

## FIELD EXPERIMENT HISTORY

**Title:** 16 Influence of Clipping Timing on Corn Grain Yield  
**Experiment:** 16 Influence of Clipping on Corn Grain      **Trial ID** 2604      **Year:** 2004  
**Personnel:** J.G. Lauer, P.J. Flannery, and K.D. Kohn  
**Location:** Arlington, WI      **County:** Columbia  
**Supported By:** HATCH

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### Site Information

**Field:** ARS 358      **Previous Crop:** Soybean      **Soil Type:** Plano Silt Loam  
**Soil Test:**      **Date:** 11/01/04      **pH:** 6.6      **OM (%)** 2.6      **P (ppm)** 43      **K (ppm)** 311

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### Plot Management

**Tillage Operations:** Fall Chisel Plow      Field Cultivator      Soil Finisher      Cultivated

	<u>Analysis:</u>	<u>Rate lbs/A:</u>	<u>Date:</u>
<b>Fertilizer:</b>			
<b>Preplant :</b>	46-0-0	325	N/A
<b>Starter :</b>	N/A	N/A	N/A
<b>Post plant :</b>	N/A	N/A	N/A
<b>Manure:</b>	N/A	N/A	N/A
<b>Herbicide:</b>	Harness 2.5 pt/A Hornet 3.5 oz/A		<b>Insecticide:</b> None
			<b>Hybrid:</b> Dekalb DKC5334
<b>Irrigation:</b>	None		
<b>Planting Date:</b>	5/4/04	<b>Planting Depth:</b> 1.5"	<b>Row Width:</b> 30"
<b>Target Plant Density:</b>	30000 plants per acre	<b>Planting Method:</b>	Kinze Inter-Row Planter
<b>Harvest Date:</b>	10/19/04	<b>Harvest Method:</b>	Kincaid Plot Combine

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### Experimental Design

**Design:** RCB Factorial      **Replications:** 3  
**Plot Size Seeded** 10' x 25'      **Experiment Size:** 0.4 Acre  
**Harvest Plot Size:** 22' x 5'      **Harvest Plant Density:** 29012 plants per acre

### Factors/Treatments:

<u>Growth Stage at Time of Clipping:</u>		<u>Date of Clipping:</u>
V2 - 2 plant pattern	V6 - 2 plant pattern	V2 - May 19
V2 - 4 plant pattern	V6 - 4 plant pattern	V4 - June 9
V2 - 8 plant pattern	V6 - 8 plant pattern	V6 - June 18
V2 - All plants	V6 - All plants	
V4 - 2 plant pattern	Control	

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**Results: Table C-78.**

**Table C-78. Influence of Clipping on Corn Grain Yield  
Arlington, WI - 2004**

Treatment	Grain yield bu/A	Grain moisture %	Test weight lbs/bu	Lodging %	Harvest pop plants/A	Grower return \$/A
V2 - 2 plant	205	22.1	52	0	31548	354
V2 - 4 plant	216	22.4	52	0	31548	372
V2 - 8 plant	200	21.6	53	0	30888	347
V2 - Clip entire plot	198	22.0	52	0	30756	343
V4 - 2 plant	177	24.2	51	1	23100	298
V4 - 4 plant	184	22.8	51	0	27456	315
V4 - 8 plant	195	22.5	51	1	29304	335
V4 - Clip entire plot	130	28.2	49	0	19140	209
V6 - 2 plant	203	25.6	51	0	29964	336
V6 - 4 plant	184	20.9	52	1	29568	322
V6 - 8 plant	184	19.0	53	2	30624	329
V6 - Clip entire plot	164	20.6	52	2	30228	289
Control A - UTC	210	21.4	53	1	31020	365
Control B - UTC	216	23.2	52	0	31020	368
Mean	190	22.7	52	1	29012	326
<b><u>Probability(%)</u></b>						
Treatment (T)	0.0	16.7	0.6	80.3	0.0	0.0
<b><u>LSD(0.10)</u></b>						
Treatment (T)	16	NS	1	NS	1848	19
<b><u>CV(%)</u></b>						
	6	13	2	256	5	4

## FIELD EXPERIMENT HISTORY

**Title:** 16 Corn Grain yield response to cohort emergence  
**Experiment:** 16 Cohorts **Trial ID** 2605 **Year:** 2004  
**Personnel:** J.G. Lauer, P.J. Flannery and K.D. Kohn  
**Location:** Arlington, WI **County:** Columbia  
**Supported By:** HATCH

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### Site Information

**Field:** ARS 358 **Previous Crop:** Soybean **Soil Type:** Plano Silt Loam  
**Soil Test:** **Date:** 11/01/04 **pH:** 6.6 **OM (%)** 2.6 **P (ppm)** 43 **K (ppm)** 311

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### Plot Management

**Tillage Operations:** Fall Chisel Plow Field Cultivator Soil Finisher Cultivated  

	<u>Analysis:</u>	<u>Rate lbs/A:</u>	<u>Date:</u>
<b>Fertilizer:</b> <b>Preplant :</b>	46-0-0	325	N/A
<b>Starter :</b>	N/A	N/A	N/A
<b>Post plant :</b>	N/A	N/A	N/A
<b>Manure:</b>	N/A	N/A	N/A

**Herbicide:** Harness 2.5 pt/A **Insecticide:** None  
 Hornet 4.5 oz/A **Hybrid:** Dekalb DKC5334  
**Irrigation:** None  
**Planting Date:** 5/4/04 **Planting Depth:** 1.5" **Row Width:** 30"  
**Target Plant Density:** 30000 plants per acre **Planting Method:** Kinze Inter-Row Planter  
**Harvest Date:** 11/2/04 **Harvest Method:** Hand Harvest

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### Experimental Design

**Design:** RCB Factorial **Replications:** 3  
**Plot Size Seeded** 25' x 10' **Experiment Size:** 0.57 Acre  
**Harvest Plot Size:** Single Plants  
**Factors/Treatments:**

#### Treatments:

A = Plant clipped completely at V3 on 6/13  
 B = Emerged leaves clipped at V3 on 6/13  
 C = Control - No clipping

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**Results: Table C-79.**

**Table C-79. Corn Grain response to cohort emergence.  
Arlington, WI - 2004**

Treatment	Five Neighboring plants south	Plant	Five Neighboring plants north	Yield Components @ 0% Moisture		
				Kernels per ear no./ear	Yield per ear grams	100 Kernel weight grams
1	All leaves clipped	A	All leaves clipped	491	120	24.4
2	All leaves clipped	B	All leaves clipped	525	141	26.8
3	All leaves clipped	C	All leaves clipped	536	150	27.9
4	All leaves clipped	A	Emerged leaves clipped	421	89	21.1
5	All leaves clipped	B	Emerged leaves clipped	555	143	25.8
6	All leaves clipped	C	Emerged leaves clipped	496	148	29.8
7	All leaves clipped	A	Control	474	107	22.6
8	All leaves clipped	B	Control	549	154	28.1
9	All leaves clipped	C	Control	550	150	27.3
10	Emerged leaves clipped	A	Emerged leaves clipped	312	63	20.2
11	Emerged leaves clipped	B	Emerged leaves clipped	447	127	28.4
12	Emerged leaves clipped	C	Emerged leaves clipped	518	138	26.7
13	Emerged leaves clipped	A	Control	300	58	19.3
14	Emerged leaves clipped	B	Control	463	115	24.8
15	Emerged leaves clipped	C	Control	544	142	26.2
16	Control	A	Control	330	72	20.8
17	Control	B	Control	484	124	25.7
18	Control	C	Control	534	140	26.2
Mean				474	121	25.1
<b>Probability(%)</b>						
Treatment (T)				0.0	0.0	0.0
<b>LSD(0.10)</b>						
Treatment (T)				88	26	3.3
<b>CV(%)</b>						
				13	15	9

A = All leaves clipped

B = Emerged leaves clipped

C = Control

## FIELD EXPERIMENT HISTORY

**Title:** Plant Spacing Effects on Corn Yield  
**Experiment:** 16 Plant Spacing **Trial ID:** 2606 **Year:** 2004  
**Personnel:** J. G. Lauer, P. J. Flannery, K. D. Kohn, and T. F. Stanger  
**Location:** Arlington, WI **County:** Columbia  
**Supported By:** HATCH

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### Site Information

**Field:** ARS407 **Previous Crop:** Soybean **Soil Type:** Plano Silt Loam  
**Soil Test:** **Date:** 10/15/04 **pH** 7.0 **OM (%)** 3.9 **P (ppm)** 69 **K (ppm)** 258

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### Plot Management

**Tillage Operations:** Chisel Plow Field Cultivator Soil Finisher Cultivated 6/14/04

	<u>Analysis:</u>	<u>Rate lbs/A:</u>	<u>Date:</u>
<b>Fertilizer:</b> <b>Preplant :</b>	46-0-0	325 lbs/A	4 /15/04
<b>Starter :</b>	9-24-24	150 lbs/A	4 /29/04
<b>Post plant :</b>	34-0-0	150 lbs/A	6 /14/04
<b>Manure:</b>	N/A	N/A	

**Herbicide:** Harness 2.5 pt/A **Insecticide:** None  
 Hornet 3.0 oz/A

**Irrigation:** None **Hybrid:** Dekalb DKC5334

**Planting Date:** 4/29/04 **Planting Depth:** 1.5" **Row Width:** 30"  
**Harvest Date:** 10/18/04 **Planting Method:** Kinze Plot Planter  
**Harvest Method:** Kincaid Plot Combine

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### Experimental Design

**Design:** RCB **Replications:** 3  
**Plot Size Seeded:** 10' x 25' **Experiment Size:** 0.12 Acre  
**Harvest Plot Size:** 5' x 22'

#### **Factors/Treatments:**

##### Treatments:

40 live seeds + 0 dead seed  
 40 live seeds + 8 dead seeds  
 40 live seeds + 16 dead seeds  
 40 live seeds + 24 dead seeds  
 40 live seeds + 32 dead seeds  
 40 live seeds + 40 dead seeds

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**Results: Table C-80.**

**Table C-80. Plant Spacing Effects on Corn Yield  
Arlington, WI - 2004**

Live seed	Dead seed	Plant spacing	Standard deviation	Population	Yield	Moisture	Test weight	Lodging	Grower Return
no. planted	no. planted	inches	inches	plants/A	bu/A	%	lbs/bu	%	\$/A
40	0	7.0	4.4	30624	222	26.2	50	0	365
40	8	7.0	5.7	29568	216	25.6	51	0	359
40	16	7.1	6.1	31152	220	26.1	49	0	364
40	24	6.8	5.2	31152	231	26.0	51	1	380
40	32	7.1	5.2	30492	231	25.3	51	0	385
40	40	7.2	5.5	30096	229	25.6	51	0	380
Mean		7.0	5.3	30514	225	25.8	50	0	372
<b><u>Probability(%)</u></b>									
Treatment (T)		70.4	25.4	59.6	58.6	29.6	61.4	46.5	60.6
<b><u>LSD(0.10)</u></b>									
Treatment (T)		NS	NS	NS	NS	NS	NS	NS	NS
<b><u>CV(%)</u></b>									
		5	15	4	5	2	3	288	6