FIELD EXPERIMENT HISTORY

Title: **Influence of Thinning Timing on Corn Grain Yield**

Experiment: 16Variability **Trial ID:** 3518 **Year:** 2012

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

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

Supported By: HATCH

Site Information

Field: ARS406 **Previous Crop:** Soybean **Soil Type:** Plano Silt Loam

Soil Test: **Date:** 10/21/11 **pH:** 7.0 **OM (%)** 4.1 **P (ppm)** 72 **K (ppm)** 219

Plot Management

Tillage Operations: Chisel Plow Disk Chisel/Ripper Cultivated

		Analysis:	Rate lbs/A:	Date:
Fertilizer:	**Preplant :**	46-0-0	300 lbs	N/A
	Starter :	N/A	N/A	N/A
	Post plant :	N/A	N/A	N/A
	Manure:	N/A	N/A	N/A

Herbicide: Dual II Mag 20 oz/A 5/25/12
Hornet 5.0 oz/A 5/25/12
Accent Q 0.9 oz/A 6/4/12
Callisto 3 oz/A 6/4/12

Insecticide: Force 3G @ 4.4 lbs/A 5/14/12

Hybrid: 1) Dekalb DKC53-78
2) Pioneer 36V53

Irrigation:

Planting Date: 5/14/12 **Planting Depth:** 1.5" **Row Width:** 30"

Target Plant Density: 45000 plants per acre **Planting Method:** Kinze 2000 Interplant planter

Harvest Date: 10/18/12 **Harvest Method:** Massey Ferguson 8XP

Notes:

Experimental Design

Design: RCB Complete Factorial **Replications:** 3

Plot Size Seeded: 10' x 25' **Experiment Size:** 0.3 Acre

Harvest Plot Size: 5' x 21' **Harvest Plant Density:** 24058 plants per acre

Factors/Treatments:

Growth Stage at Time of Thinning:

1) UTC
2) V2 - 31-May
3) V4 - 6-Jun
4) V6 - 15-Jun
5) V8 - 26-Jun
6) V10 - 2-Jul
7) V12 - 6-Jul
8) V14 - 16-Jul
9) V16 - 16-Jul
10) V18 or VT - 17-Jul
11) R1 - 27-Jul
12) R2 - 31-Jul
13) R3 - 10-Aug
14) R4 - 17-Aug
15) R5 - 10-Sep
16) R6 - 4-Oct

Hybrid

1) Pioneer 36V53
2) Dekalb DKC53-78

Results: Table C-59

Table C-59. Influence of Thinning on Corn Grain Yield.
Arlington, WI - 2012.

Hybrid	Thin time	Grain yield	Grain moisture	Test weight	Lodging Total	Lodging Stalk	Lodging Root	Return $6.65/b	Harvst density	Grain Yield Components: Kernel rows/ear	Kernel per row	Kernel per ear	Kernel mass
		bu/A	%	lb/bu	%	%	%	$/A	plants/A	no.	no.	no.	mg
Dekalb DKC53-78		171	16.5	55.5	1	0	1	1092	24431	16.6	32.9	546	304
Pioneer 36V53		157	17.2	52.5	2	0	2	1005	23686	14.9	35.2	524	321
	UTC	225	15.6	54.5	1	0	1	1442	41745	15.7	32.6	511	295
	V2	212	16.5	54.7	1	0	1	1356	24321	16.3	36.9	600	330
	V4	210	16.6	54.1	0	0	0	1346	23802	16.7	36.2	602	326
	V6	203	16.1	54.9	0	0	0	1303	26862	16.3	37.7	610	320
	V8	180	16.3	54.4	2	0	1	1155	21313	16.0	39.6	634	319
	V10	170	16.7	54.5	1	0	1	1086	22662	15.6	36.3	566	311
	V12	178	17.3	53.9	0	0	0	1135	22610	15.0	36.4	545	338
	V14	153	17.9	53.0	3	1	1	977	20691	15.4	34.0	523	309
	V16	124	17.3	53.6	5	3	2	794	18928	15.3	33.9	519	324
	V18	159	17.2	54.1	1	0	1	1017	24580	15.7	34.3	539	310
	R1	153	18.7	53.2	1	0	1	972	24217	15.7	32.1	500	319
	R2	135	18.8	53.4	1	1	0	860	22454	15.6	30.6	475	322
	R3	129	17.9	53.5	1	0	1	820	21884	15.8	31.0	486	309
	R4	133	16.5	54.1	2	0	2	853	22817	15.6	29.6	462	293
	R5	134	15.6	54.5	3	0	3	859	23543	15.6	32.0	496	290
	R6	126	15.4	54.3	4	0	4	807	22506	15.7	31.2	487	279
Dekalb DKC53-78	UTC	239	15.5	56.0	0	0	0	1533	42315	16.9	32.2	542	289
Dekalb DKC53-78	V2	221	16.6	56.2	1	0	1	1413	24684	17.0	35.9	611	325
Dekalb DKC53-78	V4	210	16.4	55.3	0	0	0	1346	24062	17.5	35.4	617	322
Dekalb DKC53-78	V6	211	16.3	56.5	0	0	0	1353	24373	17.5	35.9	628	319
Dekalb DKC53-78	V8	189	16.0	55.9	1	0	1	1210	22402	16.5	38.2	629	317
Dekalb DKC53-78	V10	175	16.6	55.6	1	0	1	1122	22610	16.3	36.1	587	304
Dekalb DKC53-78	V12	181	17.0	55.3	0	0	0	1157	23128	15.7	34.0	531	316
Dekalb DKC53-78	V14	159	16.8	55.3	3	1	2	1016	21573	16.6	34.5	571	282
Dekalb DKC53-78	V16	132	16.2	55.2	6	3	2	843	19498	16.0	33.6	539	323
Dekalb DKC53-78	V18	165	16.4	55.9	1	0	1	1059	24373	16.5	32.8	539	297
Dekalb DKC53-78	R1	157	17.9	54.9	0	0	0	1001	24995	16.9	29.3	494	313
Dekalb DKC53-78	R2	148	18.4	55.4	1	1	0	941	23751	16.5	28.4	468	317
Dekalb DKC53-78	R3	127	17.5	54.5	0	0	0	812	22299	16.8	29.9	498	294
Dekalb DKC53-78	R4	142	16.1	55.5	0	0	0	912	22921	16.4	30.3	495	290
Dekalb DKC53-78	R5	139	15.7	56.1	1	0	1	893	23958	16.6	30.4	503	279
Dekalb DKC53-78	R6	135	15.4	55.2	2	0	2	866	23958	16.5	29.0	478	269

continued

Table C-59. Influence of Thinning on Corn Grain Yield.
(continue) **Arlington, WI - 2012.**

Hybrid	Thin time	Grain yield	Grain moisture	Test weight	Lodging Total	Lodging Stalk	Lodging Root	Return $6.65/b	Harvst density	Grain Yield Components: Kernel rows/ear	Kernel per row	Kernel per ear	Kernel mass
		bu/A	%	lb/bu	%	%	%	$/A	plants/A	no.	no.	no.	mg
Pioneer 36V53	UTC	211	15.6	53.0	1	0	1	1351	41175	14.6	33.0	481	300
Pioneer 36V53	V2	203	16.4	53.2	0	0	0	1298	23958	15.5	38.0	589	334
Pioneer 36V53	V4	210	16.7	52.9	0	0	0	1346	23543	15.9	36.9	587	330
Pioneer 36V53	V6	196	15.9	53.3	1	0	0	1254	29351	15.0	39.5	591	322
Pioneer 36V53	V8	172	16.7	53.0	2	1	2	1100	20224	15.6	41.0	639	322
Pioneer 36V53	V10	164	16.8	53.5	2	0	2	1050	22713	14.9	36.5	545	318
Pioneer 36V53	V12	174	17.6	52.4	0	0	0	1112	22091	14.4	38.8	559	361
Pioneer 36V53	V14	148	19.0	50.6	2	1	1	938	19809	14.2	33.5	476	336
Pioneer 36V53	V16	117	18.4	52.0	4	3	2	745	18357	14.6	34.3	500	325
Pioneer 36V53	V18	153	18.1	52.2	1	0	1	975	24788	15.0	35.9	538	322
Pioneer 36V53	R1	149	19.6	51.5	2	0	2	943	23439	14.5	35.0	505	325
Pioneer 36V53	R2	123	19.2	51.4	1	1	0	780	21158	14.8	32.7	483	327
Pioneer 36V53	R3	130	18.2	52.6	2	0	1	828	21469	14.8	32.1	475	324
Pioneer 36V53	R4	124	16.8	52.7	3	0	3	794	22713	14.8	29.0	429	297
Pioneer 36V53	R5	128	15.4	53.0	5	0	5	824	23128	14.6	33.5	490	301
Pioneer 36V53	R6	116	15.4	53.4	5	0	5	747	21054	14.9	33.4	497	288
Mean		164	16.9	54.0	2	0	1	1049	24058	15.7	34.0	535	312
Probability(%)													
Hybrid (H)		0.0	0.0	0.0	5.8	99.2	4.1	0.0	10.9	0.0	0.0	2.3	0.0
Treatment (T)		0.0	0.0	0.0	0.1	0.0	5.3	0.0	0.0	4.4	0.0	0.0	0.0
H x T		92.8	0.0	9.3	42.9	100.0	35.3	93.0	53.4	84.9	57.8	61.1	69.5
LSD (0.10)													
Hybrid (H)		5	0.2	0	1	NS	1	30	NS	0.2	0.9	16	7
Treatment (T)		13	0.5	1	2	1	2	85	2165	0.7	2.5	44	20
H x T		NS	0.8	1	NS	NS	NS	NS	NS	NS	NS	NS	NS