pioneer 3845	173	4.8	6.9	8.1	29.6
30,000	Pioneer 3845	178	6.1	9.0	10.3	66.0
30,000	Pioneer 3845	190	9.4	11.9	14.6	136.3
30,000	Pioneer 3845	197	12.2	13.4	15.8	160.0
30,000	Pioneer 3845	220	17.5	17.5	17.5	265.9
36,000	Dekalb DK493	157	1.7	2.7	3.6	7.2
36,000	Dekalb DK493	165	2.9	4.4	5.3	13.1
36,000	Dekalb DK493	173	4.1	5.7	6.9	23.3
36,000	Dekalb DK493	178	6.1	8.2	9.7	53.3
36,000	Dekalb DK493	190	9.3	11.8	14.7	119.4
36,000	Dekalb DK493	197	11.4	12.6	15.8	133.8
36,000	Dekalb DK493	220	18.6	18.6	18.6	254.9
36,000	NK PX9060	157	1.7	3.4	4.1	5.5
36,000	NK PX9060	165	3.0	4.8	5.8	12.7
36,000	NK PX9060	173	4.4	6.9	7.8	22.4
36,000	NK PX9060	178	6.0	9.3	10.4	52.1
36,000	NK PX9060	190	9.4	12.4	14.3	125.3
36,000	NK PX9060	197	12.0	13.0	15.3	151.6
36,000	NK PX9060	220	16.0	16.0	16.0	236.2
36,000	Pioneer 3394	157	1.8	3.2	4.1	9.3
36,000	Pioneer 3394	165	3.0	4.9	5.9	16.1
36,000	Pioneer 3394	173	4.1	5.6	7.1	27.5
36,000	Pioneer 3394	178	6.1	8.4	9.7	64.4
36,000	Pioneer 3394	190	9.0	11.3	14.0	141.4
36,000	Pioneer 3394	197	11.0	12.2	15.4	154.9
36,000	Pioneer 3394	220	18.9	18.9	18.9	265.9
36,000	Pioneer 3845	157	1.8	3.8	4.3	8.0
36,000	Pioneer 3845	165	3.0	4.8	5.8	16.9
36,000	Pioneer 3845	173	4.6	6.9	8.1	29.2
36,000	Pioneer 3845	178	6.2	8.9	10.3	66.9
36,000	Pioneer 3845	190	9.6	11.9	14.2	143.9
36,000	Pioneer 3845	197	12.3	13.4	15.9	168.5
36,000	Pioneer 3845	220	17.7	17.7	17.7	273.5

**Table E-20. Determining Corn Hybrid Maturity - Plant Density by Hybrid.  
Growth and Development  
Lancaster, WI - 1996.**

Plant Density	Hybrid	Day of Year	Leaf Development			Plant Height cm
			Leaf Collars	Hail Adjuster's Method	Total Leaves	
42,000	Dekalb DK493	157	2.0	3.2	3.9	6.4
42,000	Dekalb DK493	165	3.0	4.1	5.1	12.3
42,000	Dekalb DK493	173	4.0	5.6	6.9	24.1
42,000	Dekalb DK493	178	5.9	8.2	9.6	52.5
42,000	Dekalb DK493	190	9.1	11.4	14.3	120.2
42,000	Dekalb DK493	197	11.4	12.7	15.2	141.4
42,000	Dekalb DK493	220	18.6	18.6	18.6	267.6
42,000	NK PX9060	157	1.9	3.3	4.2	5.1
42,000	NK PX9060	165	3.0	4.9	5.9	11.4
42,000	NK PX9060	173	4.2	6.4	7.6	23.7
42,000	NK PX9060	178	6.0	8.9	9.9	52.9
42,000	NK PX9060	190	9.1	12.3	14.1	118.5
42,000	NK PX9060	197	11.9	12.9	15.1	151.6
42,000	NK PX9060	220	16.1	16.1	16.1	235.4
42,000	Pioneer 3394	157	2.0	3.9	4.1	8.9
42,000	Pioneer 3394	165	3.0	5.0	6.0	15.2
42,000	Pioneer 3394	173	4.7	6.6	7.6	27.5
42,000	Pioneer 3394	178	6.2	8.9	10.0	64.4
42,000	Pioneer 3394	190	9.2	11.8	14.4	139.7
42,000	Pioneer 3394	197	11.2	12.2	15.7	158.3
42,000	Pioneer 3394	220	19.0	19.0	19.0	257.4
42,000	Pioneer 3845	157	2.0	3.6	4.3	8.0
42,000	Pioneer 3845	165	3.0	5.1	6.1	17.4
42,000	Pioneer 3845	173	4.3	6.3	7.6	29.2
42,000	Pioneer 3845	178	6.1	9.0	10.4	65.2
42,000	Pioneer 3845	190	9.3	12.2	14.3	141.4
42,000	Pioneer 3845	197	11.7	12.6	15.2	158.3
42,000	Pioneer 3845	220	17.4	17.4	17.4	263.3
Mean	.		7.6	9.2	10.5	89.1
<b>Probability %</b>						
Plant Density (PD)			41.7	27.5	3.7	2.1
Hybrid (H)			< 0.1	< 0.1	< 0.1	< 0.1
PD x H			22.4	48.7	> 50	> 50
Days (T)			< 0.1	< 0.1	< 0.1	< 0.1
PD x T			> 50	> 50	46.7	< 0.1
H x T			< 0.1	< 0.1	< 0.1	< 0.1
PD x H x T			> 50	> 50	> 50	> 50
<b>LSD (0.10)</b>						
Plant Density (PD)			NS	NS	0.1	4.2
Hybrid (H)			0.1	0.2	0.2	2.1
Days (T)			0.1	0.1	0.1	2.0
<b>CV %</b>						
			7.9	8.3	7.5	8.2

**Table E-21. Determining Corn Hybrid Maturity.  
Plant Density by Hybrid - Harvest Data.  
Lancaster, WI - 1996.**

Plant Density	Hybrid	Final Population plants/a	Broken Stalks %	Moisture %	Yield bu/a
12,000		15575	3.2	24.4	96.7
18,000		19370	7.1	25.9	114.0
24,000		22043	3.6	25.6	130.7
30,000		28147	8.6	24.8	135.4
36,000		32569	7.2	24.6	141.1
42,000		36991	11.8	24.6	133.4
	Dekalb DK493	26706	3.0	24.1	145.1
	NK PX9060	24661	12.6	20.6	81.6
	Pioneer 3394	25518	7.3	32.0	149.9
	Pioneer 3845	26244	4.7	23.1	124.4
12,000	Dekalb DK493	18743	1.5	26.7	121.8
12,000	NK PX9060	14123	9.6	16.2	50.8
12,000	Pioneer 3394	13727	0.0	30.4	124.5
12,000	Pioneer 3845	15707	1.6	24.2	89.9
18,000	Dekalb DK493	20459	1.9	23.3	142.4
18,000	NK PX9060	19139	12.0	22.3	69.2
18,000	Pioneer 3394	19139	10.4	33.4	145.9
18,000	Pioneer 3845	18743	4.2	24.6	98.6
24,000	Dekalb DK493	21911	1.3	24.8	148.1
24,000	NK PX9060	20723	6.2	21.0	89.6
24,000	Pioneer 3394	22307	5.7	33.1	153.4
24,000	Pioneer 3845	23231	1.2	23.5	131.8
30,000	Dekalb DK493	27982	5.7	23.4	147.2
30,000	NK PX9060	27586	18.0	21.6	81.9
30,000	Pioneer 3394	28378	6.4	31.8	158.8
30,000	Pioneer 3845	28642	4.2	22.3	153.7
36,000	Dekalb DK493	32338	3.1	23.1	166.5
36,000	NK PX9060	31018	17.2	21.8	87.6
36,000	Pioneer 3394	34582	1.2	31.5	178.3
36,000	Pioneer 3845	32338	7.4	21.9	132.1
42,000	Dekalb DK493	38806	4.4	23.4	144.6
42,000	NK PX9060	35374	12.8	20.4	110.4
42,000	Pioneer 3394	34978	20.2	32.0	138.3
42,000	Pioneer 3845	38806	9.8	22.4	140.2
Mean		25782	6.9	25.0	125.2
<b>Probability %</b>					
Plant Density (PD)		< 0.1	13.7	44.1	0.7
Hybrid (H)		2.8	< 0.1	< 0.1	< 0.1
PD x H		27.5	24.5	21.3	4.0
<b>LSD (0.10)</b>					
Plant Density (PD)		1580	NS	NS	17.2
Hybrid (H)		1155	3.4	1.3	8.4
<b>CV %</b>		8.0	86.6	9.5	11.9

# FIELD EXPERIMENT HISTORY

**Title:** Determining Corn Hybrid Maturity - Comparison of Sweet Corn Hybrids.

**Year:** 1996

**Personnel:** J.G. Lauer, K.D. Hudelson

**Supported by:** Hatch

**EXPERIMENTAL PROCEDURE**

Exp. Design: RCB

Replicates: 3

Variables: Hybrids:  
 Challenger Heritage Mystery  
 Delectable How Sweet It Is SS Jubilee  
 Empire Incredible Sprint  
 Excellency Jubilee Sugar Buns  
 GH 1703 Miracle Zenith

Area Planted: 2.5' x 25'

Planting Equip: Kinze Plot Planter w/seed cones or hand planted

Planting Rate: 40,000 thinned to 28,000 plants/a

Row Spacing: 30"

**FIELD INFORMATION**

Location	Results in Tables	Soil Type	Previous Crop	Planting Date	Tillage Operations	--Soil Test--			--Nitrogen Fertilizer--			Weed Control	Insecticides
						pH	P	K	actual	form	time		
Arlington	E-22.	Plano Silt Loam	Soybean	26-Apr	Chisel Plow Field Cult.(2x)	6.8	76	215	150 9	46-0-0 6-24-24	preplant planting	Bladex 2qts/A Lasso 2qts/A	None
Fond du Lac	E-23.	Virgil Silt Loam	Soybean	24-May	Moldboard Plow Field Cult.(2x)	7.2	27	110	150 9	82-0-0 6-24-24	preplant planting	Accent 0.67oz/A Exceed 0.88oz/A	None
Hancock Irrigated	E-24.	Plainfield Sand	Cucumber	13-May	Dyna Drive Moldboard Plow Disk	6.3	110	110	200 9	33-0-0 6-24-24	post planting	Saddle 2qts/A Aatrex 4L 0.75qts/A	None
Janesville	E-25.	Plano Silt Loam	Corn	27-Apr	Field Cult. Dyna Drive	6.6	37	180	180 9	28-0-0 6-24-24	preplant planting	Surpass 2qts/A Bladex 2qts/A	Lorsban 7lbs/A
Lancaster	E-26.	Rozetta Silt Loam	Corn	6-May	Chisel Plow Soil finisher	7.1	90	275	200 9	82-0-0 8-32-17	preplant planting	Dual II 2pts/A Banvel 1pt/A	Lorsban 7lbs/A Pounce 6oz/A
West Madison	E-27.	Plano Silt Loam	Corn	20-May	Moldboard Plow Disk(2x)	6.8	105	180	149	28-0-0	preplant	Bladex 4L 2qts/A Lasso 2qts/A	None

**Table E-22. Determining Corn Hybrid Maturity.  
Comparison of Sweet Corn Hybrids.  
Arlington, WI - 1996.**

Sweet Corn Hybrid	Day of Year	Leaf Development			Plant Height cm
		Leaf Collars	Hail Adjuster's Method	Total Leaves	
Challenger	.	7.5	9.6	10.8	77.7
Delectable	.	7.9	10.0	11.3	79.8
Empire	.	7.4	9.4	10.7	81.3
Excellency	.	8.0	10.2	11.5	79.8
GH 1703	.	8.3	10.2	11.5	84.0
Heritage	.	7.3	9.3	10.6	83.6
How Sweet It Is	.	7.3	9.6	10.8	73.0
Incredible	.	7.5	9.4	10.7	76.4
Jubilee	.	7.5	9.6	10.9	86.3
Miracle	.	8.1	9.9	11.2	79.3
Mystery	.	7.2	9.2	10.1	81.6
SS Jubilee	.	7.5	9.5	10.8	79.3
Sprint	.	7.6	9.6	10.8	78.8
Sugar Buns	.	7.4	9.1	10.2	73.0
Zenith	.	8.1	10.4	11.6	77.3
	170	2.3	3.8	4.8	10.1
	177	4.1	5.9	7.0	21.1
	182	5.4	8.1	9.7	34.2
	193	8.0	11.5	13.5	74.7
	200	10.6	13.2	14.9	110.2
	225	15.6	15.6	15.6	226.1
Challenger	170	2.0	3.3	4.6	8.9
Challenger	177	4.0	5.8	6.8	20.3
Challenger	182	5.3	8.1	9.2	33.0
Challenger	193	7.7	11.4	13.7	73.2
Challenger	200	10.3	13.6	15.2	108.4
Challenger	225	15.6	15.6	15.6	222.7
Delectable	170	3.0	4.0	5.0	10.2
Delectable	177	3.9	5.9	6.9	23.7
Delectable	182	5.2	8.3	10.2	33.9
Delectable	193	8.2	12.1	14.1	74.2
Delectable	200	11.0	13.7	15.1	99.1
Delectable	225	16.2	16.2	16.2	237.9
Empire	170	2.2	3.8	4.8	10.6
Empire	177	4.0	5.8	6.8	20.7
Empire	182	5.2	7.8	9.7	31.3
Empire	193	7.9	10.8	13.0	78.2
Empire	200	10.2	13.3	14.9	111.8
Empire	225	15.9	15.9	15.9	235.4
Excellency	170	2.2	3.8	4.9	8.9
Excellency	177	4.0	6.1	7.2	23.7
Excellency	182	5.7	8.2	9.9	37.3
Excellency	193	8.4	12.0	14.0	66.0
Excellency	200	10.9	14.2	16.1	109.2
Excellency	225	16.8	16.8	16.8	233.7

Table E-22.

**Determining Corn Hybrid Maturity.  
Comparison of Sweet Corn Hybrids.  
Arlington, WI - 1996.**

Sweet Corn Hybrid	Day of Year	Leaf Development			Plant Height cm
		Leaf Collars	Hail Adjuster's Method	Total Leaves	
GH 1703	170	2.9	4.6	5.9	10.6
GH 1703	177	4.7	6.9	7.9	23.3
GH 1703	182	6.0	9.3	10.7	44.5
GH 1703	193	8.7	11.7	14.2	80.3
GH 1703	200	11.9	13.4	14.9	128.7
GH 1703	225	15.6	15.6	15.6	216.8
Heritage	170	2.1	3.7	4.7	12.7
Heritage	177	3.8	5.9	7.0	23.7
Heritage	182	5.1	7.7	9.2	39.4
Heritage	193	7.7	11.1	13.4	79.3
Heritage	200	10.0	12.6	14.4	110.9
Heritage	225	15.0	15.0	15.0	235.4
How Sweet It Is	170	1.7	3.4	4.4	7.2
How Sweet It Is	177	3.8	5.6	6.4	18.6
How Sweet It Is	182	5.2	7.8	9.3	23.3
How Sweet It Is	193	7.7	11.4	13.7	72.1
How Sweet It Is	200	10.0	13.6	15.2	86.4
How Sweet It Is	225	15.6	15.6	15.6	230.3
Incredible	170	1.8	2.6	3.8	7.6
Incredible	177	4.0	5.8	6.8	16.1
Incredible	182	5.2	7.3	8.8	28.8
Incredible	193	7.7	11.1	13.1	62.0
Incredible	200	10.2	13.3	15.2	110.9
Incredible	225	16.2	16.2	16.2	232.8
Jubilee	170	2.2	3.7	5.0	11.9
Jubilee	177	4.2	5.9	7.1	21.2
Jubilee	182	5.4	8.1	9.7	40.2
Jubilee	193	7.4	11.4	13.3	85.3
Jubilee	200	10.4	13.0	15.1	116.0
Jubilee	225	15.3	15.3	15.3	243.0
Miracle	170	2.4	3.7	4.8	11.0
Miracle	177	4.1	5.8	7.0	19.5
Miracle	182	5.7	8.0	9.7	41.5
Miracle	193	8.7	11.9	14.0	79.3
Miracle	200	11.1	13.6	15.3	114.3
Miracle	225	16.3	16.3	16.3	210.0
Mystery	170	2.0	4.0	4.8	13.1
Mystery	177	3.8	5.6	6.6	27.9
Mystery	182	5.6	8.6	9.7	36.4
Mystery	193	8.0	11.6	12.9	71.1
Mystery	200	10.6	12.2	13.2	121.1
Mystery	225	13.2	13.2	13.2	220.1
SS Jubilee	170	2.2	3.8	4.8	8.9
SS Jubilee	177	4.0	5.6	6.6	21.6
SS Jubilee	182	5.3	7.9	9.7	24.6
SS Jubilee	193	7.8	11.3	13.0	77.2
SS Jubilee	200	9.8	12.7	14.8	110.1
SS Jubilee	225	15.8	15.8	15.8	233.7

**Table E-22. Determining Corn Hybrid Maturity.  
Comparison of Sweet Corn Hybrids.  
Arlington, WI - 1996.**

Sweet Corn Hybrid	Day of Year	Leaf Development			Plant Height cm
		Leaf Collars	Hail Adjuster's Method	Total Leaves	
Sprint	170	2.7	4.6	5.6	11.4
Sprint	177	4.4	6.3	7.3	21.2
Sprint	182	5.6	8.1	9.9	33.0
Sprint	193	8.2	11.3	13.6	80.3
Sprint	200	11.1	12.9	14.4	106.7
Sprint	225	14.6	14.6	14.6	220.1
Sugar Buns	170	2.6	3.6	4.6	9.3
Sugar Buns	177	4.1	6.1	7.1	19.5
Sugar Buns	182	5.2	8.0	9.6	31.3
Sugar Buns	193	7.7	10.8	12.8	76.2
Sugar Buns	200	10.8	12.1	13.2	114.3
Sugar Buns	225	13.8	13.8	13.8	187.1
Zenith	170	2.2	4.1	4.8	8.5
Zenith	177	4.0	5.9	6.9	16.1
Zenith	182	5.7	8.4	9.8	34.7
Zenith	193	8.2	11.9	14.0	66.0
Zenith	200	11.0	14.6	16.4	105.8
Zenith	225	17.6	17.6	17.6	232.8
Mean		7.6	9.7	10.9	79.4
<b>Probability %</b>					
Hybrid (H)		< 0.1	0.1	< 0.1	0.5
Day of Year (D)		< 0.1	< 0.1	< 0.1	< 0.1
H x D		< 0.1	< 0.1	< 0.1	< 0.1
<b>LSD (0.10)</b>					
Hybrid (H)		0.3	0.5	0.5	5.1
Day of Year (D)		0.1	0.2	0.1	2.5
<b>CV %</b>		7.1	7.1	6.5	9.1



**Table E-23. Determining Corn Hybrid Maturity.  
Comparison of Sweet Corn Hybrids.  
Fond du Lac, WI - 1996.**

Sweet Corn Hybrid	Day of Year	Leaf Development			Plant Height cm
		Leaf Collars	Hail Adjuster's Method	Total Leaves	
Challenger	.	6.8	8.9	10.6	52.9
Delectable	.	7.2	9.5	11.0	54.6
Empire	.	6.5	8.6	10.4	53.1
Excellency	.	6.8	8.9	10.8	50.9
GH 1703	.	7.8	9.7	11.2	58.5
Heritage	.	6.6	8.8	10.5	52.0
How Sweet It Is	.	6.5	8.8	10.5	45.6
Incredible	.	6.7	8.9	10.8	55.8
Jubilee	.	6.7	8.8	10.6	53.7
Miracle	.	7.4	9.4	11.3	55.2
Mystery	.	6.8	8.7	9.8	56.9
SS Jubilee	.	6.5	8.3	9.9	52.1
Sprint	.	7.4	9.3	10.8	55.7
Sugar Buns	.	6.9	8.6	10.2	52.4
Zenith	.	6.9	9.4	11.2	53.2
	163	0.8	1.0	2.7	5.8
	180	4.4	6.4	7.9	23.9
	189	7.2	10.6	12.6	46.7
	199	10.0	13.1	14.7	79.2
	206	12.1	13.8	15.4	111.9
Challenger	163	0.7	0.7	2.2	5.5
Challenger	180	4.2	6.2	7.6	22.0
Challenger	189	7.1	10.3	12.4	48.3
Challenger	199	10.0	13.2	15.2	80.4
Challenger	206	11.9	14.0	15.8	108.4
Delectable	163	1.0	1.7	3.0	6.4
Delectable	180	4.8	6.9	8.0	23.7
Delectable	189	7.4	11.1	13.1	44.0
Delectable	199	10.6	13.7	15.2	83.8
Delectable	206	12.4	14.0	15.6	115.2
Empire	163	0.9	0.9	2.3	4.7
Empire	180	4.0	6.0	7.6	23.7
Empire	189	7.0	10.2	12.1	44.0
Empire	199	9.4	12.6	14.8	77.1
Empire	206	11.0	13.1	15.4	116.0
Excellency	163	1.0	1.2	2.9	6.4
Excellency	180	4.1	5.8	7.7	23.7
Excellency	189	7.1	10.2	12.2	44.0
Excellency	199	9.8	13.2	15.0	77.1
Excellency	206	11.8	14.2	16.4	103.3
GH 1703	163	1.0	1.8	3.6	7.6
GH 1703	180	5.1	7.2	9.0	26.3
GH 1703	189	7.9	11.4	13.8	49.5
GH 1703	199	11.0	13.6	14.7	88.9
GH 1703	206	14.2	14.7	15.2	120.2

**Table E-23. Determining Corn Hybrid Maturity.  
Comparison of Sweet Corn Hybrids.  
Fond du Lac, WI - 1996.**

Sweet Corn Hybrid	Day of Year	Leaf Development			Plant Height cm
		Leaf Collars	Hail Adjuster's Method	Total Leaves	
Heritage	163	1.0	1.3	3.1	5.9
Heritage	180	4.0	5.9	7.3	26.3
Heritage	189	7.1	10.7	12.8	42.3
Heritage	199	9.6	12.8	14.6	72.8
Heritage	206	11.3	13.3	14.9	112.6
How Sweet It Is	163	0.2	0.2	2.2	4.2
How Sweet It Is	180	4.1	6.2	7.4	19.5
How Sweet It Is	189	7.1	10.2	11.7	41.5
How Sweet It Is	199	9.6	13.4	15.0	67.7
How Sweet It Is	206	11.3	13.8	16.1	94.8
Incredible	163	0.8	0.8	2.0	5.5
Incredible	180	4.1	6.1	7.7	22.9
Incredible	189	7.1	10.1	12.3	50.0
Incredible	199	9.7	13.4	15.3	83.8
Incredible	206	11.8	13.9	16.4	116.8
Jubilee	163	1.0	1.1	3.0	6.8
Jubilee	180	4.1	6.1	7.8	25.4
Jubilee	189	7.4	10.4	12.7	44.9
Jubilee	199	9.7	13.2	14.3	77.9
Jubilee	206	11.3	13.2	15.0	113.5
Miracle	163	1.0	1.0	3.0	6.8
Miracle	180	4.9	7.1	8.6	27.1
Miracle	189	7.6	11.2	13.2	49.1
Miracle	199	10.7	13.7	15.4	83.0
Miracle	206	12.8	14.2	16.2	110.1
Mystery	163	1.0	1.1	2.7	6.8
Mystery	180	4.1	6.2	7.7	25.4
Mystery	189	6.6	10.4	12.1	50.8
Mystery	199	9.8	12.6	13.4	83.0
Mystery	206	12.7	13.1	13.3	118.5
SS Jubilee	163	0.6	0.6	2.1	5.1
SS Jubilee	180	4.1	5.8	7.1	22.9
SS Jubilee	189	6.9	9.9	12.0	45.3
SS Jubilee	199	9.4	12.3	13.9	74.5
SS Jubilee	206	11.3	12.8	14.2	112.6
Sprint	163	0.9	1.0	3.0	5.9
Sprint	180	5.0	7.0	8.8	25.4
Sprint	189	7.4	11.1	12.8	53.3
Sprint	199	10.3	13.0	14.6	80.4
Sprint	206	13.2	14.2	14.7	113.5
Sugar Buns	163	0.7	0.7	2.6	4.7
Sugar Buns	180	4.2	6.2	7.9	22.0
Sugar Buns	189	7.1	10.6	12.3	46.6
Sugar Buns	199	10.1	12.4	13.9	78.7
Sugar Buns	206	12.3	13.3	14.2	110.1

Table E-23.

**Determining Corn Hybrid Maturity.  
Comparison of Sweet Corn Hybrids.  
Fond du Lac, WI - 1996.**

Sweet Corn Hybrid	Day of Year	Leaf Development			Plant Height cm
		Leaf Collars	Hail Adjuster's Method	Total Leaves	
Zenith	163	0.9	1.1	2.4	5.1
Zenith	180	4.6	6.6	8.3	22.0
Zenith	189	7.2	11.0	12.9	47.4
Zenith	199	9.9	13.7	15.1	78.7
Zenith	206	11.9	14.6	17.4	112.6
Mean	.	6.9	9.0	10.6	53.5
<b><u>Probability %</u></b>					
Hybrid (H)		< 0.1	< 0.1	< 0.1	5.1
Day of Year (D)		< 0.1	< 0.1	< 0.1	< 0.1
H x D		< 0.1	0.1	< 0.1	> 50
<b><u>LSD (0.10)</u></b>					
Hybrid (H)		0.4	0.4	0.5	5.1
Day of Year (D)		0.1	0.1	0.2	2.1
<b><u>CV %</u></b>					
		8.2	6.9	6.5	11.3

**Table E-24. Determining Corn Hybrid Maturity.  
Comparison of Sweet Corn Hybrids.  
Hancock, WI - 1996.**

Sweet Corn Hybrid	Day of Year	Leaf Development			Plant Height cm
		Leaf Collars	Hail Adjuster's Method	Total Leaves	
Challenger	.	5.9	7.6	8.8	55.5
Delectable	.	6.2	7.9	9.1	59.5
Empire	.	6.0	7.6	8.8	57.6
Excellency	.	6.2	7.9	9.1	55.0
GH 1703	.	6.6	8.4	9.6	61.4
Heritage	.	6.3	7.9	9.0	58.4
How Sweet It Is	.	6.0	7.8	8.8	55.3
Incredible	.	6.0	7.6	8.6	56.8
Jubilee	.	6.3	8.0	9.2	59.5
Miracle	.	6.6	8.4	9.4	55.1
Mystery	.	5.5	7.0	8.2	55.7
SS Jubilee	.	5.7	7.1	8.3	59.8
Sprint	.	6.4	8.4	9.4	57.1
Sugar Buns	.	5.6	6.8	7.9	45.5
Zenith	.	6.2	7.6	8.6	55.5
	154	1.4	2.6	3.6	4.9
	162	2.6	3.7	5.0	9.1
	170	4.4	6.5	7.4	18.0
	177	5.3	7.7	8.9	46.4
	187	7.8	10.8	13.0	59.1
	240	15.2	15.2	15.2	201.6
Challenger	154	1.1	2.0	3.2	5.1
Challenger	162	2.3	3.4	4.9	8.0
Challenger	170	4.3	6.7	7.7	16.1
Challenger	177	5.2	7.7	8.7	46.6
Challenger	187	7.3	10.6	13.1	55.9
Challenger	240	15.2	15.2	15.2	201.5
Delectable	154	1.8	3.1	3.9	5.5
Delectable	162	2.7	3.8	5.1	10.2
Delectable	170	4.4	6.4	7.4	14.8
Delectable	177	5.1	7.3	8.9	51.7
Delectable	187	7.9	11.2	13.7	61.4
Delectable	240	15.6	15.6	15.6	213.4
Empire	154	1.1	2.0	3.1	3.8
Empire	162	2.3	3.0	4.8	8.5
Empire	170	4.3	6.1	7.2	17.4
Empire	177	4.9	7.6	8.8	48.3
Empire	187	7.8	11.1	13.0	54.2
Empire	240	15.8	15.8	15.8	213.4
Excellency	154	1.2	2.4	3.6	4.7
Excellency	162	2.2	3.1	4.8	8.0
Excellency	170	4.3	6.4	7.4	18.6
Excellency	177	4.8	7.0	8.1	44.9
Excellency	187	7.7	11.3	13.7	54.6
Excellency	240	16.8	16.8	16.8	199.0

**Table E-24. Determining Corn Hybrid Maturity.  
Comparison of Sweet Corn Hybrids.  
Hancock, WI - 1996.**

Sweet Corn Hybrid	Day of Year	Leaf Development			Plant Height cm
		Leaf Collars	Hail Adjuster's Method	Total Leaves	
GH 1703	154	2.0	3.3	4.3	5.9
GH 1703	162	3.0	4.1	6.0	11.0
GH 1703	170	4.8	7.2	8.2	20.3
GH 1703	177	6.0	8.9	10.0	45.7
GH 1703	187	9.0	11.6	13.9	74.5
GH 1703	240	15.0	15.0	15.0	210.8
Heritage	154	1.4	2.4	3.7	5.9
Heritage	162	2.7	4.3	5.0	10.2
Heritage	170	4.7	6.2	7.2	19.1
Heritage	177	5.3	7.9	8.9	46.6
Heritage	187	7.9	11.1	13.7	62.7
Heritage	240	15.7	15.7	15.7	205.7
How Sweet It Is	154	1.1	2.8	3.3	3.8
How Sweet It Is	162	2.3	3.3	4.7	7.6
How Sweet It Is	170	4.1	6.2	7.1	15.2
How Sweet It Is	177	5.3	7.6	8.7	44.9
How Sweet It Is	187	7.4	10.9	13.0	52.5
How Sweet It Is	240	15.8	15.8	15.8	207.4
Incredible	154	1.3	2.4	3.6	4.2
Incredible	162	2.6	3.4	4.7	8.0
Incredible	170	4.0	5.9	6.9	17.8
Incredible	177	5.2	7.7	8.8	43.6
Incredible	187	7.6	10.6	12.4	58.0
Incredible	240	15.4	15.4	15.4	209.1
Jubilee	154	1.6	2.9	3.8	5.1
Jubilee	162	2.9	4.4	5.6	11.0
Jubilee	170	4.7	6.6	7.6	21.6
Jubilee	177	5.7	8.3	9.3	46.6
Jubilee	187	7.7	10.6	13.6	66.9
Jubilee	240	15.1	15.1	15.1	205.7
Miracle	154	1.4	2.6	3.7	5.5
Miracle	162	2.7	4.4	5.6	9.3
Miracle	170	4.9	7.0	8.1	18.6
Miracle	177	6.0	8.7	9.9	44.0
Miracle	187	8.8	11.4	13.4	62.7
Miracle	240	16.0	16.0	16.0	190.5
Mystery	154	1.2	2.1	3.6	5.5
Mystery	162	2.4	3.3	4.9	9.3
Mystery	170	4.3	6.0	7.0	16.1
Mystery	177	5.1	7.7	8.7	46.6
Mystery	187	7.6	10.4	12.3	60.5
Mystery	240	12.4	12.4	12.4	196.4
SS Jubilee	154	1.2	2.1	3.3	5.5
SS Jubilee	162	2.6	3.2	4.8	10.6
SS Jubilee	170	4.0	6.2	7.0	21.6
SS Jubilee	177	5.4	7.4	8.6	46.6
SS Jubilee	187	7.1	9.7	11.9	57.6
SS Jubilee	240	14.9	14.9	14.9	216.8

**Table E-24. Determining Corn Hybrid Maturity.  
Comparison of Sweet Corn Hybrids.  
Hancock, WI - 1996.**

Sweet Corn Hybrid	Day of Year	Leaf Development			Plant Height cm
		Leaf Collars	Hail Adjuster's Method	Total Leaves	
Sprint	154	2.1	3.9	4.4	4.2
Sprint	162	3.0	4.9	5.8	8.9
Sprint	170	4.8	7.8	8.8	17.4
Sprint	177	5.8	8.2	9.4	48.7
Sprint	187	8.6	11.1	13.6	65.2
Sprint	240	14.3	14.3	14.3	198.1
Sugar Buns	154	1.4	2.3	3.2	4.7
Sugar Buns	162	2.8	3.1	4.6	8.5
Sugar Buns	170	4.6	6.2	7.0	16.1
Sugar Buns	177	4.6	6.8	7.9	47.4
Sugar Buns	187	7.8	9.9	11.9	50.0
Sugar Buns	240	12.7	12.7	12.7	146.5
Zenith	154	0.9	2.1	3.0	3.8
Zenith	162	2.2	2.9	4.3	6.8
Zenith	170	4.4	5.8	6.8	19.5
Zenith	177	5.3	7.4	8.7	44.0
Zenith	187	7.4	10.6	12.4	49.5
Zenith	240	16.6	16.6	16.6	209.1
Mean	.	6.1	7.7	8.8	56.5
<b>Probability %</b>					
Hybrid (H)		1.5	0.6	0.7	0.1
Day of Year (D)		< 0.1	< 0.1	< 0.1	< 0.1
H x D		< 0.1	< 0.1	< 0.1	< 0.1
<b>LSD (0.10)</b>					
Hybrid (H)		0.5	0.6	0.7	4.5
Day of Year (D)		0.1	0.2	0.2	2.9
<b>CV %</b>					
		10.2	10.4	9.4	14.6

**Table E-25. Determining Corn Hybrid Maturity.  
Comparison of Sweet Corn Hybrids.  
Janesville, WI - 1996.**

Sweet Corn Hybrid	Day of Year	Leaf Development			Plant Height cm
		Leaf Collars	Hail Adjuster's Method	Total Leaves	
Challenger	.	8.2	10.1	11.7	73.3
Delectable	.	7.9	10.0	11.4	77.0
Empire	.	7.8	9.8	11.2	83.9
Excellency	.	8.2	10.2	11.7	79.3
GH 1703	.	8.9	10.3	11.9	80.2
Heritage	.	7.7	9.6	11.0	87.0
How Sweet It Is	.	8.1	10.1	11.5	74.7
Incredible	.	8.1	10.1	11.4	77.1
Jubilee	.	7.5	9.3	10.8	76.3
Miracle	.	8.5	10.3	12.1	74.7
Mystery	.	7.5	9.0	10.2	77.9
SS Jubilee	.	7.6	9.4	10.8	74.7
Sprint	.	8.7	10.2	11.8	80.2
Sugar Buns	.	7.9	9.4	10.7	68.6
Zenith	.	8.3	10.5	12.0	80.7
	182	3.0	4.6	5.6	12.1
	190	5.2	7.2	8.7	31.2
	199	6.9	9.1	11.3	51.7
	206	8.1	10.8	13.1	75.3
	212	10.1	12.6	14.3	103.0
	239	15.1	15.1	15.1	192.9
Challenger	182	3.0	4.7	5.7	14.0
Challenger	190	5.1	7.0	8.7	31.3
Challenger	199	7.2	9.4	11.8	47.4
Challenger	206	8.1	11.4	13.7	72.8
Challenger	212	10.6	12.8	14.7	99.1
Challenger	239	15.4	15.4	15.4	175.3
Delectable	182	3.0	4.6	5.7	12.3
Delectable	190	5.1	7.4	8.8	27.9
Delectable	199	6.7	9.2	11.4	44.9
Delectable	206	8.1	10.9	13.2	72.8
Delectable	212	9.8	12.8	14.4	105.8
Delectable	239	15.0	15.0	15.0	198.1
Empire	182	2.9	4.4	5.4	13.1
Empire	190	4.9	6.8	8.1	30.5
Empire	199	6.8	9.0	11.1	66.0
Empire	206	7.7	10.4	12.9	75.4
Empire	212	8.9	12.3	14.3	110.1
Empire	239	15.6	15.6	15.6	208.3
Excellency	182	2.9	4.3	5.3	12.3
Excellency	190	5.1	6.9	8.4	30.1
Excellency	199	6.8	8.9	11.0	54.2
Excellency	206	8.0	11.0	13.4	80.4
Excellency	212	10.1	13.8	15.4	94.8
Excellency	239	16.4	16.4	16.4	204.1

**Table E-25. Determining Corn Hybrid Maturity.  
Comparison of Sweet Corn Hybrids.  
Janesville, WI - 1996.**

Sweet Corn Hybrid	Day of Year	Leaf Development			Plant Height cm
		Leaf Collars	Hail Adjuster's Method	Total Leaves	
GH 1703	182	3.6	5.4	6.4	14.0
GH 1703	190	5.9	8.1	9.8	36.4
GH 1703	199	7.4	9.8	12.3	61.0
GH 1703	206	9.6	11.4	13.7	83.8
GH 1703	212	11.9	12.1	14.2	110.1
GH 1703	239	14.8	14.8	14.8	176.1
Heritage	182	2.9	4.4	5.4	14.4
Heritage	190	4.9	6.8	8.4	38.5
Heritage	199	6.4	8.8	10.6	50.0
Heritage	206	7.4	10.1	12.4	72.0
Heritage	212	9.3	12.1	13.9	133.8
Heritage	239	15.1	15.1	15.1	213.4
How Sweet It Is	182	2.9	4.6	5.6	10.2
How Sweet It Is	190	5.2	7.3	8.7	24.6
How Sweet It Is	199	7.0	9.2	11.3	47.4
How Sweet It Is	206	7.9	11.2	13.4	70.3
How Sweet It Is	212	10.0	12.9	14.3	92.3
How Sweet It Is	239	15.6	15.6	15.6	203.2
Incredible	182	2.8	4.1	5.1	10.2
Incredible	190	4.8	6.9	8.3	27.9
Incredible	199	6.8	8.9	10.9	53.3
Incredible	206	7.8	10.7	13.2	71.1
Incredible	212	9.9	13.0	14.3	99.9
Incredible	239	16.8	16.8	16.8	199.8
Jubilee	182	2.8	4.2	5.2	11.4
Jubilee	190	4.8	6.9	8.3	30.5
Jubilee	199	6.3	8.6	10.4	48.3
Jubilee	206	7.3	10.1	12.6	70.3
Jubilee	212	8.4	11.0	12.9	103.3
Jubilee	239	15.2	15.2	15.2	193.9
Miracle	182	3.0	5.0	6.1	11.9
Miracle	190	5.7	7.9	9.7	30.5
Miracle	199	7.4	9.7	12.1	50.0
Miracle	206	8.6	11.1	13.8	75.4
Miracle	212	10.9	12.7	15.0	100.8
Miracle	239	15.7	15.7	15.7	179.5
Mystery	182	3.0	4.4	5.4	13.1
Mystery	190	4.9	7.0	8.4	34.3
Mystery	199	6.4	8.9	11.2	49.1
Mystery	206	8.1	10.1	11.8	83.0
Mystery	212	11.2	12.1	12.4	105.8
Mystery	239	11.9	11.9	11.9	182.0
SS Jubilee	182	2.7	3.8	4.7	11.4
SS Jubilee	190	4.7	6.7	7.9	29.2
SS Jubilee	199	6.6	8.6	10.7	43.2
SS Jubilee	206	7.3	9.7	12.1	71.1
SS Jubilee	212	8.7	12.1	14.2	89.8
SS Jubilee	239	15.4	15.4	15.4	203.2



**Table E-25. Determining Corn Hybrid Maturity.  
Comparison of Sweet Corn Hybrids.  
Janesville, WI - 1996.**

Sweet Corn Hybrid	Day of Year	Leaf Development			Plant Height cm
		Leaf Collars	Hail Adjuster's Method	Total Leaves	
Sprint	182	3.8	5.4	6.4	11.9
Sprint	190	5.8	7.8	9.2	38.1
Sprint	199	7.6	9.7	12.0	59.3
Sprint	206	8.8	11.2	13.7	76.2
Sprint	212	11.0	12.2	14.2	107.5
Sprint	239	15.0	15.0	15.0	188.0
Sugar Buns	182	3.0	4.3	5.4	10.2
Sugar Buns	190	5.4	7.6	9.1	29.6
Sugar Buns	199	6.8	8.9	11.2	45.7
Sugar Buns	206	8.9	10.7	12.2	71.1
Sugar Buns	212	10.7	12.4	13.9	94.8
Sugar Buns	239	12.3	12.3	12.3	160.0
Zenith	182	2.9	4.4	5.4	11.0
Zenith	190	5.0	7.1	8.8	28.8
Zenith	199	7.3	9.7	12.0	55.0
Zenith	206	8.3	11.3	14.1	83.8
Zenith	212	10.1	13.9	15.6	97.4
Zenith	239	16.3	16.3	16.3	208.3
Mean	.	8.1	9.9	11.3	77.7
<b>Probability %</b>					
Hybrid (H)		< 0.1	< 0.1	< 0.1	9.1
Day of Year (D)		< 0.1	< 0.1	< 0.1	< 0.1
H x D		< 0.1	< 0.1	< 0.1	< 0.1
<b>LSD (0.10)</b>					
Hybrid (H)		0.4	0.5	0.6	8.1
Day of Year (D)		0.2	0.2	0.2	3.2
<b>CV %</b>					
		8.6	8.7	8.5	11.8

**Table E-26. Determining Corn Hybrid Maturity.  
Comparison of Sweet Corn Hybrids.  
Lancaster, WI - 1996.**

Sweet Corn Hybrid	Day of Year	Leaf Development			Plant Height cm
		Leaf Collars	Hail Adjuster's Method	Total Leaves	
Challenger	.	7.0	8.4	9.6	66.5
Delectable	.	7.1	8.1	9.4	69.4
Empire	.	7.2	8.6	9.9	71.8
Excellency	.	7.6	8.9	10.2	73.2
GH 1703	.	6.7	8.0	10.0	72.6
Heritage	.	7.2	8.5	9.8	79.5
How Sweet It Is	.	7.2	8.6	9.7	70.4
Incredible	.	6.7	8.1	9.4	75.4
Jubilee	.	6.8	8.1	9.3	77.8
Miracle	.	7.4	8.7	10.0	71.6
Mystery	.	6.8	8.1	9.0	73.9
SS Jubilee	.	7.2	8.5	9.8	75.4
Sprint	.	6.8	8.1	9.3	79.5
Sugar Buns	.	6.6	7.7	8.7	66.0
Zenith	.	7.7	9.0	10.3	74.0
	165	1.9	2.9	3.9	7.3
	173	3.1	4.7	5.9	17.6
	179	5.1	7.4	8.7	34.3
	197	10.3	11.7	14.4	102.6
	220	15.6	15.6	15.6	203.9
Challenger	165	1.7	2.6	3.7	5.9
Challenger	173	2.8	4.7	5.8	14.0
Challenger	179	5.0	7.0	8.0	33.9
Challenger	197	10.0	12.1	14.8	85.5
Challenger	220	15.6	15.6	15.6	193.0
Delectable	165	1.8	2.8	3.8	6.8
Delectable	173	3.3	4.4	5.7	16.1
Delectable	179	4.9	6.6	7.6	33.0
Delectable	197	9.7	11.1	14.0	93.1
Delectable	220	15.8	15.8	15.8	198.1
Empire	165	1.8	2.8	3.8	7.2
Empire	173	2.9	4.9	5.9	13.1
Empire	179	5.0	7.1	8.2	33.0
Empire	197	9.9	11.7	14.9	90.6
Empire	220	16.7	16.7	16.7	215.1
Excellency	165	2.0	3.0	4.0	7.2
Excellency	173	3.4	4.8	6.1	14.8
Excellency	179	5.3	7.7	8.9	34.7
Excellency	197	10.8	12.2	15.3	104.1
Excellency	220	16.7	16.7	16.7	204.9
GH 1703	165	2.3	3.3	4.3	8.9
GH 1703	173	3.4	4.7	6.1	16.5
GH 1703	179	5.4	8.0	12.6	40.6
GH 1703	197	10.7	11.6	14.2	101.6
GH 1703	220	14.3	14.3	14.3	195.6

Table E-26.

**Determining Corn Hybrid Maturity.  
Comparison of Sweet Corn Hybrids.  
Lancaster, WI - 1996.**

Sweet Corn Hybrid	Day of Year	Leaf Development			Plant Height cm
		Leaf Collars	Hail Adjuster's Method	Total Leaves	
Heritage	165	2.1	3.1	4.1	8.9
Heritage	173	3.1	4.7	5.8	15.2
Heritage	179	5.1	7.6	8.8	37.3
Heritage	197	10.1	11.6	14.6	115.2
Heritage	220	15.8	15.8	15.8	221.0
How Sweet It Is	165	1.9	3.0	4.0	6.4
How Sweet It Is	173	3.1	4.8	5.9	14.8
How Sweet It Is	179	5.1	7.7	8.7	29.6
How Sweet It Is	197	10.4	12.2	14.7	94.8
How Sweet It Is	220	15.3	15.3	15.3	206.6
Incredible	165	1.7	2.7	3.7	6.4
Incredible	173	3.1	4.7	5.9	14.0
Incredible	179	4.9	7.3	8.3	33.0
Incredible	197	10.6	11.9	15.0	104.1
Incredible	220	16.5	16.5	16.5	219.3
Jubilee	165	1.9	2.9	3.9	8.5
Jubilee	173	3.0	4.6	5.8	14.8
Jubilee	179	4.9	7.2	8.2	38.1
Jubilee	197	9.8	11.1	14.1	110.1
Jubilee	220	15.4	15.4	15.4	217.6
Miracle	165	2.1	3.1	4.1	8.9
Miracle	173	3.3	4.9	6.1	13.1
Miracle	179	5.3	7.6	8.8	37.3
Miracle	197	10.8	12.2	15.0	109.2
Miracle	220	16.5	16.5	16.5	189.7
Mystery	165	2.0	3.1	4.0	8.9
Mystery	173	2.9	4.6	5.8	15.2
Mystery	179	5.0	7.3	8.7	38.1
Mystery	197	10.7	11.9	13.0	112.6
Mystery	220	13.4	13.4	13.4	194.7
SS Jubilee	165	1.7	2.7	3.7	6.8
SS Jubilee	173	2.9	4.9	5.7	11.9
SS Jubilee	179	4.9	7.3	8.4	32.2
SS Jubilee	197	10.1	11.4	14.9	105.0
SS Jubilee	220	16.2	16.2	16.2	221.0
Sprint	165	2.3	3.3	4.3	7.2
Sprint	173	3.2	4.9	6.1	66.0
Sprint	179	5.3	7.8	9.1	34.7
Sprint	197	10.7	11.6	14.0	109.2
Sprint	220	14.1	14.1	14.1	180.3
Sugar Buns	165	1.9	2.9	3.9	5.1
Sugar Buns	173	3.0	4.7	5.7	12.3
Sugar Buns	179	4.9	7.0	8.0	28.8
Sugar Buns	197	10.4	11.0	12.8	99.9
Sugar Buns	220	13.6	13.6	13.6	183.7

Table E-26.

**Determining Corn Hybrid Maturity.  
Comparison of Sweet Corn Hybrids.  
Lancaster, WI - 1996.**

Sweet Corn Hybrid	Day of Year	Leaf Development			Plant Height cm
		Leaf Collars	Hail Adjuster's Method	Total Leaves	
Zenith	165	1.9	2.8	3.8	6.8
Zenith	173	3.1	4.7	5.9	11.9
Zenith	179	5.2	7.7	8.8	30.5
Zenith	197	10.4	12.4	15.3	103.3
Zenith	220	17.7	17.7	17.7	217.6
Mean	.	7.1	8.4	9.6	73.1
<b><u>Probability %</u></b>					
Hybrid (H)		< 0.1	0.1	2.1	2.9
Day of Year (D)		< 0.1	< 0.1	< 0.1	< 0.1
H x D		< 0.1	< 0.1	< 0.1	3.3
<b><u>LSD (0.10)</u></b>					
Hybrid (H)		0.3	0.4	0.7	6.5
Day of Year (D)		0.1	0.2	0.3	4.8
<b><u>CV %</u></b>					
		7.9	8.4	14.4	18.9

**Table E-27. Determining Corn Hybrid Maturity.  
Comparison of Sweet Corn Hybrids.  
West Madison, WI - 1996.**

Sweet Corn Hybrid	Day of Year	Leaf Development			Plant Height cm
		Leaf Collars	Hail Adjuster's Method	Total Leaves	
Challenger	.	6.6	8.2	9.6	72.1
Delectable	.	6.9	8.6	9.9	74.2
Empire	.	6.2	7.7	9.1	72.3
Excellency	.	6.8	8.6	10.1	74.7
GH 1703	.	6.9	8.4	9.9	78.1
Heritage	.	6.2	8.1	9.5	75.9
How Sweet It Is	.	6.2	7.9	9.2	67.0
Incredible	.	6.6	8.1	9.5	72.9
Jubilee	.	6.6	8.4	9.7	77.3
Miracle	.	6.6	8.0	9.6	71.8
Mystery	.	5.9	7.5	8.8	71.1
SS Jubilee	.	6.2	7.8	9.2	75.9
Sprint	.	6.6	8.1	9.6	76.1
Sugar Buns	.	5.9	7.4	8.6	66.6
Zenith	.	6.9	8.8	10.2	75.0
	164	1.0	1.6	3.2	4.7
	172	3.2	4.9	6.0	15.8
	179	4.6	6.7	7.8	30.8
	188	6.6	9.6	12.1	70.4
	196	9.0	11.5	13.5	100.0
	219	14.4	14.4	14.4	218.7
Challenger	164	0.8	0.8	2.8	4.2
Challenger	172	3.1	5.0	6.0	15.2
Challenger	179	4.8	6.7	7.8	31.3
Challenger	188	6.7	9.8	12.1	68.6
Challenger	196	8.9	12.0	13.9	95.7
Challenger	219	15.1	15.1	15.1	217.6
Delectable	164	1.2	2.2	3.2	5.1
Delectable	172	3.3	5.1	6.1	16.9
Delectable	179	4.9	7.0	8.1	30.5
Delectable	188	6.8	9.8	12.7	66.9
Delectable	196	9.4	11.9	13.9	95.7
Delectable	219	15.4	15.4	15.4	230.3
Empire	164	0.8	1.0	2.8	4.2
Empire	172	3.0	4.4	5.4	16.5
Empire	179	4.3	6.2	7.3	23.7
Empire	188	6.2	9.0	11.1	68.6
Empire	196	8.4	11.1	13.3	92.3
Empire	219	14.6	14.6	14.6	228.6
Excellency	164	1.0	2.0	3.3	5.9
Excellency	172	2.9	5.0	6.0	15.7
Excellency	179	4.7	6.8	8.0	31.3
Excellency	188	6.9	9.8	12.3	72.8
Excellency	196	9.1	11.8	14.3	96.5
Excellency	219	16.3	16.3	16.3	226.1

Table E-27.

**Determining Corn Hybrid Maturity.  
Comparison of Sweet Corn Hybrids.  
West Madison, WI - 1996.**

Sweet Corn Hybrid	Day of Year	Leaf Development			Plant Height cm
		Leaf Collars	Hail Adjuster's Method	Total Leaves	
GH 1703	164	1.7	2.8	3.9	5.5
GH 1703	172	4.6	5.8	7.0	19.5
GH 1703	179	4.6	6.9	8.0	32.2
GH 1703	188	7.0	10.0	12.7	82.1
GH 1703	196	9.7	11.1	13.4	116.0
GH 1703	219	14.1	14.1	14.1	213.4
Heritage	164	1.0	1.4	3.8	4.2
Heritage	172	2.9	4.8	5.8	14.8
Heritage	179	4.4	6.8	7.8	32.2
Heritage	188	6.6	9.9	12.4	72.8
Heritage	196	8.9	11.8	13.3	100.8
Heritage	219	13.7	13.7	13.7	230.3
How Sweet It Is	164	0.7	1.6	2.9	4.2
How Sweet It Is	172	3.2	5.2	6.2	12.3
How Sweet It Is	179	4.3	6.4	7.4	30.5
How Sweet It Is	188	6.0	9.0	11.6	57.6
How Sweet It Is	196	8.4	11.1	13.0	72.0
How Sweet It Is	219	14.3	14.3	14.3	225.2
Incredible	164	0.6	1.0	2.6	3.8
Incredible	172	2.9	4.4	5.4	12.7
Incredible	179	4.6	6.6	7.4	30.5
Incredible	188	6.8	9.6	12.2	64.4
Incredible	196	9.1	11.4	13.8	97.4
Incredible	219	15.4	15.4	15.4	228.6
Jubilee	164	0.8	1.9	3.2	5.1
Jubilee	172	3.4	5.1	6.1	17.8
Jubilee	179	4.4	6.7	7.9	34.7
Jubilee	188	6.9	10.1	12.8	72.0
Jubilee	196	9.6	12.2	13.9	106.7
Jubilee	219	14.4	14.4	14.4	227.8
Miracle	164	1.0	1.0	3.2	5.1
Miracle	172	3.0	4.9	5.9	14.4
Miracle	179	5.0	6.8	8.1	30.5
Miracle	188	7.1	9.7	12.4	68.6
Miracle	196	9.0	11.2	13.3	119.4
Miracle	219	14.4	14.4	14.4	193.0
Mystery	164	0.8	1.2	2.8	4.7
Mystery	172	3.0	4.7	5.8	15.7
Mystery	179	4.4	6.7	7.9	24.6
Mystery	188	6.2	9.7	11.9	73.7
Mystery	196	8.8	10.7	12.3	101.6
Mystery	219	12.0	12.0	12.0	206.6
SS Jubilee	164	1.0	1.7	2.9	4.7
SS Jubilee	172	3.0	4.9	6.0	17.8
SS Jubilee	179	4.3	6.2	7.4	34.7
SS Jubilee	188	6.3	9.2	11.7	71.1
SS Jubilee	196	8.4	11.1	13.6	100.8
SS Jubilee	219	13.8	13.8	13.8	226.1

**Table E-27. Determining Corn Hybrid Maturity.  
Comparison of Sweet Corn Hybrids.  
West Madison, WI - 1996.**

Sweet Corn Hybrid	Day of Year	Leaf Development			Plant Height cm
		Leaf Collars	Hail Adjuster's Method	Total Leaves	
Sprint	164	1.1	1.4	3.7	5.5
Sprint	172	3.1	5.0	6.1	16.1
Sprint	179	4.8	7.1	8.2	32.2
Sprint	188	7.1	9.9	12.4	79.6
Sprint	196	9.6	11.2	13.3	110.1
Sprint	219	13.7	13.7	13.7	213.4
Sugar Buns	164	1.0	1.3	3.0	4.7
Sugar Buns	172	3.4	4.8	5.9	15.7
Sugar Buns	179	4.4	6.7	7.7	27.9
Sugar Buns	188	6.2	8.8	11.0	67.7
Sugar Buns	196	8.7	10.7	12.2	99.1
Sugar Buns	219	12.5	12.5	12.5	184.6
Zenith	164	1.1	2.1	3.2	4.2
Zenith	172	3.0	4.9	5.9	15.7
Zenith	179	4.9	7.0	8.1	34.7
Zenith	188	6.8	10.0	12.2	69.4
Zenith	196	9.2	12.4	15.0	96.5
Zenith	219	16.6	16.6	16.6	229.5
Mean		6.5	8.1	9.5	73.4
<b>Probability %</b>					
Hybrid (H)		< 0.1	0.6	< 0.1	5.0
Day of Year (D)		< 0.1	< 0.1	< 0.1	< 0.1
H x D		< 0.1	< 0.1	< 0.1	< 0.1
<b>LSD (0.10)</b>					
Hybrid (H)		0.4	0.6	0.5	5.7
Day of Year (D)		0.1	0.2	0.1	3.2
<b>CV %</b>					
		8.1	7.5	6.5	12.4

### Field Experiment History

**Title: Silage Plant Density by Hybrid Silage Quality - 1996.**

**Personnel: J. Cusicanqui, J.G. Lauer, K.D. Hudelson**

Experimental Design:		RCB Split Plot																				
Replications:		4																				
Variables:		5 Plant Densities and 2 Hybrid Silage Qualities																				
Location	Cooperators	Soil Type	Previous Crop	Row Width (in)	Planting Date	Harvest Date	Tillage Operations	--Soil Test--			--Nitrogen Fertilizer--		Weed Control	Insecticides								
								pH	P	K	actual	form			time							
								--(ppm)--			(lb/a)											
Arlington	S.Kraak	Plano	Soybean	30	26-Apr	10-Oct	No-Till	6.7	62	205	150	46-0-0	preplant	Bladex 2qts/A	None							
		Silt Loam									9					6-24-24	planting	Lasso 2qts/A				
Ashland	M. Mlynarek	Superior	Corn	30	13-May	3-Oct	Moldboard Plow Disk Field Cult.	6.8	175	148	150	46-0-0	preplant	Lasso 2qts/A	None							
		Loamy Sand									50					46-0-0	post	Bladex 2qts/A				
Lancaster	T. Wood D. Heimdahl	Rozetta	Corn	30	6-May	25-Sep	Chisel Plow Soil finisher	6.5	25	120	200	82-0-0	preplant	Dual II 2pts/A	Lorsban							
		Silt Loam									7.3					34	150	9	8-32-17	planting	Banvel 1pt/A	7lbs/A
Marshfield	D. Wiersma T. Drendel	Loyal	Corn	30	22-May	15-Oct	Chisel Plow Disk Field Cult. Pulvimulch	6.8	35	128	250	9-23-30	planting	Surpass 2pts/A	Lorsban							
		Silt Loam									7lbs/A											
Spooner Silt Loam	R. Rand Y. Berger K. Bergquist	Antigo	Corn	36	10-May	2-Oct	Moldboard Plow Disk/Drag	6.6	22	68	5	5-10-30	planting	Prowl 2pts/A	None							
		Silt Loam									104					46-0-0	post	Bladex 90DF 1lb/A Accent 0.45oz/A				
Valders	S. Hendrickson J. Maney T.& B. Maney	Kewaunee Clay Loam	Alfalfa	30	15-May	4-Oct	Moldboard Plow Field Cult.(2x)	7.3	53	179	9	6-24-24	planting	Atrazine 1.5lbs/A	None							
												12000 gal/A Manure										

Results: Tables E-28 to E-33.



**Table E-28. Silage Plant Density by Hybrid Silage Quality  
Arlington, WI 1996**

Plant Density	Hybrid (H)=High Quality (L)=Low Quality	Final Stand	Ear Density	Broken Stalks	Kernel Milk	Moisture			Yield		
						Whole Plant	Stover	Grain	Whole Plant	Stover	Grain
plants/a		plants/a	ear/a	%	%	%	%	%	tons DM/a		
18000		19503	20988	1.0	61	58.6	62.8	41.8	9.6	5.5	4.1
24000		26037	25641	1.5	69	56.1	61.0	41.2	10.9	6.1	4.8
30000		31383	31185	2.5	59	52.7	58.0	40.1	12.1	6.4	5.7
36000		34056	33858	2.3	62	55.3	60.4	40.8	11.6	6.4	5.2
42000		40986	38115	3.3	63	54.9	58.4	40.5	11.5	7.0	4.5
	Cargill 4327 (H)	31363	30928	2.9	58	55.8	61.3	39.4	11.3	6.3	4.9
	Pioneer 3417 (L)	29423	28987	1.4	67	55.2	58.9	42.4	11.0	6.2	4.8
18000	Cargill 4327 (H)	20988	21582	2.1	54	59.8	64.5	40.7	9.6	5.7	3.9
24000	Cargill 4327 (H)	26928	26334	2.1	65	55.3	63.1	39.1	11.3	6.1	5.3
30000	Cargill 4327 (H)	32670	32670	3.0	58	51.8	59.0	38.2	12.2	6.3	5.9
36000	Cargill 4327 (H)	35442	35838	2.7	53	56.9	61.8	38.9	11.7	6.4	5.3
42000	Cargill 4327 (H)	40788	38214	4.4	60	55.5	58.2	39.8	11.4	7.1	4.3
18000	Pioneer 3417 (L)	18018	20394	0.0	68	57.4	61.1	42.8	9.7	5.4	4.3
24000	Pioneer 3417 (L)	25146	24948	0.9	73	57.0	58.9	43.3	10.4	6.1	4.3
30000	Pioneer 3417 (L)	30096	29700	2.0	60	53.7	56.9	42.0	12.0	6.4	5.6
36000	Pioneer 3417 (L)	32670	31878	1.8	71	53.8	58.9	42.3	11.5	6.4	5.1
42000	Pioneer 3417 (L)	41184	38016	2.2	65	54.3	58.7	41.2	11.6	6.9	4.7
	Mean	30393	29957	2.1	63	55.5	60.1	40.9	11.1	6.3	4.9
<b>Probability (%)</b>											
	Plant Density (PD)	<0.1	<0.1	26.8	36.2	0.2	0.1	18.8	<0.1	1.9	3.3
	Hybrid (H)	1.6	3.8	12.0	<0.1	45.5	0.4	<0.1	>50	>50	>50
	PD x H	>50	>50	>50	14.9	22.7	31.6	38.7	>50	>50	>50
<b>LSD (0.10)</b>											
	Plant Density (PD)	3086	2632	NS	NS	0.2	0.2	NS	0.6	0.6	0.8
	Hybrid (H)	1258	1494	NS	3.7	NS	0.1	0.1	NS	NS	NS
<b>CV (%)</b>											
		7.5	9.0	135.0	10.7	4.6	3.8	4.0	12.0	12.1	20.2

**Table E-29. Silage Plant Density by Hybrid Silage Quality  
Lancaster, WI 1996**

Plant Density	Hybrid (H)=High Quality (L)=Low Quality	Final Stand	Ear Density	Broken Stalks	Kernel Milk	Moisture			Yield		
						Whole Plant	Stover	Grain	Whole Plant	Stover	Grain
plants/a		plants/a	ear/a	%	%	%	%	%	tons DM/a		
18000		18612	18513	0.0	56	59.6	65.9	39.0	6.6	3.0	3.6
24000		22968	21582	0.0	61	60.0	64.8	38.6	6.8	3.3	3.4
30000		29700	26334	0.0	54	56.3	65.2	38.4	8.1	3.5	4.6
36000		35244	31383	0.0	56	56.9	63.4	37.3	8.1	4.1	4.0
42000		40194	32967	0.3	56	58.8	63.4	38.2	7.5	3.8	3.7
	Cargill 4327 (H)	29462	26770	0.0	47	57.8	64.3	34.9	7.5	3.5	4.0
	Pioneer 3417 (L)	29225	25542	0.1	66	58.8	64.8	41.7	7.3	3.6	3.7
18000	Cargill 4327 (H)	19404	19800	0.0	44	60.0	66.0	35.5	6.9	3.3	3.6
24000	Cargill 4327 (H)	24156	22968	0.0	51	58.1	63.2	34.3	7.4	3.5	3.9
30000	Cargill 4327 (H)	29106	26730	0.0	50	55.6	66.3	35.9	8.4	3.4	5.0
36000	Cargill 4327 (H)	32670	29700	0.0	46	55.4	62.6	33.4	7.9	3.8	4.1
42000	Cargill 4327 (H)	41976	34650	0.0	45	59.9	63.5	35.2	7.0	3.6	3.4
18000	Pioneer 3417 (L)	17820	17226	0.0	68	58.9	65.9	42.5	6.3	2.7	3.6
24000	Pioneer 3417 (L)	21780	20196	0.0	70	61.9	66.4	42.8	6.2	3.2	3.0
30000	Pioneer 3417 (L)	30294	25938	0.0	58	57.0	64.2	40.9	7.9	3.7	4.2
36000	Pioneer 3417 (L)	37818	33066	0.0	66	58.4	64.2	41.2	8.3	4.5	3.8
42000	Pioneer 3417 (L)	38412	31284	0.6	66	57.7	63.2	41.2	8.0	4.0	4.0
	Mean	29344	26156	0.1	56	58.3	64.6	38.3	7.4	3.6	3.9
<b>Probability (%)</b>											
Plant Density (PD)		<0.1	<0.1	44.5	49.4	14.7	>50	13.0	4.2	5.0	16.5
Hybrid (H)		>50	18.3	33.3	<0.1	17.7	>50	<0.1	44.0	>50	29.8
PD x H		12.6	15.5	43.8	39.8	7.4	>50	31.2	12.1	24.6	>50
<b>LSD (0.10)</b>											
Plant Density (PD)		2544	2341	NS	NS	NS	NS	NS	1.0	0.6	NS
Hybrid (H)		NS	NS	NS	7.6	NS	NS	0.1	NS	NS	NS
<b>CV (%)</b>											
		11.5	10.6	632.5	15.1	3.8	5.1	4.5	11.2	17.1	23.7

**Table E-30. Silage Plant Density by Hybrid Silage Quality  
Marshfield, WI 1996**

Plant Density plants/a	Hybrid (H)=High Quality (L)=Low Quality	Final Stand plants/a	Ear Density ear/a	Broken Stalks %	Kernel Milk %	Moisture			Yield		
						Whole Plant	Stover	Grain	Whole Plant	Stover	Grain
									tons DM/a		
18000		18315	20592	5.3	39	43.6	57.1	49.1	6.3	2.3	4.0
24000		23467	24420	3.7	41	52.2	50.6	46.2	5.8	2.8	3.1
30000		26475	26249	3.6	41	49.7	52.0	49.1	5.9	2.7	3.2
36000		34291	33744	4.3	53	52.6	52.4	48.3	6.3	3.2	3.2
42000		39798	39105	2.5	42	53.4	53.6	47.7	6.2	2.9	3.3
	Jacques 4120 (L)	28072	27765	4.3	41	50.1	54.9	45.3	6.0	2.9	3.1
	Pionner 3757E(H)	28946	29955	3.5	46	49.9	51.3	50.6	6.2	2.6	3.6
18000	Jacques 4120 (L)	17226	17622	6.0	34	49.3	53.1	43.8	5.7	2.5	3.1
24000	Jacques 4120 (L)	22711	23357	5.0	36	50.3	48.5	44.4	6.0	2.8	3.2
30000	Jacques 4120 (L)	27720	26664	3.8	42	48.5	48.7	50.2	6.1	2.9	3.2
36000	Jacques 4120 (L)	33609	32890	2.9	50	51.6	51.1	45.9	6.4	3.4	3.0
42000	Jacques 4120 (L)	39006	38016	3.6	41	53.4	53.6	43.4	6.1	3.0	3.1
18000	Pionner 3757E(H)	19404	23562	4.5	44	37.8	61.3	54.3	6.9	2.1	4.8
24000	Pionner 3757E(H)	24222	25483	2.5	46	54.1	52.7	48.1	5.7	2.8	2.9
30000	Pionner 3757E(H)	25542	25938	3.5	41	50.6	54.5	48.3	5.7	2.5	3.2
36000	Pionner 3757E(H)	34973	34599	5.8	56	53.5	52.6	50.6	6.2	3.0	3.3
42000	Pionner 3757E(H)	40590	40194	1.4	43	53.3	53.7	51.9	6.3	2.8	3.5
	Mean	28520	28888	3.9	43	50.2	53.2	48.1	6.1	2.8	3.3
<b>Probability (%)</b>											
Plant Density (PD)		<0.1	<0.1	43.6	>50	39.8	8.7	>50	>50	4.7	29.4
Hybrid (H)		0.3	<0.1	>50	48.6	>50	0.1	0.3	>50	2.2	32.6
PD x H		>50	34.0	>50	>50	>50	4.4	11.5	>50	>50	>50
<b>LSD (0.10)</b>											
Plant Density (PD)		4197	3759	NS	NS	NS	NS	NS	NS	0.4	NS
Hybrid (H)		868	1238	NS	NS	NS	0.1	0.2	NS	0.2	NS
<b>CV (%)</b>											
		5.5	7.7	112.5	41.2	26.9	4.9	8.9	18.9	12.7	37.9

**Table E-31. Silage Plant Density by Hybrid Silage Quality  
Valders, WI 1996**

Plant Density	Hybrid (H)=High Quality (L)=Low Quality	Final Stand	Ear Density	Broken Stalks	Kernel Milk	Moisture			Yield		
						Whole Plant	Stover	Grain	Whole Plant	Stover	Grain
plants/a		plants/a	ear/a	%	%	%	%	%	tons DM/a		
18000		20889	20493	6.7	45	57.2	62.8	40.5	6.4	3.1	3.3
24000		25344	24849	4.7	44	57.3	63.1	41.9	6.8	3.0	3.8
30000		31977	31581	1.9	45	54.7	63.4	40.6	7.9	3.4	4.6
36000		36531	35541	5.3	41	55.4	60.4	40.3	7.3	3.3	4.0
42000		40887	39699	5.1	37	56.5	59.9	39.9	7.4	3.5	3.9
	Jacques 4120(L)	30967	29779	5.2	36	53.7	60.2	37.6	7.2	3.2	4.0
	Pionner 3757E(H)	31284	31086	4.2	49	58.8	63.6	43.7	7.1	3.3	3.8
18000	Jacques 4120(L)	21384	20196	5.7	38	56.7	63.5	38.5	6.0	2.9	3.1
24000	Jacques 4120(L)	24750	23958	4.1	40	54.6	62.0	39.1	7.0	3.0	4.0
30000	Jacques 4120(L)	31680	30690	1.9	36	50.5	60.5	36.3	8.1	3.3	4.9
36000	Jacques 4120(L)	35442	34254	6.6	35	52.7	58.7	37.6	7.4	3.3	4.1
42000	Jacques 4120(L)	41580	39798	7.7	31	53.8	56.5	36.3	7.7	3.7	3.9
18000	Pionner 3757E(H)	20394	20790	7.6	53	57.7	62.0	42.5	6.9	3.4	3.5
24000	Pionner 3757E(H)	25938	25740	5.2	48	60.0	64.3	44.6	6.6	3.1	3.6
30000	Pionner 3757E(H)	32274	32472	1.8	55	59.0	66.2	44.8	7.7	3.5	4.3
36000	Pionner 3757E(H)	37620	36828	4.0	48	58.1	62.0	43.0	7.3	3.3	3.9
42000	Pionner 3757E(H)	40194	39600	2.5	43	59.2	63.3	43.5	7.2	3.2	4.0
	Mean	31126	30433	4.7	42	56.2	61.9	40.6	7.2	3.3	3.9
<b>Probability (%)</b>											
Plant Density (PD)		<0.1	<0.1	31.0	42.3	46.6	21.7	>50	1.0	25.8	0.7
Hybrid (H)		>50	19.0	44.9	<0.1	<0.1	0.2	<0.1	>50	50.0	40.4
PD x H		>50	>50	42.8	>50	19.5	7.1	8.8	36.5	4.9	>50
<b>LSD (0.10)</b>											
Plant Density (PD)		1350	1847	NS	NS	NS	NS	NS	0.6	NS	0.5
Hybrid (H)		NS	NS	NS	4.6	0.2	0.2	0.1	NS	NS	NS
<b>CV (%)</b>											
		8.5	9.9	85.9	19.5	5.1	4.6	3.8	10.2	9.4	16.0

**Table E-32. Silage Plant Density by Hybrid Silage Quality  
Spooner, WI 1996**

Plant Density	Hybrid (H)=High Quality (L)=Low Quality	Final Stand	Ear Density	Broken Stalks	Kernel Milk	Moisture			Yield		
						Whole Plant	Stover	Grain	Whole Plant	Stover	Grain
plants/a		plants/a	ear/a	%	%	%	%	%	tons DM/a		
18000		17325	22770	0.0	16	53.6	60.2	35.6	5.6	2.5	3.1
24000		23265	25938	0.4	20	58.7	59.5	36.3	6.0	3.1	2.9
30000		30294	31581	0.3	8	50.7	54.2	35.6	6.6	3.0	3.6
36000		32472	33660	0.3	8	51.2	53.8	35.4	7.2	3.5	3.7
42000		35937	36135	0.8	9	54.7	56.2	35.7	7.2	3.6	3.6
	Pioneer 3902 (L)	28274	29106	0.0	12	53.6	57.3	36.0	6.6	3.0	3.5
	Pionner 3921 (H)	27443	30928	0.7	12	54.0	56.3	35.4	6.5	3.3	3.3
18000	Pioneer 3902 (L)	17622	19602	0.0	19	56.0	63.0	35.7	5.4	2.5	3.0
24000	Pioneer 3902 (L)	23760	24750	0.0	16	55.9	60.1	36.3	6.4	2.9	3.5
30000	Pioneer 3902 (L)	30888	31878	0.0	9	51.2	52.8	36.3	6.8	3.1	3.7
36000	Pioneer 3902 (L)	33264	33264	0.0	8	50.4	55.7	36.4	7.1	3.1	4.1
42000	Pioneer 3902 (L)	35838	36036	0.0	9	54.5	54.7	35.5	7.1	3.5	3.5
18000	Pionner 3921 (H)	17028	25938	0.0	14	51.2	57.4	35.4	5.8	2.5	3.3
24000	Pionner 3921 (H)	22770	27126	0.9	24	61.6	58.8	36.2	5.7	3.3	2.4
30000	Pionner 3921 (H)	29700	31284	0.7	8	50.2	55.6	34.9	6.5	3.0	3.5
36000	Pionner 3921 (H)	31680	34056	0.6	8	52.0	51.9	34.4	7.3	3.9	3.4
42000	Pionner 3921 (H)	36036	36234	1.6	9	54.9	57.7	35.9	7.3	3.7	3.6
	Mean	27859	30017	0.4	12	53.8	56.8	35.7	6.5	3.1	3.4
<b>Probability (%)</b>											
Plant Density (PD)		<0.1	<0.1	>50	4.8	12.1	3.3	>50	1.0	<0.1	17.2
Hybrid (H)		2.3	2.4	8.5	>50	>50	42.6	15.4	>50	5.2	31.7
PD x H		>50	6.1	>50	>50	>50	13.1	45.5	>50	12.3	>50
<b>LSD (0.10)</b>											
Plant Density (PD)		2632	2557	NS	7.8	NS	0.4	NS	0.8	0.3	NS
Hybrid (H)		574	1276	NS	NS	NS	NS	NS	NS	NS	NS
<b>CV (%)</b>											
		3.7	7.7	343.3	58.2	11.0	6.6	4.1	14.7	11.3	26.1

**Table E-33. Silage Plant Density by Hybrid Silage Quality  
Ashland, WI 1996**

Plant Density	Hybrid (H)=High Quality (L)=Low Quality	Final Stand	Ear Density	Broken Stalks	Kernel Milk	Moisture			Yield		
						Whole Plant	Stover	Grain	Whole Plant	Stover	Grain
plants/a		plants/a	ear/a	%	%	%	%	%	tons DM/a		
18000		20493	29106	0.5	43	58.7	59.7	41.7	6.9	3.8	3.1
24000		27819	32076	0.7	52	58.7	62.9	43.0	8.2	4.5	3.8
30000		34155	37026	0.0	50	56.2	59.7	42.8	9.0	4.8	4.3
36000		40392	40590	0.0	51	52.5	56.3	42.7	9.0	4.4	4.6
42000		47322	46728	0.6	44	50.7	54.7	43.6	9.0	4.3	4.7
	Pioneer 3902 (L)	34096	34808	0.0	42	54.3	58.1	42.4	8.3	4.2	4.1
	Pionner 3921 (H)	33977	39402	0.7	54	56.4	59.2	43.0	8.5	4.4	4.1
18000	Pioneer 3902 (L)	20196	22572	0.0	48	61.7	64.0	42.1	6.6	3.8	2.8
24000	Pioneer 3902 (L)	28116	29898	0.0	45	57.4	64.2	42.6	8.9	4.6	4.3
30000	Pioneer 3902 (L)	34254	35046	0.0	44	53.5	59.6	42.6	9.4	4.5	4.9
36000	Pioneer 3902 (L)	40392	40194	0.0	43	50.1	50.9	41.9	8.9	4.5	4.4
42000	Pioneer 3902 (L)	47520	46332	0.0	31	49.0	51.7	42.8	8.0	3.8	4.2
18000	Pionner 3921 (H)	20790	35640	1.0	39	55.7	55.4	41.3	7.3	3.7	3.5
24000	Pionner 3921 (H)	27522	34254	1.5	59	60.1	61.6	43.3	7.7	4.3	3.3
30000	Pionner 3921 (H)	34056	39006	0.0	56	58.9	59.9	43.0	8.6	5.0	3.6
36000	Pionner 3921 (H)	40392	40986	0.0	59	54.9	61.7	43.6	9.1	4.3	4.7
42000	Pionner 3921 (H)	47124	47124	1.3	58	52.3	57.6	44.1	9.9	4.8	5.1
	Mean	34036	37105	0.4	48	55.4	58.6	42.7	8.4	4.3	4.1
<b>Probability (%)</b>											
Plant Density (PD)		<0.1	<0.1	38.6	>50	<0.1	3.8	>50	0.9	9.2	2.0
Hybrid (H)		>50	<0.1	1.5	0.1	3.7	18.2	25.9	>50	21.9	>50
PD x H		>50	<0.1	29.9	2.7	0.7	<0.1	>50	2.9	12.4	3.2
<b>LSD (0.10)</b>											
Plant Density (PD)		1050	2268	NS	NS	0.3	0.4	NS	1.0	NS	0.8
Hybrid (H)		NS	1033	0.05	5.2	0.2	NS	NS	NS	NS	NS
<b>CV (%)</b>											
		3.0	5.0	230.4	19.6	5.1	4.4	3.6	9.9	11.7	17.2

**Field Experiment History**

**Title:** Silage Plant Density by Hybrid Silage Quality - 1995.

**Personnel:** J. Cusicanqui, J.G. Lauer, K.D. Hudelson

Experimental Design:		RCB Split Plot														
Replications:		4														
Variables:		5 Plant Densities and 2 Hybrid Silage Qualities														
Location	Cooperators	Soil Type	Previous Crop	Row Width (in)	Plot Size (ft)	Planting Date	Harvest Dates	Tillage Operations	--Soil Test-- pH P K --(ppm)--			--Nitrogen Fertilizer-- actual form time (lb/a)			Weed Control	Insecticides
Arlington	S. Kraak	Plano Silt Loam	Soybean	30	22	1-May	11-Sep	No-Till	6.4	47	185	150	46-0-0	preplant	Bladex 2qts/A	none
Ashland	M. Mlynarek T. Syverud	Manistee Loamy Sand	Corn	30	25	18-May	20-Sep	Moldboard plow Disk Field cult.	6.8	175	148	150	46-0-0	preplant	Lasso 2qts/A Bladex 2qts/A Cultivate	none
Lancaster	T. Wood D. Heimdahl	Rozetta Silt Loam	Corn	30	22	6-May	12-Sep	ChiselPlow Soil finisher	7.1	31	190	9	8-32-17	starter	Roundup 2qts/A	Lorsban
												180	82-0-0	preplant	Dual II 2pts/A Banvel 1 pt/A Rotary Hoe & Cultivate	7lbs/A
Marshfield	D. Wiersma T. Drendel	Withee Silt Loam	Alfalfa/Hay	30	22	5-May	25-Sep	Chisel plow Disk Field Cult.	6.8	35	118	120	46-0-0	post	Dual 2.5pts/A	none
												14	9-23-30	starter	Bladex 2qts/A	
Spoooner	R. Rand	Antigo	Corn	36	18	11-May	13-Sep	Moldboard plow	6.6	12	55	9	5-10-30	planting	Atrazine 1.5pts/A	none
Silt Loam	Y. Berger	Silt Loam						Disk/Drag				110	46-0-0	post	Prowl 3pts/A Cultivate	
Valders	S. Hendrickson J. Maney T. & B. Maney	Kewaunee Clay Loam	Barley	30	22	12-May	17-Sep	Moldboard plow Field cult.(2x)	7.6	21	160	9	6-24-24	starter	Accent 0.5oz/A	none
													12,000 Gals/A Manure		Banvel 0.5pts/A Cultivate	

Results: Tables E-34 to E-39.

**Table E-34. Silage Plant Density by Hybrid Silage Quality  
Arlington, WI 1996**

Plant Density plants/a	Hybrid (H)=High Quality (L)=Low Quality	Final Stand plants/a	Ear Density ear/a	Broken Stalks %	Kernel Milk %	Moisture			Yield			Whole plant				Stover			
						Whole Plant	Stover	Grain	Whole Plant	Stover	Grain	Crude Protein	NDF	ADF	Digest.	Crude Protein	NDF	ADF	Digest.
						%			tons DM/a			%				%			
18000		18909	15741	0.0	53	63.8	71.0	38.1	7.2	3.6	3.5	7.2	46.9	23.6	75.1	6.6	66.2	35.0	64.0
24000		23859	19107	0.0	53	62.4	67.6	37.4	7.6	3.8	3.8	6.9	45.0	22.6	76.2	5.7	68.9	37.5	63.5
30000		29403	26433	0.0	45	60.8	66.3	37.0	8.1	4.2	3.9	6.5	49.1	25.1	74.4	5.1	68.6	37.3	63.1
36000		35838	30987	0.3	43	54.9	63.9	35.7	9.4	4.6	4.8	6.5	45.3	22.9	75.5	5.5	69.0	37.9	63.0
42000		42174	34551	0.2	48	58.3	65.5	36.8	8.9	4.4	4.6	6.4	47.7	24.7	75.2	5.8	67.4	36.7	63.1
	Cargill 4327 (H)	30373	24116	0.1	42	59.9	68.1	34.5	8.3	4.1	4.2	6.7	45.3	23.3	75.9	5.8	66.9	36.7	63.8
	Pioneer 3417 (L)	29700	26611	0.1	55	60.2	65.6	39.4	8.2	4.2	4.1	6.8	48.3	24.3	74.7	5.7	69.2	37.0	62.8
18000	Cargill 4327 (H)	19206	15642	0.0	45	63.1	71.8	35.1	7.4	3.7	3.7	7.1	44.2	22.2	75.9	6.7	62.7	32.9	65.6
24000	Cargill 4327 (H)	24552	16434	0.0	53	63.0	69.2	35.4	7.4	3.7	3.6	7.0	42.4	21.2	77.6	5.6	68.6	37.8	63.6
30000	Cargill 4327 (H)	29700	25938	0.0	38	60.4	66.0	34.6	8.3	4.4	4.0	6.2	47.7	24.9	75.0	5.5	67.9	37.8	63.3
36000	Cargill 4327 (H)	36243	29898	0.6	34	55.5	65.6	33.1	9.5	4.5	5.1	6.7	45.1	23.3	75.2	5.3	70.7	39.6	62.5
42000	Cargill 4327 (H)	42174	32670	0.0	39	57.6	67.7	34.4	8.6	4.2	4.5	6.5	47.0	24.7	75.8	6.1	64.7	35.5	64.1
18000	Pioneer 3417 (L)	18612	15840	0.0	61	64.4	70.2	41.1	6.9	3.5	3.4	7.4	49.7	24.9	74.3	6.6	69.8	37.0	62.3
24000	Pioneer 3417 (L)	23166	21780	0.0	54	61.9	65.9	39.3	7.9	4.0	3.9	6.9	47.7	23.9	74.9	5.9	69.2	37.1	63.3
30000	Pioneer 3417 (L)	29106	26928	0.0	53	61.3	66.6	39.4	7.9	4.0	3.8	6.8	50.4	25.3	73.7	4.7	69.4	36.9	62.9
36000	Pioneer 3417 (L)	35442	32076	0.0	53	54.3	62.3	38.3	9.2	4.7	4.5	6.3	45.5	22.5	75.8	5.7	67.3	36.2	63.5
42000	Pioneer 3417 (L)	42174	36432	0.5	56	59.0	63.2	39.1	9.3	4.6	4.7	6.4	48.4	24.7	74.6	5.5	70.2	38.0	62.1
	Mean	30036	35364	0.1	49	60.0	66.8	37.0	8.2	4.1	4.1	6.7	46.8	23.8	75.3	5.7	68.0	36.9	63.3
<b>Probability (%)</b>																			
Plant Density (PD)		<0.1	<0.1	>50	1.0	<0.1	2.2	13.3	<0.1	2.7	46.0	7.4	26.9	18.9	43.0	7.7	48.8	17.9	>50
Hybrid (H)		18.5	1.6	>50	<0.1	>50	3.0	<0.1	>50	>50	>50	48.5	4.2	22.5	5.2	>50	0.3	48.6	0.1
PD x H		>50	42.2	33.0	17.5	>50	>50	>50	>50	>50	10.4	1.2	69.1	>50	>50	>50	0.1	0.1	0.1
<b>LSD (0.10)</b>																			
Plant Density (PD)		1758	2783	NS	4.8	2.8	3.3	NS	0.7	0.5	NS	NS	NS	NS	NS	NS	NS	NS	NS
Hybrid (H)		NS	1606	NS	4.1	NS	1.8	1.0	NS	NS	NS	NS	2.4	NS	1.0	NS	1.1	NS	0.4
<b>CV (%)</b>																			
		5.1	11.4	451.7	15.2	5.3	4.8	5.0	12.5	11.1	16.8	3.6	9.3	10.4	2.4	19.8	2.9	3.8	1.3



**Table E-35. Silage Plant Density by Hybrid Silage Quality  
Lancaster, WI 1996**

Plant Density	Hybrid (H)=High Quality (L)=Low Quality	Final Stand	Ear Density	Broken Stalks	Kernel Milk	Moisture			Yield			Whole plant				Stover			
						Whole Plant	Stover	Grain	Whole Plant	Stover	Grain	Crude Protein	NDF	ADF	Digest.	Crude Protein	NDF	ADF	Digest.
plants/a		plants/a	ear/a	%	%	%			tons DM/a			%				%			
18000		17424	17028	0.6	43	58.2	60.2	35.3	6.4	3.9	2.5	7.6	43.3	20.6	79.0	7.0	64.7	32.9	68.4
24000		24057	23958	4.1	33	56.0	61.0	32.2	7.5	3.7	3.8	7.3	45.7	22.4	78.4	6.9	62.8	31.8	69.4
30000		29106	27324	2.8	32	56.1	59.4	32.8	7.6	4.1	3.5	7.5	42.9	20.7	78.4	6.1	67.1	34.9	66.7
36000		36333	33462	3.8	38	56.8	63.9	35.4	8.1	4.2	3.9	7.7	43.8	21.0	78.9	7.1	65.3	34.3	65.1
42000		41382	37125	4.0	32	51.9	61.2	33.1	8.8	4.4	4.5	7.6	41.9	20.4	78.7	6.4	65.5	34.6	66.6
	Cargill 4327 (H)	30452	28393	3.6	27	56.1	60.0	31.0	7.6	4.2	3.4	7.6	43.5	21.4	78.3	6.4	63.2	33.2	68.7
	Pioneer 3417 (L)	28868	27165	2.6	44	55.5	62.3	36.6	7.7	3.9	3.8	7.5	43.5	20.7	79.1	6.9	66.9	34.2	65.7
18000	Cargill 4327 (H)	18216	17622	0.0	34	59.6	56.6	32.6	6.2	4.5	1.7	7.6	44.9	21.9	77.4	6.6	64.1	33.1	68.9
24000	Cargill 4327 (H)	23760	23958	6.6	24	57.0	60.4	29.7	7.4	3.9	3.5	7.1	48.0	24.1	77.0	6.2	58.4	30.1	71.7
30000	Cargill 4327 (H)	29304	27918	2.0	21	55.9	56.8	29.2	7.6	4.3	3.4	7.6	43.0	21.0	77.9	5.9	66.9	35.6	67.6
36000	Cargill 4327 (H)	37620	34452	3.6	34	58.4	65.7	33.1	8.1	4.2	3.9	7.9	40.6	19.5	80.1	7.1	63.5	33.9	67.2
42000	Cargill 4327 (H)	43362	38016	5.6	24	49.5	60.2	30.2	9.0	4.3	4.7	7.7	41.2	20.4	78.9	6.4	63.2	33.4	68.2
18000	Pioneer 3417 (L)	16632	16434	1.5	53	56.8	63.7	38.0	6.6	3.3	3.2	7.6	41.7	19.4	80.6	7.4	65.3	32.7	67.9
24000	Pioneer 3417 (L)	24354	23958	1.7	43	55.0	61.6	34.7	7.5	3.4	4.1	7.5	43.3	20.8	79.8	7.7	67.1	33.5	67.0
30000	Pioneer 3417 (L)	28908	26730	3.7	43	56.3	62.0	36.5	7.6	4.0	3.6	7.4	42.7	20.5	79.0	6.3	67.4	34.2	65.8
36000	Pioneer 3417 (L)	35046	32472	4.0	43	55.2	62.1	37.6	8.1	4.2	3.9	7.5	46.9	22.4	77.7	7.0	67.1	34.6	62.9
42000	Pioneer 3417 (L)	39402	36234	2.5	40	54.3	62.2	32.0	8.7	4.5	4.2	7.5	42.6	20.4	78.6	6.3	67.7	35.8	65.0
	Mean	29660	27779	3.1	36	55.8	61.1	33.8	7.7	4.1	3.6	7.5	43.5	21.0	78.7	6.7	65.1	33.7	67.2
<b>Probability (%)</b>																			
Plant Density (PD)		<0.1	<0.1	5.2	11.5	7.3	>50	0.9	<0.1	28.5	2.1	>50	>50	>50	>50	33.4	>50	43.5	21.4
Hybrid (H)		2.0	11.0	39.5	<0.1	5.5	19.1	<0.1	>50	12.8	46.2	>50	>50	>50	34.2	17.2	3.1	31.3	1.2
PD x H		19.5	>50	27.2	>50	38.2	>50	>50	>50	30.8	>50	24.0	47.2	47.6	31.3	>50	>50	46.9	>50
<b>LSD (0.10)</b>																			
Plant Density (PD)		1250	1490	NS	NS	NS	NS	1.6	0.7	NS	0.7	NS	NS	NS	NS	NS	NS	NS	NS
Hybrid (H)		1065	NS	NS	4.3	NS	NS	1.3	NS	NS	NS	NS	NS	NS	NS	NS	2.7	NS	2.0
<b>CV (%)</b>																			
Plant Density (PD)		6.5	8.2	110.0	22.0	4.9	8.9	7.0	10.6	15.6	20.3	4.9	14.5	17.0	3.6	17.5	7.6	8.6	4.9

**Table E-36. Silage Plant Density by Hybrid Silage Quality  
Marshfield, WI 1996**

Plant Density	Hybrid (H)=High Quality (L)=Low Quality	Final Stand	Ear Density	Broken Stalks	Kernel Milk	Moisture			Yield			Whole plant				Stover			
						Whole Plant	Stover	Grain	Whole Plant	Stover	Grain	Crude Protein	NDF	ADF	Digest.	Crude Protein	NDF	ADF	Digest.
plants/a		plants/a	ear/a	%	%	%	%	%	tons DM/a	tons DM/a	tons DM/a	%	%	%	%	%	%	%	%
18000		18414	18612	2.1	45	60.7	75.0	36.5	5.6	2.0	3.6	8.4	37.6	17.5	84.6	7.3	62.9	31.4	74.0
24000		23265	23067	2.1	49	60.3	69.4	39.2	6.1	2.6	3.4	8.2	38.7	18.0	84.1	7.2	62.5	31.2	74.4
30000		28809	28314	1.1	49	59.9	69.7	40.5	6.2	2.7	3.5	7.8	37.1	17.4	84.8	6.9	61.1	30.2	74.4
36000		33858	32373	3.6	49	60.7	69.4	41.4	5.6	2.6	3.0	7.5	40.6	19.2	83.2	6.8	59.1	29.4	74.0
42000		39996	37917	1.0	48	60.5	68.6	41.3	6.4	3.1	3.4	7.8	39.2	18.4	84.0	7.1	63.8	32.1	73.7
	Jaques 4120 (L)	28948	27878	1.5	49	60.6	68.5	40.0	6.1	3.0	3.2	7.9	41.2	19.3	82.6	6.9	61.7	31.1	73.2
	Pioneer 3757 (H)	28789	28234	2.4	47	60.3	72.0	39.5	5.8	2.3	3.5	7.9	36.1	16.8	85.6	7.2	62.1	30.7	74.9
18000	Jaques 4120 (L)	18216	18246	1.0	43	60.8	69.4	32.7	5.6	2.5	3.1	8.1	39.6	18.6	83.2	6.9	62.4	31.5	72.8
24000	Jaques 4120 (L)	23166	22968	2.5	48	58.8	67.3	39.3	6.0	2.7	3.3	8.1	40.2	18.6	83.1	6.7	62.3	31.3	73.3
30000	Jaques 4120 (L)	28116	27324	0.7	43	59.8	69.3	40.7	6.3	2.9	3.4	8.3	39.8	18.7	83.7	6.7	61.6	30.7	74.0
36000	Jaques 4120 (L)	35442	33462	2.4	58	61.7	68.9	44.2	6.3	3.3	3.1	7.3	43.1	20.4	81.8	7.0	65.1	27.9	73.3
42000	Jaques 4120 (L)	39798	37422	1.1	53	61.7	67.7	43.2	6.5	3.3	3.2	7.9	43.2	20.4	81.5	7.1	66.2	33.8	73.0
18000	Pioneer 3757 (H)	18612	19008	3.1	48	60.7	79.1	40.2	5.7	1.7	4.0	8.8	35.6	16.4	86.0	7.8	63.5	31.4	75.2
24000	Pioneer 3757 (H)	23364	23166	1.7	50	61.8	71.5	39.1	6.1	2.6	3.6	8.2	37.2	17.3	85.1	7.7	62.8	31.0	75.4
30000	Pioneer 3757 (H)	29502	29304	1.4	55	59.9	70.1	40.3	6.1	2.5	3.6	7.3	34.4	16.2	85.9	7.1	60.7	29.8	74.7
36000	Pioneer 3757 (H)	32274	31284	4.9	40	59.8	68.8	38.6	4.8	2.0	2.8	7.6	38.0	18.0	84.6	6.6	62.1	30.9	74.7
42000	Pioneer 3757 (H)	40194	38412	1.0	43	59.3	69.5	39.5	6.3	2.8	3.5	7.7	35.1	16.4	86.4	7.1	61.4	30.4	74.5
	Mean	28868	28056	2.0	48	60.4	70.3	39.8	6.0	2.6	3.4	7.9	38.6	18.1	84.1	7.1	61.9	30.9	74.1
<b>Probability (%)</b>																			
Plant Density (PD)		<0.1	<0.1	24.6	>50	>50	15.2	19.1	40.2	14.3	29.9	5.7	6.1	14.6	37.5	34.4	22.8	29.0	>50
Hybrid (H)		>50	>50	25.1	>50	>50	0.2	>50	14.1	<0.1	>50	>50	< 0.1	< 0.1	<0.1	7.0	>50	>50	1.6
PD x H		23.3	33.7	>50	5.3	6.6	29.5	3.2	13.2	1.7	71.7	21.7	48.2	>50	>50	21.1	49.2	39.5	>50
<b>LSD (0.10)</b>																			
Plant Density (PD)		1350	1104	NS	NS	NS	NS	NS	NS	NS	NS	0.8	NS	NS	NS	NS	NS	NS	NS
Hybrid (H)		NS	NS	NS	NS	NS	0.9	NS	NS	0.2	NS	NS	1.6	0.9	1.0	NS	NS	NS	1.0
<b>CV (%)</b>																			
		6.8	7.1	118.6	20.7	3.0	2.4	9.6	11.2	11.5	18.9	8.7	7.3	8.9	2.1	8.3	9.2	7.7	2.4

**Table E-37. Silage Plant Density by Hybrid Silage Quality  
Valders, WI 1996**

Plant Density	Hybrid (H)=High Quality (L)=Low Quality	Final Stand plants/a	Ear Density ear/a	Broken Stalks %	Kernel Milk %	Moisture			Yield			Whole plant				Stover					
						Whole Plant	Stover	Grain	Whole Plant	Stover	Grain	Crude Protein	NDF	ADF	Digest.	Crude Protein	NDF	ADF	Digest.		
plants/a		plants/a	ear/a	%	%	Plant	%	Grain	Plant	Stover	Grain	Protein	NDF	ADF	Digest.	Protein	NDF	ADF	Digest.		
									tons DM/a				%					%			
18000		18018	18018	6.5	30	61.1	67.7	36.8	6.9	3.6	3.3	7.9	41.6	20.2	80.9	7.0	58.3	29.4	71.8		
24000		23859	23463	5.1	36	60.4	67.7	36.6	7.4	3.8	3.6	7.6	40.7	19.7	80.6	6.1	59.7	30.5	72.3		
30000		27819	26829	3.3	30	59.7	67.9	35.8	7.6	3.8	3.8	7.0	41.4	20.1	80.8	5.9	58.2	29.7	70.6		
36000		32373	29403	4.4	36	60.6	68.1	34.9	7.8	4.1	3.7	7.5	42.0	20.4	80.4	6.4	57.4	29.0	69.8		
42000		37224	33066	1.9	35	60.4	66.4	39.2	7.7	4.4	3.3	7.3	43.0	21.1	80.0	6.6	57.0	28.9	73.1		
	Jaques 4120 (L)	26888	24196	2.8	36	60.7	66.3	38.5	7.4	4.2	3.3	7.6	42.3	20.4	79.7	6.4	58.1	29.8	71.3		
	Pioneer 3757 (H)	28829	28116	5.7	31	60.2	68.8	34.9	7.5	3.7	3.8	7.3	41.1	20.2	81.4	6.5	58.1	29.2	71.7		
18000	Jaques 4120 (L)	18216	17424	3.2	30	61.2	66.0	35.2	6.6	3.6	3.0	7.8	42.7	20.8	79.4	6.4	57.7	29.7	72.0		
24000	Jaques 4120 (L)	22572	21780	5.5	40	60.5	67.0	38.6	7.3	4.0	3.3	7.4	41.9	20.3	79.8	6.2	59.9	30.9	71.4		
30000	Jaques 4120 (L)	26334	25148	2.5	30	58.1	65.4	36.8	8.0	4.1	3.9	7.4	41.8	19.7	80.5	6.0	59.5	30.5	70.8		
36000	Jaques 4120 (L)	33264	27918	2.2	45	63.0	67.8	37.6	7.7	4.5	3.2	7.6	43.8	21.1	78.8	6.4	58.3	29.8	70.3		
42000	Jaques 4120 (L)	34056	28710	0.6	35	60.6	65.5	44.2	7.7	4.7	3.1	7.6	41.4	19.8	80.1	6.9	55.3	28.2	72.1		
18000	Pioneer 3757 (H)	17820	18612	9.7	30	60.9	69.4	38.4	7.2	3.5	3.7	8.0	40.4	19.5	82.4	7.6	59.0	29.0	71.5		
24000	Pioneer 3757 (H)	25146	25146	4.8	33	60.3	68.4	34.6	7.6	3.7	3.9	7.8	39.4	19.1	81.5	6.0	59.5	30.0	73.2		
30000	Pioneer 3757 (H)	29304	28512	4.1	30	61.3	70.5	34.8	7.2	3.4	3.8	6.6	41.0	20.4	81.0	5.9	57.0	28.9	70.3		
36000	Pioneer 3757 (H)	31482	30888	6.6	28	58.2	68.5	32.2	7.9	3.7	4.2	7.3	40.1	19.7	81.9	6.3	56.5	28.2	69.2		
42000	Pioneer 3757 (H)	40392	37422	3.3	35	60.2	67.4	34.3	7.7	4.1	3.6	7.0	44.6	22.4	79.9	6.4	58.7	29.6	74.1		
	Mean	27859	26155	4.2	34	60.4	67.6	36.7	7.5	3.9	3.6	7.4	41.7	20.3	80.5	6.4	58.1	29.5	71.5		
<b>Probability (%)</b>																					
Plant Density (PD)		<0.1	<0.1	29.9	>50	>50	>50	>50	1.8	2.4	24.8	6.4	>50	>50	>50	4.1	>50	>50	30.4		
Hybrid (H)		13.7	<0.1	7.7	9.4	>50	1.4	11.9	>50	0.4	2.6	14.9	24.7	>50	<0.1	>50	>50	>50	>50		
PD x H		30.9	15.2	>50	24.8	21.1	>50	45.3	>50	>50	>50	8.9	26.8	11.4	21.9	31.4	>50	>50	46.4		
<b>LSD (0.10)</b>																					
Plant Density (PD)		3094	3403	NS	NS	NS	NS	NS	0.4	0.4	NS	NS	NS	NS	NS	0.6	NS	NS	NS		
Hybrid (H)		NS	1581	NS	NS	NS	1.6	NS	NS	0.3	0.4	NS	NS	NS	0.9	NS	NS	NS	NS		
<b>CV (%)</b>																					
		14.0	10.9	113.4	26.4	5.2	4.2	18.8	12.7	11.5	18.3	6.0	7.6	8.0	2.0	13.0	9.8	11.9	3.0		

**Table E-38. Silage Plant Density by Hybrid Silage Quality  
Spooner, WI 1996**

Plant Density	Hybrid (H)=High Quality (L)=Low Quality	Final Stand	Ear Density	Broken Stalks	Kernel Milk	Moisture			Yield			Whole plant				Stover			
						Whole Plant	Stover	Grain	Whole Plant	Stover	Grain	Crude Protein	NDF	ADF	Digest.	Crude Protein	NDF	ADF	Digest.
plants/a		plants/a	ear/a	%	%	%	%	tons DM/a	tons DM/a	tons DM/a	%	%	%	%	%	%	%	%	%
18000		17424	18117	0.6	40	58.3	67.6	32.8	5.30	2.46	2.84	6.8	44.5	22.5	77.9	6.0	67.7	36.2	65.6
24000		22869	23067	1.7	33	58.5	67.5	32.7	6.35	2.92	3.43	6.9	47.3	24.3	75.8	5.7	68.8	36.7	64.9
30000		29997	29898	2.0	40	59.5	68.5	34.2	6.95	3.26	3.69	6.8	46.8	23.9	76.6	5.5	70.3	38.2	63.8
36000		32472	32472	1.1	39	61.3	66.9	33.9	6.29	3.12	3.17	6.5	48.9	25.5	75.7	5.6	39.7	37.7	65.0
42000		38610	37719	2.1	41	60.0	65.4	37.2	7.48	3.69	3.79	5.7	47.3	24.7	75.1	5.4	70.3	43.2	64.2
	Pioneer 3902 (L)	28314	27918	1.2	33	59.1	67.7	33.5	6.46	2.94	3.52	6.4	46.5	24.0	76.0	5.7	69.3	37.3	64.4
	Pioneer 3921 (H)	28235	28591	1.8	44	59.9	66.7	34.8	6.48	3.24	3.24	6.7	47.4	24.3	76.5	5.6	69.4	39.5	65.0
18000	Pioneer 3902 (L)	17028	17828	1.2	30	58.1	69.0	32.7	5.33	2.24	3.09	7.1	40.6	20.5	79.1	5.9	67.8	36.1	65.0
24000	Pioneer 3902 (L)	23364	23364	0.9	28	57.3	67.2	33.0	6.37	2.78	3.59	6.6	50.5	26.2	73.9	5.9	69.8	37.4	64.5
30000	Pioneer 3902 (L)	29898	29304	2.9	38	59.3	68.8	33.8	6.71	3.04	3.67	6.7	47.5	24.4	75.5	5.6	70.0	38.1	64.2
36000	Pioneer 3902 (L)	32670	32472	0.6	33	59.1	67.3	33.7	7.09	3.22	3.87	6.4	49.2	25.6	75.3	5.7	69.6	37.6	64.1
42000	Pioneer 3902 (L)	38610	37422	0.6	38	61.8	66.2	34.4	6.82	3.43	3.39	5.3	44.6	23.2	76.2	5.5	69.5	37.3	64.2
18000	Pioneer 3921 (H)	17820	19206	0.0	50	58.5	66.1	32.9	5.27	2.68	2.59	6.6	48.3	24.5	76.7	6.0	67.6	36.3	66.2
24000	Pioneer 3921 (H)	22374	22770	2.5	38	59.8	67.9	32.5	6.32	3.06	3.26	7.2	44.2	22.3	77.7	5.5	67.8	35.9	65.3
30000	Pioneer 3921 (H)	30096	30492	1.4	43	59.7	68.3	34.5	7.20	3.48	3.72	7.0	46.0	23.3	77.7	5.5	70.6	38.3	63.4
36000	Pioneer 3921 (H)	32274	32472	1.7	45	63.5	66.5	34.2	5.48	3.03	2.45	6.5	48.5	25.3	76.1	5.5	69.8	37.8	66.0
42000	Pioneer 3921 (H)	38610	38016	3.6	45	58.1	64.6	40.0	8.14	3.95	4.19	6.1	50.0	26.3	74.0	5.3	71.1	49.2	64.3
	Mean	28274	28255	1.5	39	59.5	67.2	34.2	6.47	3.09	3.38	6.6	46.9	24.2	76.2	5.6	69.4	38.4	64.7
<b>Probability (%)</b>																			
Plant Density (PD)		<0.1	<0.1	>50	27.7	>50	16.8	23.6	2.0	0.7	2.1	16.9	>50	>50	42.5	16.8	4.4	31.6	19.1
Hybrid (H)		>50	41.1	32.4	<0.1	>50	7.0	32.2	>50	2.9	33.5	46.1	>50	>50	>50	22.9	>50	29.1	17.3
PD x H		>50	>50	25.3	40.4	36.3	31.6	>50	27.1	41.4	>50	>50	14.2	18.3	15.1	>50	>50	24.5	39.1
<b>LSD (0.10)</b>																			
Plant Density (PD)		2844	2964	NS	4.4	NS	NS	NS	1.0	0.5	0.7	NS	NS	NS	NS	NS	1.7	NS	NS
Hybrid (H)		NS	NS	NS	NS	NS	NS	NS	NS	0.2	NS	NS	NS	NS	NS	NS	NS	NS	NS
<b>CV (%)</b>																			
		7.2	8.9	142.1	20.4	6.5	2.5	11.4	19.6	12.7	19.1	43.6	11.9	14.0	3.5	8.4	3.4	16.4	2.2

**Table E-39. Silage Plant Density by Hybrid Silage Quality  
Ashland, WI 1996**

Plant Density	Hybrid (H)=High Quality (L)=Low Quality	Final Stand	Ear Density	Broken Stalks	Kernel Milk	Moisture			Yield			Whole plant				Stover			
						Whole Plant	Stover	Grain	Whole Plant	Stover	Grain	Crude Protein	NDF	ADF	Digest.	Crude Protein	NDF	ADF	Digest.
plants/a		plants/a	ear/a	%	%	%	%	tons DM/a	tons DM/a	tons DM/a	%	%	%	%	%	%	%	%	%
18000		17339	18992	0.0	56	66.5	72.4	41.4	8.8	5.3	3.5	8.1	49.1	25.5	72.1	6.8	65.2	36.0	64.1
24000		23958	23522	0.0	63	66.7	72.6	41.7	9.3	5.6	3.7	7.1	50.2	27.1	71.0	5.8	66.5	37.4	62.5
30000		29534	29447	0.0	61	65.0	70.6	43.1	10.4	5.8	4.6	7.2	46.9	25.4	73.6	6.1	70.1	40.1	63.6
36000		35284	32060	0.0	70	66.2	72.4	44.9	10.1	5.9	4.2	7.2	48.8	26.8	70.1	5.4	69.9	40.7	61.1
42000		39988	32671	0.0	63	66.9	69.5	44.7	9.7	6.4	3.3	7.5	53.9	30.2	68.5	6.2	7.7	41.1	60.3
	Pioneer 3902 (L)	29307	26066	0.0	58	66.3	71.5	43.9	9.7	6.1	3.7	7.6	50.2	27.1	71.1	6.5	67.4	38.2	63.4
	Pioneer 3921 (H)	29133	28610	0.0	68	66.2	71.6	42.4	9.6	5.6	4.0	7.3	49.4	26.8	71.0	5.6	69.6	39.9	61.2
18000	Pioneer 3902 (L)	17424	17947	0.0	50	66.2	71.9	41.8	9.1	5.6	3.5	7.7	50.0	26.3	71.4	6.8	65.2	36.0	64.9
24000	Pioneer 3902 (L)	23871	22825	0.0	60	66.8	71.8	43.0	9.3	5.9	3.4	7.4	50.0	26.9	70.3	6.3	66.8	37.5	64.2
30000	Pioneer 3902 (L)	29447	29272	0.0	58	63.7	70.7	43.7	10.8	6.1	4.7	7.3	46.8	25.3	73.7	6.5	68.0	38.5	64.1
36000	Pioneer 3902 (L)	35545	30492	0.0	65	67.1	73.6	45.6	10.1	5.8	4.3	7.5	49.5	27.3	71.1	6.2	69.6	40.4	61.7
42000	Pioneer 3902 (L)	40249	29795	0.0	55	67.9	69.2	45.3	9.4	6.7	2.7	8.1	54.4	30.0	68.5	6.8	67.5	38.7	62.2
18000	Pioneer 3921 (H)	19250	20038	0.0	63	66.8	72.9	41.0	8.5	5.0	3.5	8.5	48.3	24.6	72.7	6.8	65.3	36.1	63.3
24000	Pioneer 3921 (H)	24045	22219	0.0	65	66.7	73.5	40.5	9.2	5.2	4.0	6.9	50.3	27.3	71.2	5.3	66.3	37.3	60.8
30000	Pioneer 3921 (H)	37621	29621	0.0	65	66.2	76.0	42.5	10.0	5.6	4.4	7.0	47.0	25.4	73.6	5.8	78.2	41.6	63.0
36000	Pioneer 3921 (H)	35022	33628	0.0	75	65.3	71.2	44.1	10.2	5.9	4.3	6.8	48.1	26.4	69.1	4.5	70.3	40.9	60.5
42000	Pioneer 3921 (H)	39723	35546	0.0	70	65.9	69.8	44.1	10.0	6.0	4.0	7.0	53.3	30.3	68.5	5.6	73.8	43.6	58.5
	Mean	29220	27338	0.0	63	66.3	71.5	43.2	9.7	5.8	3.9	7.4	49.8	27.0	71.1	6.1	68.5	39.1	62.3
<b>Probability (%)</b>																			
Plant Density (PD)		<0.1	<0.1	>50	20.3	>50	>50	1.5	1.6	6.7	12.1	<0.1	>0.1	1.4	<0.1	41.3	3.8	2.0	<0.1
Hybrid (H)		>50	3.0	>50	<0.1	>50	>50	0.3	>50	0.2	0.7	4.4	28.5	>50	>50	1.2	<0.1	1.3	<0.1
PD x H		>50	>50	>50	>50	>50	15.1	>50	>50	24.3	>50	10.9	>50	>50	>50	>50	1.7	6.7	>50
<b>LSD (0.10)</b>																			
Plant Density (PD)		942	3956	NS	NS	NS	NS	1.9	0.8	NS	NS	0.3	2.7	7.7	1.7	NS	3.2	2.7	1.6
Hybrid (H)		NS	1854	NS	3.7	NS	NS	0.7	NS	0.2	0.5	0.3	NS	NS	NS	0.9	1.1	1.0	1.2
<b>CV (%)</b>																			
		4.0	12.2		10.7	4.6	2.2	3.1	11.3	6.8	17.4	7.1	4.4	6.3	4.2	17.2	2.9	8.4	3.5

## FIELD EXPERIMENT HISTORY

Title: Silage Date of Planting by Hybrid Study.

Year: 1996

Personnel: J.G. Lauer, K.D.Hudelson

Location: Arlington Research Station, Arlington, WI

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### FIELD INFORMATION

Field: 410

Soil Type: Plano Silt Loam

Soil Test Results: Test Date: 10/95 pH: 6.8 P (ppm): 76 K (ppm): 215 OM (%): 3.3

Fertilizer Applied: (lbs/a): 150 N Analysis: 46-0-0 (preplant)  
(lbs/a): 150 Total Analysis: 6-24-24 (starter)

Tillage Operations: Chisel Plow, Field Cultivate(2x)  
Field Cultivate before each planting

Previous Crop: Soybean

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### EXPERIMENTAL PROCEDURE

Exp. Design: RCB Split plot

Replicates: 3

Variables: 4 Planting Dates  
3 Hybrids

Plot Size: Planted: 10' (4 rows) by 25'  
Harvested: 1 row by 22'  
Row Spacing: 30"  
Planting Rate: 28,000 seeds/a

Hybrids: Pioneer 3417  
Pioneer 3751  
Pioneer 3921

Planting: May 15  
May 30  
June 24  
July 12  
Equipment: 4-row Kinze plot planter

Harvesting: Sept. 30: P3751 & P3921 from DOP 1, and P3769 from DOP 2  
Oct. 10: all remaining plots  
Equipment: Hand harvest

	<u>Material</u>	<u>Rate/A</u>	<u>Method</u>
Herbicides/ Weed Control:	Bladex 4L/Lasso	2qt/2qt	preplant

Note: July 12 DOP was lost due to severe gopher damage to seed just after planting.

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Results: Table E-40.

**Table E-40. Silage Date of Planting by Hybrid Study.  
Arlington, WI 1996.**

Date of Planting	Hybrid	Final Stand plants/a	Kernel Harvest Stage % Milk	Moisture			Yield		
				Whole Plant	Stover	Grain	Whole Plant	Stover	Grain
				%			tons DM/a		
May 15		31416	37	58.2	67.1	35.2	8.0	3.6	4.4
May 30		31504	42	59.2	67.6	42.1	6.9	3.1	3.8
June 24		33616	73	69.9	71.2	53.4	6.2	4.2	2.3
	P3417	32824	53	64.5	66.0	45.4	6.1	3.2	3.3
	P3751	33088	59	63.3	70.9	47.1	7.7	3.9	3.8
	P3921	30624	33	59.6	67.2	35.5	7.0	3.5	3.6
May 15	P3417	32208	50	59.3	66.7	42.9	6.2	3.0	3.2
May 30	P3417	32472	55	60.5	65.4	47.9	6.7	3.3	3.4
June 24	P3417	33792	.	73.7	.	.	5.1	.	.
May 15	P3751	30360	52	61.3	72.5	41.2	8.7	3.7	5.0
May 30	P3751	31416	33	57.9	69.0	42.0	7.4	3.0	4.4
June 24	P3751	37488	92	70.7	71.1	58.2	7.1	5.1	2.0
May 15	P3921	31680	8	54.0	62.0	21.6	8.5	4.0	4.5
May 30	P3921	30624	38	59.4	68.3	36.4	6.7	3.1	3.6
June 24	P3921	29568	53	65.4	71.3	48.6	5.9	3.3	2.6
Mean		32179	48	62.4	68.3	42.4	7.0	3.6	3.6
<b>Probability (%)</b>									
Date of Planting (DOP)		> 50	0.4	< 0.1	24.7	0.8	8.1	6.6	0.6
Hybrid (H)		6.0	< 0.1	< 0.1	0.2	0.2	8.4	30.5	3.4
DOP x H		2.9	1.2	0.7	< 0.1	32.7	> 50	8.6	21.9
<b>LSD (0.10)</b>									
Date of Planting (DOP)		NS	11	1.6	NS	6.8	0.9	0.6	0.6
Hybrid (H)		1799	9	1.6	1.6	6.2	1.1	NS	0.7
<b>CV %</b>									
		6.7	22.3	3.0	2.5	15.3	18.2	21.0	18.5

Note - treatments without stover or grain yield and moisture data had no ear pollination.

# FIELD EXPERIMENT HISTORY

Year: 1996

**Title:** Managing Corn Seed Decay and Seedling Blight in Reduced Tillage Systems  
**Personnel:** J.G. Lauer, C. Grau, K.D. Hudelson  
**Location:** Arlington Research Station, Arlington, WI  
**Supported by:** Ciba, Inc., Hatch Project 1890

## FIELD INFORMATION

Field: 406  
 Soil Type: Plano Silt Loam  
 Soil Test Results: Test Date: 10/95    pH: 6.4    P (ppm): 47    K (ppm): 185    OM (%): 3.4  
 Fertilizer: 19-Apr 150 lbs N/a 46-0-0  
 24-Apr 100 lbs/a 6-24-24 starter  
 Tillage Operations: None  
 Previous Crop: Corn  
 Irrigation: None

## EXPERIMENTAL PROCEDURE

Exp. Design: RCB Split-Split Plot  
 Replicates: 4  
 Variables: A: Tillage, B: Seed Vigor, C: Seed Treatment

Seed Treatments:	Rates (oz fluid product/cwt):
Untreated Control	
Captan 400	2.40 fl oz
Captan 400 + Apron FS	2.40 fl oz + 0.09 fl oz
Maxim + Apron FS	0.08 fl oz + 0.09 fl oz
Maxim + Apron XL	0.08 fl oz + 0.045 fl oz

Area Planted: 10' x 25'  
 Area Harvested: 5.0' x 20'  
 Row Spacing: 30"

Hybrid/Variety: 2 hybrids differing in seedling vigor: high quality(HQ) and medium quality(MQ)  
 2 inbreds differing in seedling vigor: high quality(HQ) and medium quality(MQ)

Planting Date: 24-Apr  
 Planting Equip: JD 7000 Planter w/ 3 coulters  
                   NT - 2 ripple coulters, 1 fluted  
                   ZT - 3 fluted coulters

Planting Rate: 32,000 seeds/acre

Harvesting Date: 17-Oct  
 Harvesting Equip: Gleaner Plot Combine

	<u>Date</u>	<u>Material</u>	<u>Rate</u>	<u>Method</u>
Insecticide:	24-Apr	Lorsban	8 oz/1000 ft	planter
Herbicides:	25-Apr	Roundup	4 pts/a	preemerg
	3-May	Bladex 90DF	2.2 lbs/a	preemerg
	3-May	Lasso	2 qts/a	preemerg

Results: Table E-41.



**Table E-41. Corn Seed Decay and Seedling Blight in Reduced Tillage Systems  
Arlington, WI 1996 (Ciba)**

			Root and Plant Ratings - 42 Days after Planting																				
Tillage	Seedling Vigor	Seed Treatment	Days After Planting				No. of Plants Rated	Leaf Collars	Total Leaves Visible	No. of Seeds Rated	Kernel Rot	Root Discolor	Primary Root Longevity	Seminal Root Length	Nodal Root Length	Whole Plant Dry Wt	Final Stand	Broken Stalks	Moist	Yield			
			35	37	41	47																	
			% Emergence																				
NT			45.2	47.8	52.2	53.9	4.1	1.4	3.2	4.7	1.5	1.4	1.4	4.7	3.4	16.9	1.7	5.9	0.19	17914	3.8	35.4	83.7
ZT			46.1	48.3	50.4	54.2	4.2	1.2	3.1	4.6	1.5	1.4	1.5	4.8	3.2	14.1	1.5	4.4	0.18	17745	5.6	36.0	82.7
	HQ Hybrid		60.8	59.4	59.7	61.1	4.4	1.8	3.9	4.9	1.5	1.4	1.4	5.2	4.2	19.4	2.4	8.8	0.26	21192	1.2	28.9	120.2
	HQ Inbred		28.4	36.0	43.3	46.6	3.8	0.9	2.4	4.5	1.6	1.6	1.5	4.5	1.8	7.3	0.2	0.2	0.11	14952	3.5	36.4	39.7
	MQ Hybrid		56.7	57.5	60.1	62.1	4.4	1.3	3.2	4.6	1.4	1.3	1.5	5.1	3.9	20.6	2.1	6.5	0.22	21279	6.2	44.8	106.2
	MQ Inbred		36.7	39.4	42.0	46.3	4.0	1.1	2.9	4.5	1.6	1.3	1.5	4.2	3.2	13.4	1.6	4.2	0.15	13896	7.9	32.4	63.3
NT	HQ Hybrid		60.9	61.5	61.8	61.5	4.0	1.9	4.0	4.8	1.4	1.3	1.3	5.5	4.3	20.5	2.6	9.9	0.26	21758	1.4	30.1	117.0
ZT	HQ Hybrid		60.7	57.2	57.7	60.7	4.7	1.7	3.9	5.0	1.6	1.4	1.4	4.8	4.0	18.4	2.3	7.7	0.26	20626	1.0	27.7	123.2
NT	HQ Inbred		30.7	35.4	44.7	47.4	4.1	0.9	2.3	4.8	1.5	1.8	1.6	3.7	1.6	6.8	0.3	0.3	0.13	14832	4.4	36.2	39.3
ZT	HQ Inbred		26.0	36.6	41.9	45.7	3.5	0.9	2.5	4.1	1.6	1.4	1.4	5.2	1.9	7.7	0.1	0.1	0.10	15072	2.6	36.6	40.1
NT	MQ Hybrid		52.5	55.8	59.2	59.9	4.4	1.4	3.4	4.6	1.6	1.2	1.3	5.6	4.0	23.9	2.3	7.6	0.22	20865	3.4	44.9	105.0
ZT	MQ Hybrid		60.9	59.2	60.9	64.4	4.3	1.1	3.0	4.6	1.2	1.4	1.7	4.5	3.8	17.2	1.9	5.4	0.22	21693	9.0	44.8	107.3
NT	MQ Inbred		36.6	38.6	42.9	46.6	3.8	1.2	3.0	4.4	1.6	1.3	1.4	3.8	3.6	15.1	1.6	5.2	0.16	14201	6.0	29.4	68.6
ZT	MQ Inbred		36.9	40.2	41.1	45.9	4.1	1.0	2.9	4.5	1.7	1.3	1.6	4.7	2.8	11.6	1.5	3.2	0.14	13591	9.8	34.8	58.8
		Captan	52.8	54.7	58.7	59.5	4.8	1.3	3.2	4.9	1.8	1.4	1.5	4.3	3.0	13.7	1.4	3.5	0.19	20255	3.7	35.2	88.0
		Captan + Apron FS	53.2	60.1	61.1	66.2	4.5	1.3	3.1	4.8	1.8	1.2	1.3	5.6	2.9	14.7	1.6	5.0	0.19	21916	3.0	35.0	98.5
		Control	11.6	9.7	15.2	12.7	1.8	1.3	3.4	3.6	1.1	1.8	1.8	2.5	4.6	17.8	2.1	7.7	0.17	4479	9.5	38.0	43.3
		Maxim + Apron FS	54.6	57.7	61.4	65.4	4.8	1.2	3.2	4.8	1.5	1.3	1.4	5.1	3.4	15.6	1.7	5.3	0.19	21317	4.0	35.5	91.7
		Maxim + Apron XL	55.9	58.1	60.1	66.1	4.8	1.3	3.1	5.0	1.4	1.4	1.4	5.7	3.1	16.6	1.6	5.0	0.19	21181	3.4	35.1	88.0
NT		Captan	53.3	54.7	59.9	58.8	4.9	1.3	3.2	5.0	1.8	1.5	1.5	4.7	3.0	13.4	1.3	3.5	0.19	20609	3.0	35.0	86.8
ZT		Captan	52.3	54.7	57.5	60.3	4.6	1.2	3.1	4.9	1.9	1.4	1.5	3.9	3.0	14.0	1.4	3.5	0.19	19901	4.4	35.5	89.1
NT		Captan + Apron FS	49.2	58.8	61.0	65.4	4.4	1.2	2.9	4.6	1.8	1.3	1.3	5.1	2.9	16.4	1.5	5.0	0.18	21698	4.1	34.0	95.5
ZT		Captan + Apron FS	57.3	61.4	61.1	67.1	4.6	1.3	3.2	4.9	1.8	1.1	1.2	6.0	2.9	12.9	1.6	5.0	0.20	22134	1.8	35.8	101.1
NT		Control	12.0	10.6	19.5	13.3	1.8	1.8	3.7	4.0	1.0	1.5	1.4	1.9	5.0	21.6	2.5	11.2	0.21	4193	5.6	38.6	49.2
ZT		Control	11.2	8.8	10.9	12.2	1.8	0.8	3.1	3.1	1.1	2.2	2.3	3.4	4.0	13.3	1.5	3.6	0.14	4764	13.4	37.6	39.0
NT		Maxim + Apron FS	54.6	57.9	61.6	65.8	4.5	1.3	3.3	4.6	1.6	1.3	1.3	5.9	3.7	16.8	1.7	5.7	0.20	22733	2.5	35.5	92.4
ZT		Maxim + Apron FS	54.6	57.6	61.1	65.1	5.0	1.2	3.1	4.9	1.5	1.3	1.5	4.3	3.1	14.3	1.7	4.9	0.19	19901	5.6	35.6	91.1
NT		Maxim + Apron XL	56.7	57.1	58.9	66.0	4.9	1.3	3.1	5.0	1.4	1.5	1.4	5.5	3.0	17.4	1.7	5.4	0.19	20337	3.7	34.6	85.7
ZT		Maxim + Apron XL	55.2	59.0	61.3	66.3	4.8	1.3	3.0	5.0	1.4	1.3	1.4	5.8	3.3	15.7	1.4	4.5	0.19	22025	3.1	35.6	90.3
	HQ Hybrid	Captan	71.5	68.1	70.7	68.8	4.8	1.7	3.9	5.0	1.8	1.6	1.6	3.5	3.5	14.1	2.1	5.8	0.24	24775	1.3	28.4	134.1
	HQ Inbred	Captan	31.4	38.7	49.7	50.5	4.8	1.0	2.7	4.8	1.8	1.6	1.5	4.5	2.0	9.3	0.5	0.4	0.13	15246	0.9	35.1	37.1
	MQ Hybrid	Captan	66.4	66.6	67.8	69.2	4.5	1.4	3.3	5.0	1.8	1.3	1.4	4.8	3.8	19.9	2.2	6.6	0.25	24720	4.3	45.3	120.6
	MQ Inbred	Captan	42.0	45.4	46.6	49.7	5.0	0.9	2.7	5.0	2.0	1.4	1.6	4.5	2.6	11.4	0.8	1.4	0.15	16281	8.3	32.2	60.1
	HQ Hybrid	Captan + Apron FS	68.3	69.4	67.4	69.6	4.8	1.9	4.1	4.8	1.8	1.2	1.0	6.7	3.9	19.6	3.0	11.4	0.27	24230	1.0	28.5	138.5
	HQ Inbred	Captan + Apron FS	35.9	50.1	51.8	60.2	4.0	0.7	2.0	4.3	1.9	1.4	1.3	5.6	1.5	6.2	0.0	0.0	0.12	20800	0.8	37.2	48.9
	MQ Hybrid	Captan + Apron FS	62.2	69.4	68.5	76.6	4.8	1.3	3.3	5.0	1.8	1.3	1.5	5.8	3.4	21.4	2.1	6.1	0.21	25483	2.4	44.6	127.7
	MQ Inbred	Captan + Apron FS	46.5	51.4	56.7	58.6	4.5	1.1	2.9	5.0	1.9	1.0	1.2	4.0	2.8	11.5	1.2	2.6	0.16	17152	7.6	31.1	76.2
	HQ Hybrid	Control	21.5	21.1	23.9	22.6	3.0	1.3	3.8	5.0	1.3	1.8	1.8	2.2	4.5	17.6	1.9	7.3	0.29	7841	1.8	32.3	61.1
	HQ Inbred	Control	5.4	4.6	15.8	6.8	0.8	1.0	2.3	3.3	1.0	2.3	2.3	5.0	1.3	5.7	0.0	0.0	0.12	2396	13.3	35.6	18.9
	MQ Hybrid	Control	13.2	11.1	16.2	15.2	2.5	1.0	2.8	3.0	1.0	1.7	1.9	1.5	4.4	17.1	1.9	6.0	0.15	6588	11.7	44.4	56.3
	MQ Inbred	Control	6.3	2.0	4.9	6.3	0.8	2.0	4.3	3.0	1.0	1.8	1.5	2.7	6.5	25.8	3.8	15.8	0.13	1089	11.7	41.6	17.7
	HQ Hybrid	Maxim + Apron FS	70.5	68.6	68.3	73.0	4.5	1.9	3.9	4.8	1.5	1.2	1.2	5.8	4.4	22.6	2.8	10.6	0.25	24339	0.9	28.0	136.7
	HQ Inbred	Maxim + Apron FS	31.5	42.9	49.7	56.1	5.0	0.9	2.6	5.0	1.6	1.6	1.4	4.2	2.2	9.9	0.3	0.3	0.11	18949	1.6	37.2	48.7
	MQ Hybrid	Maxim + Apron FS	72.8	70.1	74.5	75.1	5.0	1.1	3.2	5.0	1.4	1.2	1.6	5.7	4.1	18.9	2.0	5.6	0.26	25428	6.1	44.8	119.9
	MQ Inbred	Maxim + Apron FS	43.5	49.3	53.0	57.5	4.5	1.0	3.0	4.3	1.6	1.2	1.4	4.6	2.9	11.0	1.8	4.8	0.17	16553	7.5	31.3	67.3

**Table E-41. Corn Seed Decay and Seedling Blight in Reduced Tillage Systems  
Arlington, WI 1996 (Ciba)**

			Root and Plant Ratings - 42 Days after Planting																				
Tillage	Seedling Vigor	Seed Treatment	Days After Planting				No. of Plants Rated	Leaf Collars	Total Leaves Visible	No. of Seeds Rated	Kernel Rot	Root Discolor	Primary Root Longevity	Seminal Root Length	Seminal Root Number	Nodal Root Length	Nodal Root Number	Whole Plant Dry Wt	Final Stand	Broken Stalks	Moist	Yield	
			35	37	41	47																	
			% Emergence								\1\	\2\	\3\	cm	cm	cm	g/plant	plants/A	%	%	bu/a		
	HQ Hybrid	Maxim + Apron XL	72.0	69.6	68.3	71.6	4.8	1.9	4.0	5.0	1.3	1.2	1.2	7.0	4.5	23.2	2.4	8.8	0.27	24775	1.1	27.0	132.6
	HQ Inbred	Maxim + Apron XL	37.6	43.6	49.6	59.1	4.5	1.0	2.2	5.0	1.4	1.7	1.7	3.3	1.4	4.1	0.3	0.3	0.10	17370	0.6	36.8	43.6
	MQ Hybrid	Maxim + Apron XL	68.8	70.2	73.4	74.5	5.0	1.5	3.5	5.0	1.2	1.1	1.1	7.7	3.8	25.7	2.2	8.5	0.25	24176	6.5	45.0	109.3
	MQ Inbred	Maxim + Apron XL	45.4	48.8	49.1	59.4	5.0	0.9	2.6	5.0	1.8	1.6	1.7	4.7	3.0	13.3	1.4	2.3	0.15	18404	5.4	31.5	66.7
NT	HQ Hybrid	Captan	73.4	68.8	73.4	67.9	4.5	1.8	3.8	5.0	1.5	1.7	1.7	4.0	3.2	12.3	2.2	6.0	0.23	25809	1.7	29.3	129.4
ZT	HQ Hybrid	Captan	69.6	67.4	67.9	69.6	5.0	1.7	4.0	5.0	2.0	1.4	1.4	3.0	3.8	16.0	2.0	5.6	0.25	23740	0.9	27.5	138.8
NT	HQ Inbred	Captan	35.3	41.9	56.3	52.7	5.0	1.0	2.7	5.0	1.9	1.6	1.3	4.8	2.0	8.9	0.5	0.4	0.13	15137	0.0	35.9	42.8
ZT	HQ Inbred	Captan	27.5	35.6	43.2	48.4	4.5	1.0	2.8	4.5	1.8	1.5	1.6	4.1	2.0	9.7	0.5	0.5	0.12	15355	1.8	34.4	31.3
NT	MQ Hybrid	Captan	62.2	63.0	64.4	65.5	5.0	1.4	3.5	5.0	1.9	1.2	1.3	5.2	3.9	19.2	2.2	6.9	0.25	24176	6.0	45.4	111.3
ZT	MQ Hybrid	Captan	70.7	70.1	71.2	72.8	4.0	1.3	3.1	5.0	1.7	1.3	1.4	4.3	3.8	20.5	2.1	6.2	0.25	25265	2.6	45.3	129.9
NT	MQ Inbred	Captan	42.4	45.1	45.4	49.2	5.0	0.9	2.7	5.0	1.9	1.3	1.7	4.8	2.7	13.1	0.5	0.9	0.16	17315	4.2	29.6	63.8
ZT	MQ Inbred	Captan	41.6	45.7	47.8	50.3	5.0	0.9	2.7	5.0	2.0	1.4	1.5	4.2	2.4	9.7	1.1	1.8	0.13	15246	12.3	34.8	56.5
NT	HQ Hybrid	Captan + Apron FS	70.1	73.9	68.8	72.3	4.5	1.9	4.0	4.5	1.6	1.2	1.0	7.4	3.7	20.6	2.7	10.4	0.28	26136	1.0	29.1	136.3
ZT	HQ Hybrid	Captan + Apron FS	66.6	65.0	66.0	66.9	5.0	2.0	4.1	5.0	2.0	1.1	1.0	6.1	4.1	18.6	3.2	12.3	0.27	22325	1.0	27.9	140.7
NT	HQ Inbred	Captan + Apron FS	31.5	43.5	48.9	57.3	4.0	0.5	1.6	4.0	1.8	1.6	1.6	3.8	1.4	5.5	0.0	0.0	0.08	19493	1.1	35.5	43.1
ZT	HQ Inbred	Captan + Apron FS	40.2	56.8	54.6	63.0	4.0	0.8	2.4	4.5	1.9	1.2	1.1	7.5	1.7	6.8	0.0	0.0	0.16	22107	0.6	38.5	53.3
NT	MQ Hybrid	Captan + Apron FS	50.8	69.0	68.8	75.0	4.5	1.4	3.3	5.0	2.0	1.4	1.4	5.9	3.6	28.7	2.0	6.7	0.21	24829	3.5	44.5	124.5
ZT	MQ Hybrid	Captan + Apron FS	73.6	69.8	68.2	78.3	5.0	1.2	3.3	5.0	1.5	1.1	1.6	5.6	3.2	14.2	2.1	5.4	0.22	26136	1.2	44.8	130.0
NT	MQ Inbred	Captan + Apron FS	44.3	48.9	57.6	57.1	4.5	1.3	2.8	5.0	1.9	1.0	1.3	3.1	2.8	10.9	1.5	2.9	0.16	16335	11.0	30.0	72.2
ZT	MQ Inbred	Captan + Apron FS	48.6	53.8	55.7	60.1	4.5	1.0	3.0	5.0	1.9	1.0	1.1	5.0	2.7	12.1	0.9	2.3	0.15	17969	4.3	32.1	80.3
NT	HQ Hybrid	Control	21.7	23.1	28.8	25.0	2.5	1.8	4.0	5.0	1.0	1.1	1.5	2.3	5.0	20.6	2.5	11.4	0.27	7950	3.6	34.8	63.1
ZT	HQ Hybrid	Control	21.2	19.0	19.0	20.1	3.5	1.0	3.8	5.0	1.5	2.5	2.1	1.9	4.1	14.6	1.2	3.3	0.32	7732	0.0	29.8	59.1
NT	HQ Inbred	Control	6.8	4.9	23.4	5.7	1.5	1.0	2.3	5.0	1.0	2.3	2.3	1.7	1.3	5.7	0.0	0.0	0.23	1198	16.7	35.8	14.0
ZT	HQ Inbred	Control	4.1	4.4	8.2	7.9	0.0	.	.	1.5	1.0	.	.	8.2	.	.	.	.	0.00	3594	10.0	35.4	22.6
NT	MQ Hybrid	Control	13.9	12.0	18.8	15.8	2.5	1.6	3.5	3.0	1.0	1.2	1.1	1.6	4.3	21.8	3.0	9.6	0.16	6316	0.9	44.3	61.7
ZT	MQ Hybrid	Control	12.5	10.3	13.6	14.7	2.5	0.5	2.1	3.0	1.0	2.3	2.8	1.3	4.5	12.4	0.9	2.4	0.15	6861	22.6	44.4	51.0
NT	MQ Inbred	Control	5.4	2.5	7.1	6.5	0.5	3.0	5.0	3.0	1.0	2.0	1.0	1.9	10.0	39.0	4.0	25.0	0.16	1307	0.0	.	.
ZT	MQ Inbred	Control	7.1	1.6	2.7	6.0	1.0	1.0	3.5	3.0	1.0	1.5	2.0	4.4	3.0	12.5	3.5	6.5	0.10	871	23.3	41.6	17.7
NT	HQ Hybrid	Maxim + Apron FS	68.5	70.1	66.6	69.3	4.0	1.9	3.9	4.5	1.5	1.3	1.4	6.6	5.1	24.3	2.8	10.9	0.24	24394	0.5	28.8	136.6
ZT	HQ Hybrid	Maxim + Apron FS	72.6	67.1	70.1	76.6	5.0	2.0	4.0	5.0	1.4	1.0	1.1	5.1	3.8	20.9	2.9	10.4	0.25	24285	1.3	27.4	136.7
NT	HQ Inbred	Maxim + Apron FS	38.6	44.8	49.5	60.3	5.0	1.0	2.8	5.0	1.6	1.5	1.3	4.6	2.2	9.7	0.4	0.4	0.11	21344	2.8	37.0	44.9
ZT	HQ Inbred	Maxim + Apron FS	24.5	41.0	50.0	51.9	5.0	0.8	2.3	5.0	1.6	1.7	1.4	3.9	2.2	10.0	0.1	0.1	0.11	16553	0.5	37.4	52.5
NT	MQ Hybrid	Maxim + Apron FS	68.8	67.9	73.4	72.8	5.0	1.2	3.4	5.0	1.7	1.0	1.4	7.6	4.3	21.9	2.2	7.1	0.28	26354	1.2	45.1	129.1
ZT	MQ Hybrid	Maxim + Apron FS	76.9	72.3	75.5	77.5	5.0	1.0	3.0	5.0	1.1	1.4	1.7	3.7	3.8	15.9	1.7	4.0	0.23	24503	11.0	44.5	110.7
NT	MQ Inbred	Maxim + Apron FS	42.7	48.6	57.1	60.6	4.0	1.0	3.0	4.0	1.4	1.3	1.3	4.8	3.1	11.4	1.6	4.5	0.17	18840	5.7	29.4	70.0
ZT	MQ Inbred	Maxim + Apron FS	44.3	50.0	48.9	54.4	5.0	1.0	2.9	4.5	1.8	1.2	1.6	4.4	2.7	10.6	2.0	5.1	0.16	14266	9.4	33.1	64.6
NT	HQ Hybrid	Maxim + Apron XL	70.7	71.7	71.5	72.8	4.5	2.0	4.2	5.0	1.3	1.1	1.0	7.4	4.5	24.7	2.7	10.7	0.30	24503	0.4	28.0	124.5
ZT	HQ Hybrid	Maxim + Apron XL	73.4	67.4	65.2	70.4	5.0	1.7	3.7	5.0	1.2	1.2	1.3	6.5	4.4	21.7	2.0	7.0	0.24	25047	1.8	26.0	140.6
NT	HQ Inbred	Maxim + Apron XL	41.3	41.9	45.7	60.9	5.0	0.9	2.0	5.0	1.1	2.2	1.9	2.7	1.1	3.8	0.6	0.6	0.09	16988	1.3	36.5	46.3
ZT	HQ Inbred	Maxim + Apron XL	34.0	45.4	53.5	57.3	4.0	1.0	2.4	5.0	1.6	1.2	1.6	4.0	1.7	4.4	0.0	0.0	0.10	17751	0.0	37.2	40.9
NT	MQ Hybrid	Maxim + Apron XL	66.6	66.9	70.9	70.4	5.0	1.5	3.5	5.0	1.5	1.1	1.1	7.7	3.7	28.1	1.9	7.7	0.22	22651	5.5	45.0	103.5
ZT	MQ Hybrid	Maxim + Apron XL	70.9	73.6	75.8	78.5	5.0	1.5	3.5	5.0	0.9	1.0	1.0	7.7	3.8	23.2	2.5	9.2	0.28	25700	7.5	45.0	115.1
NT	MQ Inbred	Maxim + Apron XL	48.1	47.8	47.6	59.8	5.0	0.9	2.6	5.0	1.7	1.5	1.6	4.2	2.7	13.2	1.5	2.6	0.16	17206	7.5	28.7	68.6
ZT	MQ Inbred	Maxim + Apron XL	42.7	49.7	50.5	59.0	5.0	0.9	2.5	5.0	1.8	1.6	1.8	5.2	3.2	13.4	1.2	1.9	0.14	19602	3.3	34.2	64.8

**Table E-41. Corn Seed Decay and Seedling Blight in Reduced Tillage Systems  
Arlington, WI 1996 (Ciba)**

Tillage	Seedling Vigor	Seed Treatment	Root and Plant Ratings - 42 Days after Planting																				
			Days After Planting				No. of Plants Rated	Leaf Collars	Total Leaves Visible	No. of Seeds Rated	Kernel Rot	Root Discolor	Primary Root Longevity	Primary Root Length	Seminal Root Number	Seminal Root Length	Nodal Root Number	Nodal Root Length	Whole Plant Dry Wt	Final Stand	Broken Stalks	Moist	Yield
			35	37	41	47																	
<b>Mean</b>			45.6	48.1	51.3	54.0	4.1	1.3	3.1	4.6	1.5	1.4	1.5	4.7	3.3	15.5	1.6	5.1	0.19	17830	4.7	35.7	83.1
<b>Probability (%)</b>																							
Tillage (T)			> 50	> 50	> 50	> 50		31.0	> 50		> 50	> 50	39.7	47.7	14.9	4.7	48.8	26.8	19.8	> 50	42.8	25.6	> 50
Seedling Vigor (V)			< 0.1	< 0.1	< 0.1	< 0.1		< 0.1	< 0.1		29.6	44.0	20.6	37.5	< 0.1	0.8	0.2	0.2	< 0.1	< 0.1	2.4	< 0.1	< 0.1
T x V			2.0	4.2	42.3	27.4		> 50	33.7		7.0	> 50	44.2	6.8	5.9	> 50	> 50	> 50	> 50	33.8	25.0	12.9	> 50
Seed Treatment (S)			< 0.1	< 0.1	< 0.1	< 0.1		> 50	> 50		< 0.1	6.2	0.3	0.9	< 0.1	9.8	48.1	9.7	> 50	< 0.1	3.9	0.2	< 0.1
T x S			20.3	> 50	30.9	> 50		< 0.1	5.3		> 50	39.0	1.1	6.2	< 0.1	< 0.1	8.6	< 0.1	22.0	3.1	20.6	> 50	> 50
V x S			< 0.1	0.4	15.0	48.9		0.1	0.6		> 50	> 50	5.3	4.6	< 0.1	< 0.1	0.3	< 0.1	25.1	15.3	> 50	< 0.1	1.0
T x V x S			> 50	37.3	> 50	> 50		> 50	> 50		> 50	37.1	47.3	> 50	< 0.1	1.9	> 50	> 50	6.4	> 50	21.4	> 50	> 50
<b>LDS (0.10)</b>																							
Tillage (T)			NS	NS	NS	NS		NS	NS		NS	NS	NS	NS	NS	1.7	NS	NS	NS	NS	NS	NS	NS
Seedling Vigor (V)			3.3	2.3	3.1	2.9		0.2	0.2		NS	NS	NS	NS	0.4	4.6	0.6	2.1	0.02	976	3.7	2.0	6.2
Seed Treatment (S)			3.8	2.8	4.4	3.2		NS	NS		0.2	0.3	0.2	1.1	0.3	1.9	NS	1.7	NS	1205	4.0	0.9	7.3
<b>CV%</b>			20.2	13.9	20.9	14.4		21.7	14.3		17.9	31.7	22.6	37.0	15.2	20.2	43.7	55.1	25.9	16.3	206.2	6.1	21.1

\1\ Kernel rot with 1=deterioration 2=no deterioration  
 \2\ Root discoloration with 1=none, 2=trace, 3=light, 4=moderate, and 5=severe  
 \3\ Longevity of primary root with 1=living, 2=blighted, 3=dead or pruned



**Table E-42. Corn Seed Decay and Seedling Blight in Reduced Tillage Systems  
Arlington, WI 1996 (Gustafson)**

Tillage	Seedling Vigor	Seed Treatment	Root and Plant Ratings - 42 Days after Planting																				
			Days After Planting			No. of Plants Rated	No. of Seeds Rated	Kernel Rot	Root Discolor	Leaf Collars	Total Leaves		Primary Longevity	Root Length	Seminal Root		Nodal Root		Whole Plant Dry Wt	Final Stand	Broken Stalks	Moist	Yield
			35	41	47						Visible	Number			Length	Number	Length	g/plant					
	\1\		% Emergence					\2\	\3\		\4\	cm	cm	cm	cm	g/plant	plants/A	%	%	bu/A			
NT			67.0	80.7	79.8	4.6	4.8	1.3	1.5	1.0	3.1	1.4	6.3	3.6	21.1	1.2	2.0	0.24	23969	8.1	36.3	148.5	
ZT			78.0	86.8	86.2	4.7	4.9	1.3	1.4	1.1	3.5	1.3	6.9	3.5	22.5	2.0	4.2	0.25	25329	10.8	36.0	152.3	
	LQ P3556		82.4	90.6	89.9	4.9	5.0	1.3	1.4	1.1	3.4	1.4	6.5	4.1	24.0	2.1	4.4	0.22	26562	6.4	34.9	159.4	
	MQ P3475		62.6	76.9	76.1	4.5	4.7	1.3	1.5	1.1	3.2	1.4	6.6	3.0	19.5	1.2	1.8	0.27	22736	12.5	37.4	141.4	
NT	LQ P3556		77.8	87.7	88.1	4.8	5.0	1.3	1.5	1.0	3.2	1.4	6.3	4.1	23.2	1.5	2.5	0.22	26343	7.0	35.3	157.9	
NT	MQ P3475		56.2	73.6	71.5	4.4	4.7	1.3	1.5	1.0	3.0	1.4	6.3	3.1	18.9	0.9	1.3	0.26	21596	9.1	37.3	139.1	
ZT	LQ P3556		87.0	93.5	91.7	4.9	5.0	1.3	1.4	1.2	3.6	1.3	6.8	4.1	24.9	2.6	6.2	0.23	26781	5.9	34.4	160.9	
ZT	MQ P3475		69.0	80.2	80.7	4.5	4.8	1.3	1.5	1.1	3.4	1.3	6.9	3.0	20.1	1.4	2.3	0.28	23877	15.8	37.5	143.7	
		Control	50.1	60.1	59.1	4.3	4.8	1.8	1.6	1.1	3.4	1.5	5.6	4.0	24.4	2.0	3.6	0.26	17928	10.9	36.0	128.9	
		Captan 400	78.3	87.6	88.0	4.9	5.0	1.2	1.4	1.1	3.4	1.3	7.7	3.6	23.8	2.3	5.0	0.26	26156	9.2	35.2	158.9	
		Captan+Apron FL	76.7	89.6	88.5	4.9	4.9	1.2	1.5	1.0	3.2	1.4	6.2	3.4	20.1	1.1	1.4	0.23	25914	9.4	36.4	158.8	
		Captan+Apron FL+Raxil	75.7	88.0	85.6	4.6	4.9	1.1	1.4	1.1	3.3	1.3	6.7	3.6	20.0	1.6	3.7	0.22	26600	7.1	35.9	158.0	
		Captan+Apron FL+LS015	77.3	87.6	87.0	4.8	4.7	1.2	1.4	1.0	3.3	1.3	6.8	3.5	22.3	1.5	2.2	0.24	26237	8.3	36.6	150.5	
		Captan+Apron FL+Dynacoat	74.3	85.6	85.9	4.8	4.9	1.1	1.4	1.1	3.3	1.3	6.4	3.3	19.6	1.3	2.9	0.24	24724	10.2	36.0	151.6	
		Maxim+Apron FL	75.1	87.8	86.9	4.4	4.7	1.6	1.4	1.1	3.2	1.3	6.5	3.7	22.2	1.7	3.1	0.26	24986	11.0	36.8	146.3	
NT		Control	44.8	56.7	57.2	4.3	4.9	1.7	1.7	1.0	3.2	1.6	4.9	4.0	22.0	1.4	2.0	0.28	17142	5.1	36.6	124.0	
ZT		Control	55.4	63.5	61.0	4.4	4.8	1.8	1.5	1.1	3.7	1.5	6.2	4.0	26.8	2.5	5.2	0.25	18715	16.8	35.5	133.7	
NT		Captan 400	75.1	86.3	86.7	5.0	5.0	1.2	1.4	1.0	3.4	1.3	7.7	3.6	23.7	2.3	3.5	0.26	26257	9.0	35.4	159.7	
ZT		Captan 400	81.4	88.9	89.4	4.9	5.0	1.2	1.5	1.2	3.5	1.3	7.8	3.6	23.9	2.2	6.4	0.26	26055	9.4	34.9	158.0	
NT		Captan+Apron FL	72.0	85.2	85.1	4.8	4.9	1.2	1.5	1.0	3.1	1.4	6.5	3.5	20.8	0.7	0.9	0.23	24321	8.5	36.0	155.3	
ZT		Captan+Apron FL	81.4	94.0	91.9	5.0	5.0	1.2	1.4	1.0	3.3	1.4	5.8	3.4	19.4	1.5	2.0	0.24	27507	10.3	36.8	162.3	
NT		Captan+Apron FL+Raxil	68.8	86.0	81.3	4.3	4.8	1.1	1.4	1.1	3.0	1.4	6.3	3.5	18.9	1.2	3.4	0.20	25692	6.3	36.7	151.7	
ZT		Captan+Apron FL+Raxil	82.6	90.0	90.0	4.9	5.0	1.1	1.4	1.1	3.5	1.2	7.1	3.7	21.1	2.0	3.9	0.25	27507	8.0	35.2	164.3	
NT		Captan+Apron FL+LS015	71.1	82.6	81.5	4.8	4.6	1.2	1.3	1.0	3.2	1.4	6.4	3.7	22.9	1.3	1.9	0.24	25450	10.9	35.9	151.8	
ZT		Captan+Apron FL+LS015	83.6	92.7	92.5	4.8	4.8	1.1	1.4	1.1	3.4	1.3	7.2	3.3	21.7	1.7	2.5	0.25	27023	5.7	37.3	149.3	
NT		Captan+Apron FL+Dynacoat	68.1	82.7	82.2	4.9	5.0	1.2	1.5	1.0	3.1	1.4	5.9	3.4	18.8	0.6	1.0	0.23	23958	9.4	35.9	153.6	
ZT		Captan+Apron FL+Dynacoat	80.4	88.5	89.7	4.6	4.9	1.1	1.3	1.2	3.5	1.2	6.9	3.2	20.3	1.9	4.7	0.25	25491	10.9	36.2	149.7	
NT		Maxim+Apron FL	69.0	85.2	84.8	4.3	4.6	1.6	1.6	1.0	3.0	1.4	6.0	3.6	20.4	1.0	1.2	0.25	24966	7.4	37.7	143.7	
ZT		Maxim+Apron FL	81.1	90.5	89.0	4.5	4.8	1.6	1.3	1.2	3.5	1.2	7.1	3.7	24.0	2.4	5.0	0.26	25007	14.6	35.9	148.8	
	LQ P3556	Control	57.3	63.0	63.5	4.6	5.0	1.8	1.5	1.1	3.5	1.5	5.6	4.4	25.2	2.5	5.0	0.22	19078	3.9	35.9	135.2	
	MQ P3475	Control	42.9	57.1	54.8	4.0	4.6	1.8	1.6	1.1	3.4	1.6	5.5	3.6	23.5	1.4	2.3	0.31	16779	17.9	36.2	122.5	
	LQ P3556	Captan 400	84.5	92.5	91.2	5.0	5.0	1.1	1.4	1.2	3.6	1.2	8.1	4.3	27.0	2.8	6.8	0.25	28233	8.6	34.0	166.7	
	MQ P3475	Captan 400	72.0	82.6	84.9	4.9	5.0	1.2	1.5	1.0	3.3	1.4	7.4	2.9	20.7	1.7	3.0	0.27	24079	9.8	36.3	151.1	
	LQ P3556	Captan+Apron FL	86.4	98.4	96.7	5.0	5.0	1.2	1.5	1.0	3.0	1.5	5.6	4.0	21.7	1.1	1.3	0.20	26983	6.3	35.5	162.1	
	MQ P3475	Captan+Apron FL	67.0	80.8	80.2	4.8	4.9	1.2	1.5	1.1	3.3	1.3	6.8	2.9	18.5	1.1	1.5	0.27	24845	12.5	37.3	155.5	

**Table E-42. Corn Seed Decay and Seedling Blight in Reduced Tillage Systems  
Arlington, WI 1996 (Gustafson)**

Tillage	Seedling Vigor	Seed Treatment	Root and Plant Ratings - 42 Days after Planting																			
			Days After Planting			No. of Plants	No. of Seeds	Kernel	Root	Leaf	Total Leaves		Primary Root	Seminal Root		Nodal Root		Whole Plant	Final Stand	Broken Stalks	Moist	Yield
			35	41	47	Rated	Rated	Rot	Discolor	Collars	Visible	Longevity	Length	Number	Length	Number	Length	Dry Wt	plants/A	%	%	bu/A
	\1\		% Emergence					\2\	\3\			\4\	cm	cm	cm	g/plant	plants/A	%	%	bu/A		
	LQ P3556	Captan+Apron FL+Raxil	85.3	95.2	92.7	4.6	4.9	1.0	1.4	1.1	3.6	1.3	7.0	4.3	23.9	2.5	6.2	0.24	29000	7.4	34.5	169.1
	MQ P3475	Captan+Apron FL+Raxil	66.0	80.7	78.5	4.5	4.9	1.2	1.5	1.0	2.9	1.4	6.4	2.9	16.1	0.8	1.1	0.21	24200	6.8	37.4	146.9
	LQ P3556	Captan+Apron FL+LS015	90.6	94.7	96.5	5.0	5.0	1.2	1.4	1.0	3.2	1.4	7.0	3.8	22.9	1.5	1.8	0.22	28717	6.1	34.7	160.4
	MQ P3475	Captan+Apron FL+LS015	64.0	80.6	77.6	4.5	4.4	1.1	1.3	1.1	3.3	1.3	6.6	3.1	21.7	1.5	2.6	0.27	23756	10.5	38.5	140.7
	LQ P3556	Captan+Apron FL+Dynacoat	87.1	94.7	94.4	4.8	4.9	1.2	1.4	1.1	3.3	1.3	5.8	3.9	21.4	1.8	4.6	0.22	27386	5.8	34.4	161.5
	MQ P3475	Captan+Apron FL+Dynacoat	61.4	76.5	77.5	4.8	5.0	1.1	1.4	1.1	3.2	1.3	7.0	2.7	17.7	0.8	1.1	0.26	22062	14.5	37.6	141.8
	LQ P3556	Maxim+Apron FL	85.2	95.5	94.4	5.0	5.0	1.6	1.4	1.1	3.4	1.3	6.6	4.3	26.2	2.4	5.1	0.22	26539	6.9	35.1	161.1
	MQ P3475	Maxim+Apron FL	65.0	80.2	79.4	3.8	4.4	1.6	1.5	1.1	3.1	1.4	6.4	3.0	18.2	1.0	1.2	0.29	23434	15.2	38.5	131.4
NT	LQ P3556	Control	49.5	60.1	62.0	4.5	5.0	1.8	1.8	1.0	3.1	1.8	4.5	4.1	21.1	1.7	2.4	0.21	17908	2.5	37.7	123.9
ZT	LQ P3556	Control	65.2	66.0	65.0	4.8	5.0	1.8	1.3	1.2	3.8	1.2	6.6	4.6	29.4	3.4	7.6	0.22	20247	5.4	34.1	146.6
NT	MQ P3475	Control	40.2	53.3	52.5	4.0	4.8	1.7	1.5	1.1	3.3	1.4	5.4	3.9	22.9	1.2	1.7	0.35	16375	7.7	35.4	124.1
ZT	MQ P3475	Control	45.7	60.9	57.1	4.0	4.5	1.8	1.7	1.1	3.5	1.7	5.7	3.3	24.2	1.6	2.8	0.27	17182	28.1	37.0	120.9
NT	LQ P3556	Captan 400	81.5	89.4	90.8	5.0	5.0	1.1	1.4	1.0	3.4	1.2	7.5	4.3	26.9	2.5	3.5	0.25	28637	10.6	34.0	165.4
ZT	LQ P3556	Captan 400	87.5	95.7	91.6	5.0	5.0	1.1	1.4	1.4	3.7	1.2	8.7	4.4	27.0	3.0	10.2	0.25	27830	6.7	34.1	168.0
NT	MQ P3475	Captan 400	68.8	83.2	82.6	5.0	5.0	1.3	1.5	0.9	3.3	1.5	7.9	3.0	20.5	2.1	3.5	0.27	23877	7.4	36.8	154.1
ZT	MQ P3475	Captan 400	75.3	82.1	87.2	4.8	5.0	1.2	1.6	1.1	3.3	1.4	6.9	2.9	20.9	1.4	2.7	0.27	24281	12.2	35.8	148.1
NT	LQ P3556	Captan+Apron FL	85.3	95.9	94.8	5.0	5.0	1.1	1.6	1.0	3.0	1.6	5.4	3.9	21.3	0.5	0.7	0.19	25733	7.7	35.1	160.2
ZT	LQ P3556	Captan+Apron FL	87.5	100.8	98.6	5.0	5.0	1.3	1.3	1.0	3.1	1.5	5.7	4.1	22.2	1.7	2.0	0.21	28233	4.8	35.9	163.9
NT	MQ P3475	Captan+Apron FL	58.7	74.5	75.3	4.5	4.8	1.3	1.5	1.1	3.2	1.3	7.6	3.1	20.3	0.9	1.1	0.26	22909	9.2	37.0	150.3
ZT	MQ P3475	Captan+Apron FL	75.3	87.2	85.1	5.0	5.0	1.2	1.6	1.1	3.5	1.4	5.9	2.8	16.7	1.4	1.9	0.28	26781	15.8	37.7	160.8
NT	LQ P3556	Captan+Apron FL+Raxil	78.0	93.2	90.8	4.5	4.8	1.0	1.3	1.1	3.4	1.3	7.2	4.3	23.0	1.7	5.6	0.21	28959	6.5	35.6	167.3
ZT	LQ P3556	Captan+Apron FL+Raxil	92.7	97.3	94.6	4.8	5.0	1.1	1.4	1.2	3.8	1.3	6.8	4.2	24.9	3.2	6.8	0.26	29040	8.3	33.4	170.9
NT	MQ P3475	Captan+Apron FL+Raxil	59.5	78.8	71.7	4.0	4.8	1.2	1.5	1.1	2.6	1.6	5.3	2.7	14.8	0.8	1.1	0.18	22425	6.0	37.8	136.2
ZT	MQ P3475	Captan+Apron FL+Raxil	72.6	82.6	85.3	5.0	5.0	1.1	1.4	1.0	3.2	1.2	7.5	3.2	17.4	0.8	1.1	0.24	25975	7.6	37.1	157.7
NT	LQ P3556	Captan+Apron FL+LS015	86.4	89.4	93.5	5.0	5.0	1.3	1.3	1.0	3.1	1.3	7.2	3.9	24.4	1.3	1.4	0.22	29363	8.2	34.3	159.2
ZT	LQ P3556	Captan+Apron FL+LS015	94.8	100.0	99.5	5.0	5.0	1.1	1.6	1.1	3.4	1.5	6.9	3.7	21.4	1.8	2.1	0.21	28072	4.1	35.0	161.5
NT	MQ P3475	Captan+Apron FL+LS015	55.7	75.8	69.6	4.5	4.3	1.2	1.4	1.1	3.2	1.5	5.7	3.4	21.5	1.3	2.4	0.25	21538	13.6	37.5	144.4
ZT	MQ P3475	Captan+Apron FL+LS015	72.3	85.3	85.6	4.5	4.5	1.1	1.2	1.1	3.4	1.2	7.5	2.9	22.0	1.6	2.9	0.29	25975	7.4	39.5	137.1
NT	LQ P3556	Captan+Apron FL+Dynacoat	84.5	94.6	92.7	4.8	5.0	1.3	1.6	1.0	3.2	1.4	5.3	4.1	20.6	1.1	2.0	0.21	26943	8.1	34.1	168.6
ZT	LQ P3556	Captan+Apron FL+Dynacoat	89.7	94.8	96.2	4.8	4.8	1.1	1.3	1.3	3.5	1.2	6.3	3.7	22.3	2.4	7.2	0.24	27830	3.5	34.8	154.4
NT	MQ P3475	Captan+Apron FL+Dynacoat	51.6	70.9	71.7	5.0	5.0	1.1	1.5	1.0	3.0	1.3	6.6	2.8	17.1	0.1	0.1	0.25	20973	10.8	37.6	138.5
ZT	MQ P3475	Captan+Apron FL+Dynacoat	71.2	82.1	83.2	4.5	5.0	1.1	1.4	1.2	3.4	1.3	7.5	2.7	18.4	1.4	2.1	0.27	23151	18.3	37.5	145.0
NT	LQ P3556	Maxim+Apron FL	79.1	91.3	92.4	5.0	5.0	1.6	1.5	1.0	3.2	1.3	6.6	4.5	25.5	1.8	2.4	0.22	26862	5.4	36.4	160.9
ZT	LQ P3556	Maxim+Apron FL	91.3	99.7	96.5	5.0	5.0	1.7	1.3	1.2	3.7	1.3	6.7	4.2	26.9	3.0	7.8	0.22	26217	8.3	33.8	161.3
NT	MQ P3475	Maxim+Apron FL	59.0	79.1	77.2	3.5	4.3	1.6	1.7	1.0	2.8	1.5	5.4	2.8	15.3	0.1	0.1	0.28	23071	9.4	39.1	126.5
ZT	MQ P3475	Maxim+Apron FL	70.9	81.3	81.5	4.0	4.5	1.5	1.4	1.2	3.4	1.2	7.4	3.2	21.1	1.9	2.3	0.31	23797	20.9	38.0	136.3

**Table E-42. Corn Seed Decay and Seedling Blight in Reduced Tillage Systems  
Arlington, WI 1996 (Gustafson)**

Tillage	Seedling Vigor	Seed Treatment	Root and Plant Ratings - 42 Days after Planting																			
			Days After Planting			No. of Plants Rated	No. of Seeds Rated	Kernel Rot	Root Discolor	Leaf Collars	Total Leaves Visible	Primary Root Longevity	Root Length	Seminal Root Number	Seminal Root Length	Nodal Root Number	Nodal Root Length	Whole Plant Dry Wt	Final Stand	Broken Stalks	Moist	Yield
			35	41	47			\2\	\3\		\4\	cm	cm	cm	cm	g/plant	plants/A	%	%	bu/A		
<b>Mean</b>	\1\		72.5	83.8	83.0	4.7	4.9	1.3	1.5	1.1	3.3	1.4	6.6	3.6	21.8	1.6	3.1	0.25	24649	9.4	36.1	150.4
<b>Probability (%)</b>																						
Tillage (T)			0.4	7.5	1.6			> 50	26.2	16.0	5.5	1.9	8.9	> 50	37.6	13.7	13.6	34.5	12.1	> 50	> 50	39.2
Seedling Vigor (V)			< 0.1	< 0.1	< 0.1			> 50	35.9	27.0	4.5	> 50	> 50	< 0.1	0.4	0.4	4.2	1.0	< 0.1	11.1	0.2	0.6
T x V			40.5	> 50	0.7			9.2	> 50	23.3	> 50	> 50	> 50	> 50	> 50	18.0	21.0	> 50	19.1	27.4	32.1	> 50
Seed Treatment (S)			< 0.1	< 0.1	< 0.1			< 0.1	> 50	> 50	26.4	34.8	11.3	5.0	8.4	3.6	4.2	24.7	< 0.1	> 50	16.6	< 0.1
T x S			> 50	> 50	> 50			> 50	> 50	9.2	45.2	> 50	> 50	> 50	> 50	39.6	41.7	47.7	42.0	31.1	8.0	> 50
V x S			23.2	37.5	27.9			> 50	> 50	23.9	0.6	> 50	> 50	42.6	39.9	9.3	3.7	4.0	25.2	40.6	9.1	> 50
T x V x S			39.8	> 50	> 50			> 50	37.7	> 50	> 50	2.7	35.1	30.0	> 50	> 50	> 50	> 50	44.3	> 50	18.6	34.4
<b>LDS (0.10)</b>																						
Tillage (T)			3.3	5.4	3.0			NS	NS	NS	0.3	< 0.1	0.6	NS	NS	NS	NS	NS	NS	NS	NS	NS
Seedling Vigor (V)			3.9	1.7	1.4			NS	NS	NS	0.1	NS	NS	0.2	2.0	0.4	1.9	0.02	1215	NS	1.0	8.6
Seed Treatment (S)			5.2	4.9	4.8			0.1	NS	NS	NS	NS	NS	0.3	3.2	0.4	1.1	NS	1335	NS	NS	9.3
<b>CV%</b>			12.3	9.9	9.9			18.8	26.3	15.0	10.6	22.4	30.5	16.3	25.2	59.8	92.7	20.5	9.2	102.7	4.7	10.4

\1\ LQ=Low Quality, MQ=Medium Quality  
 \2\ Kernel rot with 1=deterioration 2=no deterioration  
 \3\ Root discoloration with 1=none, 2=trace, 3=light, 4=moderate, and 5=severe  
 \4\ Longevity of primary root with 1=living, 2=blighted, 3=dead or pruned

## FIELD EXPERIMENT HISTORY

Expt. Number:

Year: 1996

Title: LANDEC Corn Seed Treatment Study

Personnel: J.G. Lauer, K.D. Hudelson

Location: Arlington Research Station, Arlington, WI

Supported by: Landec Corporation

### FIELD INFORMATION

Field: 338

Soil Type: Plano Silt Loam

Soil Test Results: Test Date: 4/95    pH: 7.0    P (ppm): 50    K (ppm): 105    OM (%): 4.0

Fertilizer: 19-Apr 150 lbs N/a 46-0-0  
24-Apr 150 lbs/a 6-24-24 starter  
15-May 150 lbs/a 6-24-24 starter

Tillage Operations: None

Previous Crop: Corn

Irrigation: None

### EXPERIMENTAL PROCEDURE

Exp. Design: RCB Split Plot

Replicates: 4

Variables: A: Planting Date, B: Seed Treatment

Planting Dates: Early: 24-Apr  
Late: 15-May

Seed Treatments: DK527 Coat A  
DK527 Coat B  
DK527 UTC+Fung  
Hybrid XI Coat A  
Hybrid XI Coat A+Fung  
Hybrid XI UTC  
Hybrid XI UTC+Fung  
P3373 Coat A  
P3373 Coat B  
P3373 UTC+Fung

Area Planted: 10' x 30'

Area Harvested: 5.0' x 22.5'

Row Spacing: 30"

Planting Equip: No-Till: JD 7000 Planter w/ 1 fluted and 2 ripple coulters

Planting Rate: 32,000 seeds/acre

Harvesting Date: 11-Nov

Harvesting Equip: Gleaner Plot Combine

	<u>Date</u>	<u>Material</u>	<u>Rate</u>	<u>Method</u>
Insecticide:	24-Apr	Lorsban	8 oz/1000 ft	planter
Herbicides:	25-Apr	Roundup	4 pts/a	preemerg
	3-May	Lasso	2 qts/a	preemerg
	3-May	Bladex 90DF	2.2 lbs/a	preemerg
	30-May	Basagran	2 pts/a	post
	3-Jul	Basagran	2 pts/a	post
	24-Jul	Buctril	1.5 pts/a	post - drop nozzles



**Table E-43. LANDEC Corn Seed Treatment Study. Arlington, WI 1996**

Date of Planting (Day of Year)	Hybrid Seed Treatment	Date (Day of Year)							Extended Leaf		Final Population	Lodged & Broken		Yield	
		26-May (146)	29-May (149)	31-May (151)	3-Jun (154)	5-Jun (156)	7-Jun (158)	10-Jun (161)	12-Jun (163)	Height - Day 200		Std. Dev.	Plants		Moisture
		% Emergence							inches	plants/a		%	%	bu/a	
24-Apr (114)		17.4	33.0	62.6	74.0	72.2	77.0	78.4	.	65.3	5.1	27956	58.5	29.8	106.1
15-May (135)		.	17.9	34.3	64.8	69.6	78.1	89.0	90.4	63.1	5.3	32254	48.7	30.2	110.5
	DK527 Coat A	24.2	22.8	43.1	57.7	68.3	76.8	91.4	93.2	64.2	4.0	33735	70.9	27.8	100.0
	DK527 Coat B	18.5	20.0	39.0	58.0	66.3	81.9	92.9	91.6	63.2	4.5	33009	56.0	27.5	112.9
	DK527 UTC+Fung	19.6	40.4	76.2	91.6	81.3	92.8	94.8	100.0	66.0	5.1	34654	55.4	26.1	119.2
	Hybrid XI Coat A	12.8	14.8	31.1	56.5	61.4	59.7	67.0	78.8	61.9	8.0	24829	30.4	31.5	102.6
	Hybrid XI Coat A+Fung	22.0	24.9	46.7	69.3	73.8	75.1	82.6	87.8	67.7	6.1	30637	28.3	31.1	108.4
	Hybrid XI UTC	0.3	12.9	23.2	37.1	37.4	38.6	43.5	89.1	63.7	6.3	16214	9.0	30.8	106.4
	Hybrid XI UTC+Fung	15.8	32.6	62.5	86.0	80.2	86.7	89.1	89.7	66.2	6.1	30976	31.1	30.9	116.0
	P3373 Coat A	25.3	27.2	47.8	76.8	76.9	87.1	91.9	91.9	62.8	3.5	32622	75.8	31.7	105.5
	P3373 Coat B	17.4	20.1	39.7	69.3	71.2	82.6	88.6	87.8	61.7	4.6	31363	85.8	31.7	99.6
	P3373 UTC+Fung	18.2	38.7	75.1	91.6	92.0	94.2	95.0	91.6	64.0	4.5	33009	69.0	31.5	112.4
24-Apr (114)	DK527 Coat A	24.2	44.0	80.2	91.0	92.1	94.8	96.2	.	68.5	3.9	34074	67.4	26.6	99.3
15-May (135)	DK527 Coat A	.	1.6	6.0	24.5	44.6	58.7	86.7	93.2	60.0	4.0	33396	74.4	29.1	100.8
24-Apr (114)	DK527 Coat B	18.5	34.5	66.9	86.7	85.6	92.4	94.0	.	62.2	5.7	33396	63.2	26.7	118.1
15-May (135)	DK527 Coat B	.	5.4	11.1	29.4	47.0	71.5	91.9	91.6	64.3	3.3	32622	48.9	28.3	107.6
24-Apr (114)	DK527 UTC+Fung	19.6	38.0	75.3	87.5	80.2	89.7	91.0	.	66.2	4.0	32525	57.9	25.9	126.8
15-May (135)	DK527 UTC+Fung	.	42.7	77.2	95.7	82.3	95.9	98.6	100.0	65.9	6.1	36784	52.8	26.2	111.7
24-Apr (114)	Hybrid XI Coat A	12.8	23.9	45.9	56.0	54.4	58.2	59.2	.	63.3	8.1	21490	13.3	31.0	101.4
15-May (135)	Hybrid XI Coat A	.	5.7	16.3	57.1	68.5	61.1	74.7	78.8	60.5	7.9	28169	47.5	32.1	103.8
24-Apr (114)	Hybrid XI Coat A+Fung	22.0	41.9	77.2	78.0	79.6	79.4	81.3	.	72.9	5.3	29621	26.3	31.0	113.9
15-May (135)	Hybrid XI Coat A+Fung	.	7.9	16.3	60.6	67.9	70.9	84.0	87.8	62.6	6.8	31654	30.2	31.2	102.9
24-Apr (114)	Hybrid XI UTC	0.3	0.8	3.0	1.6	3.0	1.6	2.2	.	.	.	871	.	.	.
15-May (135)	Hybrid XI UTC	.	25.0	43.5	72.6	71.7	75.5	84.8	89.1	63.7	6.3	31557	9.0	30.8	106.4
24-Apr (114)	Hybrid XI UTC+Fung	15.8	32.9	69.0	82.6	82.1	82.9	84.8	.	68.1	5.3	30202	28.0	31.2	105.6
15-May (135)	Hybrid XI UTC+Fung	.	32.3	56.0	89.4	78.3	90.5	93.5	89.7	64.3	6.9	31750	34.2	30.5	126.4
24-Apr (114)	P3373 Coat A	25.3	41.6	67.7	82.3	73.6	89.1	90.8	.	63.6	3.7	32331	89.9	32.1	106.6
15-May (135)	P3373 Coat A	.	12.8	28.0	71.2	80.2	85.1	92.9	91.9	62.0	3.3	32912	61.6	31.4	104.4
24-Apr (114)	P3373 Coat B	17.4	34.2	66.3	84.0	79.6	87.8	89.4	.	61.7	5.0	31557	97.2	32.0	89.4
15-May (135)	P3373 Coat B	.	6.0	13.0	54.6	62.8	77.5	87.8	87.8	61.8	4.3	31170	74.4	31.5	109.8
24-Apr (114)	P3373 UTC+Fung	18.2	38.3	74.7	90.5	91.3	94.0	94.8	.	61.7	4.6	33493	83.4	32.1	93.5
15-May (135)	P3373 UTC+Fung	.	39.1	75.5	92.7	92.7	94.3	95.1	91.6	66.2	4.4	32525	54.6	30.8	131.3
<b>Mean</b>		17.4	25.4	48.5	69.4	70.9	77.5	83.7	90.4	64.2	5.2	30105	53.4	30.0	108.4
<b>Probability (%)</b>															
Date of Planting (D)		.	2.0	0.2	1.1	21.4	6.1	0.3	.	14.9	> 50	0.3	33.0	> 50	> 50
Seed Treatment (S)		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	7.4	43.9	7.4	< 0.1	< 0.1	< 0.1	42.8
D x S		.	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	.	2.2	> 50	< 0.1	46.5	2.3	10.2
<b>LSD (0.10)</b>															
Date of Planting (D)		.	7.1	5.7	3.9	NS	1.2	2.9	.	NS	NS	1116	NS	NS	NS
Seed Treatment (S)		7.4	6.0	9.0	8.4	9.9	7.6	7.3	9.9	NS	2.2	2558	24.6	1.0	NS
<b>CV%</b>		35.4	28.1	22.3	14.4	16.7	11.8	10.4	9.1	6.4	51.1	10.2	55.2	3.9	18.1

# FIELD EXPERIMENT HISTORY

Expt. Number:

Year: 1996

Title: LANDEC Sweet Corn Seed Treatment Study

Personnel: J.G. Lauer, K.D. Hudelson

Location: Arlington Research Station, Arlington, WI

Supported by: Landec Corporation

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## FIELD INFORMATION

Field: 338  
Soil Type: Plano Silt Loam  
Soil Test Results: Test Date: 4/95    pH: 7.0    P (ppm): 50    K (ppm): 105    OM (%): 4.0  
Fertilizer: 19-Apr 150 lbs N/a 46-0-0  
15-May 150 lbs/a 6-24-24 starter  
Tillage Operations: None  
Previous Crop: Corn  
Irrigation: None

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## EXPERIMENTAL PROCEDURE

Exp. Design: RCB  
Replicates: 4  
Variables: A: Seed Treatment: Coat B  
Coat B+Fung  
UTC  
UTC+Fung  
Variety: Sweet Jubilee  
Area Planted: 10' x 30'  
Area Harvested: 5.0' x 25'  
Row Spacing: 30"  
Planting Date: 15-May  
Planting Equip: No-Till: JD 7000 Planter w/ 1 fluted and 2 bubble coulters  
Planting Rate: 32,000 seeds/acre  
Harvesting Date:  
Harvesting Equip:

	<u>Date</u>	<u>Material</u>	<u>Rate</u>	<u>Method</u>
Insecticide:	15-May	Lorsban	8 oz/1000 ft	planter
Herbicides:	25-Apr	Roundup	4 pts/a	preemerg
	3-May	Lasso	2 qts/a	preemerg
	3-May	Bladex 90DF	2.2 lbs/a	preemerg
	30-May	Basagran	2 pts/a	post
	3-Jul	Basagran	2 pts/a	post
	24-Jul	Buctril	1.5 pts/a	post - drop nozzles

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Results: Table E-44.

**Table E-44. LANDEC Sweet Corn Seed Treatment Study.  
Arlington, WI 1996**

Seed Treatment	Date (Day of Year)					Extended Leaf		31-May
	31-May (151)	3-Jun (154)	5-Jun (156)	10-Jun (161)	12-Jun (163)	Height - Day 211 Mean	Std. Dev.	
	% Emergence					inches		
2 Coat B	5.2	14.1	17.4	28.8	30.4	56.8	7.8	
3 Coat B+Fung	11.7	26.1	28.8	41.6	44.3	58.4	9.8	
4 UTC	6.8	16.0	21.7	26.4	25.8	51.4	11.4	
5 UTC+Fung	23.1	50.5	56.3	62.0	58.2	61.9	9.1	
<b>6 Mean</b>	11.7	26.7	31.1	39.7	39.7	57.5	9.5	
<b><u>Probability (%)</u></b>								
Seed Treatment (S)	0.2	< 0.1	< 0.1	< 0.1	< 0.1	28.0	> 50	
<b><u>LSD (0.10)</u></b>								
Seed Treatment (S)	6.2	10.1	9.8	6.4	9.0	NS	NS	
<b><u>CV%</u></b>								
	41.1	30.9	24.4	12.5	17.5	11.1	41.0	

## FIELD EXPERIMENT HISTORY

**Title:** Performance of Bt Corn **Year:** 1996  
**Personnel:** J.L. Wedberg, J.G. Lauer, K.D. Hudelson  
**Location:** Arlington Research Station, Arlington, WI  
**Supported by:** Ciba Seeds, Northrup King Co.

### FIELD INFORMATION

Field: 372  
 Soil Type: Plano Silt Loam  
 Soil Test Results: Test Date: 7/95    pH: 6.3    P (ppm): 40    K (ppm): 255    OM (%): 3.1  
 Fertilizer: 25-Apr 100 lbs/a 6-24-24 starter  
 150 lbs/a 46-0-0 preplant  
 Tillage Operations: Chisel Plow, Field Cultivate  
 Previous Crop: Soybean  
 Irrigation: None

### EXPERIMENTAL PROCEDURE

Exp. Design: RCB Split Plot  
 Replicates: 4  
 Variables: A: Hybrid, B: ECB Treatment  
 Area Planted: 10' x 25'  
 Area Harvested: 5.0' x 22'  
 Row Spacing: 30"

Hybrid/Variety:	Ciba 1401E	Ciba MAX21	Ciba MAX747	Golden H2441
	Ciba 1402E	Ciba MAX23	Ciba MAX88	NK 4734 CBR
	Ciba 4410E	Ciba MAX357	Dairyland 1407	NK X4334 CBR
	Ciba MAX101	Ciba MAX454	Dekalb DK493	Pioneer 3769

ECB Treatment: Inoculated

	10-Jul @V9	2 egg masses
	19-Jul @V10-V11	2 egg masses
	1-Aug @early pollination	2 shots w/Bazooka @~50 larvae/shot
	16-Aug @late pollination	2 shots w/Bazooka @~50 larvae/shot

Natural Infestation  
 Insecticide

	3-Jul @V5-V6 in whorl	
	21-Aug directed at ear (3 nodes above and below)	
	3-Sep directed at ear (3 nodes above and below)	

cost of about \$15/A for each application

Planting Equip: Kinze Plot Planter  
 Harvesting Date: 11-Nov  
 Harvesting Equip: Gleaner Plot Combine

	<u>Date</u>	<u>Material</u>	<u>Rate</u>	<u>Method</u>
Insecticides:	3-Jul	Pounce 3.2ec	0.15 lbs ai/A	@V5-V6 in whorl
	21-Aug	Pounce 3.2ec	0.15 lbs ai/A	directed at ear (3 nodes above & below)
	3-Sep	Pounce 3.2ec	0.15 lbs ai/A	directed at ear (3 nodes above & below)
Herbicides:		Bladex	2 qts/A	premerge
		Lasso	2 qts/A	premerge

Results: Table E-45.

**Table E-45. Performance of Bt and Non-Bt Corn.  
Arlington, WI 1996**

Hybrid	Relative Maturity	ECB Treatment	Guthrie Rating	ECB	ECB	Broken %	Moist %	Yield bu/a
				Cavities/Plant	Larve/Plant			
Ciba 1401E	93 day		1.0	0.2	0.1	0.1	19.6	179.8
Ciba 1402E	90 day		1.0	0.3	0.2	0.9	21.4	165.2
Ciba 4410E	112 day		1.0	0.1	0.0	0.9	33.5	156.2
Ciba MAX101	105 day		1.0	0.3	0.1	3.3	28.3	153.8
Ciba MAX21	106 day		1.0	0.2	0.0	2.1	29.1	171.8
Ciba MAX23	92 day		1.0	0.3	0.1	3.8	24.0	153.3
Ciba MAX357	92 day		1.0	0.4	0.1	2.8	22.3	160.8
Ciba MAX454	110 day		1.0	0.1	0.1	3.9	33.7	147.6
Ciba MAX747	95 day		1.0	0.3	0.1	11.8	18.2	170.0
Ciba MAX88	100 day		1.0	0.3	0.1	0.8	24.9	156.4
Dairyland 1407	105 day		2.0	1.5	0.2	6.1	28.3	159.9
Dekalb DK493	100 day		2.0	2.2	0.6	7.0	24.3	155.8
Golden H2441	105 day		1.8	1.5	0.3	9.9	26.3	165.9
NK 4734 CBR	105 day		1.0	0.0	0.0	0.4	26.9	154.3
NK X4334 CBR	100 day		1.0	0.0	0.0	0.5	24.9	169.1
Pioneer 3769	95 day		1.7	3.2	0.6	6.8	21.7	166.9
		Inoculated	1.4	1.2	0.3	5.4	25.2	158.4
		Natural Infestation	1.2	0.8	0.2	3.9	25.4	162.0
		Insecticide	1.0	0.1	0.0	2.1	25.7	164.8
Ciba 1401E	93 day	Inoculated	1.0	0.3	0.1	0.0	19.4	186.8
Ciba 1401E	93 day	Natural Infestation	1.0	0.2	0.2	0.0	19.0	181.9
Ciba 1401E	93 day	Insecticide	1.0	0.0	0.0	0.4	20.6	170.7
Ciba 1402E	90 day	Inoculated	1.0	0.8	0.3	1.9	21.8	161.2
Ciba 1402E	90 day	Natural Infestation	1.0	0.2	0.2	0.4	21.0	172.2
Ciba 1402E	90 day	Insecticide	1.0	0.0	0.0	0.4	21.5	162.1
Ciba 4410E	112 day	Inoculated	1.0	0.1	0.0	1.1	32.6	152.1
Ciba 4410E	112 day	Natural Infestation	1.0	0.1	0.1	1.5	34.1	153.6
Ciba 4410E	112 day	Insecticide	1.0	0.0	0.0	0.0	33.5	161.9
Ciba MAX101	105 day	Inoculated	1.0	0.4	0.1	1.9	29.9	146.4
Ciba MAX101	105 day	Natural Infestation	1.0	0.4	0.2	3.4	26.0	161.2
Ciba MAX101	105 day	Insecticide	1.0	0.1	0.0	4.5	28.9	153.8
Ciba MAX21	106 day	Inoculated	1.0	0.2	0.1	2.3	28.4	172.5
Ciba MAX21	106 day	Natural Infestation	1.0	0.1	0.0	2.6	28.9	165.0
Ciba MAX21	106 day	Insecticide	1.0	0.3	0.0	1.5	29.9	177.8
Ciba MAX23	92 day	Inoculated	1.0	0.7	0.1	4.5	24.1	150.9
Ciba MAX23	92 day	Natural Infestation	1.0	0.3	0.2	1.1	24.0	162.2
Ciba MAX23	92 day	Insecticide	1.0	0.0	0.0	5.6	23.9	146.7
Ciba MAX357	92 day	Inoculated	1.0	1.0	0.3	6.4	21.2	164.3
Ciba MAX357	92 day	Natural Infestation	1.0	0.1	0.1	1.9	22.3	154.2
Ciba MAX357	92 day	Insecticide	1.0	0.0	0.0	0.0	23.4	164.0
Ciba MAX454	110 day	Inoculated	1.0	0.3	0.2	5.3	33.5	142.7
Ciba MAX454	110 day	Natural Infestation	1.0	0.0	0.0	4.1	33.8	145.7
Ciba MAX454	110 day	Insecticide	1.0	0.0	0.0	2.3	33.8	154.5
Ciba MAX747	95 day	Inoculated	1.0	0.7	0.4	14.6	18.4	162.1
Ciba MAX747	95 day	Natural Infestation	1.0	0.0	0.0	15.0	18.1	174.4
Ciba MAX747	95 day	Insecticide	1.0	0.1	0.0	5.6	18.2	173.6
Ciba MAX88	100 day	Inoculated	1.0	0.5	0.1	1.1	25.3	151.0
Ciba MAX88	100 day	Natural Infestation	1.0	0.3	0.2	0.4	25.3	164.7
Ciba MAX88	100 day	Insecticide	1.0	0.1	0.0	0.8	24.1	153.5

**Table E-45. Performance of Bt and Non-Bt Corn.  
Arlington, WI 1996**

Hybrid	Relative Maturity	ECB Treatment	Guthrie Rating	ECB	ECB	Broken %	Moist %	Yield bu/a
				Cavities/Plant	Larve/Plant			
Dairyland 1407	105 day	Inoculated	2.7	2.0	0.3	7.1	27.1	155.2
Dairyland 1407	105 day	Natural Infestation	2.0	2.2	0.3	6.4	30.1	156.8
Dairyland 1407	105 day	Insecticide	1.1	0.3	0.0	4.9	27.5	170.2
Dekalb DK493	100 day	Inoculated	2.9	3.4	1.3	9.8	23.7	142.9
Dekalb DK493	100 day	Natural Infestation	1.8	3.0	0.5	8.6	23.4	157.5
Dekalb DK493	100 day	Insecticide	1.2	0.3	0.0	2.6	25.8	167.0
Golden H2441	105 day	Inoculated	2.4	2.1	0.5	14.6	26.7	164.6
Golden H2441	105 day	Natural Infestation	1.7	2.3	0.4	10.9	26.3	162.3
Golden H2441	105 day	Insecticide	1.1	0.1	0.0	4.1	25.9	170.6
NK 4734 CBR	105 day	Inoculated	1.0	0.0	0.0	0.4	26.8	155.6
NK 4734 CBR	105 day	Natural Infestation	1.0	0.0	0.0	0.4	27.1	146.0
NK 4734 CBR	105 day	Insecticide	1.0	0.0	0.0	0.4	26.7	161.4
NK X4334 CBR	100 day	Inoculated	1.0	0.0	0.1	0.4	24.6	171.4
NK X4334 CBR	100 day	Natural Infestation	1.0	0.0	0.0	1.1	24.8	170.3
NK X4334 CBR	100 day	Insecticide	1.0	0.1	0.1	0.0	25.4	165.7
Pioneer 3769	95 day	Inoculated	2.3	5.9	1.0	14.3	20.8	152.8
Pioneer 3769	95 day	Natural Infestation	1.6	3.3	0.8	5.3	21.8	163.6
Pioneer 3769	95 day	Insecticide	1.1	0.3	0.0	0.8	22.5	184.3
Mean			1.2	0.7	0.2	3.8	25.4	161.7
<b>Probability %</b>								
Hybrid (H)			< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	5.5
ECB (E)			< 0.1	< 0.1	< 0.1	< 0.1	39.3	6.6
H x E			< 0.1	< 0.1	1.2	< 0.1	> 50	> 50
<b>Contrast %</b>								
Hybrids w/Bt gene(12) vs Hybrids w/o Bt gene(4)			< 0.1	< 0.1	< 0.1	< 0.1	16.1	> 50
Hybrids x ECB Treatment Interaction			< 0.1	< 0.1	< 0.1	< 0.1	> 50	0.7
Hybrids (with vs.w/o Bt gene) vs. ECB Treatment(Inoculated and Natural vs. Insecticide)								
<b>LSD (0.10)</b>								
Hybrid (H)			0.1	0.5	0.2	3.0	2.4	14.8
ECB (E)			0.1	0.2	0.1	1.0	NS	4.7
<b>CV %</b>								
			16.3	77.7	182.2	85.8	7.2	9.8

## FIELD EXPERIMENT HISTORY

**Title:** Fertilizer Placement in Corn Under Zone Tillage **Year:** 1996  
**Personnel:** J.G. Lauer, T.M Wood, K.D. Hudelson  
**Location:** Lancaster Research Station, Lancaster, WI  
**Supported by:**

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### FIELD INFORMATION

Field: 603  
Soil Type: Rozetta Silt Loam  
Soil Test Results: Date: Oct. 1996 pH: 7.0 P(ppm): 36 K(ppm): 158 OM(%): 2.7  
Previous Crop: Corn

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### EXPERIMENTAL PROCEDURE

Exp. Design: RCB Split-Split-Split Plot

Replicates: 4

Factors:

Fall Tillage	No-Till Zone Builder (Oct. 95)
Spring Tillage	Chisel Plow One Coulter Three Coulters
Nitrogen Placement	2" x 2" 50 gpa of 28-0-0 2" x 15" 50 gpa of 28-0-0
P & K Application	Fall 25 gpa of 4-10-10 (Oct. 95) Starter 25 gpa of 4-10-10 None

Plot Size: Planted: 10' x 25'  
Harvested: 5' x 21'

Planting: Date: 18-May  
Row Spacing: 30"  
Equipment: John Deere Max-Emerge  
Depth: 2"  
Rate: 32,000/a  
Hybrid: Pioneer 3769

Harvesting: Date: 25-Oct  
Equipment: Gleaner Plot Combine

Herbicides:

<u>Material</u>	<u>Rate</u>	<u>Method</u>
Roundup Ultra	2 qts/a	pre-plant on 1-May
Dual	2.5 pts/a	pre-plant on 1-May
Banvel	1 pt/a	post on 12-Jun
Accent	0.75 oz/a	post on 12-Jun
28%+ Surfactant		post on 12-Jun
Beacon	0.6 oz/a	post 1-Jul
Buctril	1.5 pt/a	post 1-Jul

Insecticides:

Lorsban	8 oz/1000'	planting
Ambush	10 oz/a	20-Jun for ECB

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Note: sprayer lines were contaminated with Poast Plus on 1-Jul. This caused severe corn injury especially in rep 1.  
Results: Table E-46.

**Table E-46. Fertilizer Placement in Corn Under Zone Tillage.  
Lancaster, WI - 1996**

Fall Tillage	Spring Tillage	Nitrogen Placement P & K	Final Stand	Broken Stalks	Grain Moist	Yield	
			plants/A	%	%	bu/a	
None			26936	5.4	24.2	106.6	
Zone Builder			26632	4.2	23.8	99.3	
	Chisel Plow		27276	4.8	24.2	108.6	
	One Coulter		26138	4.1	23.9	97.5	
	Three Coulters		26938	5.6	23.9	102.7	
None	Chisel Plow		27255	5.4	24.4	110.5	
None	One Coulter		26169	4.2	24.4	102.2	
None	Three Coulters		27384	6.6	23.7	107.0	
Zone Builder	Chisel Plow		27298	4.1	23.9	106.8	
Zone Builder	One Coulter		26107	4.0	23.4	92.8	
Zone Builder	Three Coulters		26491	4.5	24.1	98.3	
		2 x 2	26667	3.8	24.1	101.6	
		2 x 15	26901	5.8	23.9	104.3	
None		2 x 2	26666	4.4	24.2	104.4	
None		2 x 15	27207	6.4	24.1	108.7	
Zone Builder		2 x 2	26669	3.2	23.9	98.8	
Zone Builder		2 x 15	26595	5.2	23.7	99.8	
	Chisel Plow	2 x 2	27300	4.2	24.1	106.1	
	Chisel Plow	2 x 15	27253	5.4	24.3	111.2	
	One Coulter	2 x 2	26211	2.7	24.1	97.3	
	One Coulter	2 x 15	26064	5.5	23.7	97.8	
	Three Coulters	2 x 2	26491	4.5	24.0	101.5	
	Three Coulters	2 x 15	27385	6.6	23.8	103.9	
None	Chisel Plow	2 x 2	27398	4.6	24.5	108.7	
None	Chisel Plow	2 x 15	27113	6.3	24.4	112.2	
None	One Coulter	2 x 2	25645	3.3	24.4	98.8	
None	One Coulter	2 x 15	26693	5.2	24.4	105.6	
None	Three Coulters	2 x 2	26954	5.4	23.9	105.7	
None	Three Coulters	2 x 15	27815	7.9	23.5	108.4	
Zone Builder	Chisel Plow	2 x 2	27201	3.8	23.7	103.4	
Zone Builder	Chisel Plow	2 x 15	27394	4.5	24.1	110.1	
Zone Builder	One Coulter	2 x 2	26778	2.2	23.8	95.7	
Zone Builder	One Coulter	2 x 15	25436	5.9	23.0	90.0	
Zone Builder	Three Coulters	2 x 2	26028	3.7	24.1	97.2	
Zone Builder	Three Coulters	2 x 15	26955	5.3	24.1	99.4	
			Fall	26239	4.8	24.0	99.5
			None	26898	4.9	23.9	102.6
			Starter	27215	4.7	24.1	106.7
None			Fall	26498	5.0	24.1	106.3
None			None	26796	6.1	24.0	104.7
None			Starter	27514	5.2	24.3	108.7



**Table E-46. Fertilizer Placement in Corn Under Zone Tillage.  
Lancaster, WI - 1996**

Fall Tillage	Spring Tillage	Nitrogen Placement P & K	Final Stand	Broken Stalks	Grain Moist	Yield	
			plants/A	%	%	bu/a	
Zone Builder		Fall	25979	4.6	23.8	92.8	
Zone Builder		None	27001	3.8	23.7	100.5	
Zone Builder		Starter	26916	4.3	23.9	104.6	
	Chisel Plow	Fall	27103	5.0	24.2	105.5	
	Chisel Plow	None	26885	4.8	23.9	105.2	
	Chisel Plow	Starter	27842	4.5	24.4	115.1	
	One Coulter	Fall	25445	4.0	23.8	90.3	
	One Coulter	None	27038	3.9	23.9	102.6	
	One Coulter	Starter	25931	4.5	24.1	99.7	
	Three Coulters	Fall	26168	5.3	23.9	102.8	
	Three Coulters	None	26773	6.1	23.9	100.0	
	Three Coulters	Starter	27873	5.2	23.9	105.2	
None	Chisel Plow	Fall	27522	5.0	24.5	107.9	
None	Chisel Plow	None	26602	6.9	24.1	108.7	
None	Chisel Plow	Starter	27642	4.5	24.7	114.8	
None	One Coulter	Fall	25340	4.1	24.3	96.2	
None	One Coulter	None	26586	3.8	24.3	100.9	
None	One Coulter	Starter	26580	4.8	24.5	109.5	
None	Three Coulters	Fall	26633	5.9	23.6	114.7	
None	Three Coulters	None	27200	7.7	23.7	104.5	
None	Three Coulters	Starter	28320	6.2	23.8	101.9	
Zone Builder	Chisel Plow	Fall	26684	5.1	23.9	103.0	
Zone Builder	Chisel Plow	None	27168	2.7	23.7	101.8	
Zone Builder	Chisel Plow	Starter	28041	4.5	24.2	115.5	
Zone Builder	One Coulter	Fall	25551	3.9	23.2	84.3	
Zone Builder	One Coulter	None	27489	4.0	23.4	104.3	
Zone Builder	One Coulter	Starter	25281	4.2	23.6	89.9	
Zone Builder	Three Coulters	Fall	25702	4.7	24.2	91.0	
Zone Builder	Three Coulters	None	26345	4.6	24.1	95.5	
Zone Builder	Three Coulters	Starter	27427	4.2	24.0	108.5	
		2 x 2	Fall	25469	4.4	24.0	95.7
		2 x 2	None	27024	4.0	23.9	100.7
		2 x 2	Starter	27509	3.1	24.3	108.4
		2 x 15	Fall	27009	5.2	23.9	103.4
		2 x 15	None	26772	5.9	23.9	104.5
		2 x 15	Starter	26921	6.4	24.0	105.0
None		2 x 2	Fall	25445	4.4	24.1	98.0
None		2 x 2	None	27119	4.9	24.0	103.6
None		2 x 2	Starter	27434	3.9	24.7	111.7
None		2 x 15	Fall	27552	5.6	24.2	114.5
None		2 x 15	None	26473	7.3	24.1	105.8
None		2 x 15	Starter	27595	6.4	24.0	105.8
Zone Builder		2 x 2	Fall	25492	4.5	24.0	93.4
Zone Builder		2 x 2	None	26929	3.0	23.7	97.9
Zone Builder		2 x 2	Starter	27585	2.2	23.8	105.1
Zone Builder		2 x 15	Fall	26465	4.7	23.5	92.2
Zone Builder		2 x 15	None	27072	4.5	23.7	103.2
Zone Builder		2 x 15	Starter	26247	6.4	24.0	104.1

**Table E-46. Fertilizer Placement in Corn Under Zone Tillage.  
Lancaster, WI - 1996**

Fall Tillage	Spring Tillage	Nitrogen Placement	P & K	Final Stand	Broken Stalks	Grain Moist	Yield
				plants/A	%	%	bu/a
	Chisel Plow	2 x 2	Fall	25765	5.2	24.1	94.6
	Chisel Plow	2 x 2	None	27532	4.0	23.8	99.8
	Chisel Plow	2 x 2	Starter	28602	3.4	24.4	123.7
	Chisel Plow	2 x 15	Fall	28441	4.9	24.3	116.3
	Chisel Plow	2 x 15	None	26237	5.6	24.0	110.6
	Chisel Plow	2 x 15	Starter	27081	5.6	24.5	106.5
	One Coulter	2 x 2	Fall	25619	3.3	23.9	92.6
	One Coulter	2 x 2	None	26198	2.3	24.0	100.5
	One Coulter	2 x 2	Starter	26817	2.6	24.3	98.7
	One Coulter	2 x 15	Fall	25272	4.8	23.7	87.9
	One Coulter	2 x 15	None	27877	5.4	23.8	104.7
	One Coulter	2 x 15	Starter	25044	6.4	23.8	100.7
	Three Coulters	2 x 2	Fall	25022	4.8	24.2	99.9
	Three Coulters	2 x 2	None	27343	5.5	23.8	101.8
	Three Coulters	2 x 2	Starter	27109	3.2	24.0	102.7
	Three Coulters	2 x 15	Fall	27314	5.8	23.6	105.8
	Three Coulters	2 x 15	None	26202	6.8	24.0	98.2
	Three Coulters	2 x 15	Starter	28638	7.2	23.7	107.7
None	Chisel Plow	2 x 2	Fall	26697	5.5	24.3	94.8
None	Chisel Plow	2 x 2	None	27103	5.9	24.1	105.5
None	Chisel Plow	2 x 2	Starter	28395	2.3	25.0	125.9
None	Chisel Plow	2 x 15	Fall	28348	4.4	24.7	121.0
None	Chisel Plow	2 x 15	None	26100	7.9	24.2	111.9
None	Chisel Plow	2 x 15	Starter	26890	6.6	24.4	103.6
None	One Coulter	2 x 2	Fall	24238	4.1	24.1	93.1
None	One Coulter	2 x 2	None	26246	1.7	24.2	99.2
None	One Coulter	2 x 2	Starter	26450	4.0	24.8	104.1
None	One Coulter	2 x 15	Fall	26441	4.2	24.5	99.3
None	One Coulter	2 x 15	None	26927	5.8	24.4	102.5
None	One Coulter	2 x 15	Starter	26711	5.6	24.3	115.0
None	Three Coulters	2 x 2	Fall	25399	3.6	23.8	106.0
None	Three Coulters	2 x 2	None	28007	7.2	23.6	106.0
None	Three Coulters	2 x 2	Starter	27456	5.3	24.3	105.0
None	Three Coulters	2 x 15	Fall	27867	8.3	23.4	123.3
None	Three Coulters	2 x 15	None	26392	8.2	23.7	103.1
None	Three Coulters	2 x 15	Starter	29184	7.0	23.3	98.8
Zone Builder	Chisel Plow	2 x 2	Fall	24834	4.9	23.8	94.4
Zone Builder	Chisel Plow	2 x 2	None	27961	2.1	23.6	94.2
Zone Builder	Chisel Plow	2 x 2	Starter	28810	4.4	23.8	121.5
Zone Builder	Chisel Plow	2 x 15	Fall	28533	5.3	24.0	111.7
Zone Builder	Chisel Plow	2 x 15	None	26375	3.3	23.9	109.4
Zone Builder	Chisel Plow	2 x 15	Starter	27273	4.7	24.5	109.4
Zone Builder	One Coulter	2 x 2	Fall	26999	2.4	23.7	92.1
Zone Builder	One Coulter	2 x 2	None	26149	3.0	23.7	101.8
Zone Builder	One Coulter	2 x 2	Starter	27185	1.2	23.9	93.4
Zone Builder	One Coulter	2 x 15	Fall	24102	5.5	22.8	76.5
Zone Builder	One Coulter	2 x 15	None	28828	5.0	23.1	106.9
Zone Builder	One Coulter	2 x 15	Starter	23377	7.2	23.2	86.5

**Table E-46. Fertilizer Placement in Corn Under Zone Tillage.  
Lancaster, WI - 1996**

Fall Tillage	Spring Tillage	Nitrogen Placement P & K	Final Stand	Broken Stalks	Grain Moist	Yield
			plants/A	%	%	bu/a
Zone Builder	Three Coulters 2 x 2	Fall	24644	6.1	24.5	93.7
Zone Builder	Three Coulters 2 x 2	None	26678	3.9	23.9	97.7
Zone Builder	Three Coulters 2 x 2	Starter	26761	1.0	23.8	100.3
Zone Builder	Three Coulters 2 x 15	Fall	26760	3.3	23.8	88.3
Zone Builder	Three Coulters 2 x 15	None	26012	5.3	24.2	93.3
Zone Builder	Three Coulters 2 x 15	Starter	28092	7.4	24.2	116.6
Mean			26784	4.8	24.0	102.9

**Probability %**

Fall Tillage (F)	> 50	16.1	20.9	40.7
Spring Tillage (S)	46.0	31.2	40.5	14.8
F x S	> 50	> 50	5.3	> 50
Nitrogen (N)	> 50	7.7	42.0	> 50
F x N	> 50	> 50	> 50	> 50
S x N	> 50	> 50	35.0	> 50
F x S x N	> 50	> 50	19.3	> 50
P & K Treatment (P)	35.3	> 50	8.1	18.3
F x P	> 50	32.3	> 50	37.8
S x P	> 50	> 50	35.2	44.6
F x S x P	> 50	> 50	> 50	17.2
N x P	25.6	16.3	28.1	34.7
F x N x P	> 50	> 50	0.6	26.7
S x N x P	24.5	> 50	> 50	10.4
F x S x N x P	> 50	6.9	> 50	> 50

**LSD (0.10)**

Fall Tillage (F)	NS	NS	NS	NS
Spring Tillage (S)	NS	NS	NS	NS
Nitrogen (N)	NS	1.9	NS	NS
P & K Treatment (P)	NS	NS	0.2	NS

**CV (%)**

10.8	59.0	1.8	15.8
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## FIELD EXPERIMENT HISTORY

**Title:** Fertilizer Placement in Corn Under Zone Tillage **Year:** 1996  
**Personnel:** J.G. Lauer, M.C. Rankin, K.D. Hudelson  
**Location:** Bertram Farm, Fond du Lac, WI  
**Supported by:**

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### FIELD INFORMATION

Soil Type: Kewaunee Red Clay  
Soil Test Results: Date: Oct. 1994 pH: 7.1 P(ppm): 28 K(ppm): 150 OM(%): 3.2  
Previous Crop: Corn

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### EXPERIMENTAL PROCEDURE

Exp. Design: RCB Split-Split-Split Plot

Replicates: 4

Factors:

Fall Tillage	No-Till Zone Builder (Oct. 95)
Spring Tillage	Chisel Plow (w/Soil Finisher) One Coulter Three Coulters
Nitrogen Placement	2" x 2" 50 gpa of 28-0-0 2" x 15" 50 gpa of 28-0-0
P & K Application	Fall 50 gpa of 4-10-10 (Oct. 95) Starter 50 gpa of 4-10-10 None

Plot Size: Planted: 10' x 25'  
Harvested: 5' x 17.5

Planting: Date: 27-May  
Row Spacing: 30"  
Equipment: John Deere Max-Emerge  
Depth: 2"  
Rate: 32,000/a  
Hybrid: Pioneer 3861

Harvesting: Date: 12-Nov  
Equipment: Gleaner Plot Combine

Herbicides:

<u>Material</u>	<u>Rate</u>	<u>Method</u>
Roundup	2 qts/a	preemerg
Banvel	1.5 pt/a	preemerg
Accent	0.67 oz/a	post
Buctril	1.5 pts/a	post

Insecticides: Lorsban 8 oz/1000' planting

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Results: Table E-47.

**Table E-47. Fertilizer Placement in Corn Under Zone Tillage.  
Fond du Lac, WI - 1996**

Fall Tillage	Spring Tillage	Nitrogen Placement P & K	Final Stand	Broken Stalks	Grain Moist	Yield	
			plants/A	%	%	bu/a	
None			31571	21.0	23.4	120.7	
Zone Builder			29960	34.5	23.2	121.9	
	Chisel Plow		29413	34.3	23.1	116.5	
	One Coulter		31446	23.8	23.5	123.9	
	Three Coulters		31436	25.2	23.4	123.6	
None	Chisel Plow		30430	35.0	23.1	121.4	
None	One Coulter		32546	12.0	23.8	115.7	
None	Three Coulters		31737	16.1	23.4	125.1	
Zone Builder	Chisel Plow		28397	33.6	23.1	111.6	
Zone Builder	One Coulter		30347	35.7	23.3	132.4	
Zone Builder	Three Coulters		31135	34.2	23.4	122.0	
		2 x 2	30859	33.5	23.7	107.6	
		2 x 15	30672	22.0	23.0	134.8	
None		2 x 2	31612	22.9	23.8	105.0	
None		2 x 15	31529	19.1	23.0	136.5	
Zone Builder		2 x 2	30105	44.1	23.6	110.3	
Zone Builder		2 x 15	29814	24.9	22.9	133.1	
	Chisel Plow	2 x 2	29476	40.4	23.4	102.8	
	Chisel Plow	2 x 15	29351	28.1	22.8	130.2	
	One Coulter	2 x 2	31674	30.1	24.0	107.6	
	One Coulter	2 x 15	31218	17.6	23.1	139.5	
	Three Coulters	2 x 2	31426	30.1	23.7	112.3	
	Three Coulters	2 x 15	31446	20.3	23.1	134.8	
None	Chisel Plow	2 x 2	30368	39.7	23.2	109.5	
None	Chisel Plow	2 x 15	30492	30.2	23.0	133.3	
None	One Coulter	2 x 2	32857	12.2	24.4	98.0	
None	One Coulter	2 x 15	32234	11.7	23.2	133.4	
None	Three Coulters	2 x 2	31612	16.9	23.9	107.4	
None	Three Coulters	2 x 15	31861	15.4	22.8	142.7	
Zone Builder	Chisel Plow	2 x 2	28584	41.1	23.6	96.2	
Zone Builder	Chisel Plow	2 x 15	28210	26.0	22.6	127.0	
Zone Builder	One Coulter	2 x 2	30492	48.0	23.7	118.1	
Zone Builder	One Coulter	2 x 15	30202	23.4	22.9	145.5	
Zone Builder	Three Coulters	2 x 2	31239	43.3	23.4	117.3	
Zone Builder	Three Coulters	2 x 15	31031	25.2	23.3	126.8	
			Fall	31083	26.1	23.4	126.3
			None	30648	25.6	23.4	116.7
			Starter	30565	31.6	23.2	120.8
None			Fall	32131	19.5	23.6	126.9
None			None	31405	20.1	23.4	120.8
None			Starter	31177	23.5	23.2	114.5
Zone Builder			Fall	30036	32.7	23.2	125.6
Zone Builder			None	29891	31.1	23.4	112.4
Zone Builder			Starter	29953	39.7	23.2	127.1

**Table E-47. Fertilizer Placement in Corn Under Zone Tillage.  
Fond du Lac, WI - 1996**

Fall Tillage	Spring Tillage	Nitrogen Placement P & K	Final Stand	Broken Stalks	Grain Moist	Yield	
			plants/A	%	%	bu/a	
	Chisel Plow	Fall	29248	35.4	23.2	122.4	
	Chisel Plow	None	29994	28.7	23.0	114.7	
	Chisel Plow	Starter	28999	38.8	23.0	112.5	
	One Coulter	Fall	32328	20.3	23.6	134.0	
	One Coulter	None	30710	23.9	23.6	114.1	
	One Coulter	Starter	31301	27.3	23.4	122.8	
	Three Coulters	Fall	31674	22.7	23.4	122.4	
	Three Coulters	None	31239	24.2	23.5	121.2	
	Three Coulters	Starter	31394	28.7	23.3	127.1	
None	Chisel Plow	Fall	29870	35.7	23.3	119.0	
None	Chisel Plow	None	31177	30.1	22.9	128.9	
None	Chisel Plow	Starter	30243	39.1	23.0	116.4	
None	One Coulter	Fall	33604	10.0	24.1	125.9	
None	One Coulter	None	32110	13.1	23.8	113.9	
None	One Coulter	Starter	31923	12.8	23.5	107.3	
None	Three Coulters	Fall	32919	12.8	23.5	135.7	
None	Three Coulters	None	30928	17.0	23.4	119.7	
None	Three Coulters	Starter	31363	18.6	23.3	119.8	
Zone Builder	Chisel Plow	Fall	28625	35.0	23.0	125.7	
Zone Builder	Chisel Plow	None	28812	27.3	23.1	100.5	
Zone Builder	Chisel Plow	Starter	27754	38.4	23.1	108.7	
Zone Builder	One Coulter	Fall	31052	30.5	23.1	142.1	
Zone Builder	One Coulter	None	29310	34.8	23.4	114.4	
Zone Builder	One Coulter	Starter	30679	41.8	23.3	138.4	
Zone Builder	Three Coulters	Fall	30430	32.6	23.4	109.0	
Zone Builder	Three Coulters	None	31550	31.3	23.5	122.7	
Zone Builder	Three Coulters	Starter	31426	38.8	23.3	134.4	
		2 x 2	Fall	31011	30.6	23.9	113.9
		2 x 2	None	30886	29.8	23.7	102.7
		2 x 2	Starter	30679	40.2	23.5	106.0
		2 x 15	Fall	31156	21.6	22.9	138.6
		2 x 15	None	30409	21.4	23.0	130.1
		2 x 15	Starter	30451	22.9	22.9	135.7
None		2 x 2	Fall	32442	19.7	24.1	109.1
None		2 x 2	None	31239	21.5	23.8	102.1
None		2 x 2	Starter	31156	27.5	23.6	103.8
None		2 x 15	Fall	31820	19.3	23.2	144.7
None		2 x 15	None	31571	18.6	23.0	139.6
None		2 x 15	Starter	31197	19.5	22.9	125.2
Zone Builder		2 x 2	Fall	29579	41.5	23.6	118.7
Zone Builder		2 x 2	None	30534	38.0	23.7	103.4
Zone Builder		2 x 2	Starter	30202	52.9	23.4	108.1
Zone Builder		2 x 15	Fall	30492	23.9	22.7	132.5
Zone Builder		2 x 15	None	29248	24.3	23.1	120.7
Zone Builder		2 x 15	Starter	29704	26.4	23.0	146.2

**Table E-47. Fertilizer Placement in Corn Under Zone Tillage.  
Fond du Lac, WI - 1996**

Fall Tillage	Spring Tillage	Nitrogen Placement	P & K	Final Stand	Broken Stalks	Grain Moist	Yield
				plants/A	%	%	bu/a
	Chisel Plow	2 x 2	Fall	29683	36.1	23.5	103.8
	Chisel Plow	2 x 2	None	30243	34.6	23.4	101.9
	Chisel Plow	2 x 2	Starter	28501	50.4	23.2	102.8
	Chisel Plow	2 x 15	Fall	28812	34.6	22.8	140.9
	Chisel Plow	2 x 15	None	29745	22.7	22.6	127.4
	Chisel Plow	2 x 15	Starter	29496	27.1	22.8	122.3
	One Coulter	2 x 2	Fall	32297	26.8	24.0	126.5
	One Coulter	2 x 2	None	30865	28.0	24.4	89.4
	One Coulter	2 x 2	Starter	31861	35.5	23.8	104.7
	One Coulter	2 x 15	Fall	32359	13.7	23.1	141.6
	One Coulter	2 x 15	None	30554	19.9	23.0	135.8
	One Coulter	2 x 15	Starter	30741	19.1	23.1	141.0
	Three Coulters	2 x 2	Fall	31052	28.9	24.0	111.4
	Three Coulters	2 x 2	None	31550	26.7	23.5	115.2
	Three Coulters	2 x 2	Starter	31674	34.7	23.6	110.4
	Three Coulters	2 x 15	Fall	32297	16.5	22.9	133.4
	Three Coulters	2 x 15	None	30928	21.7	23.4	127.2
	Three Coulters	2 x 15	Starter	31114	22.6	23.0	143.7
None	Chisel Plow	2 x 2	Fall	30741	32.9	23.4	100.3
None	Chisel Plow	2 x 2	None	30865	36.2	23.0	112.5
None	Chisel Plow	2 x 2	Starter	29496	50.1	23.1	115.8
None	Chisel Plow	2 x 15	Fall	28999	38.6	23.3	137.8
None	Chisel Plow	2 x 15	None	31488	23.9	22.8	145.3
None	Chisel Plow	2 x 15	Starter	30990	28.2	22.8	117.0
None	One Coulter	2 x 2	Fall	33977	9.4	24.7	105.9
None	One Coulter	2 x 2	None	32110	13.3	24.5	89.2
None	One Coulter	2 x 2	Starter	32483	13.9	23.9	98.9
None	One Coulter	2 x 15	Fall	33230	10.7	23.5	146.0
None	One Coulter	2 x 15	None	32110	12.8	23.1	138.6
None	One Coulter	2 x 15	Starter	31363	11.7	23.1	115.6
None	Three Coulters	2 x 2	Fall	32608	16.9	24.2	121.2
None	Three Coulters	2 x 2	None	30741	15.1	23.8	104.5
None	Three Coulters	2 x 2	Starter	31488	18.6	23.8	96.6
None	Three Coulters	2 x 15	Fall	33230	8.6	22.7	150.3
None	Three Coulters	2 x 15	None	31114	19.0	23.0	134.9
None	Three Coulters	2 x 15	Starter	31239	18.5	22.8	143.0
Zone Builder	Chisel Plow	2 x 2	Fall	28625	39.4	23.7	107.4
Zone Builder	Chisel Plow	2 x 2	None	29621	33.1	23.8	91.4
Zone Builder	Chisel Plow	2 x 2	Starter	27505	50.7	23.3	89.7
Zone Builder	Chisel Plow	2 x 15	Fall	28625	30.6	22.4	144.0
Zone Builder	Chisel Plow	2 x 15	None	28003	21.4	22.5	109.6
Zone Builder	Chisel Plow	2 x 15	Starter	28003	26.0	22.8	127.6
Zone Builder	One Coulter	2 x 2	Fall	30617	44.3	23.4	147.1
Zone Builder	One Coulter	2 x 2	None	29621	42.7	24.2	89.5
Zone Builder	One Coulter	2 x 2	Starter	31239	57.1	23.6	110.4
Zone Builder	One Coulter	2 x 15	Fall	31488	16.8	22.7	137.1
Zone Builder	One Coulter	2 x 15	None	28999	27.0	22.8	133.0
Zone Builder	One Coulter	2 x 15	Starter	30119	26.6	23.1	166.4

**Table E-47. Fertilizer Placement in Corn Under Zone Tillage.  
Fond du Lac, WI - 1996**

Fall Tillage	Spring Tillage	Nitrogen Placement P & K	Final Stand	Broken Stalks	Grain Moist	Yield
			plants/A	%	%	bu/a
Zone Builder	Three Coulters 2 x 2	Fall	29496	40.9	23.8	101.6
Zone Builder	Three Coulters 2 x 2	None	32359	38.2	23.2	125.9
Zone Builder	Three Coulters 2 x 2	Starter	31861	50.8	23.4	124.3
Zone Builder	Three Coulters 2 x 15	Fall	31363	24.3	23.0	116.4
Zone Builder	Three Coulters 2 x 15	None	30741	24.4	23.9	119.5
Zone Builder	Three Coulters 2 x 15	Starter	30990	26.8	23.2	144.5
Mean			30765	27.8	23.3	121.3

**Probability %**

Fall Tillage (F)	< 0.1	14.0	27.5	> 50
Spring Tillage (S)	< 0.1	1.1	7.8	40.3
F x S	11.0	0.4	33.5	11.9
Nitrogen (N)	> 50	0.4	< 0.1	< 0.1
F x N	> 50	4.3	> 50	39.2
S x N	> 50	> 50	> 50	> 50
F x S x N	> 50	> 50	13.3	43.2
P & K Treatment (P)	39.0	5.3	18.6	17.8
F x P	> 50	> 50	2.0	11.9
S x P	19.8	> 50	> 50	> 50
F x S x P	15.9	> 50	49.1	8.3
N x P	> 50	18.7	20.8	> 50
F x N x P	14.7	> 50	> 50	9.8
S x N x P	35.8	45.3	2.5	30.1
F x S x N x P	> 50	> 50	33.2	34.4

**LSD (0.10)**

Fall Tillage (F)	280	NS	NS	NS
Spring Tillage (S)	678	5.5	0.3	NS
Nitrogen (N)	NS	6.1	0.3	8.8
P & K Treatment (P)	NS	4.5	NS	NS

**CV%**

	6.4	47.2	2.0	20.3
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# FIELD EXPERIMENT HISTORY

**Title:** Fertilizer Placement in Corn Under Zone Tillage **Year:** 1996  
**Expt. No.:** 9597  
**Personnel:** J.G. Lauer, F.D. Thompson, K.D. Hudelson  
**Location:** Darrow Farm, Chippewa Falls, WI  
**Supported by:**

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## FIELD INFORMATION

Soil Type: Burkhardt Sandy Loam  
Soil Test Results: Date: 1993 pH: 6.3 P(ppm): 45 K(ppm): 127 OM(%): 2.5  
Previous Crop: Corn

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## EXPERIMENTAL PROCEDURE

Exp. Design: RCB Split-Split-Split Plot

Replicates: 4

Factors:

Fall Tillage	No-Till Zone Builder (Oct. 95)
Spring Tillage	Chisel Plow (and Disk) One Coulter Three Coulters
Nitrogen Placement	2" x 2" 50 gpa of 28-0-0 2" x 15" 50 gpa of 28-0-0
P & K Application	Fall 25 gpa of 4-10-10 (Oct. 95) Starter 25 gpa of 4-10-10 None

Plot Size: Planted: 10' x 30'  
Harvested: 5' x 27'

Planting: Date: 8-May  
Row Spacing: 30"  
Equipment: John Deere Max-Emerge  
Depth: 2"  
Rate: 32,000/a  
Hybrid: Pioneer 3861

Harvesting: Date: 1-Nov  
Equipment: Gleaner Plot Combine

Herbicides:

<u>Material</u>	<u>Rate</u>	<u>Method</u>
Frontier	14 oz/a	preemerge
Marksman	2.5 pt/a	preemerge
Accent	0.33 oz/a	post
Aqua-Gene	3.2 oz/a	post
Ammonium Sulfate	2 lbs/a	post

Insecticides: Lorsban 8 oz/1000' planting

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Results: Table E-48.

**Table E-48. Fertilizer Placement in Corn Under Zone Tillage.  
Chippewa Falls, WI - 1996**

Fall Tillage	Spring Tillage	Nitrogen Placement P & K	Final Stand	Broken Stalks	Grain Moist	Yield	
			plants/A	%	%	bu/a	
None			24694	0.5	21.6	138.0	
Zone Builder			25574	0.6	20.8	148.9	
	Chisel Plow		24887	0.7	20.3	153.9	
	One Coulter		25194	0.4	21.8	137.2	
	Three Coulters		25375	0.5	21.8	137.3	
None	Chisel Plow		25141	0.4	20.2	154.7	
None	One Coulter		24265	0.4	22.6	127.7	
None	Three Coulters		24576	0.7	22.3	128.1	
Zone Builder	Chisel Plow		24621	1.0	20.3	153.2	
Zone Builder	One Coulter		26226	0.4	20.9	147.8	
Zone Builder	Three Coulters		26059	0.4	21.3	145.2	
		2 x 2	25092	0.5	21.4	141.3	
		2 x 15	25179	0.5	21.0	145.8	
None		2 x 2	24644	0.7	21.7	137.1	
None		2 x 15	24749	0.3	21.5	138.8	
Zone Builder		2 x 2	25541	0.4	21.1	145.3	
Zone Builder		2 x 15	25609	0.8	20.5	152.8	
	Chisel Plow	2 x 2	24635	0.4	20.3	154.5	
	Chisel Plow	2 x 15	25128	0.9	20.2	153.4	
	One Coulter	2 x 2	25539	0.5	21.8	136.7	
	One Coulter	2 x 15	24810	0.3	21.7	137.8	
	Three Coulters	2 x 2	25168	0.7	22.2	131.8	
	Three Coulters	2 x 15	25616	0.3	21.3	143.7	
None	Chisel Plow	2 x 2	24496	0.5	20.3	158.0	
None	Chisel Plow	2 x 15	25786	0.3	20.2	151.6	
None	One Coulter	2 x 2	24875	0.7	22.5	129.4	
None	One Coulter	2 x 15	23519	0.0	22.7	125.6	
None	Three Coulters	2 x 2	24559	1.0	22.6	121.1	
None	Three Coulters	2 x 15	24594	0.4	21.9	135.1	
Zone Builder	Chisel Plow	2 x 2	24787	0.3	20.4	151.0	
Zone Builder	Chisel Plow	2 x 15	24469	1.5	20.2	155.2	
Zone Builder	One Coulter	2 x 2	26351	0.3	21.0	145.6	
Zone Builder	One Coulter	2 x 15	26100	0.5	20.8	150.1	
Zone Builder	Three Coulters	2 x 2	25625	0.5	21.8	139.9	
Zone Builder	Three Coulters	2 x 15	26638	0.2	20.7	152.4	
			Fall	25283	0.3	21.1	144.1
			None	25345	0.9	21.2	140.2
			Starter	24757	0.5	21.4	146.3
None			Fall	24338	0.3	21.6	137.5
None			None	25214	0.7	21.6	136.8
None			Starter	24523	0.5	21.7	139.6

**Table E-48. Fertilizer Placement in Corn Under Zone Tillage.  
Chippewa Falls, WI - 1996**

Fall Tillage	Spring Tillage	Nitrogen Placement P & K	Final Stand	Broken Stalks	Grain Moist	Yield	
			plants/A	%	%	bu/a	
Zone Builder		Fall	26228	0.2	20.6	150.6	
Zone Builder		None	25475	1.0	20.8	143.3	
Zone Builder		Starter	24991	0.6	21.0	153.1	
	Chisel Plow	Fall	24745	0.3	20.2	154.7	
	Chisel Plow	None	25188	1.2	20.2	152.0	
	Chisel Plow	Starter	24716	0.4	20.5	155.0	
	One Coulter	Fall	25664	0.0	21.8	139.6	
	One Coulter	None	25565	0.4	21.6	131.4	
	One Coulter	Starter	24281	0.8	22.0	140.9	
	Three Coulters	Fall	25565	0.4	21.6	135.4	
	Three Coulters	None	25317	0.9	21.8	135.2	
	Three Coulters	Starter	25242	0.3	21.9	141.4	
None	Chisel Plow	Fall	24482	0.2	20.3	153.4	
None	Chisel Plow	None	25612	0.7	20.0	156.9	
None	Chisel Plow	Starter	25329	0.3	20.5	154.0	
None	One Coulter	Fall	24292	0.0	22.6	131.7	
None	One Coulter	None	24938	0.4	22.4	121.7	
None	One Coulter	Starter	23447	0.9	22.8	130.0	
None	Three Coulters	Fall	24200	0.7	22.2	123.2	
None	Three Coulters	None	25007	1.2	22.4	131.1	
None	Three Coulters	Starter	24523	0.3	22.2	129.9	
Zone Builder	Chisel Plow	Fall	25007	0.5	20.1	156.0	
Zone Builder	Chisel Plow	None	24765	1.8	20.3	147.8	
Zone Builder	Chisel Plow	Starter	24016	0.6	20.4	156.1	
Zone Builder	One Coulter	Fall	27265	0.0	20.8	148.9	
Zone Builder	One Coulter	None	26297	0.4	20.7	142.9	
Zone Builder	One Coulter	Starter	25114	0.8	21.1	151.8	
Zone Builder	Three Coulters	Fall	26735	0.2	21.1	145.8	
Zone Builder	Three Coulters	None	25583	0.6	21.3	138.7	
Zone Builder	Three Coulters	Starter	25859	0.4	21.6	151.2	
		2 x 2	Fall	25608	0.3	21.3	143.2
		2 x 2	None	25007	0.8	21.5	137.5
		2 x 2	Starter	24619	0.6	21.5	143.2
		2 x 15	Fall	24926	0.2	21.0	145.0
		2 x 15	None	25717	1.0	20.8	143.0
		2 x 15	Starter	24894	0.4	21.2	149.4
None		2 x 2	Fall	24845	0.2	21.6	142.3
None		2 x 2	None	24581	1.1	21.8	132.5
None		2 x 2	Starter	24490	0.8	21.9	136.1
None		2 x 15	Fall	23781	0.3	21.6	132.3
None		2 x 15	None	25910	0.4	21.3	141.1
None		2 x 15	Starter	24555	0.1	21.5	143.1
Zone Builder		2 x 2	Fall	26371	0.3	21.0	144.0
Zone Builder		2 x 2	None	25432	0.5	21.3	142.0
Zone Builder		2 x 2	Starter	24749	0.4	21.1	150.4

**Table E-48. Fertilizer Placement in Corn Under Zone Tillage.  
Chippewa Falls, WI - 1996**

Fall Tillage	Spring Tillage	Nitrogen Placement	P & K	Final Stand	Broken Stalks	Grain Moist	Yield
				plants/A	%	%	bu/a
Zone Builder		2 x 15	Fall	26071	0.1	20.3	157.8
Zone Builder		2 x 15	None	25523	1.6	20.3	144.8
Zone Builder		2 x 15	Starter	25233	0.7	21.0	155.8
	Chisel Plow	2 x 2	Fall	25087	0.5	20.0	157.7
	Chisel Plow	2 x 2	None	24563	0.4	20.4	152.3
	Chisel Plow	2 x 2	Starter	24200	0.4	20.6	153.1
	Chisel Plow	2 x 15	Fall	24402	0.2	20.3	151.7
	Chisel Plow	2 x 15	None	25813	2.1	20.0	151.8
	Chisel Plow	2 x 15	Starter	25168	0.5	20.3	156.6
	One Coulter	2 x 2	Fall	26090	0.0	21.8	139.6
	One Coulter	2 x 2	None	25721	0.7	21.8	132.2
	One Coulter	2 x 2	Starter	24684	0.9	21.8	138.5
	One Coulter	2 x 15	Fall	25168	0.0	21.8	139.7
	One Coulter	2 x 15	None	25383	0.0	21.4	130.6
	One Coulter	2 x 15	Starter	23877	0.8	22.1	143.2
	Three Coulters	2 x 2	Fall	25721	0.4	22.1	130.1
	Three Coulters	2 x 2	None	24799	1.2	22.3	127.9
	Three Coulters	2 x 2	Starter	24984	0.6	22.1	137.4
	Three Coulters	2 x 15	Fall	25383	0.4	21.0	141.5
	Three Coulters	2 x 15	None	25921	0.4	21.3	143.7
	Three Coulters	2 x 15	Starter	25544	0.0	21.6	146.0
None	Chisel Plow	2 x 2	Fall	24603	0.4	20.0	161.6
None	Chisel Plow	2 x 2	None	24119	0.8	19.9	157.9
None	Chisel Plow	2 x 2	Starter	24765	0.3	20.7	154.4
None	Chisel Plow	2 x 15	Fall	24361	0.0	20.5	145.1
None	Chisel Plow	2 x 15	None	27104	0.6	20.1	156.0
None	Chisel Plow	2 x 15	Starter	25894	0.3	20.2	153.7
None	One Coulter	2 x 2	Fall	25087	0.0	22.4	137.0
None	One Coulter	2 x 2	None	25329	0.6	22.4	123.7
None	One Coulter	2 x 2	Starter	23985	1.7	22.8	126.8
None	One Coulter	2 x 15	Fall	23232	0.0	22.9	124.6
None	One Coulter	2 x 15	None	24415	0.0	22.4	118.9
None	One Coulter	2 x 15	Starter	22909	0.0	22.8	133.2
None	Three Coulters	2 x 2	Fall	24845	0.4	22.5	123.6
None	Three Coulters	2 x 2	None	24200	2.0	22.8	118.8
None	Three Coulters	2 x 2	Starter	24630	0.5	22.6	120.9
None	Three Coulters	2 x 15	Fall	23555	0.9	21.9	122.9
None	Three Coulters	2 x 15	None	25813	0.4	21.9	143.5
None	Three Coulters	2 x 15	Starter	24415	0.0	21.9	138.9
Zone Builder	Chisel Plow	2 x 2	Fall	25571	0.6	20.0	153.8
Zone Builder	Chisel Plow	2 x 2	None	25007	0.0	20.7	148.0
Zone Builder	Chisel Plow	2 x 2	Starter	23447	0.5	20.5	151.3
Zone Builder	Chisel Plow	2 x 15	Fall	24442	0.4	20.1	158.3
Zone Builder	Chisel Plow	2 x 15	None	24523	3.5	20.0	147.5
Zone Builder	Chisel Plow	2 x 15	Starter	24442	0.7	20.4	159.6
Zone Builder	One Coulter	2 x 2	Fall	27427	0.0	21.1	143.0
Zone Builder	One Coulter	2 x 2	None	26244	0.8	21.1	143.5

**Table E-48. Fertilizer Placement in Corn Under Zone Tillage.  
Chippewa Falls, WI - 1996**

Fall Tillage	Spring Tillage	Nitrogen Placement	P & K	Final Stand	Broken Stalks	Grain Moist	Yield
				plants/A	%	%	bu/a
Zone Builder	One Coulter	2 x 2	Starter	25383	0.0	20.9	150.3
Zone Builder	One Coulter	2 x 15	Fall	27104	0.0	20.6	154.7
Zone Builder	One Coulter	2 x 15	None	26351	0.0	20.3	142.3
Zone Builder	One Coulter	2 x 15	Starter	24845	1.5	21.3	153.2
Zone Builder	Three Coulters	2 x 2	Fall	26378	0.3	21.8	135.1
Zone Builder	Three Coulters	2 x 2	None	25249	0.7	21.9	134.8
Zone Builder	Three Coulters	2 x 2	Starter	25249	0.6	21.7	149.7
Zone Builder	Three Coulters	2 x 15	Fall	27212	0.0	20.2	160.2
Zone Builder	Three Coulters	2 x 15	None	26028	0.5	20.6	143.9
Zone Builder	Three Coulters	2 x 15	Starter	26674	0.0	21.4	153.2
Mean				25134	0.5	21.2	143.5

**Probability %**

Fall Tillage (F)	33.2	> 50	3.0	16.6
Spring Tillage (S)	> 50	> 50	0.2	0.3
F x S	9.5	39.9	11.1	11.7
Nitrogen (N)	> 50	> 50	9.6	29.9
F x N	> 50	19.1	43.4	44.4
S x N	> 50	32.5	20.9	35.7
F x S x N	> 50	> 50	> 50	> 50
P & K Treatment (P)	2.0	19.6	1.8	25.7
F x P	1.9	> 50	40.3	45.3
S x P	13.0	> 50	> 50	> 50
F x S x P	> 50	> 50	> 50	> 50
N x P	5.3	> 50	8.0	> 50
F x N x P	24.1	34.0	0.7	4.9
S x N x P	> 50	28.9	16.8	> 50
F x S x N x P	42.2	32.8	> 50	> 50

**LSD (0.10)**

Fall Tillage (F)	NS	NS	0.5	12.5
Spring Tillage (S)	NS	NS	0.6	8.4
Nitrogen (N)	NS	NS	0.3	5.9
P & K Treatment (P)	498	NS	0.2	5.2

**CV%**

5.4	269.6	2.1	9.8
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**Table E-49. 1996 Spray Timing / Zone Tillage Trial - Corn Following Sod.  
Arlington, WI**

Herbicide Treatment	Tillage	Final Stand plants/a	Broken Stalks %	Grain	
				Moisture %	Yield bu/a
Fall Spray		25612	1.4	29.5	154.0
Spring Spray		24660	1.5	29.3	142.2
	NT 1 Fluted + 2 Ripple Coulters	25569	1.2	28.3	149.1
	NT 3 Fluted Coulters, + Trash Whippers	24686	1.7	29.8	147.9
	ZT 3 Fluted Coulters + Trash Whippers	25111	1.5	30.1	147.4
Fall Spray	NT 1 Fluted + 2 Ripple Coulters	25550	1.4	28.4	158.1
Fall Spray	NT 3 Fluted Coulters, + Trash Whippers	25471	1.5	29.6	153.0
Fall Spray	ZT 3 Fluted Coulters + Trash Whippers	25856	1.3	30.5	151.0
Spring Spray	NT 1 Fluted + 2 Ripple Coulters	25589	0.9	28.3	140.2
Spring Spray	NT 3 Fluted Coulters, + Trash Whippers	23901	1.9	29.9	142.8
Spring Spray	ZT 3 Fluted Coulters + Trash Whippers	24490	1.6	29.6	143.7
Mean		25122	1.5	29.4	148.1
<b><u>Probability(%)</u></b>					
Herbicide (H)		22.8	> 50	> 50	4.3
Tillage (T)		26.4	33.4	7.2	> 50
T x H		26.1	41.8	> 50	> 50
<b><u>LSD(0.10)</u></b>					
Herbicide (H)		NS	NS	NS	8.8
Tillage (T)		NS	NS	1.3	NS
<b><u>CV(%)</u></b>					
		5.1	62.4	6.3	8.6

## FIELD EXPERIMENT HISTORY

**Title:** Lancaster Spray Timing / Zone Tillage Trial - Corn following Sod      **Year:** 1996  
**Personnel:** J.G. Lauer, T.M. Wood, K.D. Hudelson  
**Location:** Lancaster Research Station, Lancaster, WI  
**Supported by:**

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### FIELD INFORMATION

Field no.: 112W      644  
Soil Type: Rozetta Silt loam  
Soil Test Results: Date: Oct. 1996      pH: 7.0      P(ppm): 39      K(ppm): 148      OM(%): 3.2  
Fertilizer Applied: 150 lbs/a of 6-24-24 at planting  
Previous Crop: Alfalfa

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### EXPERIMENTAL PROCEDURE

**Exp. Design:** Two Factor Randomized Complete Block

**Variables:** Factor A: Two Herbicide applications

1-Fall Spray	Roundup(2qt/a), Banvel(1pt/a), 2,4-D(1pt/a)
-w/ spring burndown	Roundup Ultra(2qts/a), Dual II(2.5pts/a) on 1-May Banvel(1pt/a) on 4-Jun
2-Spring Broadcast Spray	Roundup Ultra(2qts/a), Dual II(2.5pts/a) on 1-May Banvel(1pt/a) on 4-Jun

Factor B: Three Tillage Operations

- NT 1 Fluted + 2 Ripple Coulter
- NT 3 Fluted Coulters + Trash Whippers
- ZT 3 Fluted Coulters + Trash Whippers (Zone Builder in previous fall)

**Plot Size:** Planted: 10' x 40'  
Harvested: 5' x 37'

**Planting:** Date: 18-May  
Row Spacing: 30"  
Equipment: John Deere Max-Emerge  
Depth: 2"  
Rate: 32,000/a  
Hybrid: Pioneer 3769

**Harvesting:** Date: 25-Oct  
Equipment: Gleaner Plot Combine

**Insecticide:** Pounce 0.6 oz/a on 10-Jul for ECB

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Results: Table E-50.



**Table E-50. 1996 Spray Timing / Zone Tillage Trial Corn Following Sod.  
Lancaster, WI**

Herbicide Treatment	Tillage	Final Stand plants/a	Broken Stalks %	Grain	
				Moisture %	Yield bu/a
Fall Spray		21716	2.8	21.0	121.8
Spring Spray		21102	3.7	22.0	101.9
	NT 1 Fluted + 2 Ripple Coulters	22194	1.2	21.3	109.5
	NT 3 Fluted Coulters, + Trash Whippers	21546	4.2	21.8	106.7
	ZT 3 Fluted Coulters + Trash Whippers	20487	4.3	21.4	119.4
Fall Spray	NT 1 Fluted + 2 Ripple Coulters	22410	1.8	20.7	119.7
Fall Spray	NT 3 Fluted Coulters, + Trash Whippers	22096	5.5	21.1	120.2
Fall Spray	ZT 3 Fluted Coulters + Trash Whippers	20644	1.1	21.2	125.7
Spring Spray	NT 1 Fluted + 2 Ripple Coulters	21978	0.5	21.9	99.4
Spring Spray	NT 3 Fluted Coulters, + Trash Whippers	20997	2.8	22.4	93.2
Spring Spray	ZT 3 Fluted Coulters + Trash Whippers	20330	7.6	21.6	113.1
Mean		21409	3.2	21.5	111.9
<b><u>Probability(%)</u></b>					
Herbicide (H)		8.8	42.1	1.5	0.7
Tillage (T)		0.9	38.6	0.4	2.6
T x H		> 50	17.6	0.3	29.5
<b><u>LSD(0.10)</u></b>					
Herbicide (H)		587	NS	0.5	9.2
Tillage (T)		853	NS	0.2	7.7
<b><u>CV(%)</u></b>					
		5.7	192.4	1.5	9.8

## FIELD EXPERIMENT HISTORY

**Title:** Fond du Lac Spray Timing / Zone Tillage Trial - Corn following Sod. **Year:** 1996  
**Personnel:** J.G. Lauer, M.C. Rankin, K.D. Hudelson  
**Location:** Dave Burlingham Farm - Malone, WI  
**Supported by:**

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### FIELD INFORMATION

**Soil Type:** Dodge Silt Loam  
**Soil Test Results:** Date: NA pH: NA P(ppm): NA K(ppm): NA OM(%): NA  
**Fertilizer Applied:** 150 lbs/a of 6-24-24 at planting  
**Previous Crop:** Alfalfa

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### EXPERIMENTAL PROCEDURE

**Exp. Design:** RCB

**Variables:** Factor A: Two Herbicide applications

1-Fall Spray	Roundup(2qts/a), Banvel(1pt/a), 2,4-D(1pt/a) on 25-Sep
-w/ spring burndown	Roundup(2qts/a), Banvel(1.5pt/a) on 29-May
	Accent(0.67oz/a), Buctril(1.5pts/a) on 4-Jul
2-Spring Broadcast Spray	Roundup(2qts/a), Banvel(1.5pt/a) on 29-May
	Accent(0.67oz/a), Buctril(1.5pts/a) on 4-Jul

Factor B: Three Tillage Operations

- NT 1 Fluted + 2 Ripple Coulter
- NT 3 Fluted Coulters + Trash Whippers
- ZT 3 Fluted Coulters + Trash Whippers (Zone Builder in previous fall)

**Plot Size:** Planted: 10' x 40'  
Harvested: 5' x 36'

**Planting:** Date: 27-May  
Row Spacing: 30"  
Equipment: John Deere Max-Emerge  
Depth: 2"  
Rate: 32,000/a  
Hybrid: Pioneer 3861

**Harvesting:** Date: 12-Nov  
Equipment: Gleaner Plot Combine

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Results: Table E-51.

**Table E-51. 1996 Spray Timing / Zone Tillage Trial - Corn Following Sod.  
Fond du Lac, WI**

Herbicide Treatment	Tillage	Final Stand plants/a	Broken Stalks %	Grain	
				Moisture %	Yield bu/a
Fall Spray		27235	1.7	24.5	135.6
Spring Spray		27511	1.8	26.0	105.9
	NT 1 Fluted + 2 Ripple Coulters	27485	1.8	25.1	120.1
	NT 3 Fluted Coulters, + Trash Whippers	27314	1.5	25.5	114.6
	ZT 3 Fluted Coulters + Trash Whippers	27321	1.8	25.2	126.3
Fall Spray	NT 1 Fluted + 2 Ripple Coulters	27332	2.1	24.4	137.1
Fall Spray	NT 3 Fluted Coulters, + Trash Whippers	27513	1.7	24.8	131.8
Fall Spray	ZT 3 Fluted Coulters + Trash Whippers	26860	1.2	24.2	138.3
Spring Spray	NT 1 Fluted + 2 Ripple Coulters	27638	1.5	25.8	106.0
Spring Spray	NT 3 Fluted Coulters, + Trash Whippers	27115	1.3	26.1	97.4
Spring Spray	ZT 3 Fluted Coulters + Trash Whippers	27781	2.5	26.2	114.2
Mean		27373	1.7	25.3	120.3
<b><u>Probability(%)</u></b>					
Herbicide (H)		24.1	> 50	< 0.1	< 0.1
Tillage (T)		> 50	> 50	36.1	15.2
T x H		21.0	8.6	33.4	> 50
<b><u>LSD(0.10)</u></b>					
Herbicide (H)		NS	NS	.3	5.6
Tillage (T)		NS	NS	NS	NS
<b><u>CV(%)</u></b>					
		3.2	62.4	2.5	11.7

## FIELD EXPERIMENT HISTORY

**Title:** Chippewa Spray Timing / Zone Tillage Trial - Corn following Sod **Year: 1996**  
**Personnel:** J.G. Lauer, F.D. Thompson, K.D. Hudelson  
**Location:** Chippewa County Farm, Chippewa Falls, WI  
**Supported by:**

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### FIELD INFORMATION

**Soil Type:** Sattre Loam  
**Soil Test Results:** Date: October 1993      pH: 6.2      P(ppm): 18      K(ppm): 90      OM(%): 2.2  
**Fertilizer Applied:** Fertilizer Applied: 150 lbs/a of 6-24-24 at planting  
**Previous Crop:** Alfalfa

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### EXPERIMENTAL PROCEDURE

**Exp. Design:** Two Factor RCB

**Variables:** Factor A: Two Herbicide applications  
1-Fall Spray      Roundup(2qt/a), Banvel(1pt/a), 2,4-D(1pt/a) on 20-Sep  
-w/ spring burndown      Beacon(0.16oz/a) and Buctril(1pt/a) on May 31  
2-Spring Broadcast Spray      Roundup(1qt/a) and 2,4-D(1pt/a) on May 5  
Beacon(0.16oz/a) and Buctril(1pt/a) on May 31

Factor B: Three Tillage Operations  
NT 1 Fluted + 2 Ripple Coulters  
NT 3 Fluted Coulters + Trash Whippers  
ZT 3 Fluted Coulters + Trash Whippers (Zone Builder in previous fall)

**Plot Size:** Planted: 10' x 40'  
Harvested: 5' x 37'

**Planting:** Date: 2-May  
Row Spacing: 30"  
Equipment: John Deere Max-Emerge  
Depth: 2"  
Rate: 32,000/a  
Hybrid: Pioneer 3861

**Harvesting:** Date: 16-Oct  
Equipment: Gleaner Plot Combine

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Results: Table E-52.

**Table E-52. 1996 Spray Timing / Zone Tillage Trial - Corn Following Sod.  
Chippewa Falls, WI**

Herbicide Treatment	Tillage	Final Stand plants/a	Broken Stalks %	Grain	
				Moisture %	Yield bu/a
Fall Spray		28022	0.1	25.3	176.0
Spring Spray		27224	0.2	27.0	159.0
	NT 1 Fluted + 2 Ripple Coulters	26962	0.0	26.1	161.4
	NT 3 Fluted Coulters, + Trash Whippers	27826	0.4	27.0	164.4
	ZT 3 Fluted Coulters + Trash Whippers	28081	0.1	25.6	174.7
Fall Spray	NT 1 Fluted + 2 Ripple Coulters	27159	0.0	24.9	172.4
Fall Spray	NT 3 Fluted Coulters, + Trash Whippers	28846	0.3	25.8	180.5
Fall Spray	ZT 3 Fluted Coulters + Trash Whippers	28061	0.1	25.3	175.2
Spring Spray	NT 1 Fluted + 2 Ripple Coulters	26766	0.0	27.2	150.4
Spring Spray	NT 3 Fluted Coulters, + Trash Whippers	26805	0.5	28.0	151.1
Spring Spray	ZT 3 Fluted Coulters + Trash Whippers	28101	0.0	25.9	174.1
Mean		27623	0.2	26.2	167.2
<b><u>Probability(%)</u></b>					
Herbicide (H)		44.4	> 50	2.3	1.9
Tillage (T)		46.6	20.2	8.8	42.3
T x H		> 50	> 50	21.4	10.8
<b><u>LSD(0.10)</u></b>					
Herbicide (H)		NS	NS	1.0	11.5
Tillage (T)		NS	NS	1.0	NS
<b><u>CV(%)</u></b>					
		8.3	351.3	5.1	10.7

## FIELD EXPERIMENT HISTORY

**Title:** Corn Hybrid Interaction with Postemergence Herbicides.  
**Personnel:** C.M. Boerboom, J.G. Lauer  
**Location:** Arlington Research Station, Arlington, WI

**Year:** 1996

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### FIELD INFORMATION

Field: 372  
Soil Type: Plano Silt Loam  
Soil Test Results: Test Date: 7/95      pH: 6.3      P (ppm): 40      K (ppm): 255      OM (%): 3.1  
Fertilizer: 25-Apr 100 lbs/a 6-24-24 starter  
150 lbs/a 46-0-0 preplant  
Tillage Operations: Chisel Plow, Field Cultivate  
Previous Crop: Soybean  
Irrigation: None

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### EXPERIMENTAL PROCEDURE

Exp. Design: RCB Split-Split Plot  
Replicates: 3  
Variables: Herbicide Treatment: Untreated  
(Postemergence) at 6 inches - Banvel (0.5 lbs ai/a) + 28% (2.5% v/v)  
at 14 inches - Banvel (0.5 lbs ai/a) + 28% (2.5% v/v)  
at V2 - Basis (0.25 oz ai/a) + 28% (2.5% v/v) + NIS (0.25% v/v)  
at V4 - Basis (0.25 oz ai/a) + 28% (2.5% v/v) + NIS (0.25% v/v)  
at V5 - Accent (0.5 oz ai/a) + 28% (2.5% v/v) + NIS (0.25% v/v)  
at V9 - Accent (0.5 oz ai/a) + 28% (2.5% v/v) + NIS (0.25% v/v)

Maturity and Hybrid within Maturity	80 Day:	Payco 151	Pioneer 3936
	85 Day:	Dekalb DK363	Pioneer 3921
	90 Day:	NK 2409	Dekalb DK401
	95 Day:	Pioneer 3769	Dekalb DK471
	100 Day:	Golden H2387	NK 4242
	105 Day:	Dairyland 1407	Pioneer 3578
	110 Day:	Lemke SL65	Pioneer 3417

Area Planted: 5' x 25'  
Area Harvested: 5.0' x 22'  
Row Spacing: 30"

Planting Date: 22-May  
Planting Equip: Kinze Plot Planter w/seed cones  
Planting Rate: 40,000 thinned to 28,000 plants/a

Harvesting Date: 8-Nov  
Harvesting Equip: Gleaner Plot Combine

	<u>Material</u>	<u>Rate</u>	<u>Method</u>
Herbicides:	Bladex	2 qts/a	premerge
	Lasso	2 qts/a	premerge

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Results: Tables E-53.

**Table E-53. Corn Hybrid Interaction with Postemergence Herbicides.  
Arlington, WI - 1996**

Herbicide Treatment	Hybrid	Relative Maturity	Plant		Broken Stalks %	Moist %	Yield bu/a
			Height at day 211 cm	Final Stand plants/a			
	Payco 151	80 day		32168	14.5	23.3	121.4
	Pioneer 3936	80 day		33149	14.6	23.0	139.5
	Dekalb DK363	85 day		33300	10.7	24.1	130.8
	Pioneer 3921	85 day		32998	7.9	25.4	148.1
	Dekalb DK401	90 day		33941	7.7	24.2	158.4
	NK 2409	90 day		33168	9.9	25.7	133.5
	Dekalb DK471	95 day		33658	8.0	27.5	161.0
	Pioneer 3769	95 day		33243	13.2	27.6	167.9
	Golden H2387	100 day		33979	17.3	29.9	190.2
	NK 4242	100 day		34978	10.7	28.5	160.1
	Dairyland 1407	105 day		34469	9.9	32.8	176.2
	Pioneer 3578	105 day		34035	16.5	31.6	162.5
	Lemke SL65	110 day		34469	11.8	31.1	174.4
	Pioneer 3417	110 day		33432	10.1	33.1	134.2
Untreated			95	33309	10.0	28.0	158.9
Banvel 6in				33309	18.0	27.1	149.6
Banvel 14in				33592	15.4	27.2	145.4
Basis V2				33715	10.0	27.6	155.2
Basis V4				33809	11.8	27.4	153.2
Accent V5			94	33762	8.6	27.7	155.9
Accent V10			92	33997	7.6	29.1	161.6
Untreated	Payco 151	80 day	94	32602	11.1	23.9	122.4
Banvel 6in	Payco 151	80 day		30754	26.9	22.7	120.6
Banvel 14in	Payco 151	80 day		32338	9.3	22.2	131.8
Basis V2	Payco 151	80 day		31810	12.5	23.3	117.2
Basis V4	Payco 151	80 day		32998	13.4	24.1	105.6
Accent V5	Payco 151	80 day	94	32338	13.0	22.9	114.7
Accent V10	Payco 151	80 day	93	32338	15.3	24.2	146.0
Untreated	Pioneer 3936	80 day	99	32734	11.1	22.0	161.8
Banvel 6in	Pioneer 3936	80 day		31546	25.5	22.1	119.2
Banvel 14in	Pioneer 3936	80 day		33922	11.1	23.2	122.0
Basis V2	Pioneer 3936	80 day		33790	9.3	22.2	142.4
Basis V4	Pioneer 3936	80 day		33130	14.4	23.9	117.6
Accent V5	Pioneer 3936	80 day	98	33922	17.6	23.3	155.5
Accent V10	Pioneer 3936	80 day	94	32998	13.4	24.4	157.9
Untreated	Dekalb DK363	85 day	96	32470	9.3	24.0	124.0
Banvel 6in	Dekalb DK363	85 day		33922	22.7	23.7	126.4
Banvel 14in	Dekalb DK363	85 day		33262	4.6	22.8	150.4
Basis V2	Dekalb DK363	85 day		34846	7.4	25.0	117.6
Basis V4	Dekalb DK363	85 day		32206	12.5	23.5	135.8
Accent V5	Dekalb DK363	85 day	94	32866	13.0	24.3	124.1
Accent V10	Dekalb DK363	85 day	90	33526	5.6	25.6	137.2

**Table E-53. Corn Hybrid Interaction with Postemergence Herbicides.  
Arlington, WI - 1996**

Herbicide Treatment	Hybrid	Relative Maturity	Plant		Broken Stalks %	Moist %	Yield bu/a
			Height at day 211	Final Stand plants/a			
Untreated	Pioneer 3921	85 day	98	32602	3.2	25.2	169.1
Banvel 6in	Pioneer 3921	85 day		32866	13.0	25.2	144.6
Banvel 14in	Pioneer 3921	85 day		33262	6.9	25.1	129.6
Basis V2	Pioneer 3921	85 day		32866	5.6	25.8	144.6
Basis V4	Pioneer 3921	85 day		32734	8.8	25.2	153.8
Accent V5	Pioneer 3921	85 day	97	33658	6.0	25.9	139.3
Accent V10	Pioneer 3921	85 day	93	32998	11.6	25.3	155.8
Untreated	Dekalb DK401	90 day	94	33658	8.3	23.4	173.9
Banvel 6in	Dekalb DK401	90 day		34054	8.3	23.6	135.5
Banvel 14in	Dekalb DK401	90 day		33262	9.7	24.0	148.2
Basis V2	Dekalb DK401	90 day		35374	5.6	24.5	175.3
Basis V4	Dekalb DK401	90 day		33526	9.3	24.3	150.8
Accent V5	Dekalb DK401	90 day	92	32734	8.3	24.4	163.3
Accent V10	Dekalb DK401	90 day	94	34978	4.2	25.2	161.7
Untreated	NK 2409	90 day	95	33130	6.5	25.5	144.6
Banvel 6in	NK 2409	90 day		33790	12.0	24.5	147.5
Banvel 14in	NK 2409	90 day		32602	8.3	27.2	114.3
Basis V2	NK 2409	90 day		33130	6.9	26.1	131.4
Basis V4	NK 2409	90 day		32734	21.8	24.6	131.9
Accent V5	NK 2409	90 day	96	32470	4.6	26.1	130.0
Accent V10	NK 2409	90 day	95	34318	8.8	26.3	134.9
Untreated	Dekalb DK471	95 day	93	32206	6.5	27.5	176.2
Banvel 6in	Dekalb DK471	95 day		34054	12.0	28.1	154.5
Banvel 14in	Dekalb DK471	95 day		33130	13.4	27.4	145.4
Basis V2	Dekalb DK471	95 day		32734	8.8	26.3	179.8
Basis V4	Dekalb DK471	95 day		34582	6.5	27.1	162.7
Accent V5	Dekalb DK471	95 day	92	34318	3.7	27.5	144.2
Accent V10	Dekalb DK471	95 day	88	34582	5.1	28.7	164.5
Untreated	Pioneer 3769	95 day	96	33262	17.6	27.8	159.7
Banvel 6in	Pioneer 3769	95 day		33130	21.8	26.7	163.3
Banvel 14in	Pioneer 3769	95 day		31942	14.4	26.8	149.8
Basis V2	Pioneer 3769	95 day		32998	10.7	27.2	173.9
Basis V4	Pioneer 3769	95 day		32998	8.8	26.8	176.4
Accent V5	Pioneer 3769	95 day	96	34846	9.7	27.1	176.6
Accent V10	Pioneer 3769	95 day	95	33526	9.3	30.7	176.0
Untreated	Golden H2387	100 day	99	33394	15.3	30.6	191.3
Banvel 6in	Golden H2387	100 day		33922	27.3	29.0	181.8
Banvel 14in	Golden H2387	100 day		33262	26.9	29.1	178.8
Basis V2	Golden H2387	100 day		33262	19.9	29.2	194.3
Basis V4	Golden H2387	100 day		33262	16.2	30.2	184.2
Accent V5	Golden H2387	100 day	94	34318	8.8	28.3	210.1
Accent V10	Golden H2387	100 day	96	36430	6.9	32.6	190.7



**Table E-53. Corn Hybrid Interaction with Postemergence Herbicides. Arlington, WI - 1996**

Herbicide Treatment	Hybrid	Relative Maturity	Plant		Final Stand	Broken Stalks	Moist	Yield
			Height at day 211	cm				
Untreated	NK 4242	100 day	93		32470	4.2	30.5	141.6
Banvel 6in	NK 4242	100 day			35638	17.1	27.7	166.8
Banvel 14in	NK 4242	100 day			34186	24.5	27.7	136.9
Basis V2	NK 4242	100 day			34582	10.2	29.4	150.9
Basis V4	NK 4242	100 day			38410	7.9	28.2	192.2
Accent V5	NK 4242	100 day	91		36034	5.1	26.8	162.3
Accent V10	NK 4242	100 day	92		33526	6.0	29.0	170.3
Untreated	Dairyland 1407	105 day	96		34582	11.1	32.6	186.7
Banvel 6in	Dairyland 1407	105 day			33394	8.8	31.6	172.8
Banvel 14in	Dairyland 1407	105 day			35374	15.3	32.7	152.5
Basis V2	Dairyland 1407	105 day			34582	8.8	32.9	172.0
Basis V4	Dairyland 1407	105 day			34582	13.4	33.0	181.5
Accent V5	Dairyland 1407	105 day	94		34978	9.3	32.3	187.7
Accent V10	Dairyland 1407	105 day	94		33790	2.3	34.1	180.1
Untreated	Pioneer 3578	105 day	97		34846	10.7	32.5	146.5
Banvel 6in	Pioneer 3578	105 day			31942	13.0	30.5	145.3
Banvel 14in	Pioneer 3578	105 day			35506	46.8	30.5	169.4
Basis V2	Pioneer 3578	105 day			34054	9.7	30.2	173.2
Basis V4	Pioneer 3578	105 day			34450	14.8	31.5	166.8
Accent V5	Pioneer 3578	105 day	97		33526	10.7	32.1	174.8
Accent V10	Pioneer 3578	105 day	96		33922	10.2	33.8	161.8
Untreated	Lemke SL65	110 day	97		33790	13.9	32.3	188.6
Banvel 6in	Lemke SL65	110 day			35902	23.2	30.6	170.8
Banvel 14in	Lemke SL65	110 day			33922	12.0	29.1	180.0
Basis V2	Lemke SL65	110 day			35374	13.9	30.5	174.3
Basis V4	Lemke SL65	110 day			34054	10.2	29.3	163.2
Accent V5	Lemke SL65	110 day	94		33922	4.2	33.3	174.9
Accent V10	Lemke SL65	110 day	91		34318	5.1	33.1	166.7
Untreated	Pioneer 3417	110 day	83		34582	11.1	33.5	138.2
Banvel 6in	Pioneer 3417	110 day			31414	20.8	32.8	145.8
Banvel 14in	Pioneer 3417	110 day			34318	12.0	32.2	126.3
Basis V2	Pioneer 3417	110 day			32602	10.7	34.4	126.6
Basis V4	Pioneer 3417	110 day			33658	7.4	31.5	122.9
Accent V5	Pioneer 3417	110 day	82		32734	6.0	33.8	124.7
Accent V10	Pioneer 3417	110 day	78		34714	2.8	33.7	155.1
Mean		110 day	94		33642	11.6	27.7	154.2
<b>Probability(%)</b>								
Herbicide (S)			14.8		44.7	2.6	4.9	0.8
Hybrid (H)			< 0.1		< 0.1	< 0.1	< 0.1	< 0.1
S x H			31.7		40.3	7.4	> 50	4.8
<b>LSD(0.10)</b>								
Herbicide (S)			NS		NS	5.0	0.9	6.1
Hybrid (H)			1.8		874	4.2	0.8	9.6
<b>CV(%)</b>								
			2.5		5.1	70.4	5.7	12.0