

FIELD EXPERIMENT HISTORY

Title: Influence of Clipping on Corn Grain Yield
Experiment: 16 Clip **Trial ID** 3297 **Year:** 2009
Personnel: J.G. Lauer, K.D. Kohn and T. Diallo
Location: Arlington, WI **County:** Columbia
Supported By: HATCH

Site Information

Field: ARS372 **Previous Crop:** Soybean **Soil Type:** Plano Silt Loam
Soil Test: **Date:** 10/1 /09 **pH** 6.2 **OM (%)** 2.8 **P (ppm)** 13 **K (ppm)** 85

Plot Management

Tillage Operations: Chisel Plow Field Cultivator Cultivated

	<u>Analysis:</u>	<u>Rate lbs/A:</u>	<u>Date:</u>
Fertilizer: Preplant :	46-0-0	325	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 1.5 pt/A **Insecticide:** None
 Hornet 4.0 oz/A **Hybrid:** Dekalb DKC52-59
Irrigation: None

Planting Date: 5/8/09 **Planting Depth:** 1.5" **Row Width:** 30"
Target Plant Density: 32000 plants per acre **Planting Method:** Kinze 3000 Row Planter
Harvest Date: 11/4/09 **Harvest Method:** Massey 8XP

Experimental Design

Design: RCB **Replications:** 4
Plot Size Seeded: 10' x 25' **Experiment Size:** 1.45 Acre
Harvest Plot Size: 5' x 23' **Harvest Plant Density:** 30930 plants per acre

Factors/Treatments:

<u>Growth Stage:</u>	<u>Percent Clipped:</u>	<u>Clip Dates:</u>
V1	0	V1 - 5/22/09
V2	25	V2 - 5/28/09
V3	50	V3 - 6/2/09
V4	75	V4 - 6/11/09
	100	

Results: Table C-50.

**Table C-50. Influence of Clipping on Corn Grain Yield.
Arlington, WI - 2009.**

Percent clipped	Growth stage	Harvest population	Grain yield	Grain moisture %	Test weight lb/bu	Lodging			Grower return \$/A	Grain Yield Components									
						Total %	Stalk %	Root %		Clipped Plants				Untreated Plants					
										rows/ear	per row	per ear	mass	Yield %	rows/ear	per row	per ear	mass	Yield %
%	plants/A	bu/A	%	lb/bu	%	%	%	%/A	no.	no.	no.	mg	%	no.	no.	no.	mg	%	
	V1	31392	216	28.0	51	0	0	0	730	16.4	29.0	481	243	45	16.4	33.0	542	261	55
	V2	30887	211	28.7	50	0	0	0	711	15.7	26.3	417	243	44	16.4	34.7	569	261	56
	V3	30555	207	30.2	50	1	1	0	691	15.8	28.3	445	252	44	16.7	34.4	574	281	56
	V4	30887	206	29.9	51	1	1	0	691	15.8	24.6	392	243	42	16.3	35.2	574	283	58
UTC		31202	225	28.5	51	0	0	0	759	-	-	-	-	0	16.1	32.7	526	273	100
20		30374	200	28.9	50	1	1	0	674	15.4	24.4	376	242	14	16.7	31.7	527	256	86
40		30752	210	28.9	50	1	1	0	709	15.8	24.4	390	245	28	16.5	33.8	558	287	72
60		31652	215	28.4	51	1	1	0	727	16.0	27.8	447	247	50	15.9	36.9	586	278	50
80		30681	197	30.0	49	1	1	0	660	16.1	27.9	455	235	69	17.0	36.6	624	264	31
100		30918	212	30.6	50	0	0	0	707	16.3	30.8	501	258	100	-	-	-	-	0
UTC	V1	32007	211	27.4	50	1	1	0	717	-	-	-	-	0	16.2	31.3	505	254	100
20	V1	30871	221	27.2	52	0	0	0	750	16.5	28.0	465	246	17	17.1	31.8	545	258	83
40	V1	31155	230	29.3	51	0	0	0	772	17.0	31.3	529	256	36	16.5	35.3	583	271	64
60	V1	32670	222	27.6	52	0	0	0	752	16.5	28.6	471	246	55	15.8	33.4	522	273	45
80	V1	30871	202	27.5	50	1	1	0	687	16.0	25.1	422	211	59	16.6	33.3	554	251	41
100	V1	30776	209	29.3	49	0	0	0	703	16.0	32.3	518	255	100	-	-	-	-	0
UTC	V2	30965	243	27.8	52	0	0	0	824	-	-	-	-	0	16.0	33.5	536	288	100
20	V2	30776	199	30.0	49	0	0	0	667	14.5	22.0	318	243	13	16.4	31.8	518	254	87
40	V2	30208	205	27.5	50	1	1	0	694	15.3	22.5	347	241	27	16.5	34.9	580	265	73
60	V2	31818	216	27.1	52	1	1	0	735	16.2	27.2	444	244	51	16.3	37.6	607	249	49
80	V2	30587	194	29.6	48	0	0	0	648	15.8	29.8	471	237	74	17.0	35.5	604	251	26
100	V2	30965	209	30.0	49	0	0	0	700	16.8	30.0	504	248	100	-	-	-	-	0
UTC	V3	30397	212	30.1	50	0	0	0	710	-	-	-	-	0	16.0	32.9	526	276	100
20	V3	28977	188	29.3	50	1	1	0	634	15.0	28.5	422	244	15	16.8	32.6	546	266	85
40	V3	30681	210	29.4	50	0	0	0	707	16.0	24.6	396	241	26	16.8	29.5	492	329	74
60	V3	31818	214	30.2	50	1	1	0	717	15.3	27.8	427	263	50	15.8	37.6	593	276	50
80	V3	30303	187	31.7	48	1	1	0	621	16.3	28.0	456	243	71	18.0	39.5	711	256	29
100	V3	31155	227	30.5	52	0	0	0	759	16.2	32.4	525	270	100	-	-	-	-	0
UTC	V4	31439	232	28.6	52	0	0	0	785	-	-	-	-	0	16.2	33.2	538	275	100
20	V4	30871	192	29.0	50	1	1	0	645	15.5	19.0	300	234	13	16.4	30.6	500	248	87
40	V4	30965	197	29.5	50	2	2	0	662	15.0	19.1	287	240	22	16.3	35.3	578	282	78
60	V4	30303	208	28.5	51	1	1	0	704	16.0	27.6	445	233	44	16.0	39.0	624	311	56
80	V4	30965	206	31.2	51	1	1	0	685	16.4	28.8	472	249	71	16.5	38.0	628	297	29
100	V4	30776	202	32.5	50	2	1	0	666	16.0	28.6	458	256	100	-	-	-	-	0
Mean		30930	210	29.2	50	1	1	0	706	15.9	27.0	434	245	44	16.4	34.3	564	271	56
Probability(%)																			
Growth Stage (S)		23.0	45.4	1.7	55.3	15.6	19.2	79.9	29.3	36.4	0.4	0.6	67.0	67.6	70.0	38.8	46.0	13.1	67.6
Percent Clipped (C)		16.0	1.8	11.8	2.6	54.6	53.7	22.7	1.4	47.3	0.0	0.0	31.4	0.0	2.0	0.2	0.1	19.0	0.0
S x C		69.8	36.5	87.2	12.6	17.3	35.8	59.7	40.1	73.0	2.4	7.3	86.2	41.2	83.7	37.3	17.0	35.3	41.2
LSD (0.10)																			
Growth Stage (S)		NS	NS	1.3	NS	NS	NS	NS	NS	NS	2.1	42	NS	NS	NS	NS	NS	NS	NS
Percent Clipped (C)		NS	14	NS	1	NS	NS	NS	48	NS	2.4	48	NS	5	0.6	2.4	43	NS	5
S x C		NS	NS	NS	NS	NS	NS	NS	NS	NS	4.8	95	NS	NS	NS	NS	NS	NS	NS

FIELD EXPERIMENT HISTORY

Title: Influence of Thinning Timing on Corn Grain Yield
Experiment: 16Thin **Trial ID** 3298 **Year** 2009
Personnel: J.G. Lauer, K.D. Kohn and T. Diallo
Location: Arlington, WI **County:** Columbia
Supported By: HATCH

Site Information

Field: ARS372 **Previous Crop:** Soybean **Soil Type:** Plano Silt Loam
Soil Test: **Date** 10/1 /09 **pH:** 7.0 **OM (%)** 2.8 **P (ppm)** 13 **K (ppm)** 85

Plot Management

Tillage Operations: Chisel Plow Field Cultivator Cultivated

	<u>Analysis:</u>	<u>Rate lbs/A:</u>	<u>Date:</u>
Fertilizer: Preplant :	46-0-0	325	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 1.5 pt/A **Insecticide:** None
 Hornet 4.0 oz/A **Hybrid:** Dekalb DKC52-59
Irrigation: None

Planting Date: 5/8/09 **Planting Depth:** 1.5" **Row Width:** 30"
Target Plant Density: 19000 plants per acre **Planting Method:** Kinze 3000 Row Planter
Harvest Date: 10/21/09 **Harvest Method:** Kincaid Plot Combine

Experimental Design

Design: RCB Factorial **Replications:** 4
Plot Size Seeded: 10' x 25' **Experiment Size:** 1.45 Acre
Harvest Plot Size: 5' x 23' **Harvest Plant Density** 19120 plants per acre

Factors/Treatments:

Stage and date of Thinning:

V2 - 5/28	V18 - 7/27
V4 - 6/11	R1 - 7/31
V6 - 6/16	R2 - 8/18
V8 - 6/25	R3 - 8/24
V10 - 7/2	R4 - 9/1
V12 - 7/10	R5 - 9/11
V14 - 7/14	R6 - 10/20
V16 - 7/22	

Results: Table C-51.

**Table C-51. Influence of Thinning on Corn Grain Yield.
Arlington, WI - 2009.**

Timing of thinning	Grain yield	Grain moisture	Test weight	Lodging			Grower return	Grain Yield Components			
				Total	Stalk	Root		----- rows/ear	Kernel per row	----- per ear	mass
	bu/A	%	lb/bu	%	%	%	\$/A	no.	no.	no.	mg
V2	151	37.5	46	0	0	0	482	17.0	40.1	681	337
V4	154	37.6	46	0	0	0	494	16.6	41.5	689	351
V6	157	36.2	45	0	0	0	505	16.3	34.7	565	430
V8	146	36.9	45	0	0	0	468	16.3	36.7	591	430
V10	142	35.5	47	0	0	0	458	16.6	36.0	600	401
V12	131	36.5	46	0	0	0	422	16.9	41.3	696	366
V14	136	36.2	45	1	0	1	438	16.2	40.0	649	322
V16	138	37.4	46	0	0	0	440	16.6	38.8	643	328
V18	122	37.0	44	1	0	1	390	16.4	38.2	626	325
R1	124	35.1	43	0	0	0	401	16.8	38.2	642	321
R2	107	37.0	43	2	0	2	344	16.5	32.3	531	304
R3	109	35.1	43	3	1	2	354	16.2	32.6	526	302
R4	110	35.6	42	2	2	0	357	15.9	31.3	493	302
R5	106	35.6	44	1	1	0	344	16.8	30.7	515	275
R6	96	34.9	45	0	0	0	311	17.3	31.8	551	251
UTC	191	34.8	46	0	0	0	620	16.3	33.2	539	268
Mean	132	36.2	45	1	0	0	427	16.5	36.1	596	332
Probability(%)											
Treatment	0.0	9.8	7.3	47.2	58.1	32.3	0.0	42.9	0.4	0.2	5.3
LSD (0.10)											
Treatment	15	1.8	2	NS	NS	NS	49	NS	5.4	91	92