

FIELD EXPERIMENT HISTORY

Title: Determining Corn Hybrid Maturity - Comparison of Hybrids
Experiment: 01HTG&D **Trial ID** 1305 **Year:** 1998
Personnel: J.G. Lauer, K. D. Kohn, P.J. Flannery and H. M. Darby
Location: Arlington, WI **County:** Columbia
Supported By: Hatch

Site Information

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

Plot Management

Tillage Operations: Fall Chisel Plow Field Cultivator 1 Cultivation 6/3

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

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

Irrigation: None

Planting Date: 6/24/98 **Planting Depth:** 1.5" **Row Width:** 30"

Target Plant Density: 30000 plants per acre **Planting Method:** Kinze Plot Planter

Harvest Date: 10/2/98 **Harvest Method:** Kincaid Plot Combine
N/A

Experimental Design

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

Factors/Treatments:

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

Results: Table E-16 and E-17.

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

Arlington, WI - 1998

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

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

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

continued

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

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

continued

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

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