

## FIELD EXPERIMENT HISTORY

**Title:** Determining Corn Hybrid Maturity  
**Experiment:** 01 Growth and Development      **Trial ID:** 2905      **Year:** 2006  
**Personnel:** J.G. Lauer, P.J. Flannery, and K.D. Kohn  
**Location:** Arlington, WI      **County:** Columbia  
**Supported By:** HATCH

### Site Information

**Field:** ARS427      **Previous Crop:** Soybean      **Soil Type:** Plano Silt Loam  
**Soil Test:**      **Date:** 10/1 /06      **pH** 7.1      **OM (%)** 4      **P (ppm)** 88      **K (ppm)** 278

### Plot Management

**Tillage Operations:** Chisel Plow      Field Cultivator      Cultivated 6/14/06  
**Fertilizer:**      **Preplant Analysis:** 46-0-0      **Rate lbs/A:** N/A      **Date:** N/A  
                          **Starter Analysis:** 9-23-30      **Rate lbs/A:** 150      **Date:** 5 /22/06  
                          **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  
**Irrigation:** None  
**Planting Date:** 5/22/06      **Planting Depth:** 1.5"      **Row Width:** 30"  
**Target Plant Density:** 30000 plants per acre      **Planting Method:** Kinze Plot Planter  
**Harvest Date:** 10/23/06      **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:** 29848 plants per acre

### **Factors/Treatments:**

#### Hybrids:

Brunner S3403RRBt	Gold Country GCS9401CB	NK Brand N17-R3
Carharts Blue Top CX1956B	High Cycle 7560Bt	NK Brand N58-D1
Cornelius C635YG4	Kruger K5504YG	Pioneer 34N44
Croplan 691BILL	Lemke 3081Bt	Pioneer 37R71
Dahlman D4515	NK Brand N16-M1	Pioneer 39D82
Dekalb DKC58-78		

**Results: Table C-1 and C-2.**

**Table C-1. Determining Corn Hybrid Maturity - Comparison of Hybrids  
Arlington, WI - 2006**

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 height inches	Grain Composition			Ethanol	
									75%	50%	25%			Oil %	Starch %	Protein %	per bu gallons	per A gallons
NK Brand N16-M1	82	194	18.9	58.9	1	605	197	229	235	242	251	262	109	3.2	57.6	8.1	2.89	563
NK Brand N17-R3	82	195	18.3	57.8	1	599	198	229	237	244	255	262	107	3.0	58.6	7.6	2.93	567
Brunner S3403RRBt	84	190	18.8	59.2	1	587	197	234	241	248	256	270	105	3.6	57.8	8.2	2.87	546
Pioneer 39D82	87	204	18.9	56.9	0	629	197	231	239	248	256	262	108	3.3	58.6	7.9	2.87	584
Dahlman D4515	90	212	19.3	56.5	14	654	199	235	243	253	261	271	118	2.9	59.4	7.3	2.93	621
Lemke 3081Bt	90	211	18.9	56.9	9	652	201	234	242	257	263	275	114	3.0	59.4	7.1	2.93	618
Carharts Blue Top CX1956B	95	213	20.0	55.8	3	698	201	236	246	255	265	275	110	3.4	58.9	7.2	2.91	619
Gold Country GCS9401CB	95	227	19.7	55.9	2	653	202	235	243	254	264	275	118	3.4	58.8	7.1	2.91	662
Pioneer 37R71	99	216	21.5	52.7	1	658	202	232	243	253	261	269	121	3.4	58.1	7.9	2.87	620
High Cycle 7560Bt	100	246	22.7	52.7	9	742	203	234	243	257	269	279	105	3.6	58.9	7.2	2.90	712
Kruger K5504YG	103	227	24.8	53.9	3	674	206	246	255	261	271	283	122	3.3	58.1	7.7	2.89	655
NK Brand N58-D1	107	229	28.1	54.0	7	667	204	245	255	261	270	282	118	2.7	59.6	7.3	2.90	665
Dekalb DKC58-78	108	252	27.5	52.9	1	735	205	246	258	266	274	287	113	3.5	58.2	7.9	2.85	718
Pioneer 34N44	109	250	28.2	55.0	5	726	205	238	252	263	275	283	121	2.9	58.9	7.4	2.89	721
Croplan 691BtLL	112	252	30.9	52.4	3	717	206	242	253	262	274	282	125	3.1	59.0	7.1	2.88	739
Cornelius C635YG4	112	238	31.6	52.3	11	677	206	245	256	262	274	285	128	3.1	58.8	7.1	2.87	685
<b>Mean</b>		223	23.0	55.2	4	669	202	237	246	256	265	276	115	3.2	58.7	7.5	2.90	643
<b>Probability(%)</b>																		
Hybrid (H)		0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0
<b>LSD(0.10)</b>																		
Hybrid (H)		16	0.8	0.7	6	48	2	3	4	4	4	4	7	0.2	0.4	0.2	0.02	46
<b>CV(%)</b>		5	3	1	101	5	1	1	1	1	1	1	4	4	0	2	0	5

**Table C-2. Determining Corn Hybrid Maturity - Comparison of Hybrids  
Arlington, WI - 2006**

Hybrid	Relative maturity	Day of year	Leaf Development			Plant height inches
			Leaf collars no./plant	Hail adjusters method no./plant	Total leaves no./plant	
		153	3.0	4.5	5.3	5.5
		167	5.1	7.4	8.3	12.1
		181	8.2	11.3	13.2	37.1
		195	14.0	15.7	16.7	84.5
		208	19.1	19.1	19.1	114.6
NK N17-R3	82		9.7	11.3	12.3	52.1
NK N16-M1	82		9.7	11.5	12.3	49.3
Brunner S3403RRBt	84		10.4	12.1	13.1	51.6
Pioneer 39D82	87		9.4	11.2	12.1	51.9
Dahlman D4515	90		9.8	11.5	12.4	50.8
Lemke 3081Bt	90		10.2	12.0	12.8	50.5
Gold Country GCS9401CB	95		10.3	12.0	13.0	50.9
Carharts Blue Top CX1956B	95		10.1	11.8	12.6	47.2
Pioneer 37R71	99		9.6	11.1	12.1	52.0
High Cycle 7560Bt	100		10.1	11.9	12.7	49.1
Kruger K5504YG	103		9.8	11.8	12.6	52.2
NK Brand N58-D1	107		9.7	11.7	12.4	48.9
Dekalb DKC58-78	108		10.1	11.8	12.7	49.0
Pioneer 34N44	109		9.9	11.0	12.2	52.9
Croplan 691BtLL	112		9.8	11.6	12.4	52.2
Cornelius C635YG4	112		9.1	11.0	11.8	53.7
NK N17-R3	82	153	3.0	5.0	5.8	6.0
NK N17-R3	82	167	5.5	7.7	8.7	12.6
NK N17-R3	82	181	8.7	11.5	13.5	40.4
NK N17-R3	82	195	14.3	15.2	16.2	94.7
NK N17-R3	82	208	17.2	17.2	17.2	107.0
NK N16-M1	82	153	3.0	5.0	5.8	5.8
NK N16-M1	82	167	5.5	8.0	9.0	12.3
NK N16-M1	82	181	8.8	12.2	13.7	37.3
NK N16-M1	82	195	13.8	14.8	15.7	86.8
NK N16-M1	82	208	17.3	17.3	17.3	104.5
Brunner S3403RRBt	84	153	3.0	5.0	6.0	5.3
Brunner S3403RRBt	84	167	5.3	8.0	9.0	13.0
Brunner S3403RRBt	84	181	8.8	11.8	13.8	41.0
Brunner S3403RRBt	84	195	15.5	16.5	17.3	92.5
Brunner S3403RRBt	84	208	19.3	19.3	19.3	106.0

continued

**Table C-2. Determining Corn Hybrid Maturity - Comparison of Hybrids  
Arlington, WI - 2006**

(continued)

Hybrid	Relative maturity	Day of year	Leaf Development			Plant height inches
			Leaf collars no./plant	Hail adjusters method no./plant	Total leaves no./plant	
Pioneer 39D82	87	153	3.0	4.5	5.5	5.8
Pioneer 39D82	87	167	4.5	7.3	8.3	12.4
Pioneer 39D82	87	181	8.0	11.0	13.0	39.4
Pioneer 39D82	87	195	14.0	15.5	16.3	91.8
Pioneer 39D82	87	208	17.5	17.5	17.5	110.3
Dahlman D4515	90	153	3.0	4.7	5.0	6.0
Dahlman D4515	90	167	5.0	7.2	8.0	12.3
Dahlman D4515	90	181	8.2	11.2	13.0	36.5
Dahlman D4515	90	195	13.5	15.2	16.3	83.0
Dahlman D4515	90	208	19.5	19.5	19.5	116.2
Lemke 3081Bt	90	153	3.0	4.7	5.3	5.8
Lemke 3081Bt	90	167	5.0	7.3	8.5	12.7
Lemke 3081Bt	90	181	8.7	12.0	13.7	36.2
Lemke 3081Bt	90	195	15.0	16.3	17.2	83.2
Lemke 3081Bt	90	208	19.5	19.5	19.5	114.5
Gold Country GCS9401CB	95	153	3.0	4.7	5.5	5.2
Gold Country GCS9401CB	95	167	5.0	7.3	8.7	12.0
Gold Country GCS9401CB	95	181	8.5	11.7	13.7	36.8
Gold Country GCS9401CB	95	195	14.8	16.3	17.2	82.3
Gold Country GCS9401CB	95	208	20.0	20.0	20.0	118.2
Carharts Blue Top CX1956B	95	153	3.3	4.2	5.0	4.7
Carharts Blue Top CX1956B	95	167	5.0	7.3	8.0	10.6
Carharts Blue Top CX1956B	95	181	8.3	11.7	13.2	32.8
Carharts Blue Top CX1956B	95	195	14.3	16.2	17.2	78.2
Carharts Blue Top CX1956B	95	208	19.7	19.7	19.7	110.0
Pioneer 37R71	99	153	3.0	4.0	5.0	4.9
Pioneer 37R71	99	167	5.0	7.3	8.3	11.5
Pioneer 37R71	99	181	8.0	11.0	13.3	36.1
Pioneer 37R71	99	195	14.0	15.3	16.3	86.8
Pioneer 37R71	99	208	17.8	17.8	17.8	120.8
High Cycle 7560Bt	100	153	3.0	4.0	5.0	4.8
High Cycle 7560Bt	100	167	5.5	8.5	8.5	13.5
High Cycle 7560Bt	100	181	8.5	11.5	13.5	36.5
High Cycle 7560Bt	100	195	14.0	16.0	17.0	82.0
High Cycle 7560Bt	100	208	19.5	19.5	19.5	108.5
Kruger K5504YG	103	153	3.0	4.0	5.0	5.8
Kruger K5504YG	103	167	5.2	7.5	8.2	13.3
Kruger K5504YG	103	181	8.0	11.8	13.3	37.6
Kruger K5504YG	103	195	13.3	16.0	17.0	83.2
Kruger K5504YG	103	208	19.5	19.5	19.5	121.0

continued

**Table C-2. Determining Corn Hybrid Maturity - Comparison of Hybrids**  
**Arlington, WI - 2006**

(continued)

Hybrid	Relative maturity	Day of year	Leaf Development			Plant height inches
			Leaf collars no./plant	Hail adjusters method no./plant	Total leaves no./plant	
NK Brand N58-D1	107	153	3.0	4.2	4.8	4.4
NK Brand N58-D1	107	167	4.7	7.0	7.7	10.7
NK Brand N58-D1	107	181	7.7	11.0	12.7	33.2
NK Brand N58-D1	107	195	13.3	16.5	17.3	78.5
NK Brand N58-D1	107	208	19.7	19.7	19.7	117.8
Dekalb DKC58-78	108	153	3.0	4.3	5.3	5.3
Dekalb DKC58-78	108	167	5.5	7.7	8.5	11.7
Dekalb DKC58-78	108	181	8.0	11.2	12.7	35.5
Dekalb DKC58-78	108	195	13.8	16.0	16.8	79.7
Dekalb DKC58-78	108	208	20.0	20.0	20.0	113.0
Pioneer 34N44	109	153	3.0	4.0	5.0	5.9
Pioneer 34N44	109	167	5.0	6.7	8.0	11.6
Pioneer 34N44	109	181	8.2	9.8	12.2	41.9
Pioneer 34N44	109	195	13.5	15.0	16.2	85.5
Pioneer 34N44	109	208	19.7	19.7	19.7	119.5
Croplan 691BtLL	112	153	3.0	4.5	5.0	5.9
Croplan 691BtLL	112	167	5.0	7.0	8.0	12.6
Croplan 691BtLL	112	181	7.5	11.0	13.0	36.3
Croplan 691BtLL	112	195	13.5	15.5	16.3	82.3
Croplan 691BtLL	112	208	19.8	19.8	19.8	124.0
Cornelius C635YG4	112	153	3.0	4.0	5.0	6.3
Cornelius C635YG4	112	167	4.0	6.5	7.0	13.0
Cornelius C635YG4	112	181	7.0	10.0	12.0	36.0
Cornelius C635YG4	112	195	12.5	15.5	16.0	84.5
Cornelius C635YG4	112	208	19.0	19.0	19.0	128.5
Mean			9.9	11.6	12.5	50.7
<b>Probability(%)</b>						
Hybrid (H)			8.1	9.0	18.5	14.2
Day Of Year (D)			0.0	0.0	0.0	0.0
H x D			0.0	0.0	0.0	0.0
<b>LSD(0.10)</b>						
Hybrid (H)			0.3	0.3	NS	NS
Day Of Year (D)			0.3	0.3	0.3	1.6
H x D			0.6	0.7	0.6	3.5
<b>CV(%)</b>						
			4	4	4	5

## FIELD EXPERIMENT HISTORY

**Title:** Determining Corn Hybrid Maturity  
**Experiment:** 01 Growth and Development      **Trial ID:** 2906      **Year:** 2006  
**Personnel:** J.G. Lauer, P.J. Flannery, and K.D. Kohn  
**Location:** Marshfield, WI      **County:** Wood  
**Supported By:** HATCH

### Site Information

**Field:** W5      **Previous Crop:** Soybean      **Soil Type:** Withee Silt Loam  
**Soil Test:**      **Date:** 10/1 /06      **pH** 6.6      **OM (%)** 2.5      **P (ppm)** 39      **K (ppm)** 125

### Plot Management

**Tillage Operations:** Chisel Plow      Field Cultivator      Cultivated 6/15/06  
**Fertilizer:**      **Preplant Analysis:** N/A      **Rate lbs/A:** N/A      **Date:** N/A  
                          **Starter Analysis:** 9-23-30      **Rate lbs/A:** 150      **Date:** 5 /4 /06  
                          **Post plant Analysis:** 28-0-0      **Rate lbs/A:** 27 gal/A      **Date:** 6 /15/06  
                          **Manure:** N/A  
**Herbicide:** Outlook 14 oz/A      **Insecticide:** None  
                          Hornet 2.4 oz/A      **Hybrid:** See Factors  
                          Outlook 14 oz/A  
                          Accent 0.67 oz/A  
                          Northstar 5.0 oz/A  
**Irrigation:** None  
**Planting Date:** 5/4/06      **Planting Depth:** 1.5"      **Row Width:** 30"  
**Target Plant Density:** 30000 plants per acre      **Planting Method:** Kinze Plot Planter  
**Harvest Date:** 10/20/06      **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:** 30096 plants per acre

### Factors/Treatments:

#### Hybrids:

Brunner S3403RRBt	Gold Country GCS9401CB	NK Brand N17-R3
Carharts Blue Top CX1956B	High Cycle 7560Bt	NK Brand N58-D1
Cornelius C635YG4	Kruger K5504YG	Pioneer 34N44
Croplan 691BtLL	Lemke 3081Bt	Pioneer 37R71
Dahlman D4515	NK Brand N16-M1	Pioneer 39D82
Dekalb DKC58-78		

**Results: Table C-3.**

**Table C-3. Determining Corn Hybrid Maturity - Comparison of Hybrids  
Marshfield, WI - 2006**

Hybrid	Relative maturity	Grain yield bu/A	Grain moisture %	Test weight lb/bu	Lodging %	Grower return \$/A	Grain Composition			Ethanol	
							Oil %	Starch %	Protein %	per bu gallons	per A gallons
NK Brand N16-M1	82	144	24.9	54.4	0	430	3.1	60.1	8.6	2.86	411
NK Brand N17-R3	82	146	25.9	55.5	0	427	3.4	59.1	9.2	2.82	411
Brunner S3403RRBt	84	143	28.5	52.9	0	415	3.3	59.1	9.2	2.80	400
Pioneer 39D82	87	147	26.9	52.3	0	431	3.5	58.8	8.9	2.79	410
Dahlman D4515	90	181	31.6	51.6	0	514	3.1	60.5	7.7	2.86	532
Lemke 3081Bt	90	181	32.2	51.4	0	512	3.1	60.8	7.8	2.86	519
Carharts Blue Top CX1956B	95	176	31.5	51.6	3	533	3.4	60.6	7.5	2.85	501
Gold Country GCS9401CB	95	187	31.0	51.7	1	499	3.4	61.0	7.5	2.85	533
Pioneer 37R71	99	163	32.8	49.5	0	458	3.4	59.1	8.5	2.80	457
High Cycle 7560Bt	100	183	35.6	50.1	0	504	3.7	60.0	7.3	2.84	529
Kruger K5504YG	103	178	38.1	51.7	0	483	3.5	60.4	7.4	2.86	511
NK Brand N58-D1	107	162	39.6	51.4	9	434	-	-	-	-	-
Dekalb DKC58-78	108	176	38.5	50.9	0	474	3.6	59.9	8.0	2.79	506
Pioneer 34N44	109	174	39.8	51.7	1	465	-	-	-	-	-
Croplan 691BtLL	112	161	44.8	50.5	1	415	3.8	60.2	7.5	2.82	475
Cornelius C635YG4	112	150	46.1	49.7	0	381	-	-	-	-	-
<b>Mean</b>		166	34.2	51.7	1	461	3.4	59.9	8.2	2.83	470
<b>Probability(%)</b>											
Hybrid (H)		0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
<b>LSD(0.10)</b>											
Hybrid (H)		8	1.4	0.7	2	26	0	0.6	0.2	0.01	24
<b>CV(%)</b>		4	3	1	156	4	3	1	2	0	4

## FIELD EXPERIMENT HISTORY

**Title:** Determining Corn Hybrid Maturity  
**Experiment:** 01 Growth and Development      **Trial ID:** 2907      **Year:** 2006  
**Personnel:** J.G. Lauer, P.J. Flannery, and K.D. Kohn  
**Location:** Valders, WI      **County:** Manitowoc  
**Supported By:** HATCH

### Site Information

**Field:**      **Previous Crop:** Corn      **Soil Type:** Kewaunee Silt Loam  
**Soil Test:**      **Date:** 10/1 /06      **pH** 6.9      **OM (%)** 2.6      **P (ppm)** 51      **K (ppm)** 90

### Plot Management

**Tillage Operations:** Chisel Plow      Field Cultivator      Cultivated 6/21/06  
**Fertilizer:**      **Preplant Analysis:** N/A      **Rate lbs/A:** N/A      **Date:** N/A  
                          **Starter Analysis:** 9-23-30      **Rate lbs/A:** 150      **Date:** 5 /5 /06  
                          **Post plant Analysis:** 34-0-0      **Rate lbs/A:** 150      **Date:** 6 /21/06  
                          **Manure:** 12000 gal  
**Herbicide:** Dual II Mag 0.75 pt/A      **Insecticide:** Force 3G 4.4lb/A  
                          Accent Gold WDG 2.5 oz/A      **Hybrid:** See Factors  
                          Callisto 1.5 oz/A  
                          Atrazine 0.25lb/A  
**Irrigation:** None  
**Planting Date:** 5/5/06      **Planting Depth:** 1.5"      **Row Width:** 30"  
**Target Plant Density:** 30000 plants per acre      **Planting Method:** Kinze Plot Planter  
**Harvest Date:** 10/25/06      **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:** 29375 plants per acre

### **Factors/Treatments:**

#### Hybrids:

Brunner S3403RRBt	Gold Country GCS9401CB	NK Brand N17-R3
Carharts Blue Top CX1956B	High Cycle 7560Bt	NK Brand N58-D1
Cornelius C635YG4	Kruger K5504YG	Pioneer 34N44
Croplan 691BtLL	Lemke 3081Bt	Pioneer 37R71
Dahlman D4515	NK Brand N16-M1	Pioneer 39D82
Dekalb DKC58-78		

**Results: Table C-4.**



**Table C-4. Determining Corn Hybrid Maturity - Comparison of Hybrids  
Valders, WI - 2006**

Hybrid	Relative maturity	Grain yield bu/A	Grain moisture %	Test weight lb/bu	Lodging %	Grower return \$/A	Grain Composition			Ethanol	
							Oil %	Starch %	Protein %	per bu gallons	per A gallons
NK Brand N16-M1	82	167	18.8	57.8	0	510	3.3	60.9	7.7	2.92	488
NK Brand N17-R3	82	165	19.1	58.3	1	517	3.6	60.7	7.8	2.89	478
Brunner S3403RRBt	84	173	20.1	56.4	0	530	3.5	60.0	8.2	2.85	492
Pioneer 39D82	87	167	19.0	57.1	1	515	3.5	60.5	7.6	2.87	478
Dahlman D4515	90	205	20.1	55.4	3	629	3.4	61.0	7.0	2.93	601
Lemke 3081Bt	90	210	21.0	54.2	0	639	3.4	61.2	6.8	2.93	615
Carharts Blue Top CX1956B	95	211	22.9	53.6	0	663	3.5	61.0	6.6	2.93	617
Gold Country GCS9401CB	95	219	21.8	53.7	0	635	3.5	61.1	6.8	2.92	640
Pioneer 37R71	99	207	24.4	50.9	0	618	3.5	60.2	7.8	2.86	592
High Cycle 7560Bt	100	210	25.0	51.5	1	622	3.7	60.3	6.9	2.90	607
Kruger K5504YG	103	223	26.6	52.9	0	655	3.5	60.2	7.1	2.91	648
NK Brand N58-D1	107	219	31.1	52.7	0	624	3.2	60.8	6.6	2.90	636
Dekalb DKC58-78	108	222	31.6	50.8	0	631	3.4	59.8	7.1	2.87	637
Pioneer 34N44	109	224	31.5	53.4	0	637	3.2	60.4	6.8	2.90	651
Croplan 691BtLL	112	222	34.6	50.5	0	616	3.7	59.9	7.1	2.86	632
Cornelius C635YG4	112	210	33.9	50.5	1	586	3.6	59.9	6.7	2.88	604
<b>Mean</b>		206	25.5	53.4	0	608	3.5	60.5	7.1	2.89	595
<b>Probability(%)</b>											
Hybrid (H)		0.0	0.0	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0
<b>LSD(0.10)</b>											
Hybrid (H)		12	1.2	0.6	1	37	0	0.4	0.3	0.02	36
<b>CV(%)</b>		4	3	1	193	5	3	0	3	0	4

**Table C-5. Determining Corn Hybrid Maturity - Comparison of Hybrids  
Arlington, WI - 2005**

Brand	Hybrid	Relative maturity	Grain Composition			Ethanol	
			Oil %	Starch %	Protein %	per bu gallons	per A gallons
Brunner	S2055RR	82	3.8	59.2	7.9	2.86	527
NK Brand	N17-R3	82	3.6	58.7	8.5	2.87	519
Pioneer	39D82	85	3.4	58.9	8.3	2.85	532
Renk	RK232	85	3.3	59.3	8.2	2.87	546
NK Brand	N2555Bt	88	3.8	59.2	7.9	2.86	530
Dahlman	D4515	90	3.1	60.5	7.1	2.95	624
Dekalb	DKC44-42	94	3.5	59.9	7.0	2.92	580
NK Brand	NK32-L9	94	3.9	59.0	8.0	2.88	620
Pioneer	37R71	97	3.6	58.9	8.3	2.86	614
Kaltenberg	K5151Bt	102	3.7	59.3	7.6	2.91	678
Pioneer	35R58	105	3.7	59.4	7.6	2.89	661
AgriGold	A6333Bt	106	3.4	59.4	7.4	2.89	725
Dekalb	DKC58-78	108	3.9	58.7	7.8	2.86	691
Pioneer	34N44	109	3.0	60.1	7.3	2.93	719
Jung	6710RRYGCB	112	3.5	59.6	7.0	2.91	637
High Cycle	8B524	114	4.0	58.7	8.0	2.87	586
<b>Mean</b>			3.6	59.3	7.7	2.89	612
<b>Probability(%)</b>							
Hybrid (H)			0.0	0.0	0.0	0.0	0.0
<b>LSD(0.10)</b>							
Hybrid (H)			0.1	0.4	0.2	0.08	51
<b>CV(%)</b>							
			3	1	2	0	6

**Table C-6. Determining Corn Hybrid Maturity - Comparison of Hybrids  
Hancock, WI - 2005**

Brand	Hybrid	Relative maturity	Grain Composition			Ethanol	
			Oil %	Starch %	Protein %	per bu gallons	per A gallons
Brunner	S2055RR	82	3.6	59.8	7.5	2.88	577
NK Brand	N17-R3	82	3.4	59.8	7.8	2.90	490
Pioneer	39D82	85	3.1	60.1	7.5	2.86	562
Renk	RK232	85	3.3	58.6	8.5	2.84	566
NK Brand	N2555Bt	88	3.9	60.0	7.4	2.88	574
Dahlman	D4515	90	3.1	60.6	6.9	2.95	738
Dekalb	DKC44-42	94	3.3	60.5	6.8	2.94	701
NK Brand	NK32-L9	94	3.8	59.9	7.5	2.89	709
Pioneer	37R71	97	3.4	60.3	7.2	2.90	599
Kaltenberg	K5151Bt	102	3.7	60.0	7.0	2.93	722
Pioneer	35R58	105	3.6	59.7	7.5	2.88	658
AgriGold	A6333Bt	106	3.5	59.8	7.5	2.87	743
Dekalb	DKC58-78	108	3.8	59.3	7.5	2.88	741
Pioneer	34N44	109	3.1	60.3	7.2	2.92	797
Jung	6710RRYGCB	112	3.6	60.1	6.8	2.90	736
High Cycle	8B524	114	4.1	58.9	7.9	2.85	697
<b>Mean</b>			3.5	59.9	7.4	2.89	665
<b>Probability(%)</b>							
Hybrid (H)			0.0	0.0	0.0	0.0	0.0
<b>LSD(0.10)</b>							
Hybrid (H)			0.1	0.6	0.2	0.02	77
<b>CV(%)</b>							
			3	1	2	0	8

**Table C-7. Determining Corn Hybrid Maturity - Comparison of Hybrids  
Marshfield, WI - 2005**

Brand	Hybrid	Relative maturity	Grain Composition			Ethanol	
			Oil %	Starch %	Protein %	per bu gallons	per A gallons
Brunner	S2055RR	82	3.9	57.1	8.9	2.80	478
NK Brand	N17-R3	82	3.4	56.8	9.3	2.84	458
Pioneer	39D82	85	3.7	57.1	9.0	2.77	419
Renk	RK232	85	3.4	57.2	9.1	2.80	484
NK Brand	N2555Bt	88	3.7	57.2	8.9	2.81	423
Dahlman	D4515	90	3.4	58.2	8.7	2.84	559
Dekalb	DKC44-42	94	3.6	58.6	8.0	2.86	592
NK Brand	NK32-L9	94	3.9	57.5	8.9	2.81	570
Pioneer	37R71	97	3.5	57.8	9.0	2.81	523
Kaltenberg	K5151Bt	102	3.9	57.6	8.6	2.83	541
Pioneer	35R58	105	3.5	57.5	8.6	2.81	528
AgriGold	A6333Bt	106	3.4	58.6	8.3	2.81	525
Dekalb	DKC58-78	108	3.8	57.6	8.7	2.78	478
Pioneer	34N44	109	3.0	58.9	8.2	2.84	598
Jung	6710RRYGCB	112	3.6	58.0	8.7	2.79	386
High Cycle	8B524	114	3.8	58.2	8.6	2.81	460
<b>Mean</b>			3.6	57.7	8.7	2.81	501
<b>Probability(%)</b>							
Hybrid (H)			0.0	0.0	0.0	0.1	0.0
<b>LSD(0.10)</b>							
Hybrid (H)			0.2	0.7	0.4	0.03	54
<b>CV(%)</b>							
			5	1	3	1	8

**Table C-8. Determining Corn Hybrid Maturity - Comparison of Hybrids**  
**Hancock, WI - 2004**

Hybrid	Relative maturity	Grain Composition			Ethanol	
		Oil %	Starch %	Protein %	per bu gallons	per A gallons
Brunner S2055RR	82	3.5	59.6	6.8	2.90	483
NK Brand N17R3	82	3.6	59.7	7.3	2.91	509
Carharts Blue Top CX8500A	85	3.4	60.3	7.8	2.85	580
Renk RK232	85	3.4	59.7	7.7	2.86	548
Dahlman D4515	90	3.2	60.2	6.7	2.96	621
NK Brand N2555Bt	90	3.7	59.3	7.0	2.89	623
Dekalb DKC4442	94	3.3	60.5	6.4	2.94	601
NK Brand N32L9	94	3.7	60.7	7.0	2.88	637
Pioneer 37R71	97	3.7	61.1	7.2	2.85	625
Pioneer 36B08	103	3.2	60.6	7.5	2.88	612
AgriGold A6333Bt	105	3.3	60.5	6.8	2.87	629
Pioneer 35R58	104	3.5	59.8	7.3	2.87	608
Dekalb DKC5878	108	3.5	59.0	7.3	2.87	630
DynaGro DG5467	109	3.4	59.6	6.9	2.89	638
Jung 2710	112	3.5	60.5	6.9	2.87	625
Pioneer 33R78	115	3.4	61.0	8.0	2.84	456
Mean		3.5	60.1	7.2	2.88	589
<b>Probability(%)</b>						
Hybrid (H)		0.0	42.3	0.0	0.0	0.0
<b>LSD(0.10)</b>						
Hybrid (H)		0.2	NS	0.3	0.02	46
<b>CV(%)</b>						
		3	2	3	0	6

**Table C-9. Determining Corn Hybrid Maturity - Comparison of Hybrids**  
**Marshfield, WI - 2004**

Hybrid	Relative maturity	Grain Composition			Ethanol	
		Oil	Starch	Protein	per bu	per A
		%	%	%	gallons	gallons
Brunner S2055RR	82	3.6	61.1	7.9	2.82	429
NK Brand N17R3	82	3.6	60.7	8.6	2.80	381
Carharts Blue Top CX8500A	85	3.5	60.8	8.1	2.81	412
Renk RK232	85	3.4	60.7	8.2	2.80	389
Dahlman D4515	90	3.3	61.3	7.7	2.86	463
NK Brand N2555Bt	90	3.7	61.2	8.0	2.80	433
Dekalb DKC4442	94	3.4	61.2	7.3	2.85	447
NK Brand N32L9	94	3.5	60.5	8.4	2.79	450
Pioneer 37R71	97	3.7	60.3	8.4	2.77	462
Pioneer 36B08	103	2.7	60.6	8.2	2.84	417
AgriGold A6333Bt	105	3.2	60.3	7.7	2.80	411
Pioneer 35R58	104	2.9	60.2	8.6	2.80	391
Dekalb DKC5878	108	3.1	60.1	8.0	2.80	403
DynaGro DG5467	109	3.2	59.9	7.9	2.81	364
Jung 2710	112	3.2	59.7	7.6	2.82	361
Pioneer 33R78	115	3.3	60.9	7.3	2.86	294
<b>Mean</b>		<b>3.3</b>	<b>60.6</b>	<b>8.0</b>	<b>2.81</b>	<b>407</b>
<b>Probability(%)</b>						
Hybrid (H)		0.0	0.0	0.0	0.0	0.0
<b>LSD(0.10)</b>						
Hybrid (H)		0.1	0.4	0.3	0.02	22
<b>CV(%)</b>						
		3	0	3	0	4