

FIELD EXPERIMENT HISTORY

Title: Date of Planting and Row Spacing Influence on Grain Yield
Experiment: 07 Date of Planting and Row Space **Trial ID** 2500 **Year:** 2003
Personnel: J.G. Lauer, P.J. Flannery and K.D. Kohn
Location: Arlington, WI **County:** Columbia
Supported By: HATCH

Site Information

Field: ARS 374 **Previous Crop:** Soybean **Soil Type:** Plano Silt Loam
Soil Test: **Date:** 11/01/03 **pH** 7.1 **OM (%)** 2.8 **P (ppm)** 54 **K (ppm)** 148

Plot Management

Tillage Operations: Fall Chisel Plow Field Cultivator prior to each DOP

	<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 2.0 pt/A **Insecticide:** None
 Hornet 4.0 oz/A **Hybrid:** See Factors

Irrigation: None

Planting Date: See Factors **Planting Depth:** 1.5" **Row Width:** See Factors
Target Plant Density: 30000 **Planting Method:** Kinze Inter-Row Planter
Harvest Date: 10/23/03 **Harvest Method:** Kincaid Plot Combine

Experimental Design

Design: RCB Split-Plot **Replications:** 3
Plot Size Seeded: 10' x 75' **Experiment Size:** 0.62 Acre
Harvest Plot Size: 5' x 75' **Harvest Plant Density:** 27200

Factors/Treatments:

<u>Date of Planting:</u>	<u>Row Spacing:</u>	<u>Hybrid:</u>
May 02	15 inch	Dekalb DKC3947
May 21	30 inch	Dekalb DKC5334
June 10		

Results: Table C-65.

**Table C-65. Date of Planting and Row Spacing Influence on Grain Yield
Arlington, WI - 2003**

Planting date	Row spacing	Hybrid	Yield Components @ 0% moisture								
			Yield bu/A	Moisture %	Test wt. lbs/bu	Grower return \$/A	Lodged %	Plant number plants/A	Ear number ears/A	100 Kernel wt. grams	Kernel no./ear kernels/ear
		DeKalb DKC3947	150	20.0	57	288	2.9	26966	27270	30.3	476
		DeKalb DKC5334	158	24.9	53	289	3.0	27464	27685	26.7	560
	15 inches		151	22.5	56	281	1.9	26081	26274	29.4	513
	30 inches		158	22.4	55	296	4.0	28349	28680	27.5	523
	15 inches	DeKalb DKC3947	143	20.2	58	274	3.8	25887	26164	31.4	459
	15 inches	DeKalb DKC5334	158	24.9	53	288	0.0	26274	26385	27.5	566
	30 inches	DeKalb DKC3947	157	19.8	57	302	2.1	28044	28376	29.1	493
	30 inches	DeKalb DKC5334	159	25.0	53	290	5.9	28653	28985	25.8	554
May 02			149	19.2	58	287	1.2	20328	21199	31.2	576
May 21			169	20.0	58	324	4.9	29662	29621	28.2	522
June 10			145	28.2	50	255	2.7	31654	31612	25.9	456
May 02		DeKalb DKC3947	140	17.8	60	275	1.5	19664	20743	32.3	538
May 02		DeKalb DKC5334	157	20.6	57	300	0.8	20992	21656	30.2	615
May 21		DeKalb DKC3947	162	18.7	60	314	2.6	29123	29123	30.6	462
May 21		DeKalb DKC5334	176	21.3	56	333	7.3	30202	30119	25.9	581
June 10		DeKalb DKC3947	149	23.6	53	275	4.7	32110	31944	27.9	427
June 10		DeKalb DKC5334	141	32.9	47	235	0.8	31197	31280	23.9	485
May 02	15 inches		142	19.5	59	273	1.5	19083	19913	32.0	573
May 02	30 inches		156	18.9	58	302	0.8	21573	22485	30.5	580
May 21	15 inches		165	20.3	58	315	1.8	27712	27629	29.2	527
May 21	30 inches		173	19.7	58	333	8.1	31612	31612	27.3	516
June 10	15 inches		145	27.8	50	256	2.3	31446	31280	27.1	438
June 10	30 inches		145	28.7	50	254	3.1	31861	31944	24.7	474

continued

Table C-65. Date of Planting and Row Spacing Influence on Grain Yield(continued) **Arlington, WI - 2003**

Planting date	Row spacing	Hybrid	Yield Components @ 0% moisture								
			Yield	Moisture	Test wt.	Grower return	Lodged	Plant number	Ear number	100 Kernel wt.	Kernel no./ear
			bu/A	%	lbs/bu	\$/A	%	plants/A	ears/A	grams	kernels/ear
May 02	15 inches	DeKalb DKC3947	131	18.4	60	256	3.1	18254	19249	33.4	527
May 02	15 inches	DeKalb DKC5334	153	20.7	57	291	0.0	19913	20577	30.6	619
May 02	30 inches	DeKalb DKC3947	149	17.2	59	294	0.0	21075	22236	31.1	549
May 02	30 inches	DeKalb DKC5334	162	20.6	56	309	1.6	22070	22734	29.9	611
May 21	15 inches	DeKalb DKC3947	149	19.0	60	289	3.6	27381	27381	31.5	439
May 21	15 inches	DeKalb DKC5334	181	21.6	56	341	0.0	28044	27878	27.0	616
May 21	30 inches	DeKalb DKC3947	174	18.4	59	339	1.6	30865	30865	29.8	485
May 21	30 inches	DeKalb DKC5334	172	21.0	56	326	14.5	32359	32359	24.7	547
June 10	15 inches	DeKalb DKC3947	150	23.2	53	278	4.6	32027	31861	29.3	411
June 10	15 inches	DeKalb DKC5334	140	32.3	47	234	0.0	30865	30699	24.9	464
June 10	30 inches	DeKalb DKC3947	148	23.9	53	272	4.7	32193	32027	26.5	444
June 10	30 inches	DeKalb DKC5334	143	33.4	46	236	1.6	31529	31861	22.8	505
Mean			154	22.5	55	289	2.9	27215	27477	28.5	518

Probability(%)

Planting Date (D)	19.3	0.1	0.0	5.6	50.3	0.0	0.1	2.2	5.0
Row Spacing (S)	1.1	72.0	5.4	0.4	16.9	0.2	0.2	0.2	56.6
D x S	14.5	13.5	78.5	3.9	15.5	10.8	13.4	75.8	57.3
Hybrid (H)	0.6	0.0	0.0	78.6	99.6	44.4	52.6	0.0	0.0
D x H	0.2	0.0	0.1	0.0	8.3	31.3	50.6	13.8	38.9
S x H	2.9	51.6	79.0	1.0	1.9	86.4	76.6	58.8	22.7
D x S x H	1.9	79.9	58.0	1.1	11.7	88.2	80.1	73.3	39.9

LSD (0.10)

Planting Date (D)	NS	1.9	1	41	NS	1857	2022	2.4	69
Row Spacing (S)	5	NS	0	8	NS	1103	1112	0.9	NS
D x S	NS	NS	NS	13	NS	NS	NS	NS	NS
Hybrid (H)	5	0.6	0	NS	NS	NS	NS	0.9	32
D x H	8	1.0	1	13	4.4	NS	NS	NS	NS
S x H	6	NS	NS	11	3.6	NS	NS	NS	NS
D x S x H	11	NS	NS	19	NS	NS	NS	NS	NS

CV(%)

	5	4	1	5	149	7	7	6	11
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