

FIELD EXPERIMENT HISTORY

Title: Influence of Clipping Timing on Corn Grain Yield
Experiment: 16Clip **Trial ID** 1555 **Year:** 2000
Personnel: J.G. Lauer, K.D. Kohn, P.J. Flannery and M. Kral
Location: Arlington, WI **County:** Columbia
Supported By: Hatch

Site Information

Field: 373 **Previous Crop:** Soybean **Soil Type:** Plano
Soil Test: **Date:** 6 /1 /00 **pH** 6.8 **OM (%)** 2.6 **P (ppm)** 30 **K (ppm)** 152

Plot Management

Tillage Operations: Fall Chisel Plow Field Cultivator

	<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	
Herbicide:	Frontier @ 1.5 pt/a Bladex @ 2.2 lb/a	Insecticide: None	
Irrigation:	None	Hybrid: Pioneer 35R57	
Planting Date: 5/4/00	Planting Depth: 1.5"	Row Width: 30"	
Target Plant Density: 30000 plants per acre	Planting Method: Kinze Inter-Row Planter		
Harvest Date: 10/18/00	Harvest Method: Kincaid Plot Combine		

Experimental Design

Design: RCB Factorial **Replications:** 3
Plot Size Seeded: 10' x 25' **Experiment Size:** 0.09
Harvest Plot Size: 5' x 22' **Harvest Plant Density:** 27588 plants per acre

Factors/Treatments:

Growth Stage at Time of Clipping:

Date of Clipping:

V2 - 2 plant pattern	V6 - 2 plant pattern
V2 - 4 plant pattern	V6 - 8 plant pattern
V2 - 8 plant pattern	V6 - 4 plant pattern
V4 - 2 plant pattern	Control
V4 - 4 plant pattern	V4 - Random
V4 - 8 plant pattern	V4 - Entire Plot

V2 - May 22
V4 - June 9
V6 - June 16

Results: Table E-26.

**Table E-26. Influence of Clipping on Corn Grain Yield and Quality
Arlington, WI - 2000**

Treatment	Population	Grain yield bu/A	Grain moisture %	Test weight lbs/bu	Lodging %
Control - UTC	33000	204	23.4	54	1
V2 - 2 plant	29832	197	23.8	53	0
V2 - 4 plant	32472	190	23.9	52	4
V2 - 8 plant	31944	195	25.0	52	6
V4 - 2 plant	26664	163	25.3	52	3
V4 - 4 plant	30096	175	24.9	53	7
V4 - 8 plant	28512	185	24.2	53	1
V4 - plot	26136	121	29.0	49	1
V4 - random	27984	171	25.5	52	3
V6 - 2 plant	17952	158	22.6	52	1
V6 - 4 plant	23496	156	24.4	53	6
V6 - 8 plant	22968	127	24.5	53	3
Mean	27588	173	24.6	53	3
<u>Probability(%)</u>					
Treatment (T)	0.0	0.0	0.0	0.2	47.1
<u>LSD(0.10)</u>					
Treatment (T)	3814	23	1.2	1	NS
<u>CV(%)</u>					
	10	9	4	2	128

FIELD EXPERIMENT HISTORY

Title: Corn Grain Yield Response to Cohort Emergence Dates
Experiment: 16Cohort **Trial ID** 1556 **Year:** 2000
Personnel: J.G. Lauer, K.D. Kohn, P.J. Flannery and M. Kral
Location: Arlington, WI **County:** Columbia
Supported By: Hatch

Site Information

Field: 395 **Previous Crop:** Soybean **Soil Type:** Plano Silt Loam
Soil Test: **Date:** 6 /1 /00 **pH** 6.3 **OM (%)** 3.2 **P (ppm)** 30 **K (ppm)** 113

Plot Management

Tillage Operations: No-Till

	<u>Analysis:</u>	<u>Rate lbs/A:</u>	<u>Date:</u>
Fertilizer:			
Preplant :	46-0-0	325	4 /25/00
Starter :	5-14-42	100	5 /2 /00
Post plant :	N/A	N/A	N/A
Manure:	None	None	
Herbicide:	Dual II @ 2 pts/A Bladex @ 2.2 lbs/A	Insecticide: None	
Irrigation:	None	Hybrid: Pioneer 35R57	
Planting Date:	5/2/00	Planting Depth: 1.5"	Row Width: 30"
Target Plant Density:	30000 plants per acre	Planting Method:	White 6-30" Planter
Harvest Date:	10/19/00	Harvest Method:	Hand Harvest

Experimental Design

Design: RCB Factorial **Replications:** 6
Plot Size Seeded: 15' x 200' **Experiment Size:** 0.41 A
Harvest Plot Size: 10 Ears per Emergence Date

Factors/Treatments:

<u>Plant Emergence Date</u>	
May 09	May 13
May 10	May 14
May 11	May 15
May 12	

Results: Table E-27.

**Table E-27. Cohorts
Arlington, WI - 2000**

Emergence Date	Grain moisture	Yield per ear	Yield Components @ 15.5 Moisture	
			Kernels per ear	100 Kernel Weight
	%	grams	#/ear	grams
09-May	22.7	168.3	662	26.7
10-May	23.0	170.5	752	22.9
11-May	23.0	173.8	691	26.1
12-May	23.1	170.1	683	25.7
13-May	23.3	156.9	633	25.8
14-May	22.7	157.6	667	24.1
15-May	24.2	133.9	504	27.9
Mean	23.1	161.6	656	25.6
<u>Probability(%)</u>				
Treatment (T)	14.6	0.8	0.2	12.5
<u>LSD(0.10)</u>				
Treatment (T)	NS	16.6	80	NS
<u>CV(%)</u>				
	3	8	10	9

FIELD EXPERIMENT HISTORY

Title: Corn Grain Yield and Yield Component Response to Gaps in Corn Stands
Experiment: 16Gap **Trial ID** 1557 **Year:** 2000
Personnel: J.G. Lauer, K.D. Kohn, P.J. Flannery and M. Kral
Location: Arlington, WI **County:** Columbia
Supported By: Hatch

Site Information

Field: 395 **Previous Crop:** Soybean **Soil Type:** Plano Silt Loam
Soil Test: **Date:** 6 /1 /00 **pH** 6.1 **OM (%)** 3.7 **P (ppm)** 41 **K (ppm)** 129

Plot Management

Tillage Operations: No-Till

	<u>Analysis:</u>	<u>Rate lbs/A:</u>	<u>Date:</u>
Fertilizer:			
Preplant :	46-0-0	325	4 /25/00
Starter :	5-14-42	100	5 /2 /00
Post plant :	N/A	N/A	N/A
Manure:	None	None	
Herbicide:	Dual II @ 2 pts/A Bladex @ 2.2 lbs/A	Insecticide: None	
		Hybrid: Pioneer 35R57	
Irrigation:	None		
Planting Date:	5/2/00	Planting Depth: 1.5"	Row Width: 30"
Target Plant Density: 30000 plants per acre		Planting Method: White 6-30" Planter	
Harvest Date: 10/19/00		Harvest Method: Kincaid Plot Combine	

Experimental Design

Design: RCB Factorial **Replications:** 4
Plot Size Seeded: 15' x 25' **Experiment Size:** 0.34 A
Harvest Plot Size: 5' x 22'

Factors/Treatments:

<u>Treatment (gap)</u>	
1 row - 2 feet	2 row - 2 feet
1 row - 4 feet	2 row - 4 feet
1 row - 8 feet	2 row - 8 feet
1 row - 12 feet	2 row - 12 feet
1 row - UTC	2 row - UTC

Results: Table E-28.

**Table E-28. Corn grain yield and yield component response to field gaps in corn stands.
Arlington, WI - 2000**

Treatment	Harvest population no./A	Grain yield bu/a	Grain moisture %	Test Weight lb/bu	Lodging %	Bordered plants				Plants in-row next to gap				Plants across from gap			
						Ear number	Kernels Ear	Kernel weight g/100kernels	Ear yield g/Ear	Ear number	Kernels Ear	Kernel weight g/100kernels	Ear yield g/Ear	Ear number	Kernels Ear	Kernel weight g/100kernels	Ear yield g/Ear
						no./Plant	no./Ear	g/100kernels	g/Ear	no./Plant	no./Ear	g/100kernels	g/Ear	no./Plant	no./Ear	g/100kernels	g/Ear
1 row - 2 feet	27720	182	24.8	53	2	0.92	660	28.0	184	1.00	553	36.3	199	1.00	646	32.7	211
1 row - 4 feet	26004	177	25.8	54	1	1.00	545	34.0	186	1.00	630	35.3	222	1.00	582	38.1	221
1 row - 8 feet	23859	168	25.7	53	2	1.00	585	34.1	200	1.00	653	35.8	233	1.00	601	35.9	216
1 row - 12 feet	20988	148	26.2	53	1	0.94	510	35.1	177	1.00	651	34.7	225	1.00	649	36.1	234
1 row - UTC	28116	179	25.7	53	4	1.00	565	32.5	183	--	--	--	--	--	--	--	--
2 row - 2 feet	26004	182	25.6	53	3	1.00	653	31.0	202	1.00	616	37.0	228	1.00	517	33.1	171
2 row - 4 feet	23628	168	25.0	53	4	1.00	602	34.8	209	1.00	626	35.9	225	1.00	620	35.5	219
2 row - 8 feet	18612	126	24.4	52	0	1.00	621	33.7	209	1.00	597	37.0	221	1.00	605	34.6	210
2 row - 12 feet	14355	105	25.5	52	5	1.00	596	32.3	192	1.00	687	33.4	230	1.00	669	35.1	235
2 row - UTC	29601	208	25.8	53	3	0.94	641	30.6	196	--	--	--	--	--	--	--	--
Mean	23844	165	25.5	53	2	0.98	595	32.7	193	1.00	632	35.5	224	1.00	615	35.2	216
Probability(%)																	
Treatment	0.0	0.0	67.1	87.9	38.4	69.0	1.7	36.6	65.1	--	19.9	41.5	35.6	--	0.8	15.4	0.4
LSD(0.10)																	
Treatment	1436	14	NS	NS	NS	NS	56	NS	NS	NS	NS	NS	NS	NS	52	NS	21
CV(%)																	
	5	7	4	2	108	8	8	11	10	0	9	6	7	0	7	6	8

FIELD EXPERIMENT HISTORY

Title: Influence of Thinning Timing on Corn Grain Yield
Experiment: 16Thin **Trial ID** 1554 **Year:** 2000
Personnel: J.G. Lauer, P.J. Flannery, and K.D. Kohn
Location: Arlington, WI **County:** Columbia
Supported By: Hatch

Site Information

Field: 373 **Previous Crop:** Soybean **Soil Type:** Plano Silt Loam
Soil Test: **Date:** 6 /1 /00 **pH:** 7.0 **OM (%)** 2.6 **P (ppm)** 26 **K (ppm)** 142

Plot Management

Tillage Operations: Fall Chisel Plow Field Cultivator

	<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	

Herbicide: Frontier @ 1.5 pt/a **Insecticide:** None
Bladex @ 2.2 lb/a **Hybrid:** Pioneer 35R57

Irrigation: None

Planting Date: 5/4/00 **Planting Depth:** 1.5" **Row Width:** 30"
Target Plant Density: 40000 plants per acre **Planting Method:** Kinze Inter-Row Planter
Harvest Date: 10/18/00 **Harvest Method:** Kincaid Plot Combine

Experimental Design

Design: RCB Factorial **Replications:** 4
Plot Size Seeded: 10' x 25' **Experiment Size:** 0.09
Harvest Plot Size: 5' x 22' **Harvest Plant Density:** 22176 plants per acre

Factors/Treatments:

<u>Stage of Thinning:</u>	<u>Date of Thinning:</u>
V2	May 22
V4	June 9
V6	June 16
V8	June 25
V10	July 3
V12	July 10

Results: Table E-29.

**Table E-29. Influence of Thinning on Corn Grain Yield and Quality
Arlington, WI - 2000**

Treatment	Population	Grain yield bu/A	Grain moisture %	Test weight lbs/bu	Lodging %
V2	22440	187	25.2	54	1
V4	23232	191	24.7	54	0
V6	21120	180	25.3	54	0
V8	23760	193	25.5	54	1
V10	22176	182	25.4	54	1
V12	20328	154	23.8	55	2
Mean	22176	181	25.0	54	1

Probability(%)

Treatment (T)	8.0	0.0	6.3	65.4	80.0
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LSD(0.10)

Treatment (T)	1973	10	0.9	NS	NS
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CV(%)

	6	4	3	1	253
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FIELD EXPERIMENT HISTORY

Title: Stand Variability Effects on Corn Yield
Experiment: 16Variability **Trial ID** 1531 **Year:** 2000
Personnel: J.G. Lauer, P. J. Flannery, K. D. Kohn, M. Kral
Location: Arlington, WI **County:** Columbia
Supported By: WI Corn Growers

Site Information

Field: 427 **Previous Crop:** Soybean **Soil Type:** Plano
Soil Test: **Date:** 6 /1 /00 **pH** 6.3 **OM (%)** 4.5 **P (ppm)** 60 **K (ppm)** 185

Plot Management

Tillage Operations: Fall Chisel Plow Soil Finisher 1 Cultivation 6/19/00

	<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 /25/00
Post plant :	N/A	N/A	N/A
Manure:	N/A	None	

Herbicide: Harness @ 1.5 pt/A **Insecticide:** None
Hornet @ 2.4 oz/A
Banvel @ 2.0 oz/A

Irrigation: none **Hybrid:** Pioneer 35R57

Planting Date: 4/25/00 **Planting Depth:** 1.5" **Row Width:** 30"
Harvest Date: 10/10/00 **Planting Method:** Kinze Plot Planter
Harvest Method: Kincaid Plot Combine

Experimental Design

Design: RCB **Replications:** 3
Plot Size Seeded: 23.2' x 10' **Experiment Size:** 0.17 A
Harvest Plot Size: 22.7' x 5'

Factors/Treatments:

Treatments:

2 plant pattern @ 2", 2 plant pattern @ 4",
4 plant pattern @ 2", 4 plant pattern @ 4",
4 plant pattern @ 8", 8 plant pattern @ 2",
8 plant pattern @ 4", 8 plant pattern @ 8",
8 plant pattern @ 12" and Control

Results: Table E-30.

**Table E-30. Plant Spacing Effects on Corn Yield
Arlington, WI - 2000**

Treatment	Plant spacing	Standard deviation	Population	Yield	Moisture	Test weight	Lodging	Grower Return †
	inches	inches	plants/A	bu/A	%	lbs/bu	%	\$/A
Control	6.8	2.3	31215	211	28.0	54	5	\$507
2 plant pattern @ 2 inch S.D.	6.9	3.3	30959	206	27.9	53	8	\$495
2 plant pattern @ 4 inch S.D.	6.9	3.9	30063	199	28.2	54	4	\$478
4 plant pattern @ 2 inch S.D.	7.0	2.7	30191	208	28.1	54	3	\$501
4 plant pattern @ 4 inch S.D.	7.2	4.5	29424	209	28.3	54	2	\$502
4 plant pattern @ 8 inch S.D.	7.9	7.5	26226	188	28.7	54	2	\$451
8 plant pattern @ 2 inch S.D.	6.6	3.1	30703	202	27.9	54	3	\$486
8 plant pattern @ 4 inch S.D.	7.0	4.2	28017	208	27.8	54	3	\$501
8 plant pattern @ 8 inch S.D.	6.4	6.5	31215	193	28.3	54	6	\$462
8 plant pattern @ 12 inch S.D.	7.3	11.7	26353	173	28.6	54	1	\$416
Mean	7.0	5.0	29437	200	28.2	54	4	\$480
Probability(%)								
Treatment (T)	0.3	0.0	0.2	0.0	48.5	53.3	10.4	0.0
LSD(0.10)								
Treatment (T)	0.5	0.7	2067	9	NS	NS	NS	22
CV(%)								
	5	11	5	3	2	1	69	3

† Grower Return = (\$2.65 x yield) - (yield x handling x hauling) - (yield x \$ 0.15 (mst - 15.5)).

FIELD EXPERIMENT HISTORY

Title: Stand Variability Effects on Corn Yield
Experiment: 16Variability **Trial ID** 1533 **Year:** 2000
Personnel: J.G. Lauer, P. J. Flannery, K. D. Kohn, M. Kral
Location: Chippewa Falls, WI **County:** Chippewa
Supported By: WI Corn Growers

Site Information

Field: **Previous Crop:** Soybean **Soil Type:** Sattre
Soil Test: **Date:** N/A **pH** 5.9 **OM (%)** 3.1 **P (ppm)** 65 **K (ppm)** 150

Plot Management

Tillage Operations: Field Cultivated 1 Cultivation 6/22/00

	<u>Analysis:</u>	<u>Rate lbs/A:</u>	<u>Date:</u>
Fertilizer:			
Preplant :	28-0-0	150A	N/A
Starter :	6-24-24	150	4 /26/00
Post plant :	N/A	N/A	N/A
Manure:	N/A	None	
Herbicide:	Harness @ 1.7 pt/A Hornet @ 2.4 oz/A	Insecticide: None	
Irrigation:	none	Hybrid: Novartis N3030BT	
Planting Date: 4/26/00	Planting Depth: 1.5"	Row Width: 30"	
Harvest Date: 10/2/00	Planting Method: Kinze Plot Planter	Harvest Method: Kincaid Plot Combine	

Experimental Design

Design: RCB **Replications:** 3
Plot Size Seeded: 23.2' x 10' **Experiment Size:** 0.17 A
Harvest Plot Size: 22.7' x 5'
Factors/Treatments:

Treatments:

2 plant pattern @ 2", 2 plant pattern @ 4",
4 plant pattern @ 2", 4 plant pattern @ 4",
4 plant pattern @ 8", 8 plant pattern @ 2",
8 plant pattern @ 4", 8 plant pattern @ 8",
8 plant pattern @ 12" and Control

Results: Table E-31.

**Table E-31. Plant Spacing Effects on Corn Yield
Chippewa Falls, WI - 2000**

Treatment	Plant spacing	Standard deviation	Population	Yield	Moisture	Test weight	Lodging	Grower Return †
	inches	inches	plants/A	bu/A	%	lbs/bu	%	\$/A
Control	7.0	1.9	29808	150	18.3	58	6	\$384
2 plant pattern @ 2 inch S.D.	6.6	2.8	31727	154	18.2	57	5	\$393
2 plant pattern @ 4 inch S.D.	7.0	4.5	30063	155	18.8	58	5	\$395
4 plant pattern @ 2 inch S.D.	6.9	2.5	30319	159	18.6	58	3	\$406
4 plant pattern @ 4 inch S.D.	6.7	3.8	30959	157	18.7	58	6	\$400
4 plant pattern @ 8 inch S.D.	6.7	6.6	30575	151	18.6	57	3	\$385
8 plant pattern @ 2 inch S.D.	7.1	3.7	29552	147	18.0	58	3	\$376
8 plant pattern @ 4 inch S.D.	6.5	5.8	31599	147	18.6	58	5	\$375
8 plant pattern @ 8 inch S.D.	6.2	7.5	31215	140	18.7	58	11	\$356
8 plant pattern @ 12 inch S.D.	6.7	10.8	28144	115	19.0	58	4	\$292
Mean	6.7	5.0	30396	148	18.5	58	5	\$376
<u>Probability(%)</u>								
Treatment (T)	9.0	0.0	7.3	25.8	83.4	67.3	6.5	22.5
<u>LSD(0.10)</u>								
Treatment (T)	0.5	0.8	1780	NS	NS	NS	4	NS
<u>CV(%)</u>								
	5	12	4	13	4	1	56	12

† Grower Return = (\$2.65 x yield) - (yield x handling x hauling) - (yield x \$ 0.15 (mst - 15.5)).

FIELD EXPERIMENT HISTORY

Title: Stand Variability Effects on Corn Yield
Experiment: 16Variability **Trial ID** 1535 **Year:** 2000
Personnel: J.G. Lauer, P. J. Flannery, K. D. Kohn, M. Kral
Location: Fond du Lac, WI **County:** Fond du Lac
Supported By: WI Corn Growers

Site Information

Field: **Previous Crop:** Soybean **Soil Type:** Virgil
Soil Test: **Date:** N/A **pH** 6.6 **OM (%)** 4.9 **P (ppm)** 37 **K (ppm)** 100

Plot Management

Tillage Operations: Moldboard Plow Field Cultivator 1 Cultivation 6/19/00

	<u>Analysis:</u>	<u>Rate lbs/A:</u>	<u>Date:</u>
Fertilizer:			
Preplant :	82-0-0	220	N/A
Starter :	6-24-24	150	5 /3 /00
Post plant :	None	N/A	N/A
Manure:	N/A	None	

Herbicide: Accent Gold 2.9 oz/A **Insecticide:** None
Atrazine @ 8 oz/A

Irrigation: None **Hybrid:** Cargill 4111

Planting Date: 5/3/00 **Planting Depth:** 1.5" **Row Width:** 30"
Harvest Date: 10/12/00 **Planting Method:** Kinze Plot Planter
Harvest Method: Kincaid Plot Combine

Experimental Design

Design: RCB **Replications:** 3
Plot Size Seeded: 23.2' x 10' **Experiment Size:** 0.17 A
Harvest Plot Size: 22.7' x 5'

Factors/Treatments:

Treatments:

2 plant pattern @ 2", 2 plant pattern @ 4",
4 plant pattern @ 2", 4 plant pattern @ 4",
4 plant pattern @ 8", 8 plant pattern @ 2",
8 plant pattern @ 4", 8 plant pattern @ 8",
8 plant pattern @ 12" and Control

Results: Table E-32.

**Table E-32. Plant Spacing Effects on Corn Yield
Fond du Lac, WI - 2000**

Treatment	Plant spacing	Standard deviation	Population	Yield	Moisture	Test weight	Lodging	Grower Return †
	inches	inches	plants/A	bu/A	%	lbs/bu	%	\$/A
Control	7.1	2.3	29680	168	24.8	54	7	\$413
2 plant pattern @ 2 inch S.D.	7.0	3.3	29936	157	25.2	53	7	\$385
2 plant pattern @ 4 inch S.D.	7.4	4.3	28400	152	26.3	53	8	\$370
4 plant pattern @ 2 inch S.D.	7.1	4.0	29552	157	24.7	54	6	\$386
4 plant pattern @ 4 inch S.D.	6.9	4.4	30319	173	26.8	53	9	\$420
4 plant pattern @ 8 inch S.D.	7.2	7.8	28144	165	26.9	53	6	\$398
8 plant pattern @ 2 inch S.D.	7.3	3.1	28528	169	26.0	53	9	\$410
8 plant pattern @ 4 inch S.D.	6.8	4.0	29680	169	27.0	53	3	\$408
8 plant pattern @ 8 inch S.D.	6.9	7.5	28656	152	25.3	53	10	\$371
8 plant pattern @ 12 inch S.D.	7.3	11.7	26098	149	26.9	53	1	\$360
Mean	7.1	5.2	28899	161	26.0	53	7	\$392
<u>Probability(%)</u>								
Treatment (T)	6.9	0.0	0.0	2.1	12.8	73.7	83.5	2.6
<u>LSD(0.10)</u>								
Treatment (T)	0.3	1.1	1125	12	NS	NS	NS	30
<u>CV(%)</u>								
	3	15	3	5	5	1	105	5

† Grower Return = (\$2.65 x yield) - (yield x handling x hauling) - (yield x \$ 0.15 (mst - 15.5)).

FIELD EXPERIMENT HISTORY

Title: Stand Variability Effects on Corn Yield
Experiment: 16Variability **Trial ID** 1536 **Year:** 2000
Personnel: J.G. Lauer, P. J. Flannery, K. D. Kohn, M. Kral
Location: Galesville, WI **County:** Trempealeau
Supported By: WI Corn Growers

Site Information

Field: **Previous Crop:** Soybean **Soil Type:** Downs
Soil Test: **Date:** N/A **pH** 6.3 **OM (%)** 4.2 **P (ppm)** 32 **K (ppm)** 170

Plot Management

Tillage Operations: Disk 1 Cultivation 6/22/00

	<u>Analysis:</u>	<u>Rate lbs/A:</u>	<u>Date:</u>
Fertilizer:			
Preplant :	28-0-0	160	N/A
Starter :	6-24-24	150	4 /26/00
Post plant :	N/A	N/A	N/A
Manure:	N/A	None	

Herbicide: Eradicane @ 7.25 pt/A **Insecticide:** None
Hornet @ 5 oz/A
Clarity @ 2 oz/A

Irrigation: None **Hybrid:** Cargill 4111

Planting Date: 4/26/00 **Planting Depth:** 1.5" **Row Width:** 30"
Harvest Date: 10/3/00 **Planting Method:** Kinze Plot Planter
Harvest Method: Kincaid Plot Combine

Experimental Design

Design: RCB **Replications:** 3
Plot Size Seeded: 23.2' x 10' **Experiment Size:** 0.17 A
Harvest Plot Size: 22.7' x 5'

Factors/Treatments:

Treatments:

2 plant pattern @ 2", 2 plant pattern @ 4",
4 plant pattern @ 2", 4 plant pattern @ 4",
4 plant pattern @ 8", 8 plant pattern @ 2",
8 plant pattern @ 4", 8 plant pattern @ 8",
8 plant pattern @ 12" and Control

Results: Table E-33.

**Table E-33. Plant Spacing Effects on Corn Yield
Galesville, WI - 2000**

Treatment	Plant spacing	Standard deviation	Population	Yield	Moisture	Test weight	Lodging	Grower Return †
	inches	inches	plants/A	bu/A	%	lbs/bu	%	\$/A
Control	7.2	2.5	28400	156	23.1	54	9	\$387
2 plant pattern @ 2 inch S.D.	7.3	3.1	27889	157	21.9	54	16	\$391
2 plant pattern @ 4 inch S.D.	7.4	4.3	27889	141	22.0	54	23	\$352
4 plant pattern @ 2 inch S.D.	7.3	3.2	28400	159	22.4	54	21	\$395
4 plant pattern @ 4 inch S.D.	7.1	4.4	29424	153	22.1	54	14	\$382
4 plant pattern @ 8 inch S.D.	6.9	6.8	29936	160	23.1	53	13	\$397
8 plant pattern @ 2 inch S.D.	7.0	3.3	30319	165	21.6	54	19	\$412
8 plant pattern @ 4 inch S.D.	7.1	4.8	29424	167	21.3	54	9	\$419
8 plant pattern @ 8 inch S.D.	7.0	7.5	28144	145	22.5	54	16	\$360
8 plant pattern @ 12 inch S.D.	7.1	10.4	26226	109	20.9	54	25	\$273
Mean	7.2	5.0	28605	151	22.1	54	16	\$377
Probability(%)								
Treatment (T)	21.0	0.0	0.1	0.4	63.3	17.6	30.3	0.4
LSD(0.10)								
Treatment (T)	NS	0.9	1265	20	NS	NS	NS	49
CV(%)								
	3	12	3	9	6	1	50	9

† Grower Return = (\$2.65 x yield) - (yield x handling x hauling) - (yield x \$ 0.15 (mst - 15.5)).

FIELD EXPERIMENT HISTORY

Title: Stand Variability Effects on Corn Yield
Experiment: 16Variability **Trial ID** 1534 **Year:** 2000
Personnel: J.G. Lauer, P. J. Flannery, K. D. Kohn, M. Kral
Location: Hancock, WI **County:** Waushara
Supported By: WI Corn Growers

Site Information

Field: V9 **Previous Crop:** Soybean **Soil Type:** Plainfield
Soil Test: **Date:** N/A **pH** 6.8 **OM (%)** 0.8 **P (ppm)** 88 **K (ppm)** 74

Plot Management

Tillage Operations: Moldboard Plow Disk None N/A

	<u>Analysis:</u>	<u>Rate lbs/A:</u>	<u>Date:</u>
Fertilizer:			
Preplant :	28-0-0	184A	N/A
Starter :	6-24-24	150	4 /24/00
Post plant :	28-0-0	184A	N/A
Manure:	N/A	None	

Herbicide: Aatrex 4L 0.75 qt/a, Lasso 2.0 qt/a **Insecticide:** None

Irrigation: 11.8 inches 25 Applications **Hybrid:** Cargill 4111

Planting Date: 4/24/00 **Planting Depth:** 1.5" **Row Width:** 30"
Harvest Date: 10/9/00 **Planting Method:** Kinze Plot Planter
Harvest Method: Kincaid Plot Combine

Experimental Design

Design: RCB **Replications:** 3
Plot Size Seeded: 23.2' x 10' **Experiment Size:** 0.17 A
Harvest Plot Size: 22.7' x 5'
Factors/Treatments:

Treatments:

2 plant pattern @ 2", 2 plant pattern @ 4",
4 plant pattern @ 2", 4 plant pattern @ 4",
4 plant pattern @ 8", 8 plant pattern @ 2",
8 plant pattern @ 4", 8 plant pattern @ 8",
8 plant pattern @ 12" and Control

Results: Table E-34.

**Table E-34. Plant Spacing Effects on Corn Yield
Hancock, WI - 2000**

Treatment	Plant spacing	Standard deviation	Population	Yield	Moisture	Test weight	Lodging	Grower Return †
	inches	inches	plants/A	bu/A	%	lbs/bu	%	\$/A
Control	6.9	2.1	29296	160	21.4	55	1	\$401
2 plant pattern @ 2 inch S.D.	6.7	2.7	30063	169	21.0	57	1	\$425
2 plant pattern @ 4 inch S.D.	6.9	3.3	29040	172	21.2	56	1	\$432
4 plant pattern @ 2 inch S.D.	6.9	2.6	29168	164	21.1	56	0	\$410
4 plant pattern @ 4 inch S.D.	6.8	3.8	29936	164	21.0	56	1	\$413
4 plant pattern @ 8 inch S.D.	6.6	7.1	30447	163	20.7	56	1	\$409
8 plant pattern @ 2 inch S.D.	6.6	2.8	30703	163	20.8	56	0	\$410
8 plant pattern @ 4 inch S.D.	6.6	4.3	30575	167	20.4	56	1	\$420
8 plant pattern @ 8 inch S.D.	6.5	7.3	30191	152	20.5	56	1	\$383
8 plant pattern @ 12 inch S.D.	7.0	11.4	27505	140	20.4	56	1	\$353
Mean	6.7	4.7	29692	161	20.8	56	1	\$406
<u>Probability(%)</u>								
Treatment (T)	9.5	0.0	0.4	0.0	61.7	5.7	96.4	0.0
<u>LSD(0.10)</u>								
Treatment (T)	NS	0.5	1143	7	NS	0.6	NS	18
<u>CV(%)</u>								
	3	7	3	3	3	1	139	3

† Grower Return = (\$2.65 x yield) - (yield x handling x hauling) - (yield x \$ 0.15 (mst - 15.5)).

FIELD EXPERIMENT HISTORY

Title: Stand Variability Effects on Corn Yield
Experiment: 16Variability **Trial ID** 1532 **Year:** 2000
Personnel: J.G. Lauer, P. J. Flannery, K. D. Kohn, M. Kral
Location: Janesville, WI **County:** Rock
Supported By: WI Corn Growers

Site Information

Field: R5-C **Previous Crop:** Soybean **Soil Type:** Plano
Soil Test: **Date:** N/A **pH** 6.7 **OM (%)** 3.5 **P (ppm)** 51 **K (ppm)** 195

Plot Management

Tillage Operations: Fall Chisel Plow Field Cultivator 1 Cultivation 6/22/00

	<u>Analysis:</u>	<u>Rate lbs/A:</u>	<u>Date:</u>
Fertilizer:			
Preplant :	28-0-0	160 A	N/A
Starter :	6-24-24	150	4 /28/00
Post plant :	N/A	N/A	N/A
Manure:	N/A	None	
Herbicide:	Harness @ 2.75 pt/A Hornet @ 4.5 oz/A	Insecticide: None	
Irrigation:	None	Hybrid: Pioneer 35R57	
Planting Date: 4/28/00	Planting Depth: 1.5"	Row Width: 30"	
Harvest Date: 10/5/00	Planting Method: Kinze Plot Planter	Harvest Method: Kincaid Plot Combine	

Experimental Design

Design: RCB **Replications:** 3
Plot Size Seeded: 23.2' x 10' **Experiment Size:** 0.17 A
Harvest Plot Size: 22.7' x 5'
Factors/Treatments:

Treatments:

2 plant pattern @ 2", 2 plant pattern @ 4",
4 plant pattern @ 2", 4 plant pattern @ 4",
4 plant pattern @ 8", 8 plant pattern @ 2",
8 plant pattern @ 4", 8 plant pattern @ 8",
8 plant pattern @ 12" and Control

Results: Table E-35.

**Table E-35. Plant Spacing Effects on Corn Yield
Janesville, WI - 2000**

Treatment	Plant spacing	Standard deviation	Population	Yield	Moisture	Test weight	Lodging	Grower Return †
	inches	inches	plants/A	bu/A	%	lbs/bu	%	\$/A
Control	7.1	2.1	29936	192	21.9	55	17	\$480
2 plant pattern @ 2 inch S.D.	7.2	2.7	30063	189	22.1	54	27	\$471
2 plant pattern @ 4 inch S.D.	7.3	3.8	28656	187	22.3	55	19	\$465
4 plant pattern @ 2 inch S.D.	7.2	3.0	29552	187	22.1	54	15	\$466
4 plant pattern @ 4 inch S.D.	7.2	4.6	29168	189	22.1	55	20	\$470
4 plant pattern @ 8 inch S.D.	7.9	7.9	26481	179	21.8	55	18	\$446
8 plant pattern @ 2 inch S.D.	6.9	2.8	30319	188	21.5	55	17	\$470
8 plant pattern @ 4 inch S.D.	6.6	5.2	31087	185	22.2	55	24	\$462
8 plant pattern @ 8 inch S.D.	6.8	8.0	28656	177	22.0	54	24	\$442
8 plant pattern @ 12 inch S.D.	6.6	9.2	29296	169	22.1	55	20	\$421
Mean	7.1	4.9	29321	184	22.0	55	20	\$459
Probability(%)								
Treatment (T)	0.4	0.0	1.2	11.6	63.3	11.7	86.3	12.4
LSD(0.10)								
Treatment (T)	0.5	0.5	1645	NS	NS	NS	NS	NS
CV(%)								
	5	7	4	5	2	1	46	5

† Grower Return = (\$2.65 x yield) - (yield x handling x hauling) - (yield x \$ 0.15 (mst - 15.5)).

FIELD EXPERIMENT HISTORY

Title: Stand Variability Effects on Corn Yield
Experiment: 16Variability **Trial ID** 1530 **Year:** 2000
Personnel: J.G. Lauer, P. J. Flannery, K. D. Kohn, M. Kral
Location: Lancaster, WI **County:** Grant
Supported By: WI Corn Growers

Site Information

Field: R1-A **Previous Crop:** Soybean **Soil Type:** Fayette
Soil Test: **Date:** N/A **pH** 7.2 **OM (%)** 2.5 **P (ppm)** 61 **K (ppm)** 190

Plot Management

Tillage Operations: Soil Finisher 1 Cultivation 6/23/00

	<u>Analysis:</u>	<u>Rate lbs/A:</u>	<u>Date:</u>
Fertilizer:			
Preplant :	82-0-0	180 A	N/A
Starter :	6-24-24	150	4 /27/00
Post plant :	N/A	N/A	N/A
Manure:	N/A	None	

Herbicide: Aatrex 4L @ 0.8 qt/A **Insecticide:** None
Dual II @ 2 pt/A

Irrigation: none **Hybrid:** Pioneer 35R57

Planting Date: 4/27/00 **Planting Depth:** 1.5" **Row Width:** 30"
Harvest Date: 10/11/00 **Planting Method:** Kinze Plot Planter
Harvest Method: Kincaid Plot Combine

Experimental Design

Design: RCB **Replications:** 3
Plot Size Seeded: 23.2' x 10' **Experiment Size:** 0.17 A
Harvest Plot Size: 22.7' x 5'

Factors/Treatments:

Treatments:

2 plant pattern @ 2", 2 plant pattern @ 4",
4 plant pattern @ 2", 4 plant pattern @ 4",
4 plant pattern @ 8", 8 plant pattern @ 2",
8 plant pattern @ 4", 8 plant pattern @ 8",
8 plant pattern @ 12" and Control

Results: Table E-36.

**Table E-36. Plant Spacing Effects on Corn Yield
Lancaster, WI - 2000**

Treatment	Plant spacing	Standard deviation	Population	Yield	Moisture	Test weight	Lodging	Grower Return †
	inches	inches	plants/A	bu/A	%	lbs/bu	%	\$/A
Control	7.4	2.9	28528	195	22.5	58	4	\$486
2 plant pattern @ 2 inch S.D.	8.2	5.2	25842	181	22.4	58	4	\$450
2 plant pattern @ 4 inch S.D.	7.3	3.8	28912	182	22.8	59	1	\$451
4 plant pattern @ 2 inch S.D.	8.0	5.0	25970	173	23.0	58	2	\$429
4 plant pattern @ 4 inch S.D.	8.5	5.6	24818	162	23.5	57	3	\$401
4 plant pattern @ 8 inch S.D.	8.9	9.6	24179	161	22.9	57	5	\$401
8 plant pattern @ 2 inch S.D.	7.4	3.1	28912	155	22.0	58	15	\$386
8 plant pattern @ 4 inch S.D.	7.7	5.0	27505	191	22.4	58	5	\$476
8 plant pattern @ 8 inch S.D.	7.8	8.2	26353	137	22.8	58	1	\$339
8 plant pattern @ 12 inch S.D.	9.5	14.3	21876	140	23.1	58	2	\$347
Mean	8.1	6.3	26290	168	22.7	58	4	\$417
<u>Probability(%)</u>								
Treatment (T)	5.5	0.0	2.5	8.2	34.6	69.6	65.6	7.9
<u>LSD(0.10)</u>								
Treatment (T)	1.1	2.6	3262	34	NS	NS	NS	85
<u>CV(%)</u>								
	10	25	9	14	3	2	197	14

† Grower Return = (\$2.65 x yield) - (yield x handling x hauling) - (yield x \$ 0.15 (mst - 15.5)).

FIELD EXPERIMENT HISTORY

Title: Stand Variability Effects on Corn Yield
Experiment: 16Variability **Trial ID** 1528 **Year:** 2000
Personnel: J.G. Lauer, P. J. Flannery, K. D. Kohn, M. Kral
Location: Marshfield, WI **County:** Wood
Supported By: WI Corn Growers

Site Information

Field: 3 **Previous Crop:** Corn **Soil Type:** Loyal
Soil Test: **Date:** N/A **pH** 7.1 **OM (%)** 3.3 **P (ppm)** 53 **K (ppm)** 168

Plot Management

Tillage Operations: Moldboard Plow Field Cultivator 1 Cultivation 6/23/00

	<u>Analysis:</u>	<u>Rate lbs/A:</u>	<u>Date:</u>
Fertilizer:			
Preplant :	46-0-0	100A	N/A
Starter :	6-24-24	150	5 /1 /00
Post plant :	N/A	N/A	N/A
Manure:	Dairy	30 Tons	

Herbicide: Harness @ 2 pt/A Insecticide: Lorsban 7 lbs/A
Hornet @ 4 oz/A

Irrigation: none **Hybrid:** Novartis N3030BT

Planting Date: 5/1/00 **Planting Depth:** 1.5" **Row Width:** 30"
Harvest Date: 10/30/00 **Planting Method:** Kinze Plot Planter
Harvest Method: Kincaid Plot Combine

Experimental Design

Design: RCB **Replications:** 3
Plot Size Seeded: 23.2' x 10' **Experiment Size:** 0.17 A
Harvest Plot Size: 22.7' x 5'
Factors/Treatments:

Treatments:

2 plant pattern @ 2", 2 plant pattern @ 4",
4 plant pattern @ 2", 4 plant pattern @ 4",
4 plant pattern @ 8", 8 plant pattern @ 2",
8 plant pattern @ 4", 8 plant pattern @ 8",
8 plant pattern @ 12" and Control

Results: Table E-37.

**Table E-37. Plant Spacing Effects on Corn Yield
Marshfield, WI - 2000**

Treatment	Plant spacing	Standard deviation	Population	Yield	Moisture	Test weight	Lodging	Grower Return †
	inches	inches	plants/A	bu/A	%	lbs/bu	%	\$/A
Control	7.0	2.0	30703	177	21.3	54	0	\$444
2 plant pattern @ 2 inch S.D.	7.0	2.9	30063	176	21.3	54	1	\$440
2 plant pattern @ 4 inch S.D.	7.3	3.8	30063	168	21.1	54	0	\$422
4 plant pattern @ 2 inch S.D.	7.1	2.7	30191	176	21.6	54	0	\$441
4 plant pattern @ 4 inch S.D.	6.8	4.0	29936	182	21.7	54	0	\$454
4 plant pattern @ 8 inch S.D.	7.2	7.5	30447	174	22.2	54	1	\$433
8 plant pattern @ 2 inch S.D.	7.1	3.0	29552	178	21.8	54	0	\$444
8 plant pattern @ 4 inch S.D.	6.8	3.8	28784	177	21.6	54	0	\$443
8 plant pattern @ 8 inch S.D.	7.1	7.4	30319	161	21.6	54	0	\$404
8 plant pattern @ 12 inch S.D.	8.5	12.1	29808	136	22.2	53	0	\$340
Mean	7.2	4.9	29987	170	21.6	54	0	\$426
Probability(%)								
Treatment (T)	0.9	0.0	95.3	0.9	85.8	98.3	41.1	0.7
LSD(0.10)								
Treatment (T)	0.6	0.5	NS	17	NS	NS	NS	42
CV(%)								
	6	7	5	7	4	2	235	7

† Grower Return = (\$2.65 x yield) - (yield x handling x hauling) - (yield x \$ 0.15 (mst - 15.5)).

FIELD EXPERIMENT HISTORY

Title: Stand Variability Effects on Corn Yield
Experiment: 16Variability **Trial ID** 1527 **Year:** 2000
Personnel: J.G. Lauer, P. J. Flannery, K. D. Kohn, M. Kral
Location: Seymour, WI **County:** Outagamie
Supported By: WI Corn Growers

Site Information

Field: **Previous Crop:** Corn **Soil Type:**
Soil Test: **Date:** N/A **pH** 7.1 **OM (%)** 3.7 **P (ppm)** 42 **K (ppm)** 210

Plot Management

Tillage Operations: Fall Chisel Plow Soil Finisher 1 Cultivation 6/23/00

	<u>Analysis:</u>	<u>Rate lbs/A:</u>	<u>Date:</u>
Fertilizer:			
Preplant :	N/A	N/A	N/A
Starter :	6-24-24	150	5 /2 /00
Post plant :	N/A	N/A	N/A
Manure:	Dairy	9000 gal	

Herbicide: Accent @ 0.33 oz/A **Insecticide:** Lorsban 7 lbs/A
Northstar @ 4 oz/A

Irrigation: none **Hybrid:** Novartis N3030BT

Planting Date: 5/2/00 **Planting Depth:** 1.5" **Row Width:** 30"
Harvest Date: 10/16/00 **Planting Method:** Kinze Plot Planter
Harvest Method: Kincaid Plot Combine

Experimental Design

Design: RCB **Replications:** 3
Plot Size Seeded: 23.2' x 10' **Experiment Size:** 0.17 A
Harvest Plot Size: 22.7' x 5'
Factors/Treatments:

Treatments:

2 plant pattern @ 2", 2 plant pattern @ 4",
4 plant pattern @ 2", 4 plant pattern @ 4",
4 plant pattern @ 8", 8 plant pattern @ 2",
8 plant pattern @ 4", 8 plant pattern @ 8",
8 plant pattern @ 12" and Control

Results: Table E-38.

**Table E-38. Plant Spacing Effects on Corn Yield
Seymour, WI - 2000**

Treatment	Plant spacing	Standard deviation	Population	Yield	Moisture	Test weight	Lodging	Grower Return †
	inches	inches	plants/A	bu/A	%	lbs/bu	%	\$/A
Control	6.8	1.9	29552	158	19.6	57	10	\$401
2 plant pattern @ 2 inch S.D.	7.1	2.6	29680	168	19.6	57	3	\$426
2 plant pattern @ 4 inch S.D.	7.2	4.3	30319	173	19.9	57	3	\$436
4 plant pattern @ 2 inch S.D.	6.8	2.6	30063	167	20.2	57	8	\$422
4 plant pattern @ 4 inch S.D.	6.9	4.3	30191	169	19.8	57	3	\$426
4 plant pattern @ 8 inch S.D.	7.0	7.2	29552	171	19.8	57	1	\$433
8 plant pattern @ 2 inch S.D.	7.0	2.8	29680	172	20.0	57	11	\$434
8 plant pattern @ 4 inch S.D.	6.6	4.0	27761	168	19.6	57	12	\$426
8 plant pattern @ 8 inch S.D.	6.6	7.3	30575	161	19.2	57	2	\$408
8 plant pattern @ 12 inch S.D.	7.0	11.8	29424	129	19.4	56	18	\$327
Mean	6.9	4.9	29684	164	19.7	57	7	\$414
Probability(%)								
Treatment (T)	13.9	0.0	87.4	0.1	27.8	66.8	78.4	0.2
LSD(0.10)								
Treatment (T)	NS	0.9	NS	14	NS	NS	NS	36
CV(%)								
	4	13	7	6	2	1	166	6

† Grower Return = (\$2.65 x yield) - (yield x handling x hauling) - (yield x \$ 0.15 (mst - 15.5)).