

FIELD EXPERIMENT HISTORY

Title: Determining Corn Hybrid Maturity
Experiment: 01GD **Trial ID** 3290 **Year:** 2009
Personnel: J.G. Lauer, K.D. Kohn and T.H. Diallo
Location: Arlington, WI **County:** Columbia
Supported By: HATCH

Site Information

Field: **Previous Crop:** Alfalfa **Soil Type:** Plano Silt Loam
Soil Test: **Date:** 10/25/09 **pH** 6.2 **OM (%)** 2.9 **P (ppm)** 39 **K (ppm)** 110

Plot Management

Tillage Operations: Fall Chisel Plow Field Cultivated 6/16/09

	<u>Analysis:</u>	<u>Rate lbs/A:</u>	<u>Date:</u>
Fertilizer: Preplant :	N/A	N/A	N/A
Starter :	10-34-0	3.0 gal/A	5 /2 /09
Post plant :	46-0-0	50	6 /26/09
Manure:	N/A	N/A	N/A

Herbicide: Dual II Mag 24 oz/A **Insecticide:** Force 3G 4.4lb/A
 Hornet 4 oz/A **Hybrid:** See Factors
Irrigation: None

Planting Date: 5/2/09 **Planting Depth:** 1.5" **Row Width:** 30"
Target Plant Density: 32000 plants per acre **Planting Method:** Almaco Precision Planter
Harvest Date: 11/04/09 **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:** 34788 plants per acre

Factors/Treatments:

Hybrids:

Dahlman D4356	Kaltenberg K3038LLBt11	Nu-Tech 3T-514VT3
Dairyland ST8208	Kruger 6499VT3	Pioneer 35F40
Dairyland ST9789	Kruger K6208VT3	Pioneer 37Y14
Dekalb DKC30-20	Mycogen 2P176	Renk RK570VT3
Dekalb DKC68-06	Mycogen 2P484	
Jung 7426VT3	Nu-Tech 3T-393VT3	

Results: Table C-01 and C-02.

**Table C-01. Determining Corn Hybrid Maturity - Comparison of Hybrids.
Arlington, WI - 2009.**

Hybrid	Relative maturity	Grain yield bu/A	Grain moisture %	Test wt lb/bu	Lodged			Grower return \$/A	Silking date	Early dent	Kernel Milk			Black layer	Plant height inches
					Total %	Stalk %	Root %				75%	50%	25%		
Dekalb DKC30-20	80	173	18.2	59	3	3	0	619	196	238	246	251	255	259	92
Mycogen 2P176	84	210	18.1	60	0	0	0	755	203	242	249	255	259	263	89
Dahlman D4356	85	189	16.7	58	2	0	2	684	202	240	245	251	254	257	96
Kaltenberg K3038LLBt11	87	212	17.3	57	3	1	2	763	202	240	246	252	256	260	94
Dairyland ST9789	89	248	19.1	56	0	0	0	886	203	241	252	258	263	269	96
Nu-Tech 3T-393VT3	90	241	18.7	56	1	1	0	861	207	249	255	261	265	269	94
Jung 7426VT3	96	239	18.8	56	1	1	0	855	207	249	254	259	263	269	98
Renk RK570VT3	96	226	18.6	56	1	1	0	810	206	250	257	261	266	271	96
Mycogen 2P484	97	238	18.7	56	0	0	0	850	208	252	256	261	263	268	91
Kruger 6499VT3	99	235	19.9	56	0	0	0	834	208	247	255	260	266	270	90
Pioneer 37Y14	99	249	20.0	57	1	1	0	886	206	243	250	255	259	268	98
Pioneer 35F40	105	237	22.4	58	5	5	0	828	207	246	254	260	266	274	100
Dairyland ST8208	108	239	25.3	53	2	2	0	823	209	253	260	266	274	281	113
Kruger K6208VT3	108	255	23.0	57	5	5	0	888	208	252	258	265	270	276	109
Nu-Tech 3T-514VT3	114	206	32.2	52	3	3	0	681	211	260	270	275	282	285	110
Dekalb DKC68-06	118	229	31.5	51	3	3	0	760	212	255	263	270	277	284	103
Mean		227	21.1	56	2	2	0	799	206	247	254	260	265	270	98
Probability(%)															
Hybrid (H)		0.0	0.0	0.0	3.9	4.3	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LSD(0.10)															
Hybrid (H)		17	1.1	1	3	3	1	56	1	3	4	4	4	4	5

**Table C-02. Determining Corn Hybrid Maturity - Comparison of Hybrids.
Arlington, WI - 2009.**

Hybrid	Relative maturity	Day of year	Leaf Development			Plant height inches
			Leaf collars no./plant	Hail adjusters method no./plant	Total leaves no./plant	
		152	2.9	4.0	5.1	4.7
		166	5.7	7.0	8.0	13.5
		181	9.8	12.2	13.2	44.7
		196	14.6	16.2	17.2	79.3
		211	19.1	19.1	19.1	100.4
Dekalb DKC30-20	80		11.0	12.1	13.0	53.9
Mycogen 2P176	84		10.9	12.0	12.9	48.1
Dahlman D4356	85		9.9	11.0	11.7	47.0
Kaltenberg K3038LLBt11	87		9.7	10.9	11.7	45.9
Dairyland ST9789	89		10.7	11.8	12.6	50.7
Nu-Tech 3T-393VT3	90		10.8	12.0	12.9	47.1
Jung 7426VT3	96		10.7	11.9	12.7	46.1
Renk RK570VT3	96		10.6	11.9	12.7	46.3
Mycogen 2P484	97		10.4	11.6	12.5	44.7
Kruger 6499VT3	99		10.6	11.8	12.5	44.0
Pioneer 37Y14	99		10.1	11.5	12.4	49.8
Pioneer 35F40	105		10.4	11.8	12.7	46.5
Dairyland ST8208	108		10.8	12.2	13.0	56.4
Kruger K6208VT3	108		10.3	11.8	12.6	49.5
Nu-Tech 3T-514VT3	114		9.9	11.5	12.2	51.3
Dekalb DKC68-06	118		10.1	11.6	12.4	49.0
Dekalb DKC30-20	80	152	3.0	4.0	5.8	6.0
Dekalb DKC30-20	80	166	6.0	7.7	8.7	16.5
Dekalb DKC30-20	80	181	11.3	13.5	14.5	56.3
Dekalb DKC30-20	80	196	16.8	17.2	17.8	95.8
Dekalb DKC30-20	80	211	18.0	18.0	18.0	94.7
Mycogen 2P176	84	152	3.0	4.0	5.7	4.8
Mycogen 2P176	84	166	6.0	7.3	8.3	15.0
Mycogen 2P176	84	181	11.0	13.0	14.2	46.0
Mycogen 2P176	84	196	15.7	16.7	17.7	83.5
Mycogen 2P176	84	211	18.8	18.8	18.8	91.2
Dahlman D4356	85	152	3.0	4.0	5.0	3.9
Dahlman D4356	85	166	5.2	6.8	7.8	10.7
Dahlman D4356	85	181	9.3	11.2	12.2	40.3
Dahlman D4356	85	196	14.3	15.3	15.8	81.3
Dahlman D4356	85	211	17.5	17.5	17.5	98.7

continued

Table C-02. Determining Corn Hybrid Maturity - Comparison of Hybrids.
 (continued) **Arlington, WI - 2009.**

Hybrid	Relative maturity	Day of year	Leaf Development			Plant height inches
			Leaf collars no./plant	Hail adjusters method no./plant	Total leaves no./plant	
Kaltenberg K3038LLBt11	87	152	2.7	4.2	5.3	6.2
Kaltenberg K3038LLBt11	87	166	5.5	6.7	7.5	14.3
Kaltenberg K3038LLBt11	87	181	8.8	11.2	12.2	39.8
Kaltenberg K3038LLBt11	87	196	13.8	15.0	15.8	77.0
Kaltenberg K3038LLBt11	87	211	17.5	17.5	17.5	92.0
Dairyland ST9789	89	152	3.0	4.0	5.3	4.5
Dairyland ST9789	89	166	6.0	7.5	8.5	14.0
Dairyland ST9789	89	181	10.3	12.7	13.7	51.3
Dairyland ST9789	89	196	15.3	16.3	17.0	84.2
Dairyland ST9789	89	211	18.7	18.7	18.7	99.3
Nu-Tech 3T-393VT3	90	152	3.0	4.0	5.2	4.4
Nu-Tech 3T-393VT3	90	166	6.0	7.0	8.0	14.0
Nu-Tech 3T-393VT3	90	181	9.7	12.0	13.2	43.3
Nu-Tech 3T-393VT3	90	196	15.3	17.0	18.0	76.3
Nu-Tech 3T-393VT3	90	211	20.0	20.0	20.0	97.7
Jung 7426VT3	96	152	3.0	4.0	5.0	3.8
Jung 7426VT3	96	166	5.8	7.0	8.2	10.3
Jung 7426VT3	96	181	10.0	12.2	13.2	41.0
Jung 7426VT3	96	196	14.8	16.5	17.5	74.8
Jung 7426VT3	96	211	19.7	19.7	19.7	100.5
Renk RK570VT3	96	152	3.0	4.0	5.0	4.4
Renk RK570VT3	96	166	5.7	7.2	8.2	12.7
Renk RK570VT3	96	181	10.2	12.5	13.5	43.2
Renk RK570VT3	96	196	14.8	16.5	17.5	74.5
Renk RK570VT3	96	211	19.2	19.2	19.2	96.8
Mycogen 2P484	97	152	2.7	3.7	5.0	4.7
Mycogen 2P484	97	166	5.5	6.8	7.8	12.0
Mycogen 2P484	97	181	9.7	12.0	13.0	40.8
Mycogen 2P484	97	196	14.8	16.5	17.5	73.0
Mycogen 2P484	97	211	19.2	19.2	19.2	92.8
Kruger 6499VT3	99	152	3.0	4.0	4.3	3.9
Kruger 6499VT3	99	166	5.8	7.0	8.0	11.2
Kruger 6499VT3	99	181	9.8	12.2	13.2	41.7
Kruger 6499VT3	99	196	14.7	16.3	17.3	71.2
Kruger 6499VT3	99	211	19.7	19.7	19.7	92.0
Pioneer 37Y14	99	152	3.0	4.0	5.5	5.1
Pioneer 37Y14	99	166	5.5	6.8	7.8	14.2
Pioneer 37Y14	99	181	9.2	12.2	13.2	48.0
Pioneer 37Y14	99	196	14.2	16.2	17.2	80.8
Pioneer 37Y14	99	211	18.5	18.5	18.5	101.0

continued

Table C-02. Determining Corn Hybrid Maturity - Comparison of Hybrids.
 (continued) **Arlington, WI - 2009.**

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 35F40	105	152	2.7	4.0	5.2	4.5
Pioneer 35F40	105	166	5.7	6.7	7.7	11.5
Pioneer 35F40	105	181	9.5	12.2	13.2	39.2
Pioneer 35F40	105	196	14.3	16.5	17.5	74.5
Pioneer 35F40	105	211	19.8	19.8	19.8	103.0
Dairyland ST8208	108	152	3.0	4.0	5.0	5.3
Dairyland ST8208	108	166	5.8	7.2	8.3	17.5
Dairyland ST8208	108	181	10.0	13.0	14.0	52.2
Dairyland ST8208	108	196	14.5	16.2	17.2	91.2
Dairyland ST8208	108	211	20.7	20.7	20.7	116.0
Kruger K6208VT3	108	152	2.7	4.0	4.8	4.1
Kruger K6208VT3	108	166	5.7	7.5	8.5	13.2
Kruger K6208VT3	108	181	9.7	12.0	13.0	43.8
Kruger K6208VT3	108	196	14.3	16.3	17.3	77.8
Kruger K6208VT3	108	211	19.3	19.3	19.3	108.5
Nu-Tech 3T-514VT3	114	152	2.7	4.0	4.8	4.4
Nu-Tech 3T-514VT3	114	166	5.3	6.8	7.8	13.3
Nu-Tech 3T-514VT3	114	181	9.2	11.3	12.3	43.7
Nu-Tech 3T-514VT3	114	196	13.2	15.8	16.8	78.8
Nu-Tech 3T-514VT3	114	211	19.3	19.3	19.3	116.2
Dekalb DKC68-06	118	152	2.7	3.8	5.0	4.9
Dekalb DKC68-06	118	166	5.3	6.5	7.5	15.3
Dekalb DKC68-06	118	181	9.2	12.2	13.2	44.5
Dekalb DKC68-06	118	196	13.3	15.5	16.5	74.5
Dekalb DKC68-06	118	211	20.0	20.0	20.0	106.0
Mean			10.4	11.7	12.5	48.5
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	0.0	0.0	0.0
LSD(0.10)						
Hybrid (H)			0.3	0.3	0.3	1.9
Day Of Year (D)			0.2	0.2	0.2	1.1
H x D			0.7	0.7	0.8	4.3

**Addendum Table C-54. Hybrid Maturity Effects on Corn Stover Agronomic and Biofuel Measurements.
Arlington, WI - 2009.†**

Hybrid	Harvest		Yield						-----%-----									
	RM	Density plants/ A	Moisture %	Stover g/plant	TEP T/A	TE G/T	Etoh G/A	CP	ADF	NDF	NDFD	ADL	Lignin	Glucan	Xylan	Cell	Hem	
Dahlman D4356	85		46.9	76	3.0	94.6	288	3.27	5.4	49.1	79.9	54.8	3.8	12.9	34.4	19.9	42.9	29.1
Renk RK570VT3	96		48.5	79	3.2	95.4	300	3.10	5.4	48.4	79.3	54.9	3.8	12.7	34.4	20.3	42.0	29.2
Pioneer 35F40	105		55.4	101	4.0	95.0	387	3.51	5.6	48.1	78.7	56.7	3.5	12.8	34.4	20.1	42.1	29.1
Nu-Tech 3T-514VT3	114		53.0	188	7.6	95.8	725	3.63	5.2	49.4	81.4	54.8	3.8	13.5	34.9	20.1	42.9	29.3
Mean		36448	51.0	111	4.4	95.2	425	3.38	5.4	48.7	79.8	55.3	3.7	13.0	34.5	20.1	42.5	29.2
Probability (%)																		
Hybrid (H)			84.6	4.4	4.4	85.2	4.8	4.7	72.5	49.6	16.3	32.2	38.6	14.3	90.8	65.9	47.9	87.0
LSD (0.05)																		
Hybrid (H)			26.1	NS	3.2	NS	322	0.4	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

† TEP, Theoretical ethanol potential; TE, Theoretical ethanol; Etoh, ethanol; CP, crude protein; ADF, acid detergent fiber; NDF; neutral detergent fiber; NDFD, neutral detergent fiber digestibility; ADL, acid detergent lignin; Cell, cellulose; Hem, hemicellulose

FIELD EXPERIMENT HISTORY

Title: Determining Corn Hybrid Maturity
Experiment: 01GD **Trial ID** 3291 **Year:** 2009
Personnel: J.G. Lauer, K.D. Kohn and T.H. Diallo
Location: Lancaster, WI **County:** Grant
Supported By: HATCH

Site Information

Field: **Previous Crop:** Soybean **Soil Type:** Lafayette Silt Loam
Soil Test: **Date:** 10/1 /09 **pH** 6.9 **OM (%)** 2.2 **P (ppm)** 21 **K (ppm)** 72

Plot Management

Tillage Operations: Disk Cultivated 6/17/09

	<u>Analysis:</u>	<u>Rate lbs/A:</u>	<u>Date:</u>
Fertilizer: Preplant :	46-0-0	160	N/A
Starter :	10-34-0	3.0 gal/A	N/A
Post plant :	N/A	N/A	N/A
Manure:	N/A	N/A	N/A

Herbicide: Lumax 3.0 qt/A **Insecticide:** Force 3G 4.4lb/A
Irrigation: None **Hybrid:** See Factors
Planting Date: 5/4/09 **Planting Depth:** 1.5" **Row Width:** 30"
Target Plant Density: 32000 plants per acre **Planting Method:** Almaco Precision Planter
Harvest Date: 11/2/09 **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:** 32125 plants per acre

Factors/Treatments:

Hybrids:

Dahlman D4356	Kaltenberg K3038LLBt11	Nu-Tech 3T-514VT3
Dairyland ST8208	Kruger 6499VT3	Pioneer 35F40
Dairyland ST9789	Kruger K6208VT3	Pioneer 37Y14
Dekalb DKC30-20	Mycogen 2P176	Renk RK570VT3
Dekalb DKC68-06	Mycogen 2P484	
Jung 7426VT3	Nu-Tech 3T-393VT3	

Results: Table C-03.

**Table C-03. Determining Corn Hybrid Maturity - Comparison of Hybrids.
Lancaster, WI - 2009.**

Hybrid	Relative maturity	Grain yield bu/A	Grain moisture %	Test weight lb/bu	Lodged			Grower return \$/A
					Total %	Stalk %	Root %	
Dekalb DKC30-20	80	144	19.3	59	33	32	1	512
Mycogen 2P176	84	182	19.7	61	10	9	1	647
Dahlman D4356	85	158	18.5	57	10	9	0	564
Kaltenberg K3038LLBt11	87	177	18.5	55	23	18	5	634
Dairyland ST9789	89	204	19.5	56	3	3	0	725
Nu-Tech 3T-393VT3	90	242	21.2	55	1	1	0	852
Jung 7426VT3	96	220	22.9	54	0	0	0	768
Renk RK570VT3	96	231	21.8	54	2	2	0	812
Mycogen 2P484	97	223	20.9	54	0	0	0	789
Kruger 6499VT3	99	248	24.6	54	0	0	0	858
Pioneer 37Y14	99	239	23.1	56	1	0	1	834
Pioneer 35F40	105	237	27.7	55	1	1	0	804
Dairyland ST8208	108	231	30.1	52	2	1	2	772
Kruger K6208VT3	108	224	30.9	53	2	2	0	746
Nu-Tech 3T-514VT3	114	146	33.4	47	4	4	0	481
Dekalb DKC68-06	118	225	35.0	52	2	2	0	733
Mean		208	24.2	55	6	5	1	721
Probability(%)								
Hybrid (H)		0.0	0.0	0.0	8.5	22.9	0.1	0.0
LSD(0.10)								
Hybrid (H)		27	1.8	1	16	NS	2	97

**Addendum Table C-55. Hybrid Maturity Effects on Corn Stover Agronomic and Biofuel Measurements.
Lancaster, WI - 2009.†**

Hybrid	Harvest		Yield															
	RM	Density	Moisture	Stover	TEP	TE	Etoh	CP	ADF	NDF	NDFD	ADL	Lignin	Glucan	Xylan	Cell	Hem	
	plants/ A	%	g/plant	T/A	G/T	G/A	g/L	-----%-----										
Dahlman D4356	85		52.3	47	1.9	95.6	180	3.52	5.6	49.9	79.9	54.5	3.8	13.8	34.9	20.0	42.7	28.5
Renk RK570VT3	96		65.4	102	4.1	96.8	398	3.63	5.1	50.0	81.3	55.0	3.7	12.4	34.9	20.6	43.5	28.5
Pioneer 35F40	105		64.5	108	4.3	96.9	419	3.75	5.6	47.5	77.3	57.0	3.5	12.9	35.4	20.2	40.9	28.6
Nu-Tech 3T-514VT3	114		66.0	164	6.6	94.0	617	3.28	5.1	47.4	77.1	56.9	3.4	12.4	33.6	20.3	40.6	28.3
Mean	36448		62.1	105	4.2	95.9	404	3.54	5.3	48.7	78.9	55.9	3.6	12.9	34.7	20.3	41.9	28.5
Probability (%)																		
Hybrid (H)			0.3	2.8	2.8	25.5	3.1	63.6	91.5	43.8	36.0	18.1	20.4	36.3	17.8	16.9	6.0	43.5
LSD (0.05)																		
Hybrid (H)			5.5	65.8	2.6	NS	253	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

† TEP, Theoretical ethanol potential; TE, Theoretical ethanol; Etoh, ethanol; CP, crude protein; ADF, acid detergent fiber; NDF; neutral detergent fiber; NDFD, neutral detergent fiber digestibility; ADL, acid detergent lignin; Cell, cellulose; Hem, hemicellulose

FIELD EXPERIMENT HISTORY

Title: Determining Corn Hybrid Maturity
Experiment: 01GD **Trial ID** 3292 **Year:** 2009
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:** 12/10/08 **pH** 6.1 **OM (%)** 3.5 **P (ppm)** 62 **K (ppm)** 164

Plot Management

Tillage Operations: Chisel Plow Field Cultivator Cultivated 6/22/09

	<u>Analysis:</u>	<u>Rate lbs/A:</u>	<u>Date:</u>
Fertilizer:			
Preplant :	N/A	N/A	N/A
Starter :	10-34-0	3.0 gal/A	5 /7 /09
Post plant :	28-0-0	90	6 /22/09
Manure:	N/A	N/A	N/A
Herbicide:	G-Max Lite 2.33 pt/A Hornet 2.4 oz/A	Insecticide: None	
		Hybrid: See Factors	
Irrigation:	None		
Planting Date:	5/7/09	Planting Depth: 1.5"	Row Width: 30"
Target Plant Density:	32000 plants per acre	Planting Method:	Almaco Precision Planter
Harvest Date:	11/12/09	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:** 34769 plants per acre

Factors/Treatments:

Hybrids:

Dahlman D4356	Kaltenberg K3038LLBt11	Nu-Tech 3T-514VT3
Dairyland ST8208	Kruger 6499VT3	Pioneer 35F40
Dairyland ST9789	Kruger K6208VT3	Pioneer 37Y14
Dekalb DKC30-20	Mycogen 2P176	Renk RK570VT3
Dekalb DKC68-06	Mycogen 2P484	
Jung 7426VT3	Nu-Tech 3T-393VT3	

Results: Table C-04.

**Table C-04. Determining Corn Hybrid Maturity - Comparison of Hybrids.
Marshfield, WI - 2009.**

Hybrid	Relative maturity	Grain yield bu/A	Grain moisture %	Test weight lb/bu	Lodged			Grower return \$/A
					Total %	Stalk %	Root %	
Dekalb DKC30-20	80	195	25.2	54	0	0	0	672
Mycogen 2P176	84	184	32.9	47	0	0	0	606
Dahlman D4356	85	192	32.4	49	11	11	0	633
Kaltenberg K3038LLBt11	87	195	35.3	47	8	8	0	634
Dairyland ST9789	89	191	34.7	47	1	0	1	624
Nu-Tech 3T-393VT3	90	204	35.4	46	0	0	0	661
Jung 7426VT3	96	191	39.2	45	1	1	0	606
Renk RK570VT3	96	199	37.8	47	1	1	0	636
Mycogen 2P484	97	198	36.8	47	0	0	0	637
Kruger 6499VT3	99	192	38.8	47	8	2	6	609
Pioneer 37Y14	99	205	33.2	46	0	0	0	672
Pioneer 35F40	105	184	39.7	47	0	0	0	580
Dairyland ST8208	108	171	44.1	45	0	0	0	525
Kruger K6208VT3	108	195	41.6	46	0	0	0	608
Nu-Tech 3T-514VT3	114	164	46.3	44	1	1	0	497
Dekalb DKC68-06	118	167	46.0	43	0	0	0	505
Mean		189	37.5	47	2	1	0	607
Probability(%)								
Hybrid (H)		0.2	0.0	0.8	0.0	0.0	2.9	0.0
LSD(0.10)								
Hybrid (H)		16	1.6	3	3	3	2	53

**Addendum Table C-56. Hybrid Maturity Effects on Corn Stover Agronomic and Biofuel Measurements.
Marshfield, WI 2009.†**

Hybrid	Harvest		Yield															
	RM	Density plants/ A	Moisture %	Stover g/plant	TEP T/A	TE G/T	Etoh G/A	CP	ADF	NDF	NDFD	ADL	Lignin	Glucan	Xylan	Cell	Hem	
-----%-----																		
Dahlman D4356	85		67.9	90	3.6	96.2	348	3.19	5.6	48.1	79.1	58.0	3.2	11.1	34.2	21.0	41.7	28.6
Renk RK570VT3	96		64.8	134	5.4	95.9	516	3.09	6.5	47.5	78.9	58.5	3.1	11.3	34.0	21.0	41.7	29.0
Pioneer 35F40	105		67.4	120	4.8	97.0	466	3.06	6.6	47.3	77.5	59.5	3.0	10.4	34.5	21.1	41.2	28.9
Nu-Tech 3T-514VT3	114		67.8	178	7.1	92.5	660	3.18	5.8	47.2	76.6	58.5	3.2	10.8	32.4	20.6	41.9	28.2
Mean		36448	67.0	131	5.2	95.4	498	3.13	6.1	47.5	78.0	58.6	3.1	10.9	33.8	20.9	41.6	28.7
Probability (%)																		
Hybrid (H)			24.0	1.5	1.5	2.2	2.2	97.6	10.3	39.7	1.4	8.9	10.8	82.7	3.5	40.4	86.1	7.6
LSD (0.05)																		
Hybrid (H)			NS	44.7	1.8	2.7	172	NS	NS	NS	1.4	NS	NS	NS	1.4	NS	NS	NS

† TEP, Theoretical ethanol potential; TE, Theoretical ethanol; Etoh, ethanol; CP, crude protein; ADF, acid detergent fiber; NDF; neutral detergent fiber; NDFD, neutral detergent fiber digestibility; ADL, acid detergent lignin; Cell, cellulose; Hem, hemicellulose

FIELD EXPERIMENT HISTORY

Title: Determining Corn Hybrid Maturity
Experiment: 01GD **Trial ID** 3293 **Year:** 2009
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:** Silt Loam
Soil Test: **Date:** 10/1 /09 **pH** 7.5 **OM (%)** 2.9 **P (ppm)** 22 **K (ppm)** 109

Plot Management

Tillage Operations: Chisel Plow Field Cultivator Cultivated 6/24/09

	<u>Analysis:</u>	<u>Rate lbs/A:</u>	<u>Date:</u>
Fertilizer:			
Preplant :	N/A	N/A	N/A
Starter :	10-34-0	3.0 gal/A	5 /11/09
Post plant :	46-0-0	126	6 /24/09
Manure:	N/A	N/A	N/A
Herbicide:	Hornet 2.0 oz/A Keystone LA 1.7 qt/A	Insecticide: None	
		Hybrid: See Factors	
Irrigation:	None		
Planting Date:	5/11/09	Planting Depth: 1.5"	Row Width: 30"
Target Plant Density:	32000 plants per acre	Planting Method:	Almaco Precision Planter
Harvest Date:	11/10/09	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:** 32709 plants per acre

Factors/Treatments:

Hybrids:

Dahlman D4356	Kaltenberg K3038LLBt11	Nu-Tech 3T-514VT3
Dairyland ST8208	Kruger 6499VT3	Pioneer 35F40
Dairyland ST9789	Kruger K6208VT3	Pioneer 37Y14
Dekalb DKC30-20	Mycogen 2P176	Renk RK570VT3
Dekalb DKC68-06	Mycogen 2P484	
Jung 7426VT3	Nu-Tech 3T-393VT3	

Results: Table C-05.

**Table C-05. Determining Corn Hybrid Maturity - Comparison of Hybrids.
Seymour, WI - 2009.**

Hybrid	Relative maturity	Grain yield bu/A	Grain moisture %	Test weight lb/bu	Lodged			Grower return \$/A
					Total %	Stalk %	Root %	
Dekalb DKC30-20	80	191	18.8	58	5	5	0	681
Mycogen 2P176	84	205	20.2	56	2	2	0	728
Dahlman D4356	85	214	21.5	53	0	0	0	753
Kaltenberg K3038LLBt11	87	232	22.0	53	0	0	0	813
Dairyland ST9789	89	220	24.3	52	0	0	0	762
Nu-Tech 3T-393VT3	90	214	24.2	50	1	1	0	743
Jung 7426VT3	96	225	27.0	48	1	1	0	766
Renk RK570VT3	96	213	26.0	47	1	1	0	728
Mycogen 2P484	97	217	22.7	50	3	3	0	757
Kruger 6499VT3	99	217	29.8	50	2	2	0	728
Pioneer 37Y14	99	230	27.5	50	0	0	0	782
Pioneer 35F40	105	204	32.7	51	1	1	0	672
Dairyland ST8208	108	188	34.9	47	1	1	0	610
Kruger K6208VT3	108	203	36.5	48	1	1	0	652
Nu-Tech 3T-514VT3	114	169	40.4	41	0	0	0	530
Dekalb DKC68-06	118	192	41.3	45	1	1	0	600
Mean		208	28.1	50	1	1	0	707
Probability(%)								
Hybrid (H)		0.0	0.0	0.0	12.5	12.5	0.0	0.0
LSD(0.10)								
Hybrid (H)		11	1.9	2	NS	NS	0	42

**Addendum Table C-57. Hybrid Maturity Effects on Corn Stover Agronomic and Biofuel Measurements.
Seymour, WI - 2009.†**

Hybrid	Harvest		Yield															
	RM	Density plants/ A	Moisture %	Stover g/plant	TEP T/A	TE G/T	Etoh G/A	CP g/L	ADF	NDF	NDFD	ADL	Lignin	Glucan	Xylan	Cell	Hem	
Dahlman D4356	85		51.6	87	3.5	96.5	335	3.74	4.9	49.8	81.1	55.1	3.6	10.9	34.6	20.7	42.7	28.4
Renk RK570VT3	96		57.4	85	3.4	97.3	327	3.68	5.8	49.9	81.1	55.4	3.5	9.2	34.7	21.1	42.8	28.8
Pioneer 35F40	105		58.5	109	4.4	97.0	426	3.90	6.4	47.7	77.0	56.2	3.4	8.9	35.0	20.6	41.5	28.2
Nu-Tech 3T-514VT3	114		56.1	184	7.4	95.2	622	3.86	6.6	47.8	73.7	56.6	3.4	8.1	33.5	20.3	42.0	26.8
Mean		36448	55.9	116	4.7	96.5	427	3.79	5.9	48.8	78.2	55.8	3.5	9.3	34.5	20.7	42.3	28.1
Probability (%)																		
Hybrid (H)			13.1	0.1	0.1	24.3	2.2	98.2	1.5	0.5	0.2	0.2	0.9	6.5	23.3	21.9	17.6	0.2
LSD (0.05)																		
Hybrid (H)			NS	27.7	1.1	NS	124	NS	1.0	1.1	2.6	0.5	0.1	NS	NS	NS	NS	0.6

† TEP, Theoretical ethanol potential; TE, Theoretical ethanol; Etoh, ethanol; CP, crude protein; ADF, acid detergent fiber; NDF; neutral detergent fiber; NDFD, neutral detergent fiber digestibility; ADL, acid detergent lignin; Cell, cellulose; Hem, hemicellulose