

FIELD EXPERIMENT HISTORY

Title: Determining Corn Hybrid Maturity
Experiment: 01 Growth and Development **Trial ID:** 2718 **Year:** 2005
Personnel: J.G. Lauer, P.J. Flannery, and K.D. Kohn
Location: Arlington, WI **County:** Columbia
Supported By: HATCH

Site Information

Field: ARS428 **Previous Crop:** Soybean **Soil Type:** Plano Silt Loam
Soil Test: **Date:** 11/1 /05 **pH** 6.6 **OM (%)** 3.6 **P (ppm)** 65 **K (ppm)** 130

Plot Management

Tillage Operations: Chisel Plow Field Cultivator Cultivated 6/9/05
Fertilizer: **Preplant Analysis:** 46-0-0 **Rate lbs/A:** 325 lbs/A **Date:** 4 /14/05
 Starter Analysis: 9-24-24 **Rate lbs/A:** 150 lbs/A **Date:** 4 /28/05
 Post plant Analysis: N/A **Rate lbs/A:** N/A **Date:** N/A
 Manure: N/A
Herbicide: Outlook 20 oz/A **Insecticide:** None
 Hornet 4 oz/A **Hybrid:** See Factors
 Callisto 3oz/A
Irrigation: None
Planting Date: 4/28/05 **Planting Depth:** 1.5" **Row Width:** 30"
Target Plant Density: 30000 plants per acre **Planting Method:** Kinze Plot Planter
Harvest Date: 10/10/05 **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:** 29858 plants per acre

Factors/Treatments:

Hybrids:

Brunner S2055RR	Dekalb DKC44-42	AgriGold A6333Bt
NK Brand N17R3	NK Brand N32-L9	Dekalb DKC5878
Pioneer 39D82	Pioneer 37R71	Pioneer 34N44
Renk RK232	Kaltenberg 5151Bt	Jung 6710RRYGCB
NK Brand N2555Bt	Pioneer 35R58	High Cycle 8B524
Dahlman D4515		

Results: Table C-1 and C-2.

**Table C-1. Determining Corn Hybrid Maturity - Comparison of Hybrids
Arlington, WI - 2005**

Brand	Hybrid	Relative maturity	Grain yield bu/A	Grain moisture %	Test weight lb/bu	Lodging %	Grower return \$/A	Silking Date	Early dent	Kernel Milk			Black layer	Plant end height inches
										75%	50%	25%		
Brunner	S2055RR	82	185	17.0	60	3	295	194	229	239	243	249	257	72
NK Brand	N17-R3	82	181	18.0	62	13	286	195	226	233	239	246	255	75
Pioneer	39D82	85	186	17.6	59	7	296	193	228	234	239	246	250	79
Renk	RK232	85	190	16.6	61	8	306	196	234	240	245	249	256	78
NK Brand	N2555Bt	88	185	18.8	58	12	290	196	229	237	241	248	257	80
Dahlman	D4515	90	212	17.5	59	7	337	198	229	237	245	252	258	79
Dekalb	DKC44-42	94	199	18.0	57	19	313	199	233	241	246	250	258	76
NK Brand	NK32-L9	94	216	18.0	58	10	341	195	231	239	244	250	257	79
Pioneer	37R71	97	215	18.2	57	13	339	196	229	238	244	251	260	83
Kaltenberg	K5151Bt	102	233	19.7	58	3	360	200	235	242	248	256	266	88
Pioneer	35R58	105	229	20.4	57	7	350	202	233	239	246	256	263	80
AgriGold	A6333Bt	106	251	24.4	53	9	364	203	241	247	252	261	270	86
Dekalb	DKC58-78	108	242	21.1	56	2	367	201	238	244	252	259	268	81
Pioneer	34N44	109	245	24.4	56	11	356	200	236	244	251	259	269	78
Jung	6710RRYGCB	112	219	25.2	54	24	314	203	240	245	250	261	269	84
High Cycle	8B524	114	204	26.7	52	19	285	205	242	248	253	263	277	83
Mean			212	20.1	57	10	325	198	233	240	246	254	262	80
Probability(%)														
Hybrid (H)			0.0	0.0	0.0	20.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9
LSD(0.10)														
Hybrid (H)			18	1.9	1	NS	24	1	3	3	2	3	4	6
CV(%)														
			6	7	1	84	5	0	1	1	1	1	1	6

Table C-2. Determining Corn Hybrid Maturity - Comparison of Hybrids
Arlington, WI - 2005

(continued)

Brand	Hybrid	Relative maturity	Day of year	Leaf Development			Plant height inches
				Leaf collars no./plant	Hail adjusters method no./plant	Total leaves no./plant	
Renk	RK232	85	151	2.0	4.0	4.5	4.5
Renk	RK232	85	165	6.0	8.5	10.0	21.1
Renk	RK232	85	180	9.7	12.2	14.2	49.5
Renk	RK232	85	194	15.2	14.5	16.0	81.2
Renk	RK232	85	208	17.5	17.2	17.5	79.8
NK Brand	N2555Bt	88	151	2.0	3.8	4.5	4.5
NK Brand	N2555Bt	88	165	6.0	8.0	9.3	18.1
NK Brand	N2555Bt	88	180	9.3	11.7	14.3	42.0
NK Brand	N2555Bt	88	194	16.0	15.3	16.8	77.3
NK Brand	N2555Bt	88	208	17.8	17.7	17.8	81.3
Dahlman	D4515	90	151	2.0	3.7	4.3	4.9
Dahlman	D4515	90	165	6.0	8.2	10.0	18.3
Dahlman	D4515	90	180	9.8	11.8	14.7	44.2
Dahlman	D4515	90	194	16.0	15.7	17.5	74.2
Dahlman	D4515	90	208	19.7	19.0	19.7	78.8
Dekalb	DKC44-42	94	151	1.8	3.5	4.3	3.8
Dekalb	DKC44-42	94	165	6.2	9.0	10.7	17.6
Dekalb	DKC44-42	94	180	9.8	12.7	14.8	42.7
Dekalb	DKC44-42	94	194	15.8	15.0	17.0	77.5
Dekalb	DKC44-42	94	208	18.8	18.5	18.8	78.0
NK Brand	NK32-L9	94	151	2.0	4.0	4.7	3.7
NK Brand	NK32-L9	94	165	6.2	8.3	10.2	18.2
NK Brand	NK32-L9	94	180	9.5	11.3	14.3	41.2
NK Brand	NK32-L9	94	194	15.0	14.5	17.2	73.0
NK Brand	NK32-L9	94	208	18.3	18.0	18.3	83.2
Pioneer	37R71	97	151	2.0	3.8	4.0	4.7
Pioneer	37R71	97	165	6.0	8.0	10.0	20.3
Pioneer	37R71	97	180	9.3	11.7	14.3	49.0
Pioneer	37R71	97	194	15.5	15.0	17.0	81.3
Pioneer	37R71	97	208	18.2	18.2	18.2	83.2
Kaltenberg	K5151Bt	102	151	1.8	3.7	4.0	3.8
Kaltenberg	K5151Bt	102	165	5.8	8.7	9.7	18.0
Kaltenberg	K5151Bt	102	180	9.5	12.0	14.3	43.2
Kaltenberg	K5151Bt	102	194	13.8	15.2	16.8	79.5
Kaltenberg	K5151Bt	102	208	18.3	18.3	18.3	87.7
Pioneer	35R58	105	151	2.0	4.0	4.3	3.8
Pioneer	35R58	105	165	6.0	8.5	9.7	20.0
Pioneer	35R58	105	180	9.2	11.7	13.8	44.7
Pioneer	35R58	105	194	14.0	14.2	16.3	73.2
Pioneer	35R58	105	208	19.0	19.0	19.0	81.7

continued

Table C-2. Determining Corn Hybrid Maturity - Comparison of Hybrids
Arlington, WI - 2005

(continued)

Brand	Hybrid	Relative maturity	Day of year	Leaf Development			Plant height inches
				Leaf collars no./plant	Hail adjusters method no./plant	Total leaves no./plant	
AgriGold	A6333Bt	106	151	2.0	3.8	4.2	4.4
AgriGold	A6333Bt	106	165	5.5	8.0	9.5	19.7
AgriGold	A6333Bt	106	180	8.8	10.7	14.0	45.0
AgriGold	A6333Bt	106	194	14.3	14.3	16.8	79.3
AgriGold	A6333Bt	106	208	19.2	19.2	19.2	86.5
Dekalb	DKC58-78	108	151	1.7	3.7	4.2	4.3
Dekalb	DKC58-78	108	165	6.0	8.3	9.7	19.4
Dekalb	DKC58-78	108	180	9.2	11.3	14.3	43.8
Dekalb	DKC58-78	108	194	14.3	15.2	17.3	74.3
Dekalb	DKC58-78	108	208	19.7	19.7	20.0	85.7
Pioneer	34N44	109	151	2.0	3.8	4.2	5.0
Pioneer	34N44	109	165	6.0	7.3	9.0	19.4
Pioneer	34N44	109	180	8.7	9.7	12.8	45.3
Pioneer	34N44	109	194	13.7	13.3	15.7	70.5
Pioneer	34N44	109	208	19.2	18.8	19.2	81.8
Jung	6710RRYGCB	112	151	2.0	3.3	4.0	4.1
Jung	6710RRYGCB	112	165	5.3	7.7	8.8	16.7
Jung	6710RRYGCB	112	180	8.8	10.5	13.5	40.5
Jung	6710RRYGCB	112	194	13.5	14.5	16.8	74.8
Jung	6710RRYGCB	112	208	19.5	19.5	19.5	84.3
High Cycle	8B524	114	151	2.0	3.8	4.0	4.5
High Cycle	8B524	114	165	6.0	8.5	10.0	19.8
High Cycle	8B524	114	180	9.2	11.5	14.0	42.7
High Cycle	8B524	114	194	13.7	14.8	17.2	75.7
High Cycle	8B524	114	208	20.5	20.3	20.5	85.8
Mean				10.2	11.4	12.7	45.3
Probability(%)							
Hybrid (H)				21.0	2.3	4.7	50.0
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)				NS	0.5	0.5	NS
Day Of Year (D)				0.1	0.1	0.1	0.9
H x D				0.6	0.6	0.5	3.6
CV(%)							
				4	4	3	6

**Table C-2. Determining Corn Hybrid Maturity - Comparison of Hybrids
Arlington, WI - 2005**

Brand	Hybrid	Relative maturity	Day of year	Leaf Development			Plant height inches
				Leaf collars no./plant	Hail adjusters method no./plant	Total leaves no./plant	
			151	2.0	3.8	4.3	4.3
			165	5.9	8.3	9.8	19.0
			180	9.4	11.6	14.2	44.5
			194	15.0	14.9	16.8	76.8
			208	18.6	18.5	18.6	81.6
Brunner	S2055RR	82		10.3	11.6	12.6	44.2
NK Brand	N17-R3	82		10.2	11.2	12.7	43.1
Pioneer	39D82	85		10.3	11.8	12.7	47.6
Renk	RK232	85		10.1	11.3	12.4	47.2
NK Brand	N2555Bt	88		10.2	11.3	12.6	44.7
Dahlman	D4515	90		10.7	11.7	13.2	44.1
Dekalb	DKC44-42	94		10.5	11.7	13.1	43.9
NK Brand	NK32-L9	94		10.2	11.2	12.9	43.9
Pioneer	37R71	97		10.2	11.3	12.7	47.7
Kaltenberg	K5151Bt	102		9.9	11.6	12.6	46.4
Pioneer	35R58	105		10.0	11.5	12.6	44.7
AgriGold	A6333Bt	106		10.0	11.2	12.7	47.0
Dekalb	DKC58-78	108		10.2	11.6	13.1	45.5
Pioneer	34N44	109		9.9	10.6	12.2	44.4
Jung	6710RRYGCB	112		9.8	11.1	12.5	44.1
High Cycle	8B524	114		10.3	11.8	13.1	45.7
Brunner	S2055RR	82	151	2.0	3.7	4.2	4.5
Brunner	S2055RR	82	165	6.0	9.0	10.0	22.0
Brunner	S2055RR	82	180	10.0	12.8	14.8	48.0
Brunner	S2055RR	82	194	16.7	15.8	16.8	74.7
Brunner	S2055RR	82	208	17.0	16.8	17.0	72.0
NK Brand	N17-R3	82	151	2.0	3.8	4.2	4.1
NK Brand	N17-R3	82	165	6.0	8.7	9.8	14.8
NK Brand	N17-R3	82	180	9.5	11.5	14.3	42.3
NK Brand	N17-R3	82	194	15.5	14.2	16.8	78.8
NK Brand	N17-R3	82	208	18.2	18.0	18.2	75.5
Pioneer	39D82	85	151	2.0	4.0	4.7	4.0
Pioneer	39D82	85	165	5.7	8.7	10.0	21.1
Pioneer	39D82	85	180	9.3	12.7	14.5	48.7
Pioneer	39D82	85	194	17.2	16.7	17.2	84.2
Pioneer	39D82	85	208	17.2	17.2	17.2	79.8

continued

FIELD EXPERIMENT HISTORY

Title: Determining Corn Hybrid Maturity
Experiment: 01 Growth and Development **Trial ID:** 2719 **Year:** 2005
Personnel: J.G. Lauer, P.J. Flannery, and K.D. Kohn
Location: Hancock, WI **County:** Waushara
Supported By: HATCH

Site Information

Field: K19 **Previous Crop:** Soybean **Soil Type:** Plainfield Sand
Soil Test: **Date:** 10/15/05 **pH** 6.9 **OM (%)** 0.9 **P (ppm)** 99 **K (ppm)** 67

Plot Management

Tillage Operations: Moldboard Plow Disk

Fertilizer: **Preplant Analysis:** 28-0-0 **Rate lbs/A:** 842 **Date:** N/A
 Starter Analysis: 9-24-24 **Rate lbs/A:** 150 **Date:** 4 /21/05
 Post plant Analysis: N/A **Rate lbs/A:** N/A **Date:** N/A
 Manure: N/A

Herbicide: Define 16 oz/A **Insecticide:** None
 Atrazine 0.75 lb/A **Hybrid:** See Factors

Irrigation: 13.4"

Planting Date: 4/21/05 **Planting Depth:** 1.5" **Row Width:** 30"

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

Harvest Date: 10/06/05 **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:** 29937 plants per acre

Factors/Treatments:

Hybrids:

Brunner S2055RR	Dekalb DKC44-42	AgriGold A6333Bt
NK Brand N17R3	NK Brand N32-L9	Dekalb DKC5878
Pioneer 39D82	Pioneer 37R71	Pioneer 34N44
Renk RK232	Kaltenberg 5151Bt	Jung 6710RRYGCB
NK Brand N2555Bt	Pioneer 35R58	High Cycle 8B524
Dahlman D4515		

Results: Table C-3.

**Table C-3. Determining Corn Hybrid Maturity - Comparison of Hybrids
Hancock, WI - 2005**

Brand	Hybrid	Relative maturity	Grain yield bu/A	Grain moisture %	Test weight lb/bu	Lodging %	Grower return \$/A
Brunner	S2055RR	82	200	18.0	57	1	317
NK Brand	N17-R3	82	169	19.5	57	0	263
Pioneer	39D82	85	197	17.4	56	0	313
Renk	RK232	85	199	17.5	58	0	316
NK Brand	N2555Bt	88	199	20.4	56	0	305
Dahlman	D4515	90	250	18.5	56	0	392
Dekalb	DKC44-42	94	238	19.2	54	0	371
NK Brand	NK32-L9	94	245	18.9	55	0	383
Pioneer	37R71	97	206	20.2	53	0	317
Kaltenberg	K5151Bt	102	246	20.9	56	0	375
Pioneer	35R58	105	228	24.3	54	0	332
AgriGold	A6333Bt	106	259	26.1	53	0	367
Dekalb	DKC58-78	108	257	25.8	53	0	367
Pioneer	34N44	109	273	26.0	56	0	387
Jung	6710RRYGCB	112	254	29.6	53	0	343
High Cycle	8B524	114	244	29.2	53	0	332
Mean			230	22.0	55	0	343
Probability(%)							
Hybrid (H)			0.0	0.0	0.0	22.1	0.0
LSD(0.10)							
Hybrid (H)			27	1.1	1	NS	42
CV(%)							
			8	4	1	455	9

FIELD EXPERIMENT HISTORY

Title: Determining Corn Hybrid Maturity
Experiment: 01 Growth and Development **Trial ID:** 2720 **Year:** 2005
Personnel: J.G. Lauer, P.J. Flannery, and K.D. Kohn
Location: Marshfield, WI **County:** Wood
Supported By: HATCH

Site Information

Field: 008-05C51 **Previous Crop:** Soybean **Soil Type:** Withee Silt Loam
Soil Test: **Date:** 10/1 /05 **pH** 6.7 **OM (%)** 3.4 **P (ppm)** 94 **K (ppm)** 212

Plot Management

Tillage Operations: Chisel Plow Field Cultivator
Fertilizer: **Preplant Analysis:** N/A **Rate lbs/A:** N/A **Date:** N/A
 Starter Analysis: 9-24-24 **Rate lbs/A:** 150 **Date:** 5 /3 /05
 Post plant Analysis: 28-0-0 **Rate lbs/A:** 15 gal/A **Date:** 6 /17/05
 Manure: N/A
Herbicide: Lumax 2.25 qt/A **Insecticide:** None
Irrigation: None **Hybrid:** See Factors
Planting Date: 5/3/05 **Planting Depth:** 1.5" **Row Width:** 30"
Target Plant Density: 30000 plants per acre **Planting Method:** Kinze Plot Planter
Harvest Date: 10/18/05 **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:** 29700 plants per acre

Factors/Treatments:

Hybrids:

Brunner S2055RR
 NK Brand N17R3
 Pioneer 39D82
 Renk RK232
 NK Brand N2555Bt
 Dahlman D4515

Dekalb DKC44-42
 NK Brand N32-L9
 Pioneer 37R71
 Kaltenberg 5151Bt
 Pioneer 35R58

AgriGold A6333Bt
 Dekalb DKC5878
 Pioneer 34N44
 Jung 6710RRYGCB
 High Cycle 8B524

Results: Table C-4.

**Table C-4. Determining Corn Hybrid Maturity - Comparison of Hybrids
Marshfield, WI - 2005**

Brand	Hybrid	Relative maturity	Grain yield bu/A	Grain moisture %	Test weight lb/bu	Lodging %	Grower return \$/A
Brunner	S2055RR	82	171	22.6	54	0	254
NK Brand	N17-R3	82	161	20.9	60	0	246
Pioneer	39D82	85	151	19.9	57	0	233
Renk	RK232	85	173	20.4	58	1	265
NK Brand	N2555Bt	88	151	23.5	57	0	221
Dahlman	D4515	90	197	23.5	54	0	290
Dekalb	DKC44-42	94	207	25.4	52	0	296
NK Brand	NK32-L9	94	203	24.3	53	0	295
Pioneer	37R71	97	186	24.7	51	0	269
Kaltenberg	K5151Bt	102	191	27.7	54	0	265
Pioneer	35R58	105	188	32.1	51	0	243
AgriGold	A6333Bt	106	186	34.1	52	0	235
Dekalb	DKC58-78	108	171	36.3	51	0	208
Pioneer	34N44	109	210	34.6	53	0	263
Jung	6710RRYGCB	112	138	36.3	51	0	168
High Cycle	8B524	114	164	36.8	52	0	197
Mean			178	27.7	54	0	247
Probability(%)							
Hybrid (H)			0.0	0.0	0.0	48.0	0.0
LSD(0.10)							
Hybrid (H)			19	1.0	1	NS	26
CV(%)							
			8	2	1	693	8