

FIELD EXPERIMENT HISTORY

Title: Influence of Clipping Timing on Corn Grain Yield
Experiment: 16Clip **Trial ID** 2353 **Year:** 2002
Personnel: J.G. Lauer, P.J. Flannery, and K.D. Kohn
Location: Arlington, WI **County:** Columbia
Supported By: Hatch

Site Information

Field: 371 **Previous Crop:** Soybean **Soil Type:** Plano
Soil Test: **Date:** 11/01/02 **pH** 5.8 **OM (%)** 2.8 **P (ppm)** 36 **K (ppm)** 128

Plot Management

Tillage Operations: Fall Chisel Plow Field Cultivator Soil Finisher 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:	None	N/A	N/A

Herbicide: Harness 2.5 pt/A **Insecticide:** None
Hornet 4.5 oz/A **Hybrid:** Pioneer 35R57

Irrigation: None

Planting Date: 5/7/02 **Planting Depth:** 1.5" **Row Width:** 30"

Target Plant Density: 30000 plants per acre **Planting Method:** Kinze Inter-Row Planter

Harvest Date: 10/22/02 **Harvest Method:** Kincaid Plot Combine

Experimental Design

Design: RCB Factorial **Replications:** 3
Plot Size Seeded: 23' x 10' **Experiment Size:** 0.24 Acre
Harvest Plot Size: 22' x 5' **Harvest Plant Density:** 29500 plants per acre

Factors/Treatments:

<u>Growth Stage at Time of Clipping:</u>	<u>Date of Clipping:</u>
V2 - 2 plant pattern	V2 - June 10
V2 - 4 plant pattern	V4 - June 18
V2 - 8 plant pattern	V6 - June 26
V2 - All plants	
V4 - 2 plant pattern	
V4 - 4 plant pattern	
V4 - 8 plant pattern	
V4 - All plants	

Results: Table C-49.

**Table C-49. Influence of Clipping on Corn Grain Yield
Arlington, WI - 2002**

Treatment	Grain yield bu/A	Grain moisture %	Test weight lbs/bu	Lodging %	Grower return \$/A
V2 - 2 plant	176	20.5	52	3	371
V2 - 4 plant	173	20.9	53	4	364
V2 - 8 plant	179	20.4	53	3	377
V2 - Clip entire plot	163	21.7	52	2	341
V4 - 2 plant	171	21.0	53	6	359
V4 - 4 plant	171	21.0	53	9	359
V4 - 8 plant	168	20.9	53	4	354
V4 - Clip entire plot	176	22.0	53	3	367
V6 - 2 plant	169	20.1	53	7	357
V6 - 4 plant	173	19.8	52	6	367
V6 - 8 plant	175	20.9	53	3	368
V6 - Clip entire plot	168	22.4	52	3	349
Control A - UTC	194	19.6	53	3	413
Control B - UTC	198	20.9	55	1	415
Mean	175	20.9	53	4	368
<u>Probability(%)</u>					
Treatment (T)	3.8	18.2	4.2	9.0	3.1
<u>LSD(0.10)</u>					
Treatment (T)	14	NS	1	4	30
<u>CV(%)</u>					
	6	5	2	64	6

FIELD EXPERIMENT HISTORY

Title: Cohorts
Experiment: 16Cohorts **Trial ID** 2352 **Year:** 2002
Personnel: J.G. Lauer, P.J. Flannery and K.D. Kohn
Location: Arlington, WI **County:** Columbia
Supported By: Hatch

Site Information

Field: 371 **Previous Crop:** Soybean **Soil Type:** Plano
Soil Test: **Date:** 11/01/02 **pH** 5.8 **OM (%)** 2.8 **P (ppm)** 36 **K (ppm)** 128

Plot Management

Tillage Operations: Fall Chisel Plow Field Cultivator Soil Finisher 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:	None	None	N/A

Herbicide: Harness 2.5 pt/A **Insecticide:** None
Hornet 4.5 oz/A **Hybrid:** Pioneer 35R57

Irrigation: None

Planting Date: 5/7/02 **Planting Depth:** 1.5" **Row Width:** 30"
Target Plant Density: 30000 plants per acre **Planting Method:** Kinze Inter-Row Planter
Harvest Date: 10/25/02 **Harvest Method:** Hand Harvest

Notes:

Experimental Design

Design: RCB Factorial **Replications:** 3
Plot Size Seeded: 10' x 25' **Experiment Size:** 0.31 Acre
Harvest Plot Size: Single Plants
Factors/Treatments:

Treatments:

A = Plant clipped completely at V3 on 6/8
B = Emerged leaves clipped at V3 on 6/8
C = Control - No clipping

Results: Table C-50.

**Table C-50. Cohorts
Arlington, WI - 2002**

Treatment	Five Neighboring plants east	Plant	Five Neighboring plants west	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	512	131	26.2
2	All leaves clipped	B	All leaves clipped	563	149	26.4
3	All leaves clipped	C	All leaves clipped	547	133	24.9
4	All leaves clipped	A	Emerged leaves clipped	365	78	22.2
5	All leaves clipped	B	Emerged leaves clipped	538	136	24.6
6	All leaves clipped	C	Emerged leaves clipped	560	140	23.6
7	All leaves clipped	A	Control	372	76	20.5
8	All leaves clipped	B	Control	524	130	24.4
9	All leaves clipped	C	Control	605	153	25.1
10	Emerged leaves clipped	A	Emerged leaves clipped	361	76	22.7
11	Emerged leaves clipped	B	Emerged leaves clipped	549	129	26.2
12	Emerged leaves clipped	C	Emerged leaves clipped	575	131	23.7
13	Emerged leaves clipped	A	Control	418	95	26.7
14	Emerged leaves clipped	B	Control	490	113	24.3
15	Emerged leaves clipped	C	Control	618	147	26.2
16	Control	A	Control	320	66	27.5
17	Control	B	Control	533	120	25.5
18	Control	C	Control	596	149	25.4
Mean				503	120	24.8
<u>Probability(%)</u>						
Treatment (T)				2.0	0.1	96.2
<u>LSD(0.10)</u>						
Treatment (T)				148	36	NS
<u>CV(%)</u>						
				21	22	19

A = All leaves clipped
 B = Emerged leaves clipped
 C = Control

FIELD EXPERIMENT HISTORY

Title: Effect of Primed Seed on Corn Grain Performance
Experiment: 16Prime **Trial ID** 2356 **Year:** 2002
Personnel: J.G. Lauer, P.J. Flannery, and K.D. Kohn
Location: Arlington, WI **County:** Columbia
Supported By: Hatch

Site Information

Field: 406 **Previous Crop:** Soybean **Soil Type:** Plano Silt Loam
Soil Test: **Date:** 11/01/02 **pH** 6.2 **OM (%)** 3.3 **P (ppm)** 79 **K (ppm)** 247

Plot Management

Tillage Operations: Chisel Plow Field Cultivator Soil Finisher Cultivated

	<u>Analysis:</u>	<u>Rate lbs/A:</u>	<u>Date:</u>
Fertilizer:			
Preplant :	46-0-0	325	N/A
Starter :	6-24-24	150	5 /17/02
Post plant :	N/A	N/A	N/A
Manure:	N/A	N/A	N/A

Herbicide: Harness 2.5 pt/A **Insecticide:** None
Hornet 4.5 oz/A **Hybrid:** See Factors

Irrigation: None

Planting Date: 5/17/02 **Planting Depth:** 1.5" **Row Width:** 30"

Target Plant Density: 30300 plants per acre **Planting Method:** Kinze Plot Planter

Harvest Date: 10/21/02 **Harvest Method:** Kincaid Plot Combine

Notes: Primed seeds were moistened and then incubated for 21 hours prior to planting.

Experimental Design

Design: RCB Factorial **Replications:** 3
Plot Size Seeded: 23' x 10' **Experiment Size:** 0.34 Acre
Harvest Plot Size: 23' x 5' **Harvest Plant Density:** 28800 plants per acre

Factors/Treatments:

Primed Seed:

0%
25%
50%
75%
100%

Hybrids:

Dekalb DKC4442
Pioneer 35R58

Results: Table C-51.

**Table C-51. Effect of Primed Seed On Corn Grain Performance
Arlington, WI - 2002.**

Primed seed	Hybrid	Yield	Moisture	Test wt	Lodged	Harvest pop	Seeds planted	Grower return
		bu/A	%	lbs/bu	%	plants/A	seeds/A	\$/A
	Dekalb DKC4442	196	19.4	56	9	29318	30303	416
	Pioneer 35R58	212	22.5	55	0	28282	30303	442
0% primed seed		201	21.1	55	5	28661	30303	422
25% primed seed		199	20.9	55	4	28724	30303	419
50% primed seed		206	21.3	55	7	28409	30303	431
75% primed seed		209	20.7	56	3	28977	30303	439
100% primed seed		206	20.7	56	4	29229	30303	433
0% primed seed	Dekalb DKC4442	200	19.9	55	10	29798	30303	422
0% primed seed	Pioneer 35R58	203	22.2	56	0	27525	30303	422
25% primed seed	Dekalb DKC4442	186	19.1	56	8	29040	30303	397
25% primed seed	Pioneer 35R58	212	22.7	55	0	28409	30303	441
50% primed seed	Dekalb DKC4442	188	19.2	56	13	28661	30303	400
50% primed seed	Pioneer 35R58	223	23.4	54	0	28156	30303	461
75% primed seed	Dekalb DKC4442	207	19.4	56	5	28914	30303	440
75% primed seed	Pioneer 35R58	210	22.1	56	0	29040	30303	438
100% primed seed	Dekalb DKC4442	197	19.3	56	8	30176	30303	419
100% primed seed	Pioneer 35R58	214	22.0	55	0	28282	30303	446
Mean		204	20.9	55	4	28800	30303	429
<u>Probability(%)</u>								
Primed (P)		17.9	22.3	36.1	40.3	45.5	-	12.0
Hybrid (H)		0.1	0.0	0.1	0.0	0.9	-	0.4
P x H		4.9	6.3	0.0	36.9	17.0	-	6.3
<u>LSD (0.10)</u>								
Primed (P)		NS	NS	NS	NS	NS	-	NS
Hybrid (H)		6	0.6	0.3	2	577	-	13
P x H		14	0.8	0.6	NS	NS	-	28
<u>CV(%)</u>								
		5	3	1	74	3	-	4

continued

Table C-51. Effect of Primed Seed On Corn Grain Performance
 (continued) **Arlington, WI - 2002.**

Primed seed	Hybrid	Emergence on Day of Year				Silks on Day of Year					
		149	151	154	157	203	206	210	213	217	220
		----- % -----		----- % -----		----- % -----		----- % -----		----- % -----	
	Dekalb DKC4442	17	92	97	96	11	88	99	100	100	100
	Pioneer 35R58	8	82	92	91	0	9	90	97	99	100
0% primed seed		0	83	93	93	6	47	93	100	100	100
25% primed seed		6	87	94	94	2	39	96	100	100	100
50% primed seed		13	83	94	93	3	46	93	98	100	100
75% primed seed		18	90	95	95	9	57	95	100	100	100
100% primed seed		27	92	96	94	8	53	95	97	98	98
0% primed seed	Dekalb DKC4442	0	90	98	96	13	92	99	100	100	100
0% primed seed	Pioneer 35R58	0	76	88	89	0	2	88	100	100	100
25% primed seed	Dekalb DKC4442	8	93	97	97	4	72	100	100	100	100
25% primed seed	Pioneer 35R58	3	80	90	90	0	5	91	96	97	100
50% primed seed	Dekalb DKC4442	17	89	94	94	5	87	97	100	100	100
50% primed seed	Pioneer 35R58	8	77	93	91	0	4	89	96	98	99
75% primed seed	Dekalb DKC4442	24	94	96	96	17	93	100	100	100	100
75% primed seed	Pioneer 35R58	13	87	94	94	0	21	90	100	100	100
100% primed seed	Dekalb DKC4442	38	96	98	96	16	94	98	99	99	99
100% primed seed	Pioneer 35R58	16	88	93	92	0	12	93	95	97	97
Mean		13	87	94	94	6	48	95	99	100	100
<u>Probability(%)</u>											
Primed (P)		0.0	0.0	6.3	8.3	16.6	1.6	72.8	7.9	25.9	28.8
Hybrid (H)		0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.6	11.6	17.4
P x H		1.3	19.5	0.5	15.0	22.3	18.8	77.8	24.8	57.6	83.7
<u>LSD (0.10)</u>											
Primed (P)		3	2	2	1	NS	7	NS	2	NS	NS
Hybrid (H)		3	2	1	1	4	5	3	2	NS	NS
P x H		6	NS	2	3	NS	NS	NS	NS	NS	NS
<u>CV(%)</u>											
		34	3	2	2	107	17	5	3	3	3

FIELD EXPERIMENT HISTORY

Title: Influence of Thinning Timing on Corn Grain Yield
Experiment: 16Thin **Trial ID** 2355 **Year:** 2002
Personnel: J.G. Lauer, P.J. Flannery, and K.D. Kohn
Location: Arlington, WI **County:** Columbia
Supported By: Hatch

Site Information

Field: 406 **Previous Crop:** Soybean **Soil Type:** Plano Silt Loam
Soil Test: **Date:** 11/01/02 **pH:** 7.0 **OM (%)** 3.3 **P (ppm)** 79 **K (ppm)** 247

Plot Management

Tillage Operations: Chisel Plow Field Cultivator Soil Finisher Cultivated

	<u>Analysis:</u>	<u>Rate lbs/A:</u>	<u>Date:</u>
Fertilizer: Preplant :	46-0-0	325	N/A
Starter :	6-24-24	150	4 /25/02
Post plant :	N/A	N/A	N/A
Manure:	N/A	N/A	N/A

Herbicide: Harness 2.5 pt/A **Insecticide:** None
 Hornet 3.0 oz/A **Hybrid:** Pioneer 35R57

Irrigation: None

Planting Date: 04/25/02 **Planting Depth:** 1.5" **Row Width:** 30"

Target Plant Density: 30000 plants per acre **Planting Method:** Kinze Plot Planter

Harvest Date: 10/15/02 **Harvest Method:** Kincaid Plot Combine

Experimental Design

Design: RCB Factorial **Replications:** 3
Plot Size Seeded: 23' x 10' **Experiment Size:** 0.1 Acre
Harvest Plot Size: 22' x 5' **Harvest Plant Density:** 22700 plants per acre

Factors/Treatments:

<u>Stage of Thinning:</u>	<u>Date of Thinning:</u>
V2	June 5
V4	June 11
V6	June 20
V8	June 28
V10	July 8
V12	July 15

Results: Table C-52.

**Table C-52. Influence of Thinning Timing on Corn Grain Yield.
Arlington, WI - 2002**

Treatment	Population	Grain yield	Grain moisture	Test weight	Lodging	Grower return
growth stage	plants/A	bu/A	%	lbs/bu	%	\$/A
V2	25212	198	22.7	55	2	412
V4	24552	204	23.1	55	2	423
V6	21516	192	23.2	55	2	396
V8	21648	193	23.2	54	2	400
V10	20856	175	23.1	55	1	362
V12	22572	183	23.0	55	1	378
Mean	22726	191	23.1	55	1	395
<u>Probability(%)</u>						
Treatment (T)	5.8	3.0	94.4	11.0	88.0	3.3
<u>LSD(0.10)</u>						
Treatment (T)	2555	14	NS	NS	NS	29
<u>CV(%)</u>						
	8	5	3	1	98	5