

FIELD EXPERIMENT HISTORY

Title: Plant Density and Row Spacing Effects on Corn Grain.
Experiment: 06RSxPD **Trial ID:** 3488 **Year:** 2011
Personnel: J.G. Lauer, K.D. Kohn and T.H. Diallo
Location: Arlington, WI **County:** Columbia
Supported By: Mycogen

Site Information

Field: ARS372 **Previous Crop:** Soybean **Soil Type:** Plano Silt Loam
Soil Test: **Date:** 10/21/11 **pH:** 6.2 **OM (%)** 2.6 **P (ppm)** 9 **K (ppm)** 110

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:	N/A	N/A	N/A

Herbicide: Dual II Mag 1.5 pt/A **Insecticide:** None
 Hornet 4.0 oz/A **Hybrid:** Pioneer 35F44

Irrigation:

Planting Date: 5/23/11 **Planting Depth:** 1.5" **Row Width:** See Factors
Target Plant Density: See Factors **Planting Method:** Kinze 2000 Interplant planter
Harvest Date: 10/31/11 **Harvest Method:** Massey Ferguson 8XP

Experimental Design

Design: RCB split-plot **Replications:** 3
Plot Size Seeded: 10' x 50' **Experiment Size:** 0.6 A
Harvest Plot Size: 5' x 47' **Harvest Plant Density:** See Factors

Factors/Treatments:

<u>Row Spacing:</u>	<u>Plant Density: (plants/A)</u>
15 inch	26000, 32000,
30 inch	38000 and 44000

Results: Table C-27.

FIELD EXPERIMENT HISTORY

Title: Plant Density and Row Spacing Effects on Corn Silage.
Experiment: 06RSxPD **Trial ID:** 3494 **Year:** 2011
Personnel: J.G. Lauer, K.D. Kohn and T.H. Diallo
Location: Arlington, WI **County:** Columbia
Supported By: Mycogen

Site Information

Field: ARS372 **Previous Crop:** Soybean **Soil Type:** Plano Silt Loam
Soil Test: **Date:** 10/21/11 **pH:** 6.2 **OM (%)** 2.6 **P (ppm)** 9 **K (ppm)** 110

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:	N/A	N/A	N/A

Herbicide: Dual II Mag 1.5 pt/A **Insecticide:** None
 Hornet 4.0 oz/A **Hybrid:** See Factors

Irrigation:

Planting Date: 5/23/11 **Planting Depth:** 1.5" **Row Width:** See Factors
Target Plant Density: See Factors **Planting Method:** Kinze 2000 Interplant planter
Harvest Date: 9/23/11 **Harvest Method:** Mycogen Kemper

Experimental Design

Design: RCB split-plot **Replications:** 3
Plot Size Seeded: 10' x 50' **Experiment Size:** 1.7 A
Harvest Plot Size: 5' x 47' **Harvest Plant Density:** See Factors

Factors/Treatments:

<u>Row Spacing:</u>	<u>Plant Density: (plants/A)</u>	<u>Hybrid:</u>
15 inch	26000, 32000,	Mycogen F2F569
30 inch	38000 and 44000	Mycogen F2F622
		Mycogen TMF 2R522
		Pioneer 35F44

Results: Table C-28.

**Table C-28. Plant Density and Row Spacing Effects on Corn Silage Yield and Quality
Arlington, WI - 2011.**

Row spacing inches	Density plants/A	Hybrid	Whole Plant													Milk per	
			Harvest population plants/A	Dry Matter yield tons/A	Moisture %	Kernel milk %	KMR 0-5	SMR 0-5	VMR 0-10	Crude protein %	ADF %	NDF %	In Vitro Digest %	NDFD %	Starch %	Ton lbs/T	Acre lbs/A
		Mycogen F2F569	34500	5.5	64	60	3	1	4	6.3	26	49	81	62	31	3199	17773
		Mycogen F2F622	35708	6.3	66	64	3	2	5	6.0	28	52	80	62	30	3152	19940
		Mycogen TMF 2R522	35958	6.8	59	54	3	1	4	6.0	25	47	79	54	35	3093	20937
		Pioneer 35F44	34120	7.2	60	58	3	2	4	6.0	24	45	80	56	37	3203	23149
	26000		26681	6.0	63	59	3	2	5	6.2	25	48	81	59	34	3199	19242
	32000		33135	6.7	63	55	3	1	4	6.1	26	49	80	58	33	3151	21046
	38000		38206	6.6	61	58	3	1	4	6.0	25	48	80	58	34	3149	20851
	44000		42265	6.6	63	63	3	1	5	6.0	26	48	80	58	33	3149	20660
	26000	Mycogen F2F569	26667	5.5	65	60	3	1	4	6.5	25	49	81	62	31	3221	17577
	26000	Mycogen F2F622	27500	6.0	66	68	3	2	5	6.3	27	50	82	64	31	3231	19291
	26000	Mycogen TMF 2R522	26500	5.8	60	50	3	1	4	6.0	25	47	79	55	34	3094	18033
	26000	Pioneer 35F44	26058	6.8	60	59	3	2	5	6.1	23	44	81	57	37	3249	22066
	32000	Mycogen F2F569	31833	5.7	67	58	3	1	4	6.4	26	51	81	63	30	3196	18350
	32000	Mycogen F2F622	34000	6.5	65	58	3	2	4	5.9	28	52	80	62	31	3149	20635
	32000	Mycogen TMF 2R522	34000	7.3	59	49	2	1	4	6.1	25	47	79	54	35	3099	22717
	32000	Pioneer 35F44	32706	7.1	60	55	3	1	4	5.9	24	45	79	54	37	3157	22483
	38000	Mycogen F2F569	37333	5.9	62	60	3	1	4	6.3	25	49	81	61	32	3214	18799
	38000	Mycogen F2F622	38000	6.6	67	65	3	1	5	6.0	28	52	80	62	29	3123	20367
	38000	Mycogen TMF 2R522	39333	6.5	54	49	2	1	3	5.7	24	47	78	52	37	3054	19838
	38000	Pioneer 35F44	38157	7.6	59	57	3	1	4	6.0	24	45	80	56	38	3205	24399
	44000	Mycogen F2F569	42167	5.2	63	60	3	1	4	6.2	26	50	80	60	31	3166	16368
	44000	Mycogen F2F622	43333	6.3	67	65	3	1	4	5.9	29	53	80	61	28	3104	19467
	44000	Mycogen TMF 2R522	44000	7.4	61	66	3	1	5	6.2	24	46	79	55	35	3126	23159
	44000	Pioneer 35F44	39559	7.4	60	60	3	2	5	5.9	24	45	80	56	37	3200	23647
	15		34273	6.4	62	56	3	1	4	6.1	25	48	80	58	34	3176	20302
	30		35870	6.5	63	61	3	1	4	6.1	26	49	80	58	33	3148	20598
	15	Mycogen F2F569	33500	5.5	64	57	3	2	4	6.3	25	49	81	62	31	3216	17725
	15	Mycogen F2F622	34833	6.2	66	60	3	2	5	6.1	28	51	81	63	30	3186	19794
	15	Mycogen TMF 2R522	35750	6.8	58	50	3	1	4	6.0	24	46	79	54	36	3120	21316
	15	Pioneer 35F44	33010	7.0	59	56	3	1	4	5.9	24	45	80	55	37	3183	22372

continued

Table C-28. Plant Density and Row Spacing Effects on Corn Silage Yield and Quality(continued) **Arlington, WI - 2011.**

Row spacing inches	Density plants/A	Hybrid	Whole Plant													Milk per	
			Harvest population plants/A	Dry Matter yield tons/A	Moisture %	Kernel milk %	KMR 0-5	SMR 0-5	VMR 0-10	Crude protein %	ADF %	NDF %	In Vitro Digest %	NDFD %	Starch %	Ton lbs/T	Acre lbs/A
30		Mycogen F2F569	35500	5.6	65	62	3	1	4	6.4	26	50	81	61	31	3183	17822
30		Mycogen F2F622	36583	6.5	66	67	3	1	5	5.9	28	52	80	62	30	3118	20087
30		Mycogen TMF 2R522	36167	6.7	60	57	3	1	4	6.0	25	48	78	54	34	3067	20558
30		Pioneer 35F44	35230	7.4	61	60	3	2	5	6.0	23	44	80	56	37	3223	23925
15	26000		25818	5.7	62	55	3	2	4	6.3	25	48	81	60	34	3210	18313
15	32000		31917	6.6	62	55	3	1	4	6.1	25	48	80	59	33	3183	21016
15	38000		37490	6.7	60	54	3	1	4	6.0	25	48	80	58	35	3164	21187
15	44000		41868	6.6	62	61	3	1	4	6.1	26	48	80	58	33	3147	20690
30	26000		27544	6.3	63	64	3	1	5	6.2	25	48	80	59	33	3188	20171
30	32000		34353	6.7	63	55	3	1	4	6.0	26	49	79	58	33	3118	21076
30	38000		38922	6.6	61	62	3	1	4	6.1	26	49	80	58	33	3134	20514
30	44000		42662	6.6	64	65	3	2	5	6.0	26	49	80	58	33	3151	20631
15	26000	Mycogen F2F569	25000	5.2	65	57	3	2	5	6.4	26	50	81	62	31	3202	16682
15	26000	Mycogen F2F622	27333	5.7	66	62	3	2	5	6.4	27	50	82	65	31	3260	18673
15	26000	Mycogen TMF 2R522	26333	5.8	58	47	2	1	3	6.1	24	46	79	54	37	3148	18182
15	26000	Pioneer 35F44	24607	6.1	60	53	3	2	5	6.1	23	45	81	57	37	3230	19714
15	32000	Mycogen F2F569	30667	6.0	66	58	3	1	4	6.4	25	50	82	64	30	3259	19698
15	32000	Mycogen F2F622	31333	6.4	65	60	3	2	5	6.0	27	51	81	63	31	3205	20622
15	32000	Mycogen TMF 2R522	33667	7.4	59	45	2	1	4	6.0	24	46	79	54	36	3126	22959
15	32000	Pioneer 35F44	32000	6.6	59	57	3	1	4	5.8	24	46	79	55	36	3142	20788
15	38000	Mycogen F2F569	35000	5.7	62	60	3	2	5	6.3	25	48	81	61	33	3225	18513
15	38000	Mycogen F2F622	38000	6.5	67	57	3	1	4	6.3	28	52	81	63	29	3158	20620
15	38000	Mycogen TMF 2R522	39000	6.6	53	48	2	1	3	5.7	24	46	78	53	38	3073	20296
15	38000	Pioneer 35F44	37960	7.9	56	50	3	1	4	5.6	23	44	80	54	39	3200	25321
15	44000	Mycogen F2F569	43333	5.0	62	53	3	1	4	6.3	26	50	81	61	32	3176	16008
15	44000	Mycogen F2F622	42667	6.2	66	63	3	1	4	5.9	28	52	80	61	29	3122	19261
15	44000	Mycogen TMF 2R522	44000	7.6	62	62	3	1	4	6.3	24	46	79	55	35	3132	23824
15	44000	Pioneer 35F44	37472	7.5	60	65	3	2	5	6.0	24	45	79	55	37	3159	23666
30	26000	Mycogen F2F569	28333	5.7	65	63	3	1	4	6.5	25	49	82	62	32	3241	18472
30	26000	Mycogen F2F622	27667	6.2	66	73	4	2	6	6.3	27	50	81	63	31	3203	19910
30	26000	Mycogen TMF 2R522	26667	5.9	62	53	3	2	4	6.0	26	49	78	55	32	3040	17883
30	26000	Pioneer 35F44	27509	7.5	60	65	3	1	4	6.1	23	43	81	56	38	3268	24417

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