

FIELD EXPERIMENT HISTORY

Title: Determining Corn Hybrid Maturity - Comparison of Hybrids. **Year:** 1995
Personnel: J.G. Lauer, K.D. Hudelson
Location: Arlington Research Station, Arlington, WI
Supported by: Hatch

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: May 1 - 150 lbs/a 6-24-24 starter
April 28 - 150 lbs N/a 46-0-0 preplant
Tillage Operations: Chisel Plow, Field Cultivate(2x)
Previous Crop: Soybean
Irrigation: None

EXPERIMENTAL PROCEDURE

Exp. Design: RCB
Replicates: 3
Variables: Hybrids:
Carhart's CX92A Dekalb DK 580 Golden H2441
Dairyland ST-1180 Dekalb DK306 NK PX9060
Dairyland ST-1289 Dekalb DK385 Pioneer 3394
Dairyland ST-1400 Dekalb DK493 Pioneer 3730
Dairyland ST-1412 Golden H2387 Pioneer 3845
Pioneer 3947

Area Planted: 10' x 25'
Area Harvested: 5.0' x 22'
Row Spacing: 30"

Planting Date: May 1
Planting Equip: Kinze Plot Planter w/seed cones
Planting Rate: 40,000 thinned to 28,000 plants/a

Harvesting Date: Oct. 12
Harvesting Equip: Almaco Plot Combine

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

Results: Tables E-1 and E-2.

**Table E-1. Determining Corn Hybrid Maturity - Comparison of Hybrids.
Growth and Development
Arlington, WI - 1995.**

Hybrid	Relative Maturity	Day of Year	Leaf Development			Plant Height cm
			Leaf Collars	Hail Adjuster's Method	Total Leaves	
Carhart's CX92A	90	.	9.7	11.2	13.0	95.9
Dairyland ST-1180	80	.	8.9	10.1	11.8	87.8
Dairyland ST-1289	90	.	9.7	11.1	13.0	96.4
Dairyland ST-1400	100	.	9.4	11.0	12.9	92.0
Dairyland ST-1412	110	.	9.1	10.2	12.3	99.2
Dekalb DK 580	108	.	9.4	11.1	12.8	94.9
Dekalb DK306	80	.	9.9	10.9	12.7	99.4
Dekalb DK385	88	.	9.7	10.7	12.8	94.2
Dekalb DK493	99	.	9.6	10.5	12.9	98.7
Golden H2387	100	.	9.7	11.2	13.4	102.4
Golden H2441	105	.	9.7	11.0	13.2	95.5
NK PX9060	80	.	9.2	10.7	12.2	90.0
Pioneer 3394	110	.	9.1	9.8	12.3	102.5
Pioneer 3730	100	.	8.8	10.2	12.0	96.1
Pioneer 3845	90	.	9.8	11.0	13.0	111.7
Pioneer 3947	80	.	9.6	10.4	12.4	105.4
		151	2.0	3.1	4.3	9.5
		158	4.0	4.9	7.2	21.1
		165	5.5	7.7	9.2	35.9
		174	7.8	9.3	12.3	68.4
		181	10.7	12.4	15.8	126.3
		188	12.8	14.3	17.1	151.2
		194	15.8	16.6	18.1	.
		213	17.8	17.8	17.8	274.9
Carhart's CX92A	90	151	2.0	3.0	4.2	9.0
Carhart's CX92A	90	158	4.0	5.0	7.2	17.0
Carhart's CX92A	90	165	5.8	8.1	9.6	35.3
Carhart's CX92A	90	174	7.7	9.6	12.4	65.0
Carhart's CX92A	90	181	11.0	13.2	16.0	125.0
Carhart's CX92A	90	188	13.0	15.0	17.9	148.3
Carhart's CX92A	90	194	16.2	17.2	18.4	.
Carhart's CX92A	90	213	18.1	18.2	18.3	271.7
Dairyland ST-1180	80	151	1.7	2.0	3.8	7.5
Dairyland ST-1180	80	158	3.8	4.7	6.9	16.7
Dairyland ST-1180	80	165	5.0	7.0	8.9	28.7
Dairyland ST-1180	80	174	7.6	10.0	11.9	61.0
Dairyland ST-1180	80	181	9.9	12.2	15.0	113.3
Dairyland ST-1180	80	188	12.0	13.4	15.7	140.7
Dairyland ST-1180	80	194	15.0	15.2	16.2	.
Dairyland ST-1180	80	213	15.9	15.9	15.9	246.7

**Table E-1. Determining Corn Hybrid Maturity - Comparison of Hybrids.
Growth and Development
Arlington, WI - 1995.**

Hybrid	Relative Maturity	Day of Year	Leaf Development			Plant Height cm
			Leaf Collars	Hail Adjuster's Method	Total Leaves	
Dairyland ST-1289	90	151	2.0	2.9	4.0	9.7
Dairyland ST-1289	90	158	4.0	4.8	7.1	20.0
Dairyland ST-1289	90	165	5.4	8.0	9.3	33.0
Dairyland ST-1289	90	174	8.1	10.1	12.6	61.7
Dairyland ST-1289	90	181	11.0	13.3	16.1	118.3
Dairyland ST-1289	90	188	13.1	15.0	18.1	150.0
Dairyland ST-1289	90	194	16.3	17.3	19.1	.
Dairyland ST-1289	90	213	17.3	17.3	17.3	282.3
Dairyland ST-1400	100	151	2.0	3.0	4.2	9.2
Dairyland ST-1400	100	158	4.0	4.9	7.0	21.3
Dairyland ST-1400	100	165	5.2	7.7	8.9	33.0
Dairyland ST-1400	100	174	7.7	9.1	12.1	63.7
Dairyland ST-1400	100	181	10.3	12.8	15.9	103.3
Dairyland ST-1400	100	188	12.3	14.4	17.6	130.3
Dairyland ST-1400	100	194	14.8	16.9	18.6	.
Dairyland ST-1400	100	213	18.9	18.9	18.9	283.3
Dairyland ST-1412	110	151	2.0	2.7	4.0	9.7
Dairyland ST-1412	110	158	4.0	4.9	6.8	22.3
Dairyland ST-1412	110	165	5.0	6.8	8.7	39.0
Dairyland ST-1412	110	174	7.3	8.7	11.9	65.7
Dairyland ST-1412	110	181	10.1	11.6	15.2	125.0
Dairyland ST-1412	110	188	12.1	14.0	16.3	150.0
Dairyland ST-1412	110	194	15.1	15.7	17.9	.
Dairyland ST-1412	110	213	18.5	18.5	18.5	283.0
Dekalb DK 580	108	151	2.0	3.2	4.2	8.0
Dekalb DK 580	108	158	4.0	4.4	7.2	19.0
Dekalb DK 580	108	165	5.9	8.0	9.0	34.0
Dekalb DK 580	108	174	7.9	9.2	11.8	62.7
Dekalb DK 580	108	181	10.3	12.3	16.0	113.3
Dekalb DK 580	108	188	12.4	14.3	17.4	144.0
Dekalb DK 580	108	194	14.9	19.7	19.2	.
Dekalb DK 580	108	213	17.4	17.4	17.4	283.0
Dekalb DK306	80	151	2.1	3.2	4.4	9.5
Dekalb DK306	80	158	4.2	5.2	7.7	21.7
Dekalb DK306	80	165	6.1	8.3	10.0	37.7
Dekalb DK306	80	174	8.3	9.7	13.3	73.3
Dekalb DK306	80	181	11.8	13.2	15.7	135.0
Dekalb DK306	80	188	13.8	14.6	16.7	166.7
Dekalb DK306	80	194	16.9	16.9	17.0	.
Dekalb DK306	80	213	17.1	17.1	17.1	251.7

**Table E-1. Determining Corn Hybrid Maturity - Comparison of Hybrids.
Growth and Development
Arlington, WI - 1995.**

Hybrid	Relative Maturity	Day of Year	Leaf Development			Plant Height cm
			Leaf Collars	Hail Adjuster's Method	Total Leaves	
Dekalb DK385	88	151	2.0	2.8	4.2	8.8
Dekalb DK385	88	158	4.0	4.7	7.0	20.0
Dekalb DK385	88	165	5.2	7.4	9.0	32.0
Dekalb DK385	88	174	7.6	8.4	12.3	60.0
Dekalb DK385	88	181	11.0	12.4	16.1	116.7
Dekalb DK385	88	188	13.0	14.8	17.4	152.3
Dekalb DK385	88	194	17.2	17.4	18.3	.
Dekalb DK385	88	213	18.1	18.1	18.1	269.3
Dekalb DK493	99	151	2.0	3.0	4.0	9.7
Dekalb DK493	99	158	4.0	4.7	6.9	21.3
Dekalb DK493	99	165	5.4	7.3	9.1	36.0
Dekalb DK493	99	174	7.8	8.3	12.1	65.0
Dekalb DK493	99	181	10.7	11.4	15.9	125.0
Dekalb DK493	99	188	12.8	14.7	17.6	149.0
Dekalb DK493	99	194	15.8	16.3	18.9	.
Dekalb DK493	99	213	18.4	18.4	18.4	285.0
Golden H2387	100	151	2.1	3.7	4.7	10.2
Golden H2387	100	158	4.1	5.4	7.8	21.3
Golden H2387	100	165	5.7	8.3	9.7	38.7
Golden H2387	100	174	7.8	9.7	12.6	75.7
Golden H2387	100	181	10.8	12.7	16.4	131.7
Golden H2387	100	188	12.7	14.6	17.9	160.0
Golden H2387	100	194	15.8	16.9	19.2	.
Golden H2387	100	213	18.7	18.7	18.7	279.0
Golden H2441	105	151	2.0	3.6	4.6	9.7
Golden H2441	105	158	4.1	4.6	7.3	21.3
Golden H2441	105	165	6.0	8.3	9.7	35.0
Golden H2441	105	174	8.0	9.8	12.4	70.3
Golden H2441	105	181	11.0	13.0	16.7	125.7
Golden H2441	105	188	12.9	14.8	17.9	146.3
Golden H2441	105	194	15.7	16.2	19.2	.
Golden H2441	105	213	17.6	17.6	17.6	260.3
NK PX9060	80	151	2.1	3.7	4.7	9.7
NK PX9060	80	158	4.0	5.3	7.4	22.0
NK PX9060	80	165	5.8	8.2	9.7	36.0
NK PX9060	80	174	8.0	11.2	13.3	72.0
NK PX9060	80	181	11.1	13.2	15.6	128.3
NK PX9060	80	188	13.2	14.1	16.0	157.3
NK PX9060	80	194	16.2	16.2	16.2	.
NK PX9060	80	213	17.3	17.3	17.3	262.0

**Table E-1. Determining Corn Hybrid Maturity - Comparison of Hybrids.
Growth and Development
Arlington, WI - 1995.**

Hybrid	Relative Maturity	Day of Year	Leaf Development			Plant Height cm
			Leaf Collars	Hail Adjuster's Method	Total Leaves	
Pioneer 3394	110	151	2.1	2.8	4.7	10.0
Pioneer 3394	110	158	4.0	5.1	6.9	21.0
Pioneer 3394	110	165	5.4	6.8	8.6	36.3
Pioneer 3394	110	174	7.6	7.7	11.6	71.3
Pioneer 3394	110	181	10.2	10.9	15.0	138.3
Pioneer 3394	110	188	12.0	13.8	16.8	145.3
Pioneer 3394	110	194	14.6	14.7	18.1	.
Pioneer 3394	110	213	17.6	17.6	17.6	295.3
Pioneer 3730	100	151	2.0	2.7	4.0	10.2
Pioneer 3730	100	158	3.6	4.6	6.3	23.3
Pioneer 3730	100	165	5.2	7.1	8.3	37.7
Pioneer 3730	100	174	7.0	9.0	10.9	64.0
Pioneer 3730	100	181	9.4	12.0	14.9	117.3
Pioneer 3730	100	188	11.6	13.9	16.9	133.7
Pioneer 3730	100	194	14.6	15.7	17.7	.
Pioneer 3730	100	213	17.0	17.0	17.0	286.3
Pioneer 3845	90	151	2.0	3.7	4.8	10.8
Pioneer 3845	90	158	4.0	5.2	7.4	25.7
Pioneer 3845	90	165	5.3	7.9	9.7	41.3
Pioneer 3845	90	174	8.0	9.6	12.8	87.3
Pioneer 3845	90	181	10.8	12.8	15.7	150.0
Pioneer 3845	90	188	13.0	13.9	17.1	170.3
Pioneer 3845	90	194	16.8	16.8	17.9	.
Pioneer 3845	90	213	18.4	18.6	18.7	296.7
Pioneer 3947	80	151	2.0	3.0	4.7	10.3
Pioneer 3947	80	158	3.9	5.2	7.6	23.0
Pioneer 3947	80	165	5.7	7.9	8.7	40.0
Pioneer 3947	80	174	7.8	8.7	12.4	75.0
Pioneer 3947	80	181	11.3	12.0	16.2	155.0
Pioneer 3947	80	188	14.1	14.1	16.7	175.3
Pioneer 3947	80	194	17.1	17.1	17.1	.
Pioneer 3947	80	213	17.3	17.3	17.3	259.0
Mean	.	.	9.4	10.7	12.7	97.7
<u>Probability %</u>						
Hybrid (H)			< 0.1	0.2	< 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
<u>LSD (0.10)</u>						
Hybrid (H)			0.4	0.5	0.4	5.6
Day of Year (D)			0.1	0.3	0.2	2.1
<u>CV %</u>						
			6.2	11.4	6.2	6.4

**Table E-2. Determining Corn Hybrid Maturity - Comparison of Hybrids.
Harvest Data
Arlington, WI - 1995.**

Hybrid	Relative Maturity	Days to Silk	Final Population plants/a	Broken Stalks %	Moisture %	Yield bu/a
Carhart's CX92A	90	79.0	28248	5.8	15.6	166.9
Dairyland ST-1180	80	76.7	27720	13.0	15.7	140.2
Dairyland ST-1289	90	79.7	31152	5.5	15.8	166.6
Dairyland ST-1400	100	82.7	29568	7.7	17.5	165.6
Dairyland ST-1412	110	83.0	27588	2.8	23.8	208.9
Dekalb DK 580	108	83.3	28776	3.5	21.9	199.1
Dekalb DK306	80	75.0	27852	14.7	13.1	105.9
Dekalb DK385	88	76.7	28512	4.8	15.4	152.2
Dekalb DK493	99	78.3	29964	2.6	17.6	190.7
Golden H2387	100	77.3	28116	5.7	19.1	172.9
Golden H2441	105	77.7	28512	4.7	18.7	156.8
NK PX9060	80	75.0	28116	13.6	14.4	121.5
Pioneer 3394	110	83.0	28644	3.7	23.6	205.0
Pioneer 3730	100	78.0	26664	2.4	19.1	183.1
Pioneer 3845	90	78.7	28116	3.7	17.2	173.6
Pioneer 3947	80	74.7	27324	36.5	15.5	78.8
Mean		78.7	28430	8.2	17.8	161.7
Probability %						
Hybrid (H)		< 0.1	> 50	< 0.1	< 0.1	< 0.1
LSD (0.10)						
Hybrid (H)		1.0	NS	6.1	1.0	15.8
CV %						
		0.9	6.9	54.2	4.2	7.1

FIELD EXPERIMENT HISTORY

Title: Determining Corn Hybrid Maturity - Comparison of Hybrids. **Year:** 1995
Personnel: J.G. Lauer, K.D. Hudelson
Location: Hancock Research Station, Hancock, WI
Supported by: Hatch

FIELD INFORMATION

Field: V17
Soil Type: Plainfield sand
Soil Test Results: Test Date: 11/94 pH: 6.2 P (ppm): 102 K (ppm): 80 OM (%): 0.6
Fertilizer: May 5 - 150 lbs/a 6-24-24 starter
April 3 - 100 lbs/a 0-0-60 preplant
June 6 - 75 lbs/a N 33.5-0-0 post
June 23 - 125 lbs/a N 33.5-0-0 post
Tillage Operations: Paratill (2x), Dyna drive
Previous Crop: Cucumber
Irrigation: Total seasonal irrigation: 10.49 inches

EXPERIMENTAL PROCEDURE

Exp. Design: RCB
Replicates: 3
Variables: Hybrids:
Carhart's CX92A Dekalb DK 580 Golden H2441
Dairyland ST-1180 Dekalb DK306 NK PX9060
Dairyland ST-1289 Dekalb DK385 Pioneer 3394
Dairyland ST-1400 Dekalb DK493 Pioneer 3730
Dairyland ST-1412 Golden H2387 Pioneer 3845
Pioneer 3947

Area Planted: 10' x 25'
Area Harvested: 5.0' x 22'
Row Spacing: 30"

Planting Date: May 5
Planting Equip: Kinze Plot Planter w/seed cones
Planting Rate: 40,000 thinned to 28,000 plants/a

Cultivation: June 23
Harvesting Date: Oct. 17
Harvesting Equip: Gleaner Plot Combine

	<u>Material</u>	<u>Rate</u>	<u>Method</u>
Herbicides:	Aatrex 4L	0.75 qts/a	premerge
	Lasso	2 qts/a	premerge

Results: Tables E-3 and E-4.

**Table E-3. Determining Corn Hybrid Maturity - Comparison of Hybrids.
Growth and Development
Hancock, WI - 1995.**

Hybrid	Plant Density	Day of Year	Leaf Development			Plant Height cm
			Leaf Collars	Hail Adjuster's Method	Total Leaves	
Carhart's CX92A	90		9.5	11.1	12.6	93.3
Dairyland ST-1180	80		8.5	9.9	11.4	83.4
Dairyland ST-1289	90		9.9	11.3	12.9	97.8
Dairyland ST-1400	100		8.9	10.5	12.1	87.4
Dairyland ST-1412	110		8.4	9.6	11.4	89.4
Dekalb DK 580	108		9.1	10.4	12.3	90.9
Dekalb DK306	80		8.9	9.8	11.4	88.6
Dekalb DK385	88		9.4	10.5	12.4	93.1
Dekalb DK493	99		9.3	10.4	12.4	95.0
Golden H2387	100		9.3	10.9	12.6	92.7
Golden H2441	105		9.5	11.0	12.9	91.6
NK PX9060	80		9.3	10.8	12.1	99.4
Pioneer 3394	110		8.7	9.4	11.5	93.7
Pioneer 3730	100		8.7	10.0	12.0	96.8
Pioneer 3845	90		9.5	10.8	12.6	103.7
Pioneer 3947	80		9.1	10.3	11.9	104.8
		152	2.4	3.7	4.9	8.2
		158	4.0	4.8	6.8	15.8
		166	5.4	6.8	8.7	27.4
		174	7.7	9.6	12.0	58.1
		180	9.5	11.9	14.5	88.5
		188	11.6	13.5	15.9	113.6
		195	14.9	15.6	16.9	187.3
		209	17.6	17.6	17.6	251.9
Carhart's CX92A	90	152	2.3	3.8	4.8	7.7
Carhart's CX92A	90	158	4.1	5.2	6.9	15.3
Carhart's CX92A	90	166	5.8	6.9	9.1	29.3
Carhart's CX92A	90	174	8.2	10.4	12.4	60.7
Carhart's CX92A	90	180	10.1	13.0	15.4	87.3
Carhart's CX92A	90	188	12.0	14.9	16.8	110.7
Carhart's CX92A	90	195	15.0	16.1	17.2	181.7
Carhart's CX92A	90	209	18.1	18.1	18.1	253.7
Dairyland ST-1180	80	152	2.2	3.6	4.6	6.7
Dairyland ST-1180	80	158	3.8	4.7	6.9	11.7
Dairyland ST-1180	80	166	5.1	6.9	8.4	21.0
Dairyland ST-1180	80	174	7.1	9.7	11.8	46.7
Dairyland ST-1180	80	180	8.9	11.7	14.2	76.0
Dairyland ST-1180	80	188	10.9	13.0	14.8	105.7
Dairyland ST-1180	80	195	14.4	14.7	15.3	173.3
Dairyland ST-1180	80	209	15.4	15.4	15.4	226.3

**Table E-3. Determining Corn Hybrid Maturity - Comparison of Hybrids.
Growth and Development
Hancock, WI - 1995.**

Hybrid	Plant Density	Day of Year	Leaf Development			Plant Height cm
			Leaf Collars	Hail Adjuster's Method	Total Leaves	
Dairyland ST-1289	90	152	2.8	3.8	5.1	9.0
Dairyland ST-1289	90	158	4.3	5.0	7.3	19.3
Dairyland ST-1289	90	166	5.8	7.3	9.6	33.3
Dairyland ST-1289	90	174	8.2	11.1	13.0	63.7
Dairyland ST-1289	90	180	10.6	13.2	15.6	91.7
Dairyland ST-1289	90	188	13.0	14.9	17.1	124.3
Dairyland ST-1289	90	195	16.7	17.3	17.9	191.7
Dairyland ST-1289	90	209	18.0	18.0	18.0	249.0
Dairyland ST-1400	100	152	2.2	3.6	4.9	7.3
Dairyland ST-1400	100	158	3.9	4.6	6.2	12.7
Dairyland ST-1400	100	166	5.0	6.8	8.2	21.7
Dairyland ST-1400	100	174	7.4	9.3	11.7	52.3
Dairyland ST-1400	100	180	9.0	11.7	14.0	82.0
Dairyland ST-1400	100	188	10.8	13.2	15.8	96.7
Dairyland ST-1400	100	195	13.7	15.8	17.2	155.0
Dairyland ST-1400	100	209	18.9	18.9	18.9	271.3
Dairyland ST-1412	110	152	2.0	3.0	4.1	7.3
Dairyland ST-1412	110	158	3.3	4.2	5.8	12.7
Dairyland ST-1412	110	166	4.8	5.9	7.3	22.0
Dairyland ST-1412	110	174	7.0	8.0	10.8	52.3
Dairyland ST-1412	110	180	8.4	10.8	13.0	77.3
Dairyland ST-1412	110	188	10.2	11.8	15.1	102.0
Dairyland ST-1412	110	195	13.2	14.6	16.4	173.3
Dairyland ST-1412	110	209	18.3	18.3	18.3	268.3
Dekalb DK 580	108	152	2.4	3.6	5.0	6.3
Dekalb DK 580	108	158	3.9	4.7	6.6	15.7
Dekalb DK 580	108	166	5.6	6.8	8.8	26.0
Dekalb DK 580	108	174	7.8	9.6	12.0	54.0
Dekalb DK 580	108	180	9.4	11.2	14.0	85.0
Dekalb DK 580	108	188	11.6	13.4	16.1	108.3
Dekalb DK 580	108	195	14.0	15.4	17.7	175.0
Dekalb DK 580	108	209	18.4	18.4	18.4	257.0
Dekalb DK306	80	152	2.4	3.2	4.8	7.7
Dekalb DK306	80	158	4.1	4.3	6.3	18.0
Dekalb DK306	80	166	5.3	6.6	8.4	27.0
Dekalb DK306	80	174	7.4	9.1	11.7	52.7
Dekalb DK306	80	180	9.4	11.4	13.8	85.3
Dekalb DK306	80	188	11.8	13.0	14.8	113.3
Dekalb DK306	80	195	15.3	15.0	15.6	183.3
Dekalb DK306	80	209	15.4	15.4	15.4	221.3

**Table E-3. Determining Corn Hybrid Maturity - Comparison of Hybrids.
Growth and Development
Hancock, WI - 1995.**

Hybrid	Plant Density	Day of Year	Leaf Development			Plant Height cm
			Leaf Collars	Hail Adjuster's Method	Total Leaves	
Dekalb DK385	88	152	2.3	3.8	5.0	8.0
Dekalb DK385	88	158	4.0	4.6	7.1	16.3
Dekalb DK385	88	166	5.6	6.9	9.0	28.7
Dekalb DK385	88	174	7.9	9.2	12.3	59.0
Dekalb DK385	88	180	9.9	12.4	15.0	89.0
Dekalb DK385	88	188	12.1	13.9	16.4	112.3
Dekalb DK385	88	195	16.1	16.2	17.3	191.7
Dekalb DK385	88	209	17.3	17.3	17.3	239.7
Dekalb DK493	99	152	2.2	3.7	4.7	8.3
Dekalb DK493	99	158	3.9	4.6	6.8	15.7
Dekalb DK493	99	166	5.7	6.0	8.9	32.0
Dekalb DK493	99	174	7.7	9.4	12.2	57.7
Dekalb DK493	99	180	9.7	11.8	14.8	91.0
Dekalb DK493	99	188	11.8	14.1	16.3	113.3
Dekalb DK493	99	195	15.0	15.2	17.4	181.7
Dekalb DK493	99	209	18.3	18.3	18.3	260.3
Golden H2387	100	152	2.7	4.1	5.1	7.7
Golden H2387	100	158	4.0	5.3	7.1	13.0
Golden H2387	100	166	5.6	7.3	9.0	25.0
Golden H2387	100	174	7.9	10.2	12.0	52.0
Golden H2387	100	180	9.6	12.0	14.7	81.7
Golden H2387	100	188	11.4	13.7	16.3	116.0
Golden H2387	100	195	14.4	15.8	18.0	186.7
Golden H2387	100	209	18.6	18.6	18.6	259.3
Golden H2441	105	152	2.7	3.8	5.1	8.7
Golden H2441	105	158	4.2	5.2	7.0	16.3
Golden H2441	105	166	5.6	7.7	9.2	28.0
Golden H2441	105	174	8.0	10.2	12.4	59.0
Golden H2441	105	180	9.9	12.4	15.3	86.3
Golden H2441	105	188	11.8	14.2	17.0	107.3
Golden H2441	105	195	14.7	15.9	17.9	178.3
Golden H2441	105	209	18.9	18.9	18.9	249.0
NK PX9060	80	152	2.9	4.0	5.6	10.7
NK PX9060	80	158	4.3	5.8	7.6	17.7
NK PX9060	80	166	5.7	8.1	9.3	30.3
NK PX9060	80	174	7.8	11.1	13.2	64.3
NK PX9060	80	180	10.0	12.8	14.6	103.3
NK PX9060	80	188	12.3	13.8	15.2	123.7
NK PX9060	80	195	15.6	15.6	15.6	216.7
NK PX9060	80	209	15.4	15.4	15.4	228.3

**Table E-3. Determining Corn Hybrid Maturity - Comparison of Hybrids.
Growth and Development
Hancock, WI - 1995.**

Hybrid	Plant Density	Day of Year	Leaf Development			Plant Height cm
			Leaf Collars	Hail Adjuster's Method	Total Leaves	
Pioneer 3394	110	152	2.4	3.4	4.7	8.0
Pioneer 3394	110	158	3.8	4.1	6.3	13.7
Pioneer 3394	110	166	5.2	5.7	7.9	23.7
Pioneer 3394	110	174	7.2	8.1	10.7	59.0
Pioneer 3394	110	180	8.4	9.7	13.0	84.0
Pioneer 3394	110	188	10.9	11.8	15.0	110.0
Pioneer 3394	110	195	13.1	13.8	16.2	176.7
Pioneer 3394	110	209	18.6	18.6	18.6	274.7
Pioneer 3730	100	152	2.0	3.4	4.6	10.0
Pioneer 3730	100	158	3.8	4.4	6.3	20.0
Pioneer 3730	100	166	5.0	5.7	8.3	31.0
Pioneer 3730	100	174	7.3	8.9	11.6	62.7
Pioneer 3730	100	180	8.9	11.6	14.2	84.7
Pioneer 3730	100	188	10.9	13.2	16.1	114.3
Pioneer 3730	100	195	14.6	15.4	17.2	178.3
Pioneer 3730	100	209	17.3	17.3	17.3	273.7
Pioneer 3845	90	152	2.9	4.0	5.1	10.3
Pioneer 3845	90	158	4.1	5.0	7.1	20.0
Pioneer 3845	90	166	5.3	6.8	9.0	31.7
Pioneer 3845	90	174	7.9	10.3	12.2	67.0
Pioneer 3845	90	180	9.8	12.4	15.1	103.3
Pioneer 3845	90	188	12.0	13.4	16.6	127.0
Pioneer 3845	90	195	16.2	16.4	17.6	210.0
Pioneer 3845	90	209	17.9	17.9	17.9	260.3
Pioneer 3947	80	152	2.2	3.9	5.0	7.7
Pioneer 3947	80	158	4.0	4.9	6.9	15.0
Pioneer 3947	80	166	5.4	7.7	8.8	27.7
Pioneer 3947	80	174	7.6	8.9	12.3	66.0
Pioneer 3947	80	180	9.8	11.9	14.7	108.3
Pioneer 3947	80	188	12.0	13.2	15.4	132.0
Pioneer 3947	80	195	15.8	15.8	15.9	243.3
Pioneer 3947	80	209	15.9	15.9	15.9	238.3
Mean			9.1	10.4	12.2	93.9
<u>Probability %</u>						
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
<u>LSD (0.10)</u>						
Hybrid (H)			0.4	0.4	0.5	4.8
Day of Year (D)			0.1	0.1	0.1	2.0
<u>CV %</u>						
			7.3	7.2	5.8	6.3

Table E-4. Determining Corn Hybrid Maturity - Comparison of Hybrid Harvest Data Hancock, WI.

Hybrid	Relative Maturity	Final Population plants/a	Broken Stalks %	Moisture %	Yield bu/a
Carhart's CX92A	90	28512	4.6	16.5	163.9
Dairyland ST-1180	80	28512	6.0	16.6	126.1
Dairyland ST-1289	90	28512	2.3	16.9	139.6
Dairyland ST-1400	100	28512	3.2	18.5	151.8
Dairyland ST-1412	110	28512	0.5	23.4	193.7
Dekalb DK 580	108	28512	3.2	20.3	180.7
Dekalb DK306	80	28512	4.6	15.1	132.8
Dekalb DK385	88	28512	1.9	16.5	143.3
Dekalb DK493	99	28512	1.9	18.5	188.0
Golden H2387	100	28512	4.2	20.5	182.6
Golden H2441	105	28512	6.0	20.6	191.9
NK PX9060	80	28512	3.7	15.9	124.8
Pioneer 3394	110	28512	2.8	21.8	179.7
Pioneer 3730	100	28512	1.4	19.2	163.6
Pioneer 3845	90	28512	3.7	18.0	170.9
Pioneer 3947	80	28512	6.0	16.3	119.6
Mean		28512	3.5	18.4	159.6
<u>Probability %</u>					
Hybrid (H)			4.2	< 0.1	< 0.1
<u>LSD (0.10)</u>					
Hybrid (H)			2.8	0.9	18.9
<u>CV %</u>					
			58.2	3.5	8.5

FIELD EXPERIMENT HISTORY

Title: Determining Corn Hybrid Maturity - Comparison of Hybrids. **Year:** 1995
Personnel: J.G. Lauer, K.D. Hudelson
Location: Lancaster Research Station, Lancaster, WI
Supported by: Hatch

FIELD INFORMATION

Field: 306
Soil Type: Fayette silt loam
Soil Test Results: Test Date: 10/94 pH: 7.1 P (ppm): 31 K (ppm): 190 OM (%): 3.1
Fertilizer: May 1 - 150 lbs/a 6-24-24 starter
150 lbs N/a 82-0-0 preplant
Tillage Operations: Chisel Plow, Soil Finisher
Previous Crop: Soybean
Irrigation: None

EXPERIMENTAL PROCEDURE

Exp. Design: RCB
Replicates: 3
Variables: Hybrids:
Carhart's CX92A Dekalb DK 580 Golden H2441
Dairyland ST-1180 Dekalb DK306 NK PX9060
Dairyland ST-1289 Dekalb DK385 Pioneer 3394
Dairyland ST-1400 Dekalb DK493 Pioneer 3730
Dairyland ST-1412 Golden H2387 Pioneer 3845
Pioneer 3947

Area Planted: 10' x 25'
Area Harvested: 5.0' x 22'
Row Spacing: 30"

Planting Date: 6-Jan
Planting Equip: Kinze Plot Planter w/seed cones
Planting Rate: 40,000 thinned to 28,000 plants/a

Cultivation: Rotary hoe on May 25
Cultivate on June 21

Harvesting Date: Oct. 14
Harvesting Equip: Gleaner Plot Combine

	Material	Rate	Method
Herbicides:	Roundup	2 qts/a	spot spray on May 1
	Bladex 4L	2 qts/a	premerge on May 15
	Dual II	2 pts/a	premerge on May 15
	Roundup	2 qts/a	hand wick on July 3
Insecticides:	Lorsban	7 lbs/a	planting

Results: Tables E-5 and E-6.

**Table E-5. Determining Corn Hybrid Maturity - Comparison of Hybrids.
Growth and Development
Lancaster, WI - 1995.**

Hybrid	Plant Density	Day of Year	Leaf Development			Plant Height cm
			Leaf Collars	Hail Adjuster's Method	Total Leaves	
Carhart's CX92A	90		8.4	10.0	11.6	101.8
Dairyland ST-1180	80		6.5	8.1	10.2	66.4
Dairyland ST-1289	90		8.9	10.3	12.1	101.0
Dairyland ST-1400	100		8.3	10.0	11.6	100.6
Dairyland ST-1412	110		8.1	9.1	11.1	100.8
Dekalb DK 580	108		8.4	9.6	11.5	91.5
Dekalb DK306	80		7.4	8.8	10.8	75.0
Dekalb DK385	88		7.9	8.8	11.0	98.5
Dekalb DK493	99		8.4	9.2	11.5	100.2
Golden H2387	100		8.4	10.0	11.9	102.9
Golden H2441	105		8.4	9.6	11.6	98.2
NK PX9060	80		6.9	8.9	10.6	91.4
Pioneer 3394	110		8.5	9.3	11.7	108.6
Pioneer 3730	100		7.8	9.2	11.0	105.6
Pioneer 3845	90		8.3	9.7	11.6	110.7
Pioneer 3947	80		7.6	8.5	11.3	89.6
		153	2.0	2.8	4.5	10.4
		159	3.7	4.7	6.6	22.6
		167	4.9	6.9	8.9	32.8
		173	7.3	9.2	12.0	71.3
		179	9.3	11.4	14.4	109.9
		193	14.3	15.2	17.0	203.7
		220	17.9	18.0	18.1	272.4
Carhart's CX92A	90	153	2.0	3.0	4.6	9.5
Carhart's CX92A	90	159	4.0	5.0	6.7	21.7
Carhart's CX92A	90	167	4.9	7.2	9.0	33.0
Carhart's CX92A	90	173	7.6	10.3	12.4	67.7
Carhart's CX92A	90	179	9.7	12.3	14.9	110.0
Carhart's CX92A	90	193	14.8	15.4	17.1	206.7
Carhart's CX92A	90	220	16.9	17.1	17.4	264.3
Dairyland ST-1180	80	153	1.9	2.6	4.4	8.7
Dairyland ST-1180	80	159	3.6	4.0	6.3	17.7
Dairyland ST-1180	80	167	4.6	6.6	8.4	27.7
Dairyland ST-1180	80	173	7.1	9.6	11.9	61.7
Dairyland ST-1180	80	179	8.7	11.6	14.1	97.7
Dairyland ST-1180	80	193	13.4	14.2	15.9	185.0
Dairyland ST-1180	80	220	-	-	-	-

**Table E-5. Determining Corn Hybrid Maturity - Comparison of Hybrids.
Growth and Development
Lancaster, WI - 1995.**

Hybrid	Plant Density	Day of Year	Leaf Development			Plant Height cm
			Leaf Collars	Hail Adjuster's Method	Total Leaves	
Dairyland ST-1289	90	153	2.1	3.1	4.7	10.5
Dairyland ST-1289	90	159	4.0	4.9	7.0	23.0
Dairyland ST-1289	90	167	5.1	7.1	9.4	34.7
Dairyland ST-1289	90	173	7.8	9.9	12.2	68.3
Dairyland ST-1289	90	179	10.0	12.2	14.9	111.7
Dairyland ST-1289	90	193	15.3	16.4	18.1	201.7
Dairyland ST-1289	90	220	18.1	18.2	18.3	257.0
Dairyland ST-1400	100	153	2.0	3.2	4.2	9.8
Dairyland ST-1400	100	159	3.8	4.9	6.7	21.0
Dairyland ST-1400	100	167	5.0	7.3	8.9	33.7
Dairyland ST-1400	100	173	7.2	9.7	11.8	70.7
Dairyland ST-1400	100	179	9.0	11.8	14.4	97.0
Dairyland ST-1400	100	193	13.6	15.8	17.3	188.3
Dairyland ST-1400	100	220	18.4	18.4	18.4	283.7
Dairyland ST-1412	110	153	2.0	2.4	4.1	10.3
Dairyland ST-1412	110	159	3.2	4.1	5.9	21.3
Dairyland ST-1412	110	167	4.7	5.9	8.3	31.0
Dairyland ST-1412	110	173	6.9	8.7	11.6	71.7
Dairyland ST-1412	110	179	8.7	10.6	13.8	103.7
Dairyland ST-1412	110	193	13.3	14.2	16.6	185.7
Dairyland ST-1412	110	220	17.6	17.7	17.8	282.0
Dekalb DK 580	108	153	2.1	2.2	4.1	7.7
Dekalb DK 580	108	159	3.9	4.3	6.3	19.0
Dekalb DK 580	108	167	4.6	6.8	8.4	27.3
Dekalb DK 580	108	173	7.0	9.2	11.4	61.0
Dekalb DK 580	108	179	8.9	11.2	13.9	94.3
Dekalb DK 580	108	193	13.6	15.2	17.7	173.3
Dekalb DK 580	108	220	18.4	18.4	18.4	257.7
Dekalb DK306	80	153	2.0	2.7	4.6	8.8
Dekalb DK306	80	159	3.9	5.1	6.8	21.7
Dekalb DK306	80	167	5.0	7.2	9.0	33.7
Dekalb DK306	80	173	7.7	9.3	12.9	69.0
Dekalb DK306	80	179	9.9	12.3	14.7	111.7
Dekalb DK306	80	193	15.8	15.9	16.7	205.0
Dekalb DK306	80	220	-	-	-	-
Dekalb DK385	88	153	2.0	2.4	4.4	10.0
Dekalb DK385	88	159	3.7	4.6	6.4	22.7
Dekalb DK385	88	167	5.0	6.6	8.7	33.3
Dekalb DK385	88	173	7.0	8.2	11.6	70.7
Dekalb DK385	88	179	9.2	10.7	14.3	96.7
Dekalb DK385	88	193	15.1	15.3	17.2	202.7
Dekalb DK385	88	220	17.2	17.2	17.2	253.7

**Table E-5. Determining Corn Hybrid Maturity - Comparison of Hybrids.
Growth and Development
Lancaster, WI - 1995.**

Hybrid	Plant Density	Day of Year	Leaf Development			Plant Height cm
			Leaf Collars	Hail Adjuster's Method	Total Leaves	
Dekalb DK493	99	153	2.0	2.8	4.2	10.7
Dekalb DK493	99	159	3.7	4.3	6.6	23.0
Dekalb DK493	99	167	4.9	6.1	8.7	30.7
Dekalb DK493	99	173	7.4	8.3	12.0	70.0
Dekalb DK493	99	179	9.3	10.6	14.2	105.0
Dekalb DK493	99	193	14.3	15.6	17.7	190.3
Dekalb DK493	99	220	17.9	18.0	18.1	272.0
Golden H2387	100	153	2.1	3.0	4.8	9.7
Golden H2387	100	159	3.8	4.8	6.7	21.3
Golden H2387	100	167	4.9	7.3	9.0	30.3
Golden H2387	100	173	7.1	9.8	11.9	67.7
Golden H2387	100	179	9.1	11.9	14.8	108.3
Golden H2387	100	193	14.0	15.1	17.7	201.0
Golden H2387	100	220	18.0	18.3	18.7	282.0
Golden H2441	105	153	2.0	2.8	4.4	10.0
Golden H2441	105	159	3.8	4.6	6.7	21.0
Golden H2441	105	167	5.1	7.1	8.8	31.0
Golden H2441	105	173	7.4	8.9	11.8	69.0
Golden H2441	105	179	9.3	11.2	14.2	103.3
Golden H2441	105	193	13.4	14.6	17.0	185.0
Golden H2441	105	220	18.0	18.1	18.2	268.3
NK PX9060	80	153	2.0	3.2	4.8	12.2
NK PX9060	80	159	3.8	5.1	6.9	23.3
NK PX9060	80	167	4.7	7.4	9.1	34.0
NK PX9060	80	173	7.1	10.2	12.2	70.3
NK PX9060	80	179	9.2	12.0	14.4	111.7
NK PX9060	80	193	14.6	15.2	15.9	296.7
NK PX9060	80	220	-	-	-	-
Pioneer 3394	110	153	2.0	2.7	4.7	11.8
Pioneer 3394	110	159	3.8	4.8	6.9	27.7
Pioneer 3394	110	167	5.1	6.7	8.8	35.0
Pioneer 3394	110	173	7.3	8.2	11.4	80.7
Pioneer 3394	110	179	9.2	9.7	14.0	121.7
Pioneer 3394	110	193	13.6	14.2	17.3	201.0
Pioneer 3394	110	220	18.7	18.7	18.7	282.3
Pioneer 3730	100	153	2.0	2.7	4.2	12.3
Pioneer 3730	100	159	3.2	4.7	6.0	24.7
Pioneer 3730	100	167	4.7	6.6	8.4	36.7
Pioneer 3730	100	173	6.8	8.8	11.3	72.7
Pioneer 3730	100	179	8.8	11.1	14.1	116.7
Pioneer 3730	100	193	13.4	14.8	17.0	191.7
Pioneer 3730	100	220	17.6	17.6	17.6	284.7

**Table E-5. Determining Corn Hybrid Maturity - Comparison of Hybrids.
Growth and Development
Lancaster, WI - 1995.**

Hybrid	Plant Density	Day of Year	Leaf Development			Plant Height cm
			Leaf Collars	Hail Adjuster's Method	Total Leaves	
Pioneer 3845	90	153	2.0	2.9	4.7	12.3
Pioneer 3845	90	159	3.7	5.2	6.9	25.7
Pioneer 3845	90	167	4.9	7.0	9.1	35.7
Pioneer 3845	90	173	7.0	9.4	12.2	84.0
Pioneer 3845	90	179	9.1	11.8	14.3	128.3
Pioneer 3845	90	193	14.7	15.0	16.8	208.3
Pioneer 3845	90	220	17.8	17.8	17.8	280.7
Pioneer 3947	80	153	2.0	2.9	4.9	11.2
Pioneer 3947	80	159	3.9	4.2	7.0	26.3
Pioneer 3947	80	167	5.3	7.3	9.9	37.7
Pioneer 3947	80	173	7.8	9.2	13.7	85.7
Pioneer 3947	80	179	10.2	11.0	15.4	140.0
Pioneer 3947	80	193	16.4	16.6	16.7	236.7
Pioneer 3947	80	220	-	-	-	-
Mean			8.0	9.3	11.3	97.0
Probability %						
Hybrid (H)			< 0.1	< 0.1	< 0.1	1.8
Days (D)			< 0.1	< 0.1	< 0.1	< 0.1
H x D			< 0.1	< 0.1	< 0.1	8.2
LSD (0.10)						
Hybrid (H)			0.3	0.4	0.3	11.1
Day of Year (D)			0.1	0.2	0.1	6.0
CV %						
			7.8	8.7	6.7	18.3

**Table E-6. Determining Corn Hybrid Maturity - Comparison of Hybrids
Harvest Data
Lancaster, WI - 1995.**

Hybrid	Relative Maturity	Final Population plants/a	Broken Stalks %	Moisture %	Yield bu/a
Carhart's CX92A	90	24156	16.5	14.4	102.1
Dairyland ST-1180	80	-	-	-	-
Dairyland ST-1289	90	28116	19.9	14.8	117.6
Dairyland ST-1400	100	27720	10.0	16.9	127.9
Dairyland ST-1412	110	25080	6.4	21.9	172.5
Dekalb DK 580	108	28248	5.7	19.3	156.7
Dekalb DK306	80	-	-	-	-
Dekalb DK385	88	22836	10.6	14.3	87.5
Dekalb DK493	99	28248	9.4	16.2	144.9
Golden H2387	100	27456	22.2	23.0	144.7
Golden H2441	105	28116	15.9	17.7	145.2
NK PX9060	80	-	-	-	-
Pioneer 3394	110	29172	8.0	19.7	128.7
Pioneer 3730	100	26400	8.4	16.3	125.6
Pioneer 3845	90	25542	10.8	15.4	98.4
Pioneer 3947	80	-	-	-	-
Mean		26870	11.9	17.5	129.3
<u>Probability %</u>					
Hybrid (H)		2.3	6.8	0.52	< 0.1
<u>LSD (0.10)</u>					
Hybrid (H)		2755	8.9	3.7	25.9
<u>CV %</u>					
		7.3	53.3	15.2	14.3