FIELD EXPERIMENT HISTORY

Title: **Determining Corn Hybrid Maturity**

Experiment: 01GD **Trial ID:** 3178 **Year:** 2008

Personnel: J.G. Lauer, K.D. Kohn and T.H. Diallo

Location: Arlington, WI **County:** Columbia

Supported By: HATCH

Site Information

Field: ARS407 **Previous Crop:** Soybean **Soil Type:** Plano Silt Loam

Soil Test: **Date:** 10/1 /08 **pH:** 6.7 **OM (%)** 2.9 **P (ppm)** 37 **K (ppm)** 102

Plot Management

Tillage Operations: Chisel Plow Field Cultivator Cultivated 6/17/08

Fertilizer:

Preplant Analysis:	46-0-0	**Rate lbs/A:**	300 lbs	**Date:** N/A
Starter Analysis:	10-34-0	**Rate lbs/A:**	3 gallons	**Date:** 5 /9 /08
Post plant Analysis:	46-0-0	**Rate lbs/A:**	108	**Date:** 6 /17/08
Manure:	N/A			

Herbicide: Dual II Mag 24 oz/A
Hornet 2.4 oz/A
Accent 0.33 oz/A

Insecticide: Force 3G 4.4lb/A

Hybrid: See Factors

Irrigation: None

Planting Date: 5/9/08 **Planting Depth:** 1.5" **Row Width:** 30"

Target Plant Density: 32000 **plants per acre** **Planting Method:** Almaco Precision Planter

Harvest Date: 10/17/08 **Harvest Method:** Massey Ferguson 8XP

Notes: Drought stress between rep 2 and rep 3.

Experimental Design

Design: RCB **Replications:** 3

Plot Size Seeded: 10' x 25' **Experiment Size:** 0.28 Acre

Harvest Plot Size: 5' x 22' **Harvest Plant Density:** 35254 **plants per acre**

Factors/Treatments:

Hybrids:

Croplan Genetics 421VT3
Dairyland ST7184
Dekalb DKC42-91(VT3)
Gold Country 9608VT3
Kruger K5504YGCB
Kruger K6208VT3
Kruger K6412VT3
Kruger K6499VT3
Mycogen 2K15
NuTech 3A-390RR
Pioneer 35F40
Pioneer 39D82
Renk RK292CBLL
Renk RK692LLYGCB
Trelay 4T722
Trelay 8T339

Results: Tables C-01 and C-02.

Table C-01. Determining Corn Hybrid Maturity - Comparison of Hybrids. Arlington, WI - 2008.

Hybrid	Relative maturity	Grain yield	Grain moisture	Test wt	Lodging	Grower return	Silking date	Early dent	Kernel Milk 75%	Kernel Milk 50%	Kernel Milk 25%	Black layer	Plant height	Grain Composition Oil	Grain Composition Starch	Grain Composition Protein	Ethanol per bu	Ethanol per A
		bu/A	%	lb/bu	%	$/A	doy						inches	%	%	%	gallons	gallons
Mycogen 2K15	82	200	19.6	60.5	0	681	206	240	247	256	263	271	100	3.5	60.4	8.0	2.91	582
Dairyland ST7184	84	192	18.8	59.9	0	656	204	239	247	259	265	271	103	3.7	60.8	7.7	2.87	552
Renk RK292CBLL	85	214	18.2	57.1	0	733	204	238	247	253	258	268	102	3.7	59.4	8.3	2.86	612
Pioneer 39D82	87	184	17.6	58.3	0	631	204	239	246	252	257	260	98	3.6	60.2	8.1	2.86	526
NuTech 3A-390RR	90	214	16.2	57.5	0	741	206	240	249	255	261	271	113	3.6	60.2	7.9	2.87	616
Dekalb DKC42-91(VT3)	92	190	16.9	56.4	0	653	205	240	246	254	260	267	102	3.3	60.3	8.0	2.92	554
Gold Country 9608VT3	96	223	18.0	55.3	0	763	209	245	256	260	265	276	112	3.4	60.3	7.8	2.91	647
Trelay 4T722	97	209	18.4	56.2	0	714	209	241	248	258	265	273	104	3.3	60.2	8.0	2.90	606
Kruger K6499VT3	99	236	20.3	56.9	0	800	208	242	256	262	269	274	107	3.3	60.6	7.7	2.92	691
Croplan Genetics 421VT3	100	239	22.3	56.6	0	800	210	244	257	263	271	281	110	3.3	60.9	7.6	2.93	700
Kruger K5504YGCB	104	203	19.3	55.2	0	688	211	245	254	260	267	271	113	3.5	59.6	8.1	2.87	583
Pioneer 35F40	104	258	29.0	54.6	0	829	209	245	258	265	276	284	116	3.6	60.1	7.5	2.90	750
Kruger K6208VT3	108	234	27.4	53.8	0	758	210	246	260	266	272	279	118	3.4	60.3	7.4	2.90	678
Renk RK692LLYGCB	108	257	27.5	54.9	0	832	209	240	255	265	273	283	116	3.4	60.3	7.5	2.89	743
Kruger K6412VT3	112	237	31.6	53.8	0	750	211	250	262	272	278	285	120	3.5	60.3	7.5	2.89	686
Trelay 8T339	113	247	31.3	54.5	0	782	211	251	261	266	278	285	121	3.5	59.8	7.7	2.88	711
Mean		221	22.0	56.3	0	738	208	243	253	260	267	275	110	3.5	60.2	7.8	2.89	640
Probability(%)																		
Hybrid (H)		0.0	0.0	0.0	60.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.0	4.6	0.0	0.0
LSD(0.10)																		
Hybrid (H)		25	3.1	0.8	NS	76	1	3	3	5	5	6	5	0.2	0.6	0.4	0.03	76

Table C-02. Determining Corn Hybrid Maturity - Comparison of Hybrids. Arlington, WI - 2008.

Hybrid	Relative maturity	Day of year	Leaf Development: Leaf collars	Leaf Development: Hail adjusters method	Leaf Development: Total leaves	Plant height
			no./plant	no./plant	no./plant	inches
		152	2.1	3.4	4.2	4.2
		171	4.9	6.6	8.3	16.1
		182	7.5	10.5	12.2	29.5
		198	13.1	15.1	16.3	72.1
		212	18.9	18.9	18.9	109.0
Mycogen 2K15	82		9.2	11.1	12.0	44.1
Dairyland ST7184	84		9.5	11.3	12.2	46.1
Renk RK292CBLL	85		9.1	10.7	11.9	48.1
Pioneer 39D82	87		8.8	10.7	11.5	45.0
NuTech 3A-390RR	90		9.5	11.0	12.0	47.1
Dekalb DKC42-91(VT3)	92		9.1	10.8	11.7	43.5
Gold Country 9608VT3	96		9.7	11.0	12.2	47.2
Trelay 4T722	97		9.7	11.1	12.2	46.5
Kruger K6499VT3	99		9.6	10.8	12.1	47.2
Croplan Genetics 421VT3	100		9.4	10.7	11.8	45.1
Kruger K5504YGCB	104		9.3	10.9	12.0	47.3
Pioneer 35F40	104		9.2	10.8	12.0	46.1
Kruger K6208VT3	108		9.2	11.0	12.0	46.1
Renk RK692LLYGCB	108		9.4	10.9	12.2	47.3
Kruger K6412VT3	112		9.1	10.9	12.0	46.2
Trelay 8T339	113		9.1	10.7	11.8	46.3
Mycogen 2K15	82	152	2.0	4.0	5.0	3.6
Mycogen 2K15	82	171	5.0	7.7	8.8	14.7
Mycogen 2K15	82	182	7.8	11.0	12.3	31.0
Mycogen 2K15	82	198	13.7	15.3	16.3	74.2
Mycogen 2K15	82	212	17.7	17.7	17.7	96.8
Dairyland ST7184	84	152	2.3	4.0	4.5	3.7
Dairyland ST7184	84	171	5.0	7.3	8.8	15.5
Dairyland ST7184	84	182	7.8	11.5	13.0	30.0
Dairyland ST7184	84	198	14.3	15.7	16.7	76.7
Dairyland ST7184	84	212	18.2	18.2	18.2	104.5
Renk RK292CBLL	85	152	2.0	4.0	4.7	5.2
Renk RK292CBLL	85	171	5.0	6.8	8.7	20.0
Renk RK292CBLL	85	182	7.5	10.3	12.7	33.3
Renk RK292CBLL	85	198	12.8	14.3	15.5	77.8
Renk RK292CBLL	85	212	18.0	18.0	18.0	104.3

continued

Table C-02. Determining Corn Hybrid Maturity - Comparison of Hybrids. Arlington, WI - 2008.
(continued)

Hybrid	Relative maturity	Day of year	Leaf Development: Leaf collars	Leaf Development: Hail adjusters method	Leaf Development: Total leaves	Plant height
			no./plant	no./plant	no./plant	inches
Pioneer 39D82	87	152	2.0	3.8	4.0	3.9
Pioneer 39D82	87	171	5.0	6.7	8.3	16.0
Pioneer 39D82	87	182	7.0	11.0	12.3	31.3
Pioneer 39D82	87	198	13.0	15.0	16.2	77.2
Pioneer 39D82	87	212	16.8	16.8	16.8	96.5
NuTech 3A-390RR	90	152	1.8	3.2	3.8	4.4
NuTech 3A-390RR	90	171	5.0	6.3	8.2	16.0
NuTech 3A-390RR	90	182	7.8	11.2	12.3	29.7
NuTech 3A-390RR	90	198	13.7	15.3	16.5	72.8
NuTech 3A-390RR	90	212	19.0	19.0	19.0	112.5
Dekalb DKC42-91(VT3)	92	152	2.0	3.7	4.2	4.2
Dekalb DKC42-91(VT3)	92	171	4.8	6.5	8.3	15.0
Dekalb DKC42-91(VT3)	92	182	7.2	11.0	12.0	27.2
Dekalb DKC42-91(VT3)	92	198	13.2	14.8	15.8	67.5
Dekalb DKC42-91(VT3)	92	212	18.2	18.2	18.2	103.7
Gold Country 9608VT3	96	152	2.5	3.2	4.3	4.5
Gold Country 9608VT3	96	171	5.0	6.5	8.3	16.5
Gold Country 9608VT3	96	182	8.0	10.3	12.3	31.2
Gold Country 9608VT3	96	198	13.3	15.2	16.3	70.8
Gold Country 9608VT3	96	212	19.8	19.8	19.8	112.8
Trelay 4T722	97	152	2.2	3.5	4.2	4.6
Trelay 4T722	97	171	5.0	6.2	8.5	19.0
Trelay 4T722	97	182	8.0	10.7	12.0	30.0
Trelay 4T722	97	198	13.8	15.5	16.5	71.7
Trelay 4T722	97	212	19.7	19.7	19.7	107.0
Kruger K6499VT3	99	152	2.2	3.2	4.2	4.3
Kruger K6499VT3	99	171	5.0	6.2	8.5	19.7
Kruger K6499VT3	99	182	7.5	9.8	12.0	33.0
Kruger K6499VT3	99	198	13.7	15.2	16.2	71.3
Kruger K6499VT3	99	212	19.7	19.7	19.7	107.8
Croplan Genetics 421VT3	100	152	2.0	3.0	4.0	4.1
Croplan Genetics 421VT3	100	171	4.8	6.2	7.7	15.2
Croplan Genetics 421VT3	100	182	7.2	9.5	11.5	29.7
Croplan Genetics 421VT3	100	198	13.0	14.8	15.8	67.8
Croplan Genetics 421VT3	100	212	19.8	19.8	19.8	108.8
Kruger K5504YGCB	104	152	2.0	3.3	4.2	4.6
Kruger K5504YGCB	104	171	5.0	6.7	8.2	16.5
Kruger K5504YGCB	104	182	7.7	10.3	12.2	29.7
Kruger K5504YGCB	104	198	12.8	15.3	16.5	73.2
Kruger K5504YGCB	104	212	18.8	18.8	18.8	112.7

continued

Table C-02. Determining Corn Hybrid Maturity - Comparison of Hybrids. Arlington, WI - 2008.
(continued)

Hybrid	Relative maturity	Day of year	Leaf Development: Leaf collars	Leaf Development: Hail adjusters method	Leaf Development: Total leaves	Plant height
			no./plant	no./plant	no./plant	inches
Pioneer 35F40	104	152	2.0	3.3	4.3	4.2
Pioneer 35F40	104	171	5.0	6.5	8.3	15.0
Pioneer 35F40	104	182	7.3	10.5	11.8	26.5
Pioneer 35F40	104	198	12.5	14.7	16.2	71.0
Pioneer 35F40	104	212	19.0	19.2	19.3	113.7
Kruger K6208VT3	108	152	2.0	3.2	4.0	4.4
Kruger K6208VT3	108	171	5.0	6.8	7.8	14.7
Kruger K6208VT3	108	182	7.5	11.0	12.5	27.5
Kruger K6208VT3	108	198	12.7	15.0	16.3	70.5
Kruger K6208VT3	108	212	19.0	19.2	19.2	113.5
Renk RK692LLYGCB	108	152	2.0	3.0	4.0	3.9
Renk RK692LLYGCB	108	171	4.8	6.5	8.5	15.8
Renk RK692LLYGCB	108	182	8.2	10.8	12.7	29.8
Renk RK692LLYGCB	108	198	12.8	14.8	16.5	70.5
Renk RK692LLYGCB	108	212	19.2	19.2	19.2	116.7
Kruger K6412VT3	112	152	2.0	3.0	4.0	4.4
Kruger K6412VT3	112	171	4.8	6.5	8.0	15.5
Kruger K6412VT3	112	182	6.8	9.8	11.8	26.7
Kruger K6412VT3	112	198	12.0	15.2	16.5	68.7
Kruger K6412VT3	112	212	19.8	19.8	19.8	115.7
Trelay 8T339	113	152	2.0	3.2	4.0	3.8
Trelay 8T339	113	171	4.8	6.3	7.8	13.0
Trelay 8T339	113	182	7.2	9.5	11.5	26.2
Trelay 8T339	113	198	12.0	14.7	16.2	71.2
Trelay 8T339	113	212	19.5	19.7	19.7	117.2
Mean			9.3	10.9	12.0	46.2
Probability(%)						
Hybrid (H)			0.0	1.2	0	0.0
Day Of Year (D)			0.0	0.0	0.0	0.0
H x D			0.0	0.0	0.0	0.0
LSD(0.10)						
Hybrid (H)			0.2	0.3	0.3	1.3
Day Of Year (D)			0.1	0.2	0.1	0.7
H x D			0.5	0.7	0.6	2.8

FIELD EXPERIMENT HISTORY

Title: **Determining Corn Hybrid Maturity**

Experiment: 01GD **Trial ID:** 3179 **Year:** 2008

Personnel: J.G. Lauer, K.D. Kohn and T.H. Diallo

Location: Marshfield, WI **County:** Wood

Supported By: HATCH

Site Information

Field: **Previous Crop:** Soybean **Soil Type:** Withee Silt Loam

Soil Test: **Date:** 10/1 /08 **pH:** 6.4 **OM (%)** 3.3 **P (ppm)** 75 **K (ppm)** 220

Plot Management

Tillage Operations: Chisel Plow Field Cultivator Cultivated 7/1/08

Fertilizer:

Preplant Analysis:	N/A	**Rate lbs/A:** N/A	**Date:**	N/A
Starter Analysis:	10-34-0	**Rate lbs/A:** 3 gallons	**Date:**	5 /19/08
Post plant Analysis:	28-0-0	**Rate lbs/A:** 27 gal/A	**Date:**	7 /1 /08
Manure:	N/A			

Herbicide: Gmax Lite 2.33 pt/A
Hornet 2.4 oz/A
Aatrex4L 6.4 oz/A

Insecticide: None

Hybrid: See Factors

Irrigation: None

Planting Date: 5/19/08 **Planting Depth:** 1.5" **Row Width:** 30"

Target Plant Density: 32000 **plants per acre** **Planting Method:** Almaco Precision Planter

Harvest Date: 10/30/08 **Harvest Method:** Massey Ferguson 8XP

Experimental Design

Design: RCB **Replications:** 3

Plot Size Seeded: 10' x 25' **Experiment Size:** 0.28 Acre

Harvest Plot Size: 5' x 22' **Harvest Plant Density:** 34623 **plants per acre**

Factors/Treatments:

Hybrids:

Croplan Genetics 421VT3
Dairyland ST7184
Dekalb DKC42-91(VT3)
Gold Country 9608VT3
Kruger K5504YGCB
Kruger K6208VT3
Kruger K6412VT3
Kruger K6499VT3
Mycogen 2K15
NuTech 3A-390RR
Pioneer 35F40
Pioneer 39D82
Renk RK292CBLL
Renk RK692LLYGCB
Trelay 4T722
Trelay 8T339

Results: Table C-03.

Table C-03. Determining Corn Hybrid Maturity - Comparison of Hybrids. Marshfield, WI - 2008.

Hybrid	Relative maturity	Grain yield	Grain moisture	Test weight	Lodging	Grower return	Plant density	Grain Composition			Ethanol	
								Oil	Starch	Protein	per bu	per A
		bu/A	%	lb/bu	%	$/A	plants/A	%	%	%	gallons	gallons
Mycogen 2K15	82	122	23.7	54.0	16	405	32635	3.5	60.3	8.0	2.86	349
Dairyland ST7184	84	111	23.3	54.3	0	368	26136	3.8	60.9	7.7	2.85	315
Renk RK292CBLL	85	134	23.1	51.4	0	444	32774	3.6	60.1	8.1	2.83	379
Pioneer 39D82	87	131	25.0	52.7	0	430	36231	3.6	60.7	7.9	2.83	369
NuTech 3A-390RR	90	135	27.5	49.6	0	436	34295	3.4	60.5	7.7	2.85	385
Dekalb DKC42-91(VT3)	92	134	27.6	49.8	0	433	36231	3.2	60.5	7.8	2.87	384
Gold Country 9608VT3	96	134	29.0	47.4	0	431	35816	3.2	60.4	7.6	2.85	383
Trelay 4T722	97	121	34.8	47.4	0	373	38305	3.1	60.4	8.0	2.84	342
Kruger K6499VT3	99	122	31.4	47.9	0	387	34710	3.1	60.3	8.1	2.84	348
Croplan Genetics 421VT3	100	125	34.1	47.9	1	388	35125	3.1	60.4	7.7	2.84	355
Kruger K5504YGCB	104	107	36.8	49.7	0	326	31667	3.2	60.3	8.0	2.82	301
Pioneer 35F40	104	124	37.8	49.2	1	377	36369	3.2	60.1	7.7	2.83	351
Kruger K6208VT3	108	111	39.8	47.6	1	334	35954	3.4	60.6	7.9	2.82	314
Renk RK692LLYGCB	108	104	44.1	50.3	0	303	35401	3.3	60.4	7.7	2.83	294
Kruger K6412VT3	112	87	47.9	42.2	1	247	35539	3.3	61.3	8.0	2.80	244
Trelay 8T339	113	86	48.2	42.2	0	242	36784	3.5	61.5	7.4	2.82	241
Mean		118	33.4	49.0	1	370	34623	3.3	60.6	7.8	2.84	335
Probability(%)												
Hybrid (H)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	2.8	0.0	0.0
LSD(0.10)												
Hybrid (H)		9	2.6	1.9	2	32	2388	0.2	0.6	0.3	0.0	26

FIELD EXPERIMENT HISTORY

Title: **Determining Corn Hybrid Maturity**

Experiment: 01GD **Trial ID:** 3180 **Year:** 2008

Personnel: J.G. Lauer, K.D. Kohn and T.H. Diallo

Location: Seymour, WI **County:** Oneida

Supported By: HATCH

Site Information

Field: **Previous Crop:** Soybean **Soil Type:** Clay Loam

Soil Test: **Date:** 10/1 /08 **pH:** 7.6 **OM (%)** 2.8 **P (ppm)** 22 **K (ppm)** 70

Plot Management

Tillage Operations: Chisel Plow Field Cultivator Cultivated 6/25/08

Fertilizer:

Preplant Analysis:	N/A	**Rate lbs/A:** N/A	**Date:**	N/A
Starter Analysis:	10-34-0	**Rate lbs/A:** 3 gallons	**Date:**	5 /13/08
Post plant Analysis:	46-0-0	**Rate lbs/A:** 260	**Date:**	6 /25/08
Manure:	N/A			

Herbicide: Hornet 2.0 oz/A
Keystone LA 1.7 qt/A

Insecticide: None

Hybrid: See Factors

Irrigation: None

Planting Date: 5/13/08 **Planting Depth:** 1.5" **Row Width:** 30"

Target Plant Density: 32000 **plants per acre** **Planting Method:** Almaco Precision Planter

Harvest Date: 10/28/08 **Harvest Method:** Massey Ferguson 8XP

Experimental Design

Design: RCB **Replications:** 3

Plot Size Seeded: 10' x 25' **Experiment Size:** 0.28 Acre

Harvest Plot Size: 5' x 22' **Harvest Plant Density:** 32576 **plants per acre**

Factors/Treatments:

Hybrids:

Croplan Genetics 421VT3
Dairyland ST7184
Dekalb DKC42-91(VT3)
Gold Country 9608VT3
Kruger K5504YGCB
Kruger K6208VT3
Kruger K6412VT3
Kruger K6499VT3
Mycogen 2K15
NuTech 3A-390RR
Pioneer 35F40
Pioneer 39D82
Renk RK292CBLL
Renk RK692LLYGCB
Trelay 4T722
Trelay 8T339

Results: Table C-04.

Table C-04. Determining Corn Hybrid Maturity - Comparison of Hybrids. Seymour, WI - 2008.

Hybrid	Relative maturity	Grain yield	Grain moisture	Test weight	Lodging	Grower return	Plant density	Grain Composition			Ethanol	
								Oil	Starch	Protein	per bu	per A
		bu/A	%	lb/bu	%	$/A	plants/A	%	%	%	gallons	gallons
Mycogen 2K15	82	150	18.7	57.9	5	511	35539	3.5	61.3	7.0	2.92	437
Dairyland ST7184	84	135	17.2	58.2	0	464	31806	3.5	61.2	6.9	2.91	392
Renk RK292CBLL	85	144	16.0	54.4	0	498	34295	3.4	60.7	7.2	2.91	419
Pioneer 39D82	87	137	17.6	57.2	0	470	35678	3.4	60.7	7.6	2.88	394
NuTech 3A-390RR	90	163	20.3	55.8	5	551	34571	3.6	61.3	6.5	2.90	473
Dekalb DKC42-91(VT3)	92	134	18.9	55.0	0	458	35816	3.2	60.9	7.2	2.94	395
Gold Country 9608VT3	96	161	20.6	54.5	0	544	36093	3.4	60.7	7.3	2.90	468
Trelay 4T722	97	155	23.3	53.6	0	514	36231	3.4	60.8	6.9	2.92	451
Kruger K6499VT3	99	157	21.6	54.5	0	525	35816	3.3	61.1	7.0	2.92	457
Croplan Genetics 421VT3	100	154	22.3	54.1	0	516	36369	3.3	61.0	7.1	2.91	450
Kruger K5504YGCB	104	148	21.1	56.0	0	498	36093	3.4	61.1	7.2	2.91	430
Pioneer 35F40	104	136	25.0	53.6	0	448	35401	3.3	60.5	7.2	2.92	398
Kruger K6208VT3	108	136	29.7	51.9	0	435	35401	3.4	60.9	6.7	2.90	395
Renk RK692LLYGCB	108	145	27.5	52.1	0	469	34710	3.2	60.8	6.7	2.92	423
Kruger K6412VT3	112	148	32.5	52.0	0	466	34571	3.2	60.8	7.0	2.85	423
Trelay 8T339	113	146	32.7	50.3	1	458	35678	3.2	60.5	6.7	2.87	418
Mean		147	22.8	54.4	1	489	35254	3.4	60.9	7.0	2.91	427
Probability(%)												
Hybrid (H)		6.0	0.0	0.0	0.1	1.6	0.7	0.0	18.6	4.3	0.0	6.9
LSD(0.10)												
Hybrid (H)		16	1.6	1.2	2	54	1594	0.1	NS	0.5	0.0	48