FIELD EXPERIMENT HISTORY

Title: **Date of Planting and Row Spacing Influence on Grain Yield**

Experiment: 07 Date of Planting and Row Space **Trial ID** 2735 **Year:** 2005

Personnel: J.G. Lauer, P.J. Flannery and K.D. Kohn

Location: Arlington, WI **County:** Columbia

Supported By: HATCH

Site Information

Field: ARS 372 **Previous Crop:** Soybean **Soil Type:** Plano Silt Loam

Soil Test: **Date:** 10/01/05 **pH:** 6.8 **OM (%)** 2.8 **P (ppm)** 23 **K (ppm)** 120

Plot Management

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

		Analysis:	Rate lbs/A:	Date:
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: Outlook 20.0 oz/A
Hornet 4.0 oz/A

Insecticide: None

Hybrid: See Factors

Irrigation: None

Planting Date: See Factors **Planting Depth:** 1.5" **Row Width:** See Factors

Target Plant Density: 35000 **Planting Method:** Kinze Inter-Row Planter

Harvest Date: 10/25/05 **Harvest Method:** Massey Ferguson 8XP

Experimental Design

Design: RCB Split-Plot **Replications:** 4

Plot Size Seeded 10' x 80' **Experiment Size:** 1.1 Acre

Harvest Plot Size: 5' x 80' **Harvest Plant Density:** 34350

Factors/Treatments:

Date of Planting:	Row Spacing:	Hybrid:
April 29	15 inch	NK Brand N32-L9
May 23	30 inch	NK Brand N50-P5
June 10		

Results: Table C-46.

Table C-46. Date of Planting and Row Spacing Influence on Grain Yield
Arlington, WI - 2005

Planting date	Row spacing	Hybrid	Yield	Moisture	Test weight	Grower return	Lodged	Yield Components @ 0% moisture: Plant number	Ear number	100 Kernel wt.	Kernel no./ear
			bu/A	%	lbs/bu	$/A	%	plants/A	ears/A	grams	kernels/ear
		NK N32-L9	172	17.9	56	273	43.6	34765	34516	21.7	508
		NK N50-P5	169	18.8	56	265	23.8	33935	33728	22.2	503
	15 inches		169	18.3	56	266	29.8	29372	29289	21.9	572
	30 inches		172	18.4	55	271	37.6	39328	38955	22.0	439
	15 inches	NK N32-L9	169	17.9	56	266	41.3	30865	30616	21.7	555
	15 inches	NK N50-P5	170	18.6	56	266	18.2	27878	27961	22.2	590
	30 inches	NK N32-L9	176	17.8	55	279	46.0	38665	38416	21.8	461
	30 inches	NK N50-P5	169	19.0	56	263	29.3	39992	39494	22.2	416
April 29			170	16.3	58	274	17.7	33603	33479	23.2	483
May 23			178	17.1	57	285	41.6	36030	35844	21.7	504
June 10			164	21.6	52	248	41.8	33417	33043	21.0	530
April 29		NK N32-L9	165	16.5	58	265	23.8	33355	33230	23.5	462
April 29		NK N50-P5	175	16.1	58	283	11.5	33852	33728	22.9	504
May 23		NK N32-L9	182	16.5	56	293	39.4	37337	36964	22.1	490
May 23		NK N50-P5	175	17.7	57	276	43.8	34724	34724	21.3	518
June 10		NK N32-L9	170	20.6	53	260	67.8	33603	33355	19.6	573
June 10		NK N50-P5	158	22.6	51	235	15.9	33230	32732	22.4	486
April 29	15 inches		161	16.2	58	261	11.8	28252	28127	22.5	551
April 29	30 inches		178	16.4	58	288	23.5	38955	38831	23.9	415
May 23	15 inches		179	17.1	57	286	33.9	31239	30990	22.2	567
May 23	30 inches		177	17.1	56	283	49.3	40822	40697	21.3	441
June 10	15 inches		167	21.5	52	252	43.6	28625	28750	21.2	599
June 10	30 inches		162	21.8	52	243	40.1	38208	37337	20.8	460

continued

Table C-46. Date of Planting and Row Spacing Influence on Grain Yield

(continued) **Arlington, WI - 2005**

								Yield Components @ 0% moisture			
Planting date	Row spacing	Hybrid	Yield	Moisture	Test weight	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
April 29	15 inches	NK N32-L9	154	16.4	58	248	10.7	27878	27878	23.3	512
April 29	15 inches	NK N50-P5	169	16.1	58	273	13.0	28625	28376	21.7	590
April 29	30 inches	NK N32-L9	175	16.6	58	282	36.9	38831	38582	23.7	412
April 29	30 inches	NK N50-P5	181	16.2	59	293	10.1	39080	39080	24.0	418
May 23	15 inches	NK N32-L9	182	16.6	57	292	40.1	33852	33106	22.1	545
May 23	15 inches	NK N50-P5	177	17.6	57	280	27.7	28625	28874	22.3	589
May 23	30 inches	NK N32-L9	182	16.4	56	293	38.6	40822	40822	22.1	434
May 23	30 inches	NK N50-P5	172	17.7	57	273	60.0	40822	40573	20.4	448
June 10	15 inches	NK N32-L9	170	20.8	53	259	73.1	30865	30865	19.7	608
June 10	15 inches	NK N50-P5	164	22.2	52	245	14.1	26385	26634	22.7	589
June 10	30 inches	NK N32-L9	171	20.5	52	261	62.4	36341	35844	19.6	537
June 10	30 inches	NK N50-P5	153	23.1	51	225	17.7	40075	38831	22.1	383
Mean			171	18.3	56	269	33.7	34350	34122	22.0	506
Probability(%)											
Planting Date (D)			40.4	0.2	0.0	7.8	7.4	2.4	2.4	21.4	5.6
Row Spacing (R)			28.6	68.0	20.4	28.2	8.0	0.0	0.0	88.4	0.0
Hybrid (H)			31.4	0.4	92.3	8.1	0.0	47.2	47.1	20.6	78.6
R x D			0.7	88.5	78.8	0.4	18.3	89.8	72.8	3.2	95.9
R x H			13.4	42.7	33.8	9.0	46.5	6.9	9.5	85.2	4.5
D x H			0.8	1.3	0.9	0.1	0.0	52.3	58.7	0.0	1.8
R x D x H			88.2	63.8	52.3	81.8	1.8	29.9	40.4	11.0	54.2
LSD (0.10)											
Planting Date (D)			NS	1.8	1	26.0	18.7	1479	1526	NS	29
Row Spacing (R)			NS	NS	NS	NS	7.3	1937	1835	NS	32
Hybrid (H)			NS	0.5	NS	7.4	7.3	NS	NS	NS	NS
R x D			8.4	NS	NS	12.8	NS	NS	NS	1.0	NS
R x H			NS	NS	NS	10.4	NS	2739	2595	NS	46
D x H			8.4	0.7	1	12.8	12.7	NS	NS	1.0	56
R x D x H			NS	NS	NS	NS	17.9	NS	NS	NS	NS
CV(%)			6	6	2	6	44	11	11	6	13