

FIELD EXPERIMENT HISTORY

Title: Plant Density and Hybrid Influence on Corn Grain and Silage Performance
Experiment: 02PD **Trial ID:** 6610 **Year:** 2021
Personnel: Joe Lauer, Kent Kohn, Thierno Diallo
Location: Arlington, WI **County:** Columbia
Supported By: HATCH

Site Information

Field: ARS411 **Previous Crop:** Alfalfa **Soil Type:** Plano Silt Loam
Soil Test: **Date:** 9 /1 /21 **pH** 6.3 **OM (%)** 4.0 **P (ppm)** 56 **K (ppm)** 75

Plot Management

Tillage Operations: Field Cultivator

		<u>Analysis:</u>	<u>Rate lbs/A</u>	<u>Date:</u>
Fertilizer:	Preplant :	32-0-0	149 lbs/A	N/A
	Starter :	9-11-30-6S-1Zn	18 lbs/A	4 /27/21
	Post plant :	N/A	N/A	N/A
	Manure:	N/A	N/A	N/A
Herbicide:	Resicore 2.5 qt/A		Insecticide: Force 3G 4.4 lbs/A	
Irrigation:	None		Hybrid: See Factors	
Planting Date:	4/27/21	Planting Depth: 1.5"	Row Width: 30"	
Target Plant Density:	See Factors		Planting Method: Almaco Plot Planter	
Harvest Date:	S: 9/9/21 G: 10/6/21		Harvest Method: S: New Holland 707 G: Massey 8XP	

Experimental Design

Design: RCB	Replications: 3
Plot Size Seeded: 10' x 25'	Experiment Size: 0.25 A
Harvest Plot Size: S: 2.5' x 23' G: 5' x 23'	Harvest Plant Density: 33091

Factors/Treatments:

<u>Target Plant Density:</u>	<u>Hybrid:</u>
1) 20000	1) Jung 47DP411 97RM
2) 26000	2) Dairyland DS-4440AMXT 106RM
3) 32000	
4) 38000	
5) 44000	
6) 50000	

Results: Tables 2102-01 & 2102-02.

**Table: 2102-01. Plant Density and Hybrid Influence on Corn Grain.
Arlington, WI - 2021.**

Hybrid	Target	Harvest	Yield	Moisture	Test	Lodged			AGR
	density	density				Total	Stalk	Root	
	plants/A	plants/A	bu/A	%	lbs/bu	%	%	%	\$/A
Dairyland DS-4440AMXT		33291	255	23.1	54	0.6	0.1	0.5	1234
Jung 47DP411		32891	245	19.2	55	5.4	5.1	0.2	1202
	20000	18182	211	22.5	54	0.8	0.3	0.4	1022
	26000	25378	236	21.7	55	0.7	0.5	0.2	1148
	32000	30050	257	20.5	54	1.6	1.2	0.4	1258
	38000	35416	255	20.9	56	2.8	2.8	0.0	1245
	44000	42361	271	20.5	56	6.0	4.9	1.0	1325
	50000	47158	269	20.6	55	6.2	6.0	0.1	1313
Dairyland DS-4440AMXT	20000	17550	193	24.2	53	0.9	0.0	0.9	929
Dairyland DS-4440AMXT	26000	25757	237	23.6	53	0.0	0.0	0.0	1146
Dairyland DS-4440AMXT	32000	30681	261	21.9	54	0.4	0.0	0.4	1267
Dairyland DS-4440AMXT	38000	36111	273	23.2	57	0.0	0.0	0.0	1318
Dairyland DS-4440AMXT	44000	42297	282	22.5	55	2.1	0.6	1.5	1370
Dairyland DS-4440AMXT	50000	47348	284	23.0	54	0.5	0.3	0.3	1376
Jung 47DP411	20000	18813	228	20.8	54	0.7	0.7	0.0	1116
Jung 47DP411	26000	25000	234	19.7	56	1.4	1.0	0.5	1149
Jung 47DP411	32000	29419	254	19.1	55	2.9	2.5	0.4	1249
Jung 47DP411	38000	34722	238	18.7	55	5.6	5.6	0.0	1172
Jung 47DP411	44000	42424	260	18.6	57	9.8	9.3	0.6	1280
Jung 47DP411	50000	46969	253	18.2	56	11.8	11.8	0.0	1249
Mean		33091	250	21.1	55	3.0	2.6	0.4	1218
Probability(%)									
Hybrid (H)		47.9	0.6	0.0	1.1	2.5	1.9	26.7	8.4
Plant Density (D)		0.0	0.0	1.3	3.6	40.1	45.0	18.4	0.0
Hybrid x Plant Density		75.1	0.0	58.9	0.9	55.8	53.6	49.6	0.0
LSD (0.10)									
Hybrid (H)		NS	6	0.6	1	3.4	3.4	NS	30
Plant Density (D)		1649	10	1.0	1	NS	NS	NS	53
Hybrid x Plant Density		NS	14	NS	2	NS	NS	NS	74.3

Table: 2102-02. Plant Density and Hybrid Influence on Silage Performance.
Arlington WI - 2021.

Hybrid	Target density plants/A	Harvest density plants/A	Dry Matter		Kernel milk %	KMR 0-5	SMR 0-5	VMR 0-10	Crude protein %	ADF %	NDF %	In Vitro			Milk per	
			Yield T/A	Moist %								Digest %	NDFD %	Starch %	Ton lbs/T	Acre lbs/A
Dairyland DS-4440AMXT		32723	10.8	60.8	38.9	1.9	2.2	4.2	7.5	18.9	35.6	86.6	62.4	32.0	3261	35182
Jung 47DP411		32891	10.9	50.5	19.2	1.0	0.6	1.6	6.6	17.4	33.7	86.6	60.2	37.7	3258	35469
	20000	18750	9.1	60.1	40.8	2.0	2.1	4.1	7.5	19.2	36.3	86.0	61.5	31.0	3162	28918
	26000	24810	10.6	56.3	30.0	1.5	1.5	3.0	7.1	17.6	34.0	87.2	62.5	35.2	3284	34763
	32000	30050	10.6	55.9	23.3	1.2	1.9	3.1	6.9	17.8	34.1	86.9	61.8	36.3	3313	35143
	38000	35921	11.5	53.8	23.3	1.2	1.2	2.4	7.0	17.0	33.0	87.3	61.5	37.2	3327	38149
	44000	40025	11.3	54.2	28.3	1.4	0.9	2.3	6.9	17.9	34.3	86.6	60.9	36.1	3291	37187
	50000	47285	11.9	53.7	28.3	1.4	1.1	2.5	6.9	19.5	36.3	85.3	59.6	33.6	3181	37794
Dairyland DS-4440AMXT	20000	18813	8.5	64.9	50.0	2.5	3.1	5.6	7.8	20.7	38.4	85.2	61.5	26.6	3059	26020
Dairyland DS-4440AMXT	26000	25126	10.7	59.7	40.0	2.0	2.1	4.1	7.4	17.5	34.0	87.8	64.1	34.1	3349	36081
Dairyland DS-4440AMXT	32000	29545	10.7	61.5	33.3	1.7	3.1	4.7	7.5	19.1	35.2	86.9	63.0	32.8	3334	35954
Dairyland DS-4440AMXT	38000	35732	11.6	59.9	33.3	1.7	1.8	3.5	7.5	17.5	33.3	87.8	63.2	34.7	3347	38766
Dairyland DS-4440AMXT	44000	39898	11.1	60.1	36.7	1.8	1.6	3.4	7.3	19.6	36.5	86.0	61.6	31.8	3247	35977
Dairyland DS-4440AMXT	50000	47222	11.9	58.8	40.0	2.0	1.8	3.8	7.5	19.2	36.0	86.0	61.0	32.2	3230	38295
Jung 47DP411	20000	18687	9.8	55.2	31.7	1.6	1.1	2.7	7.2	17.7	34.2	86.8	61.5	35.5	3265	31816
Jung 47DP411	26000	24495	10.4	52.9	20.0	1.0	0.8	1.8	6.9	17.7	34.0	86.7	60.8	36.2	3218	33446
Jung 47DP411	32000	30555	10.4	50.3	13.3	0.7	0.8	1.5	6.4	16.6	32.9	87.0	60.6	39.7	3292	34332
Jung 47DP411	38000	36111	11.3	47.7	13.3	0.7	0.7	1.3	6.5	16.6	32.6	86.9	59.8	39.7	3307	37532
Jung 47DP411	44000	40151	11.5	48.2	20.0	1.0	0.2	1.2	6.5	16.2	32.0	87.3	60.2	40.4	3335	38396
Jung 47DP411	50000	47348	11.9	48.5	16.7	0.8	0.3	1.2	6.3	19.7	36.6	84.7	58.2	34.9	3131	37293
Mean		32807	10.8	55.7	29.0	1.5	1.4	2.9	7.0	18.2	34.6	86.6	61.3	34.9	3260	35326
Probability(%)																
Hybrid (H)		78.8	74.2	0.4	4.1	4.1	0.7	1.1	1.6	11.2	12.0	94.5	4.4	2.3	95.7	87.2
Plant Density (D)		0.0	0.1	0.0	20.1	20.0	0.0	0.8	5.0	12.0	6.6	5.2	5.3	0.8	1.0	0.1
Hybrid x Density (H x D)		97.2	65.5	28.0	99.8	99.8	18.7	81.8	48.4	22.9	21.4	16.5	34.4	16.0	2.5	28.8
LSD (0.10)																
Hybrid (H)		NS	NS	2.0	12.0	0.6	0.4	0.8	0.3	NS	NS	NS	1.4	2.6	NS	NS
Plant Density (D)		1636	0.9	2.1	NS	NS	0.4	0.8	0.3	NS	2.1	1.1	1.4	2.6	85	3367
Hybrid x Density (H x D)		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	130	NS

FIELD EXPERIMENT HISTORY

Title: Plant Density and Hybrid Influence on Corn Grain
Experiment: 02PD **Trial ID:** 6541 **Year:** 2021
Personnel: Joe Lauer, Kent Kohn, Thierno Diallo
Location: Chippewa Falls, WI **County:** Chippewa, WI
Supported By: HATCH

Site Information

Field: **Previous Crop:** Corn **Soil Type:** Sattre Silt Loam
Soil Test: **Date:** 9 /1 /21 **pH** 5.5 **OM (%)** 1.6 **P (ppm)** 69 **K (ppm)** 117

Plot Management

Tillage Operations: Spring Chisel Field Cultivator

	<u>Analysis:</u>	<u>Rate lbs/A</u>	<u>Date:</u>
Fertilizer:	Preplant : 21-0-0-24S	11 lbs/A	N/A
	Starter : 9-11-30-6S-1Zn	18 lbs/A	4 /30/21
	Post plant : 32-0-0	54 lbs/A	N/A
	Manure: Dairy	10000 gal/A	N/A
Herbicide:	Atrazine 16 oz/A Accent Q 0.9 oz/A Capreno 3.0 oz/A Sterling Blue 4.0 ozt/A	Insecticide: Force 3G 4.4 lbs/A	
Irrigation:	Irrigated	Hybrid: See Factors	
Planting Date:	4/30/21	Planting Depth: 1.5"	Row Width: 30"
Target Plant Density:	See Factors	Planting Method:	Almaco Plot Planter
Harvest Date:	10/4/21	Harvest Method:	Massey 8XP

Experimental Design

Design: RCB **Replications:** 3
Plot Size Seeded: 10' x 25' **Experiment Size:** 0.5 A
Harvest Plot Size: 5' x 23' **Harvest Plant Density:** 34690

Factors/Treatments:

<u>Target Plant Density:</u>	<u>Hybrid:</u>
1) 20000	1) Dekalb DKC43-75RIB 93RM
2) 26000	2) Jung 47DP411 97RM
3) 32000	
4) 38000	
5) 44000	
6) 50000	

Results: Tables 2102-03.

FIELD EXPERIMENT HISTORY

Title: Plant Density and Hybrid Influence on Corn Grain
Experiment: 02PD **Trial ID:** 6540 **Year:** 2021
Personnel: Joe Lauer, Kent Kohn, Thierno Diallo
Location: Coleman, WI **County:** Marinette
Supported By: HATCH

Site Information

Field: **Previous Crop:** Soybean **Soil Type:** Oconto Silt Loam
Soil Test: **Date:** 9 /1 /21 **pH** 6.7 **OM (%)** 2.1 **P (ppm)** 41 **K (ppm)** 83

Plot Management

Tillage Operations: Disk Chisel Field Cultivator

		<u>Analysis:</u>	<u>Rate lbs/A</u>	<u>Date:</u>
Fertilizer:	Preplant :	18-46-0	9 lbs/A	N/A
		21-0-0-24S	21 lbs/A	N/A
		46-0-0	138 lbs/A	N/A
	Starter :	9-11-30-6S-1Zn	18 lbs/A	5 /6 /21
	Post plant :	N/A	N/A	N/A
	Manure:	N/A	N/A	N/A
Herbicide:	Accent Q 5.0 oz/A Explorer 3.0 oz/A Status 5.0 oz/A		Insecticide: Force 3G 4.4 lbs/A	
Irrigation:	None		Hybrid: See Factors	
Planting Date:	5/6/21	Planting Depth:	1.5"	Row Width: 30"
Target Plant Density:	See Factors	Planting Method:	Almaco Plot Planter	
Harvest Date:	10/18/21	Harvest Method:	Massey 8XP	

Experimental Design

Design: RCB **Replications:** 3
Plot Size Seeded: 10' x 25' **Experiment Size:** 0.5 A
Harvest Plot Size: 5' x 23' **Harvest Plant Density:** 33491

Factors/Treatments:

<u>Target Plant Density:</u>	<u>Hybrid:</u>
1) 20000	1) Dekalb DKC43-75RIB 93RM
2) 26000	2) Jung 47DP411 97RM
3) 32000	
4) 38000	
5) 44000	
6) 50000	

Results: Tables 2102-04.

FIELD EXPERIMENT HISTORY

Title: Plant Density and Hybrid Influence on Corn Grain
Experiment: 02PD **Trial ID:** 6539 **Year:** 2021
Personnel: Joe Lauer, Kent Kohn, Thierno Diallo
Location: Fond du Lac, WI **County:** Fond du Lac
Supported By: HATCH

Site Information

Field: **Previous Crop:** Soybean **Soil Type:** Virgil Silt Loam
Soil Test: **Date:** 9 /1 /21 **pH** 7.0 **OM (%)** 3.3 **P (ppm)** 51 **K (ppm)** 126

Plot Management

Tillage Operations: Strip-Till

		<u>Analysis:</u>	<u>Rate lbs/A</u>	<u>Date:</u>
Fertilizer:	Preplant :	N/A	N/A	N/A
	Starter :	9-11-30-6S-1Zn	18 lbs/A	4 /27/21
	Post plant :	32-0-0	165 lbs/A	N/A
	Manure:	N/A	N/A	N/A
Herbicide:	Acuron 1.5 qt/A		Insecticide: Force 3G 4.4 lbs/A	
Irrigation:	None		Hybrid: See Factors	
Planting Date:	4/27/21	Planting Depth: 1.5"	Row Width: 30"	
Target Plant Density:	See Factors	Planting Method:	Almaco Plot Planter	
Harvest Date:	10/15/21	Harvest Method:	Massey 8XP	

Experimental Design

Design: RCB **Replications:** 3
Plot Size Seeded: 10' x 25' **Experiment Size:** 0.5 A
Harvest Plot Size: 5' x 23' **Harvest Plant Density:** 32175

Factors/Treatments:

<u>Target Plant Density:</u>	<u>Hybrid:</u>
1) 20000	1) Jung 47DP411 97RM
2) 26000	2) Dairyland DS-4440AMXT 106RM
3) 32000	
4) 38000	
5) 44000	
6) 50000	

Results: Tables 2102-05.

**Table: 2102-05. Plant Density and Hybrid Influence on Corn Grain.
Fond du Lac, WI - 2021.**

Hybrid	Target	Harvest	Yield	Moisture	Test	Lodged			AGR
	density	density				Total	Stalk	Root	
	plants/A	plants/A	bu/A	%	lbs/bu	%	%	%	\$/A
Dairyland DS-4440AMXT		32323	257	29.4	52	0.2	0.1	0.1	1213
Jung 47DP411		32028	261	26.2	52	0.1	0.1	0.0	1249
	20000	18560	220	30.1	52	0.0	0.0	0.0	1032
	26000	25063	249	27.6	52	0.3	0.3	0.0	1184
	32000	29798	262	27.7	52	0.0	0.0	0.0	1243
	38000	34217	271	27.3	52	0.2	0.2	0.0	1287
	44000	40845	277	27.2	52	0.2	0.0	0.2	1318
	50000	44570	277	26.8	52	0.4	0.4	0.0	1322
Dairyland DS-4440AMXT	20000	18687	213	30.0	52	0.0	0.0	0.0	1001
Dairyland DS-4440AMXT	26000	24621	246	29.1	52	0.5	0.5	0.0	1160
Dairyland DS-4440AMXT	32000	29798	257	29.4	52	0.0	0.0	0.0	1209
Dairyland DS-4440AMXT	38000	34217	274	29.4	52	0.4	0.4	0.0	1290
Dairyland DS-4440AMXT	44000	42424	286	29.2	52	0.3	0.0	0.3	1347
Dairyland DS-4440AMXT	50000	44191	269	29.2	53	0.0	0.0	0.0	1268
Jung 47DP411	20000	18434	226	30.1	51	0.0	0.0	0.0	1062
Jung 47DP411	26000	25505	253	26.1	52	0.0	0.0	0.0	1208
Jung 47DP411	32000	29798	267	26.0	52	0.0	0.0	0.0	1277
Jung 47DP411	38000	34217	268	25.3	52	0.0	0.0	0.0	1283
Jung 47DP411	44000	39267	269	25.1	51	0.0	0.0	0.0	1288
Jung 47DP411	50000	44949	286	24.4	52	0.9	0.9	0.0	1375
Mean		32175	259	27.8	52	0.2	0.1	0.0	1231
<u>Probability(%)</u>									
Hybrid (H)		64.4	15.5	0.0	7.3	72.5	99.9	32.8	1.2
Plant Density (D)		0.0	0.0	0.1	90.0	51.0	34.3	44.1	0.0
Hybrid x Plant Density		49.0	1.2	1.3	70.5	12.0	9.9	44.1	2.1
<u>LSD (0.10)</u>									
Hybrid (H)		NS	NS	0.6	0	NS	NS	NS	23
Plant Density (D)		1872	8	1	NS	NS	NS	NS	39
Hybrid x Plant Density		NS	11.5	1.5	NS	NS	0.6	NS	55.6

FIELD EXPERIMENT HISTORY

Title: Plant Density and Hybrid Influence on Corn Grain
Experiment: 02PD **Trial ID:** 6538 **Year:** 2021
Personnel: Joe Lauer, Kent Kohn, Thierno Diallo
Location: Galesville, WI **County:** Trempeau
Supported By: HATCH

Site Information

Field: **Previous Crop:** Soybean **Soil Type:** Downs Silt Loam
Soil Test: **Date:** 9 /1 /21 **pH** 5.1 **OM (%)** 3.1 **P (ppm)** 93 **K (ppm)** 160

Plot Management

Tillage Operations: Field Cultivator

		<u>Analysis:</u>	<u>Rate lbs/A</u>	<u>Date:</u>
Fertilizer:	Preplant :	46-0-0	100 lbs/A	N/A
		21-0-0-24S	21 lbs/A	N/A
		18-46-0	18 lbs/A	N/A
	Starter :	9-11-30-6S-1Zn	18 lbs/A	5 /7 /21
	Post plant :	N/A	N/A	N/A
	Manure:	N/A	N/A	N/A
Herbicide:	Callisto 3.0 oz/A Dual II Mag 3.0 pt/A		Insecticide: Force 3G 4.4 lbs/A	
Irrigation:	None		Hybrid: See Factors	
Planting Date:	5/7/21	Planting Depth:	1.5"	Row Width: 30"
Target Plant Density:	See Factors	Planting Method:	Almaco Plot Planter	
Harvest Date:	9/30/21	Harvest Method:	Massey 8XP	

Experimental Design

Design: RCB **Replications:** 3
Plot Size Seeded: 10' x 25' **Experiment Size:** 0.5 A
Harvest Plot Size: 5' x 23' **Harvest Plant Density:** 33101

Factors/Treatments:

<u>Target Plant Density:</u>	<u>Hybrid:</u>
1) 20000	1) Jung 47DP411 97RM
2) 26000	2) Dairyland DS-4440AMXT 106RM
3) 32000	
4) 38000	
5) 44000	
6) 50000	

Results: Tables 2102-06.

**Table: 2102-06. Plant Density and Hybrid Influence on Corn Grain.
Galesville, WI - 2021.**

Hybrid	Target	Harvest	Yield	Moisture	Test	Lodged			AGR
	density	density				Total	Stalk	Root	
	plants/A	plants/A	bu/A	%	lbs/bu	%	%	%	\$/A
Dairyland DS-4440AMXT		32428	262	27.6	52	0.1	0.1	0.0	1246
Jung 47DP411		33775	256	27.9	52	1.7	1.6	0.1	1216
	20000	19255	243	28.5	52	1.0	1.0	0.0	1149
	26000	25378	273	27.6	51	0.0	0.0	0.0	1296
	32000	31250	257	28.5	52	0.8	0.8	0.0	1216
	38000	36237	257	27.3	52	0.3	0.2	0.2	1223
	44000	41414	260	27.1	52	0.6	0.6	0.0	1240
	50000	45075	266	27.6	52	2.7	2.7	0.0	1263
Dairyland DS-4440AMXT	20000	18939	261	26.9	52	0.0	0.0	0.0	1245
Dairyland DS-4440AMXT	26000	25126	279	27.1	51	0.0	0.0	0.0	1325
Dairyland DS-4440AMXT	32000	30429	259	30.0	52	0.8	0.8	0.0	1218
Dairyland DS-4440AMXT	38000	34974	250	28.4	52	0.0	0.0	0.0	1185
Dairyland DS-4440AMXT	44000	40025	272	25.3	52	0.0	0.0	0.0	1302
Dairyland DS-4440AMXT	50000	45075	253	27.8	52	0.0	0.0	0.0	1201
Jung 47DP411	20000	19570	224	30.0	52	2.0	2.0	0.0	1053
Jung 47DP411	26000	25631	267	28.2	52	0.0	0.0	0.0	1266
Jung 47DP411	32000	32070	255	27.0	51	0.8	0.8	0.0	1214
Jung 47DP411	38000	37499	264	26.2	52	0.7	0.3	0.3	1261
Jung 47DP411	44000	42802	249	28.9	53	1.2	1.2	0.0	1177
Jung 47DP411	50000	45075	278	27.3	52	5.4	5.4	0.0	1325
Mean		33101	259	27.8	52	0.9	0.9	0.0	1231
<u>Probability(%)</u>									
Hybrid (H)		0.8	39.5	64.5	35.3	0.7	0.8	32.8	39.2
Plant Density (D)		0.0	25.9	82.3	43.6	8.9	6.9	44.1	27.0
Hybrid x Plant Density		42.0	15.3	7.9	84.0	5.6	4.4	44.1	11.6
<u>LSD (0.10)</u>									
Hybrid (H)		788	NS	NS	NS	0.9	0.9	NS	NS
Plant Density (D)		1364	NS	NS	NS	1.5	1.5	NS	NS
Hybrid x Plant Density		NS	NS	3.1	NS	2.2	2.1	NS	NS

FIELD EXPERIMENT HISTORY

Title: Plant Density and Hybrid Influence on Corn Grain
Experiment: 02PD **Trial ID:** 6537 **Year:** 2021
Personnel: Joe Lauer, Kent Kohn, Thierno Diallo
Location: Hancock, WI **County:** Waushara
Supported By: HATCH

Site Information

Field: **Previous Crop:** Potato **Soil Type:** Plainfield Sand
Soil Test: **Date:** 9 /1 /21 **pH** 5.3 **OM (%)** 0.7 **P (ppm)** 126 **K (ppm)** 50

Plot Management

Tillage Operations: Soil Finisher

		<u>Analysis:</u>	<u>Rate lbs/A</u>	<u>Date:</u>	
Fertilizer:	Preplant :	N/A	N/A	N/A	
	Starter :	9-11-30-6S-1Zn	18 lbs/A	4 /30/21	
	Post plant :	21-0-024S	32 lbs/A	N/A	
		46-0-0	161 lbs/A	N/A	
	Manure:	N/A	N/A	N/A	
Herbicide:	Prowl 2.0 pt/A Laudis 3.0 oz/A		Insecticide:	Force 3G 4.4 lbs/A	
Irrigation:	Irrigated		Hybrid:	See Factors	
Planting Date:	5/4/21	Planting Depth:	1.5"	Row Width:	30"
Target Plant Density:	See Factors	Planting Method:	Almaco Plot Planter		
Harvest Date:	10/1/21	Harvest Method:	Massey 8XP		

Experimental Design

Design: RCB **Replications:** 3
Plot Size Seeded: 10' x 25' **Experiment Size:** 0.5 A
Harvest Plot Size: 5' x 23' **Harvest Plant Density:** 33196

Factors/Treatments:

<u>Target Plant Density:</u>	<u>Hybrid:</u>
1) 20000	1) Jung 47DP411 97RM
2) 26000	2) Dairyland DS-4440AMXT 106RM
3) 32000	
4) 38000	
5) 44000	
6) 50000	

Results: Tables 2102-07.

**Table: 2102-07. Plant Density and Hybrid Influence on Corn Grain.
Hancock, WI - 2021.**

Hybrid	Target	Harvest	Yield	Moisture	Test	Lodged			AGR
	density	density				Total	Stalk	Root	
	plants/A	plants/A	bu/A	%	lbs/bu	%	%	%	\$/A
Dairyland DS-4440AMXT		32807	233	23.4	54	0.1	0.0	0.1	1128
Jung 47DP411		33585	210	17.2	55	4.6	4.6	0.0	1041
	20000	19381	179	21.3	54	7.6	7.3	0.3	873
	26000	25000	209	21.4	54	0.8	0.8	0.0	1016
	32000	29356	224	20.1	54	1.3	1.3	0.0	1094
	38000	34595	237	19.5	54	0.3	0.3	0.0	1160
	44000	42676	242	19.7	54	0.1	0.1	0.0	1187
	50000	48169	240	19.9	55	3.8	3.8	0.0	1176
Dairyland DS-4440AMXT	20000	19192	189	24.5	54	0.7	0.0	0.7	909
Dairyland DS-4440AMXT	26000	24495	216	25.1	54	0.0	0.0	0.0	1034
Dairyland DS-4440AMXT	32000	29040	236	22.5	52	0.0	0.0	0.0	1147
Dairyland DS-4440AMXT	38000	33964	254	23.0	54	0.0	0.0	0.0	1228
Dairyland DS-4440AMXT	44000	42550	256	22.4	53	0.0	0.0	0.0	1244
Dairyland DS-4440AMXT	50000	47600	249	22.9	55	0.0	0.0	0.0	1205
Jung 47DP411	20000	19570	170	18.0	55	14.5	14.5	0.0	837
Jung 47DP411	26000	25505	202	17.6	53	1.6	1.6	0.0	998
Jung 47DP411	32000	29671	211	17.8	56	2.6	2.6	0.0	1042
Jung 47DP411	38000	35227	220	15.9	54	0.7	0.7	0.0	1092
Jung 47DP411	44000	42802	228	17.0	55	0.3	0.3	0.0	1130
Jung 47DP411	50000	48737	231	16.8	55	7.7	7.7	0.0	1146
Mean		33196	222	20.3	54	2.3	2.3	0.1	1084
Probability(%)									
Hybrid (H)		8.1	0.0	0.0	4.6	0.3	0.2	32.8	0.0
Plant Density (D)		0.0	0.0	4.7	40.2	2.6	3.3	44.1	0.0
Hybrid x Plant Density		97.4	34.0	38.4	33.2	4.9	3.3	44.1	31.3
LSD (0.10)									
Hybrid (H)		731	4.8	0.7	1	2.3	2.3	NS	23
Plant Density (D)		1266	8	1.2	NS	4.0	3.9	NS	41
Hybrid x Plant Density		NS	NS	NS	NS	5.6	5.5	NS	NS

FIELD EXPERIMENT HISTORY

Title: Plant Density and Hybrid Influence on Corn Grain
Experiment: 02PD **Trial ID:** 6536 **Year:** 2021
Personnel: Joe Lauer, Kent Kohn, Thierno Diallo
Location: Janesville, WI **County:** Rock
Supported By: HATCH

Site Information

Field: **Previous Crop:** Corn **Soil Type:** Plano Silt Loam
Soil Test: **Date:** 9/1/21 **pH:** 6.4 **OM (%):** 3.6 **P (ppm):** 104 **K (ppm):** 175

Plot Management

Tillage Operations: Spring Chisel Field

		<u>Analysis:</u>	<u>Rate lbs/A</u>	<u>Date:</u>
Fertilizer:	Preplant :	N/A	N/A	N/A
	Starter :	9-11-30-6S-1Zn	18 lbs/A	4/27/21
	Post plant :	12-0-026S	13 lbs/A	N/A
		10-34-0	16 lbs/A	N/A
		32-0-0	142 lbs/A	N/A
	Manure:	N/A	N/A	N/A
Herbicide:	Acuron 3.0 qt/A		Insecticide:	Force 3G 4.4 lbs/A
Irrigation:	None		Hybrid:	See Factors
Planting Date:	4/27/21	Planting Depth:	1.5"	Row Width: 30"
Target Plant Density:	See Factors		Planting Method:	Almaco Plot Planter
Harvest Date:	9/30/21		Harvest Method:	Massey 8XP

Experimental Design

Design: RCB **Replications:** 3
Plot Size Seeded: 10' x 25' **Experiment Size:** 0.5 A
Harvest Plot Size: 5' x 23' **Harvest Plant Density:** 33554

Factors/Treatments:

<u>Target Plant Density:</u>	<u>Hybrid:</u>
1) 20000	1) Jung 47DP411 97RM
2) 26000	2) Dairyland DS-4440AMXT 106RM
3) 32000	
4) 38000	
5) 44000	
6) 50000	

Results: Tables 2102-08.

**Table: 2102-08. Plant Density and Hybrid Influence on Corn Grain.
Janesville, WI - 2021.**

Hybrid	Target	Harvest	Yield	Moisture	Test	Lodged			AGR
	density	density				Total	Stalk	Root	
	plants/A	plants/A	bu/A	%	lbs/bu	%	%	%	\$/A
Dairyland DS-4440AMXT		33101	226	17.6	58	0.1	0.1	0.0	1118
Jung 47DP411		34006	217	12.3	58	0.7	0.7	0.0	1081
	20000	19697	193	15.1	58	0.0	0.0	0.0	960
	26000	25378	208	15.2	57	0.2	0.2	0.0	1033
	32000	30871	222	15.1	58	0.2	0.2	0.0	1103
	38000	37058	229	14.5	58	0.2	0.2	0.0	1141
	44000	41540	236	15.1	58	0.7	0.7	0.0	1174
	50000	46780	238	14.6	57	1.1	0.9	0.1	1184
Dairyland DS-4440AMXT	20000	19318	192	17.5	57	0.0	0.0	0.0	951
Dairyland DS-4440AMXT	26000	25252	216	17.9	57	0.0	0.0	0.0	1066
Dairyland DS-4440AMXT	32000	30429	230	18.0	58	0.0	0.0	0.0	1138
Dairyland DS-4440AMXT	38000	36616	233	16.7	58	0.0	0.0	0.0	1157
Dairyland DS-4440AMXT	44000	41287	241	17.9	59	0.0	0.0	0.0	1192
Dairyland DS-4440AMXT	50000	45706	243	17.4	58	0.6	0.6	0.0	1201
Jung 47DP411	20000	20075	194	12.7	59	0.0	0.0	0.0	970
Jung 47DP411	26000	25505	201	12.5	57	0.5	0.5	0.0	1001
Jung 47DP411	32000	31313	214	12.3	57	0.4	0.4	0.0	1069
Jung 47DP411	38000	37499	225	12.2	58	0.3	0.3	0.0	1124
Jung 47DP411	44000	41792	232	12.3	58	1.5	1.5	0.0	1156
Jung 47DP411	50000	47853	234	11.7	57	1.6	1.3	0.3	1166
Mean		33554	221	14.9	58	0.4	0.4	0.0	1099
<u>Probability(%)</u>									
Hybrid (H)		7.7	0.6	0.0	82.7	4.3	6.6	32.8	2.3
Plant Density (D)		0.0	0.0	42.6	16.2	28.9	43.8	44.1	0.0
Hybrid x Plant Density		90.6	56.7	64.8	9.0	72.3	79.1	44.1	61.0
<u>LSD (0.10)</u>									
Hybrid (H)		836	5	0.4	NS	0.5	0.5	NS	26
Plant Density (D)		1448	9	NS	NS	NS	NS	NS	44
Hybrid x Plant Density		NS	NS	NS	1.5	NS	NS	NS	NS

FIELD EXPERIMENT HISTORY

Title: Plant Density and Hybrid Influence on Corn Grain and Silage Performance
Experiment: 02PD **Trial ID:** 6535 **Year:** 2021
Personnel: Joe Lauer, Kent Kohn, Thierno Diallo
Location: Marshfield, WI **County:** Wood
Supported By: HATCH

Site Information

Field: **Previous Crop:** Soybean **Soil Type:** Fenwood Silt Loam
Soil Test: **Date:** 9 /1 /21 **pH** 6.5 **OM (%)** 2.7 **P (ppm)** 30 **K (ppm)** 80

Plot Management

Tillage Operations: Strip-Till Vertical-Till

		<u>Analysis:</u>	<u>Rate lbs/A</u>	<u>Date:</u>
Fertilizer:	Preplant :	18-46-0	N/A	23 lbs/A
	Starter :	9-11-30-6S-1Zn	18 lbs/A	5 /1 /21
	Post plant :	29-0-0-3S	119 lbs/A	N/A
	Manure:	Dairy	25 ton	N/A
Herbicide:	Resicore 2.0 qt/A		Insecticide:	Force 3G 4.4 lbs/A
Irrigation:	None		Hybrid:	See Factors
Planting Date:	5/10/21	Planting Depth:	1.5"	Row Width: 30"
Target Plant Density:	See Factors	Planting Method:	Almaco Plot Planter	
Harvest Date:	S: 9/22/21 G: 10/19/21	Harvest Method:	S: New Holland 707 G: Massey 8XP	

Experimental Design

Design: RCB	Replications: 3
Plot Size Seeded: 20' x 25'	Experiment Size: 1.0 A
Harvest Plot Size: S: 2.5' x 23' G: 5' x 23'	Harvest Plant Density: 32912

Factors/Treatments:

<u>Target Plant Density:</u>	<u>Hybrid :</u>
1) 20000	1) Dekalb DKC43-75RIB 93RM
2) 26000	2) Jung 47DP411 97RM
3) 32000	
4) 38000	
5) 44000	
6) 50000	

Results: Tables 2102-09 & 2102-10.

FIELD EXPERIMENT HISTORY

Title: Plant Density and Hybrid Influence on Corn Grain
Experiment: 02PD **Trial ID:** 6534 **Year:** 2021
Personnel: Joe Lauer, Kent Kohn, Thierno Diallo
Location: Montfort, WI **County:** Iowa
Supported By: HATCH

Site Information

Field: **Previous Crop:** Soybean **Soil Type:** Dodgeville Silt Loam
Soil Test: **Date:** 9 /1 /21 **pH** 6.1 **OM (%)** 3.2 **P (ppm)** 78 **K (ppm)** 99

Plot Management

Tillage Operations: Strip-Till

		<u>Analysis:</u>	<u>Rate lbs/A</u>	<u>Date:</u>
Fertilizer:	Preplant :	32-0-0	160 lbs/A	N/A
		12-0-026S	13 lbs/A	N/A
		46-0-0	23 lbs/A	N/A
		11-52-0	6 lbs/A	N/A
	Starter :	9-11-30-6S-1Zn	18 lbs/A	4 /26/21
	Post plant :	N/A	N/A	N/A
	Manure:	N/A	N/A	N/A
Herbicide:	Atrazine 4L 32.0 oz/A Explorer 3.0 oz/A Roundup 25.6 oz/A Zidua 3.25 oz/A		Insecticide:	Force 3G 4.4 lbs/A
Irrigation:	None		Hybrid:	See Factors
Planting Date:	4/26/21	Planting Depth:	1.5"	Row Width: 30"
Target Plant Density:	See Factors		Planting Method:	Almaco Plot Planter
Harvest Date:	9/30/21		Harvest Method:	Massey 8XP

Experimental Design

Design: RCB **Replications:** 3
Plot Size Seeded: 10' x 25' **Experiment Size:** 0.5 A
Harvest Plot Size: 5' x 23' **Harvest Plant Density:** 33343

Factors/Treatments:

<u>Target Plant Density:</u>	<u>Hybrid:</u>
1) 20000	1) Jung 47DP411 97RM
2) 26000	2) Dairyland DS-4440AMXT 106RM
3) 32000	
4) 38000	
5) 44000	
6) 50000	

Results: Tables 2102-11.

FIELD EXPERIMENT HISTORY

Title: Plant Density and Hybrid Influence on Corn Grain
Experiment: 02PD **Trial ID:** 6533 **Year:** 2021
Personnel: Joe Lauer, Kent Kohn, Thierno Diallo
Location: Seymour, WI **County:** Outagamie
Supported By: HATCH

Site Information

Field: **Previous Crop:** Soybean **Soil Type:** Onaway Silt Loam
Soil Test: **Date:** 9 /1 /21 **pH** 7.1 **OM (%)** 2.1 **P (ppm)** 63 **K (ppm)** 112

Plot Management

Tillage Operations: Chisel Plow FieldCultivator

		<u>Analysis:</u>	<u>Rate lbs/A</u>	<u>Date:</u>
Fertilizer:	Preplant :	46-0-0	46 lbs/A	N/A
	Starter :	9-11-30-6S-1Zn	18 lbs/A	5 /6 /21
	Post plant :	32-0-0	124 lbs/A	N/A
	Manure:	N/A	N/A	N/A
Herbicide:	Atrazine 0.75 lbs/A Dual II Mag 1.0 pt/A Explorer 3.0 oz/A		Insecticide: Force 3G 4.4 lbs/A	
Irrigation:	None		Hybrid: See Factors	
Planting Date:	5/6/21	Planting Depth:	1.5"	Row Width: 30"
Target Plant Density:	See Factors	Planting Method:	Almaco Plot Planter	
Harvest Date:	10/18/21	Harvest Method:	Massey 8XP	

Experimental Design

Design: RCB **Replications:** 3
Plot Size Seeded: 10' x 25' **Experiment Size:** 0.5 A
Harvest Plot Size: 5' x 23' **Harvest Plant Density:** 33859

Factors/Treatments:

<u>Target Plant Density:</u>	<u>Hybrid:</u>
1) 20000	1) Dekalb DKC43-75RIB 93RM
2) 26000	2) Jung 47DP411 97RM
3) 32000	
4) 38000	
5) 44000	
6) 50000	

Results: Tables 2102-12.

FIELD EXPERIMENT HISTORY

Title: Plant Density and Hybrid Influence on Corn Grain
Experiment: 02PD **Trial ID:** 6532 **Year:** 2021
Personnel: Joe Lauer, Kent Kohn, Thierno Diallo
Location: Valders, WI **County:** Manitowoc
Supported By: HATCH

Site Information

Field: **Previous Crop:** Alfalfa **Soil Type:** Kewaunee Clay Loam
Soil Test: **Date:** 9 /1 /21 **pH** 7.4 **OM (%)** 2.8 **P (ppm)** 31 **K (ppm)** 82

Plot Management

Tillage Operations: Chisel Plow Field Cultivator

		<u>Analysis:</u>	<u>Rate lbs/A</u>	<u>Date:</u>
Fertilizer:	Preplant :	N/A	N/A	N/A
	Starter :	9-11-30-6S-1Zn	18 lbs/A	4 /29/21
	Post plant :	32-0-0	131 lbs/A	N/A
	Manure:	Dairy	10000 gal/A	N/A
Herbicide:	Atrazine 1.0 lb/A Realm Q 4.0oz/A TripleFlex 3.0 qt/A		Insecticide: Force 3G 4.4 lbs/A	
Irrigation:	None		Hybrid: See Factors	
Planting Date:	4/29/21	Planting Depth:	1.5"	Row Width: 30"
Target Plant Density:	See Factors	Planting Method:	Almaco Plot Planter	
Harvest Date:	9/19/21	Harvest Method:	Massey 8XP	

Experimental Design

Design: RCB **Replications:** 3
Plot Size Seeded: 10' x 25' **Experiment Size:** 0.5 A
Harvest Plot Size: 5' x 23' **Harvest Plant Density:** 31502

Factors/Treatments:

<u>Target Plant Density:</u>	<u>Hybrid:</u>
1) 20000	1) Dekalb DKC43-75RIB 93RM
2) 26000	2) Jung 47DP411 97RM
3) 32000	
4) 38000	
5) 44000	
6) 50000	

Results: Tables 2102-13.

**Table: 2102-13. Plant Density and Hybrid Influence on Corn Grain.
Valders, WI - 2021.**

Hybrid	Target	Harvest	Yield	Moisture	Test	Lodged			AGR
	density	density				Total	Stalk	Root	
	plants/A	plants/A	bu/A	%	lbs/bu	%	%	%	\$/A
Dekalb DKC43-75RIB		31334	231	21.4	55	0.5	0.5	0.0	1128
Jung 47DP411		31670	254	24.7	52	0.4	0.3	0.1	1219
	20000	18497	211	24.2	53	0.4	0.4	0.0	1014
	26000	24495	228	24.0	53	0.0	0.0	0.0	1101
	32000	28851	238	22.4	54	0.4	0.4	0.0	1153
	38000	34595	253	23.2	53	0.2	0.0	0.2	1221
	44000	38446	259	21.9	54	0.7	0.7	0.0	1257
	50000	44128	267	22.5	54	0.9	0.9	0.0	1294
Dekalb DKC43-75RIB	20000	18560	193	22.5	55	0.7	0.7	0.0	937
Dekalb DKC43-75RIB	26000	23611	214	22.9	55	0.0	0.0	0.0	1038
Dekalb DKC43-75RIB	32000	28787	225	20.6	55	0.9	0.9	0.0	1100
Dekalb DKC43-75RIB	38000	34722	249	21.9	54	0.0	0.0	0.0	1213
Dekalb DKC43-75RIB	44000	36868	248	19.6	56	0.0	0.0	0.0	1217
Dekalb DKC43-75RIB	50000	45454	258	20.7	55	1.1	1.1	0.0	1262
Jung 47DP411	20000	18434	228	26.0	51	0.0	0.0	0.0	1091
Jung 47DP411	26000	25378	243	25.1	51	0.0	0.0	0.0	1164
Jung 47DP411	32000	28914	250	24.1	52	0.0	0.0	0.0	1206
Jung 47DP411	38000	34469	256	24.5	52	0.4	0.0	0.4	1229
Jung 47DP411	44000	40025	269	24.1	52	1.3	1.3	0.0	1298
Jung 47DP411	50000	42802	275	24.2	52	0.6	0.6	0.0	1325
Mean		31502	242	23.0	53	0.4	0.4	0.0	1173
<u>Probability(%)</u>									
Hybrid (H)		44.4	0.0	0.0	0.0	83.3	69.7	32.8	0.0
Plant Density (D)		0.0	0.0	1.0	26.6	73.5	62.8	44.1	0.0
Hybrid x Plant Density		1.8	51.9	59.2	88.0	45.0	46.6	44.1	50.2
<u>LSD (0.10)</u>									
Hybrid (H)		NS	8	0.7	1	NS	NS	NS	36
Plant Density (D)		1285	13	1	NS	NS	NS	NS	63
Hybrid x Plant Density		1816.9	NS	NS	NS	NS	NS	NS	NS

FIELD EXPERIMENT HISTORY

Title: Stine Seeds Plant Density and Hybrid Corn Grain Trial.
Experiment: 02PD Stine **Trial ID:** 6542 **Year:** 2021
Personnel: Joe Lauer, Kent Kohn, Thierno Diallo
Location: Arlington, WI **County:** Columbia
Supported By: Stine Seeds

Site Information

Field: ARS411 **Previous Crop:** Alfalfa **Soil Type:** Plano Silt Loam
Soil Test: **Date:** 9 /1 /21 **pH** 6.8 **OM (%)** 3.8 **P (ppm)** 46 **K (ppm)** 78

Plot Management

Tillage Operations: Field Cultivator

		<u>Analysis:</u>	<u>Rate lbs/A</u>	<u>Date:</u>
Fertilizer:	Preplant :	32-0-0	149 lbs/A	N/A
	Starter :	9-11-30-6S-1Zn	200 lbs/A	5 /10/21
	Post plant :	N/A	N/A	N/A
	Manure:	N/A	N/A	N/A
Herbicide:	Resicore 2.5 qt/A		Insecticide:	Force 3G 4.4 lbs/A
Irrigation:	None		Hybrid:	See Factors
Planting Date:	5/10/21	Planting Depth:	1.5"	Row Width: 30"
Target Plant Density:	See Factors		Planting Method:	Almaco Plot Planter
Harvest Date:	10/6/21		Harvest Method:	Massey 8XP

Experimental Design

Design: RCB **Replications:** 3
Plot Size Seeded: 10' x 25' **Experiment Size:** 0.25 A
Harvest Plot Size: 5' x 23' **Harvest Plant Density:** 31965

Factors/Treatments:

<u>Target Plant Density:</u>	<u>Hybrid:</u>
1) 28000	1) Stine 9319-10
2) 32000	2) Stine 9547-G
3) 35000	3) Stine EXP104B-20
4) 38000	

Results: Tables 2102-14.

**Table: 2102-14. Stine Seeds Plant Density and Hybrid Corn Grain Trial.
Arlington, WI - 2021.**

Hybrid	Target	Density	Yield	Moisture	Test	Lodged			Silk	Plant	*AGR
	density	Harvest				Weight	Total	Stalk			
	plants/A	plants/A	bu/A	%	lbs/bu	%	%	%	DOY	inches	\$/A
Stine 9319-10		30839	227	19.7	57	1.9	1.5	0.5	198	109	1112
Stine 9547-G		33996	238	23.8	50	8.4	8.4	0.0	199	95	1149
Stine EXP104B-20		31060	226	22.3	53	0.2	0.3	0.0	198	97	1096
	28000	27483	223	21.8	52	2.0	1.9	0.1	197	99	1085
	32000	31313	230	22.0	53	0.8	0.8	0.0	198	101	1120
	35000	33291	231	22.0	54	3.8	3.8	0.0	198	100	1121
	38000	35774	236	21.9	53	7.6	7.1	0.6	199	101	1150
Stine 9319-10	28000	26767	224	19.3	55	0.3	0.0	0.3	196	105	1099
Stine 9319-10	32000	29292	223	19.7	56	2.0	2.0	0.0	197	111	1093
Stine 9319-10	35000	32449	229	20.0	58	0.7	0.7	0.0	198	111	1120
Stine 9319-10	38000	34848	231	19.7	56	4.7	3.3	1.7	199	108	1135
Stine 9547-G	28000	29040	233	24.0	49	5.7	5.7	0.0	198	95	1120
Stine 9547-G	32000	33838	242	24.0	49	0.3	0.3	0.0	198	95	1168
Stine 9547-G	35000	35353	236	23.7	51	10.7	10.7	0.0	199	94	1141
Stine 9547-G	38000	37752	242	23.7	52	17.0	17.0	0.0	199	95	1166
Stine EXP104B-20	28000	26641	213	22.0	53	0.0	0.0	0.0	197	96	1035
Stine EXP104B-20	32000	30808	226	22.3	54	0.0	0.0	0.0	198	97	1098
Stine EXP104B-20	35000	32071	227	22.3	52	0.0	0.0	0.0	198	95	1101
Stine EXP104B-20	38000	34722	237	22.3	52	1.0	1.0	0.0	198	99	1149
Mean		31965	230	21.9	53	3.5	3.4	0.2	198	100	1119
<u>Probability(%)</u>											
Hybrid		0.0	2.2	0.0	0.0	0.8	0.6	27.1	1.7	0.0	8.5
Plant Density		0.0	12.1	92.8	11.1	12.4	14.8	47.1	1.0	75.3	14.5
Hybrid x Plant Density		79.5	79.8	96.1	0.3	36.0	30.8	53.1	58.0	74.8	84.2
<u>LSD (0.10)</u>											
Hybrid		944	8	0.6	1	4.2	4.2	NS	1	3	40
Plant Density		1090	NS	NS	NS	NS	NS	NS	1	NS	NS
Hybrid x Plant Density		NS	NS	NS	1	NS	NS	NS	NS	NS	NS