FIELD EXPERIMENT HISTORY

Title: **Plant Density and Hybrid Influence on Corn Grain and Silage Performance**

Experiment: 02PD **Trial ID:** 6426 **Year:** 2020

Personnel: Joe Lauer, Kent Kohn, Thierno Diallo

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

Supported By: HATCH

Site Information

Field: ARS408 **Previous Crop:** Alfalfa **Soil Type:** Plano Silt Loam

Soil Test: **Date:** 9 /15/20 **pH** 6.1 **OM (%)** 2.8 **P (ppm)** 60 **K (ppm)** 119

Plot Management

Tillage Operations: Field Cultivator

		Analysis:	Rate lbs/A	Date:
Fertilizer:	**Preplant :**	32-0-0	350 lbs/A	N/A
	Starter :	9-11-30-6S-1Zn	200 lbs/A	4 /28/20
	Post plant :	N/A	N/A	N/A
	Manure:	Dairy	13543 gal/A	N/A

Herbicide: Resicore 80.0 oz/A **Insecticide:** Force 3G 4.4 lbs/A

Irrigation: None **Hybrid:** See Factors

Planting Date: 4/28/20 **Planting Depth:** 1.5" **Row Width:** 30"

Target Plant Density: See Factors **Planting Method:** Almaco Plot Planter

Harvest Date: S: 9/14/20 **Harvest Method:** S: New Holland 707
G: Massey 8XP

Notes:

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:** 33438

Factors/Treatments:

Target Plant Density:

1) 20000
2) 26000
3) 32000
4) 38000
5) 44000
6) 50000

Hybrid:

1) Jung 48DP420 98RM
2) Jung 56SS538 106RM

Results: Tables 2002-01 & 2002-02.

Table: 2002-01. Plant Density and Hybrid Influence on Corn Grain. Arlington, WI - 2020.

	Target	Density				Test	Lodged			AGR
Hybrid	density	Harvest	Ears	Yield	Moisture	weight	Total	Stalk	Root	$3.58
	plants/A	plants/A	ears/A	bu/A	%	lbs/bu	%	%	%	$/A
Jung 48DP420		33627	34238	250	18.1	56	11.9	3.0	8.9	825
Jung 56SS538		33249	35016	269	24.4	56	19.2	0.5	18.7	854
	20000	19634	25694	225	22.3	55	0.3	0.3	0.0	722
	26000	26010	26894	260	20.8	56	0.7	0.7	0.0	841
	32000	30808	30871	273	20.2	55	2.5	0.4	2.1	889
	38000	35921	36047	269	22.1	56	3.5	0.7	2.8	865
	44000	41792	41792	276	21.0	56	23.4	0.0	23.4	895
	50000	46464	46464	255	21.1	57	62.8	8.3	54.5	825
Jung 48DP420	20000	19570	22222	204	18.6	56	0.0	0.0	0.0	670
Jung 48DP420	26000	25883	26767	244	17.7	56	0.5	0.5	0.0	806
Jung 48DP420	32000	30934	30934	264	17.2	55	1.7	0.4	1.3	876
Jung 48DP420	38000	36489	36616	260	19.5	56	3.1	0.3	2.8	850
Jung 48DP420	44000	42929	42929	277	17.7	57	8.9	0.0	8.9	916
Jung 48DP420	50000	45959	45959	252	17.9	58	57.0	16.7	40.3	832
Jung 56SS538	20000	19697	29166	246	26.0	54	0.6	0.6	0.0	773
Jung 56SS538	26000	26136	27020	275	23.8	56	0.9	0.9	0.0	876
Jung 56SS538	32000	30681	30808	282	23.2	54	3.3	0.4	2.9	903
Jung 56SS538	38000	35353	35479	278	24.6	57	3.9	1.1	2.9	880
Jung 56SS538	44000	40656	40656	275	24.2	55	37.9	0.0	37.9	874
Jung 56SS538	50000	46969	46969	258	24.3	57	68.6	0.0	68.6	819
Mean		33438	34627	260	21.2	56	15.5	1.7	13.8	840
Probability(%)										
Hybrid (H)		60.1	43.9	0.3	0.0	40.1	3.9	38.4	1.3	13.4
Plant Density (D)		0.0	0.0	0.0	6.4	20.5	0.0	50.0	0.0	0.0
Hybrid x Plant Density		81.4	15.9	30.5	74.0	52.9	12.6	42.1	4.9	28.9
LSD (0.10)										
Hybrid (H)		NS	NS	10	0.7	NS	5.7	NS	6.2	NS
Plant Density (D)		2123	2940	17	1.2	NS	10.0	NS	10.8	56
Hybrid x Plant Density		NS	NS	NS	NS	NS	NS	NS	15.3	NS

Table: 2002-02. Plant Density and Hybrid Influence on Silage Preformance.

Arlington WI - 2020.

Hybrid	Target density	Harvest density	Dry Matter Yield	Moist	Kernel milk	KMR 0-5	SMR 0-5	VMR 0-10	Crude protein	*In Vitro* ADF	*In Vitro* NDF	*In Vitro* Digest	*In Vitro* NDFD	*In Vitro* Starch	Milk per Ton	Milk per Acre
	plants/A	plants/A	T/A	%	%				%	%	%	%	%	%	lbs/T	lbs/A
Jung 48DP420		35479	12.1	59.4	17.8	0.9	0.3	1.2	6.5	18.6	35.4	85.7	59.5	32.3	3102	37615
Jung 56SS538		35479	12.5	65.2	21.9	1.1	1.3	2.4	6.6	18.5	35.2	86.1	60.7	30.3	3092	38643
	20000	22727	11.1	63.7	17.0	0.9	1.0	1.8	7.2	17.4	34.2	86.6	60.8	30.8	3093	34544
	26000	26515	12.0	62.8	27.5	1.4	1.2	2.6	6.7	17.5	34.3	87.2	63.0	31.6	3167	38244
	32000	31944	12.6	62.6	24.2	1.2	0.6	1.8	6.6	18.5	35.2	86.1	60.4	31.7	3129	39418
	38000	37247	12.5	63.2	16.7	0.8	0.7	1.5	6.4	19.9	36.6	84.9	58.8	30.9	3097	38862
	44000	43686	13.0	61.4	17.2	0.9	0.5	1.4	6.2	19.2	35.9	85.3	58.9	31.2	3046	39637
	50000	50757	12.6	60.0	16.7	0.8	0.6	1.5	6.3	18.9	35.8	85.2	58.8	31.5	3047	38070
Jung 48DP420	20000	21969	10.1	61.4	19.0	1.0	0.3	1.3	7.4	17.2	34.1	86.6	60.8	31.7	3140	31830
Jung 48DP420	26000	27525	10.9	62.0	21.7	1.1	0.5	1.6	6.7	18.6	35.8	85.9	60.5	30.3	3067	33427
Jung 48DP420	32000	32828	12.4	58.6	26.7	1.3	0.5	1.9	6.5	18.1	34.8	86.3	60.7	33.7	3188	39520
Jung 48DP420	38000	37373	12.2	59.7	13.3	0.7	0.1	0.8	6.3	19.1	35.6	85.2	58.4	33.2	3156	38443
Jung 48DP420	44000	43434	13.2	57.5	11.0	0.6	0.0	0.6	6.0	18.8	35.3	85.3	58.4	33.7	3093	40956
Jung 48DP420	50000	49747	14.0	57.1	15.0	0.7	0.0	0.8	6.1	19.9	36.9	84.6	58.4	31.0	2966	41514
Jung 56SS538	20000	23485	12.2	65.9	15.0	0.8	1.6	2.4	7.0	17.5	34.3	86.5	60.7	29.9	3047	37257
Jung 56SS538	26000	25505	13.2	63.6	33.3	1.7	1.9	3.6	6.8	16.4	32.8	88.6	65.4	32.9	3267	43061
Jung 56SS538	32000	31060	12.8	66.6	21.7	1.1	0.7	1.8	6.6	18.9	35.5	85.8	60.1	29.8	3070	39317
Jung 56SS538	38000	37121	12.9	66.7	20.0	1.0	1.3	2.3	6.4	20.7	37.6	84.6	59.2	28.6	3038	39280
Jung 56SS538	44000	43939	12.8	65.2	23.3	1.2	1.0	2.1	6.4	19.5	36.4	85.3	59.5	28.7	2999	38318
Jung 56SS538	50000	51767	11.2	62.9	18.3	0.9	1.2	2.1	6.6	18.0	34.8	85.8	59.1	32.0	3129	34626
Mean		35479	12.3	62.3	19.9	1.0	0.8	1.8	6.6	18.6	35.3	85.9	60.1	31.3	3097	38129
Probability(%)																
Hybrid (H)		100.0	52.2	1.0	39.8	39.9	1.2	3.6	27.3	84.6	84.3	53.7	38.5	22.6	87.3	60.7
Plant Density (D)		0.0	33.9	1.4	14.0	14.0	0.2	0.4	0.0	10.6	39.3	1.6	0.0	99.5	78.8	56.3
Hybrid x Density (H x D)		25.4	6.4	3.6	35.4	35.4	1.6	4.1	14.6	29.5	37.8	15.2	4.6	31.5	33.8	12.7
LSD (0.10)																
Hybrid (H)		2783	1	2	11	1	0	1	0.3	2	2	2	3.1	3	161	4966
Plant Density (D)		1695	1.5	2	8	0	0.3	0.5	0.3	2	2	1	1	3	165	5081
Hybrid x Density (H x D)		2583	2	2	12	1	0	1	0	2	3	2	2	5	233	7185

FIELD EXPERIMENT HISTORY

Title: **Plant Density and Hybrid Influence on Corn Grain**

Experiment: 02PD **Trial ID:** 6508 **Year:** 2020

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 /15/20 **pH** 5.5 **OM (%)** 1.6 **P (ppm)** 69 **K (ppm)** 117

Plot Management

Tillage Operations: Spring Chisel Field Cultivator

		Analysis:	Rate lbs/A	Date:
Fertilizer:	**Preplant :**	21-0-0-24S	52 lbs/A	N/A
	Starter :	9-11-30-6S-1Zn	200 lbs/A	5 /4 /20
	Post plant :	46-0-0	200 lbs/A	N/A
	Manure:	Dairy	10000 gal/A	N/A

Herbicide: Acuron 3.0 qt/A **Insecticide:** Force 3G 4.4 lbs/A

Irrigation: Irrigated **Hybrid:** See Factors

Planting Date: 5/4/20 **Planting Depth:** 1.5" **Row Width:** 30"

Target Plant Density: See Factors **Planting Method:** Almaco Plot Planter

Harvest Date: 10/13/20 **Harvest Method:** Massey 8XP

Notes:

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:** 33091

Factors/Treatments:

Target Plant Density:

1) 20000
2) 26000
3) 32000
4) 38000
5) 44000
6) 50000

Hybrid:

1) Dekalb DKC43-75RIB 93RM
2) Jung 48DP420 98RM

Results: Tables 2002-03.

Table: 2002-03. Plant Density and Hybrid Influence on Corn Grain. Chippewa Falls, WI - 2020.

Hybrid	Target density	Density Harvest	Density Ears	Yield	Moisture	Test weight	Lodged Total	Lodged Stalk	Lodged Root	AGR $3.58
	plants/A	plants/A	ears/A	bu/A	%	lbs/bu	%	%	%	$/A
Dekalb DKC43-75RIB		32996		260	17.2	59	0.5	0.0	0.5	862
Jung 48DP420		33186		258	19.0	56	0.4	0.0	0.3	846
	20000	21275		207	18.3	57	0.9	0.0	0.9	684
	26000	27399		246	18.1	57	0.2	0.0	0.2	812
	32000	30618		255	17.8	57	0.6	0.0	0.6	842
	38000	35669		280	18.1	57	0.0	0.0	0.0	923
	44000	40782		280	18.3	58	0.3	0.1	0.2	922
	50000	42802		286	17.8	58	0.6	0.0	0.6	944
Dekalb DKC43-75RIB	20000	22601		219	17.9	59	1.2	0.0	1.2	723
Dekalb DKC43-75RIB	26000	28409		243	17.3	58	0.0	0.0	0.0	806
Dekalb DKC43-75RIB	32000	31818		254	16.8	59	1.2	0.0	1.2	845
Dekalb DKC43-75RIB	38000	36237		287	16.7	58	0.0	0.0	0.0	956
Dekalb DKC43-75RIB	44000	39520		278	17.4	59	0.3	0.0	0.3	922
Dekalb DKC43-75RIB	50000	39393		278	17.0	59	0.3	0.0	0.3	923
Jung 48DP420	20000	19949		196	18.7	55	0.7	0.0	0.7	645
Jung 48DP420	26000	26389		249	18.9	56	0.5	0.0	0.5	819
Jung 48DP420	32000	29419		256	18.8	56	0.0	0.0	0.0	840
Jung 48DP420	38000	35101		272	19.4	57	0.0	0.0	0.0	890
Jung 48DP420	44000	42045		282	19.3	57	0.3	0.3	0.0	922
Jung 48DP420	50000	46211		293	18.7	57	0.8	0.0	0.8	964
Mean		33091		259	18.1	57	0.4	0.0	0.4	854
Probability(%)										
Hybrid (H)		79.1		70.2	0.0	0.0	72.1	32.8	61.2	35.2
Plant Density (D)		0.0		0.0	45.4	54.5	68.6	44.1	62.5	0.0
Hybrid x Plant Density		0.4		29.0	10.9	87.4	67.1	44.1	65.9	30.8
LSD (0.10)										
Hybrid (H)		NS		NS	0.3	1	NS	0.1	NS	NS
Plant Density (D)		2100		15	0.5	NS	NS	0.1	NS	50
Hybrid x Plant Density		2970		NS	NS	NS	NS	NS	NS	NS

FIELD EXPERIMENT HISTORY

Title: **Plant Density and Hybrid Influence on Corn Grain**

Experiment: 02PD **Trial ID:** 6509 **Year:** 2020

Personnel: Joe Lauer, Kent Kohn, Thierno Diallo

Location: Coleman, WI **County:** Marinette

Supported By: HATCH

Site Information

Field: **Previous Crop:** Alfalfa **Soil Type:** Oconto Silt Loam

Soil Test: **Date:** 9 /15/20 **pH** 6.5 **OM (%)** 3.8 **P (ppm)** 185 **K (ppm)** 353

Plot Management

Tillage Operations: Disk Chisel Field Cultivator

		Analysis:	Rate lbs/A	Date:
Fertilizer:	**Preplant :**	18-46-0	27 lbs/A	N/A
		21-0-0-24S	76 lbs/A	N/A
		46-0-0	153 lbs/A	N/A
	Starter :	9-11-30-6S-1Zn	200 lbs/A	5 /6 /20
	Post plant :	N/A	N/A	N/A
	Manure:	Dairy	5000 gal/A	N/A

Herbicide: Accent Q 5.0 oz/A
Status 5.0 oz/A
Cavallo 4SC 3.0 oz/A

Insecticide: Force 3G 4.4 lbs/A

Irrigation: None **Hybrid:** See Factors

Planting Date: 5/6/20 **Planting Depth:** 1.5" **Row Width:** 30"

Target Plant Density: See Factors **Planting Method:** Almaco Plot Planter

Harvest Date: 10/19/20 **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:** 31739

Factors/Treatments:

Target Plant Density:

1) 20000
2) 26000
3) 32000
4) 38000
5) 44000
6) 50000

Hybrid:

1) Dekalb DKC43-75RIB 93RM
2) Jung 48DP420 98RM

Results: Tables 2002-04.

Table: 2002-04. Plant Density and Hybrid Influence on Corn Grain. Coleman, WI - 2020.

	Target	Density				Test	Lodged			AGR
Hybrid	density	Harvest	Ears	Yield	Moisture	weight	Total	Stalk	Root	$3.58
	plants/A	plants/A	ears/A	bu/A	%	lbs/bu	%	%	%	$/A
Dekalb DKC43-75RIB		30113		236	26.6	57	3.9	3.5	0.4	738
Jung 48DP420		33364		263	28.7	54	1.8	1.8	0.1	813
	20000	21149		200	28.5	56	7.5	7.5	0.0	619
	26000	28661		240	26.6	55	1.9	1.3	0.6	750
	32000	31376		253	28.1	56	1.0	1.0	0.0	785
	38000	33617		265	27.4	56	1.5	1.3	0.3	824
	44000	36363		275	26.8	55	2.0	1.9	0.2	858
	50000	39267		264	28.5	55	3.1	2.9	0.2	816
Dekalb DKC43-75RIB	20000	17550		182	27.4	58	9.9	9.9	0.0	567
Dekalb DKC43-75RIB	26000	25126		223	25.4	57	3.8	2.6	1.1	704
Dekalb DKC43-75RIB	32000	30303		242	27.6	58	0.9	0.9	0.0	752
Dekalb DKC43-75RIB	38000	33901		248	25.8	58	1.9	1.4	0.6	782
Dekalb DKC43-75RIB	44000	39962		271	25.2	57	2.7	2.4	0.4	855
Dekalb DKC43-75RIB	50000	33838		247	28.0	56	4.0	4.0	0.0	769
Jung 48DP420	20000	24747		219	29.6	54	5.1	5.1	0.0	671
Jung 48DP420	26000	32197		256	27.8	53	0.0	0.0	0.0	796
Jung 48DP420	32000	32449		265	28.6	55	1.2	1.2	0.0	818
Jung 48DP420	38000	33333		281	29.1	55	1.1	1.1	0.0	866
Jung 48DP420	44000	32765		279	28.3	53	1.3	1.4	0.0	861
Jung 48DP420	50000	44696		280	29.0	54	2.1	1.8	0.4	864
Mean		31739		249	27.6	56	2.8	2.7	0.2	775
Probability(%)										
Hybrid (H)		22.3		0.7	0.3	0.0	32.1	37.9	20.8	2.4
Plant Density (D)		1.0		0.2	34.1	34.4	42.7	35.5	65.9	0.3
Hybrid x Plant Density		47.9		95.5	86.8	83.8	97.2	97.2	44.8	95.8
LSD (0.10)										
Hybrid (H)		NS		16	1.1	1	NS	NS	NS	52
Plant Density (D)		7733		28	NS	NS	NS	NS	NS	91
Hybrid x Plant Density		NS		NS	NS	NS	NS	NS	NS	NS

FIELD EXPERIMENT HISTORY

Title: **Plant Density and Hybrid Influence on Corn Grain**

Experiment: 02PD **Trial ID:** 6510 **Year:** 2020

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 /15/20 **pH** 6.6 **OM (%)** 3.0 **P (ppm)** 20 **K (ppm)** 117

Plot Management

Tillage Operations: Strip-Till

		Analysis:	Rate lbs/A	Date:
Fertilizer:	**Preplant :**	28-0-0	107 lbs/A	N/A
	Starter :	9-11-30-6S-1Zn	200 lbs/A	5 /5 /20
	Post plant :	32-0-0	397 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: 5/5/20 **Planting Depth:** 1.5" **Row Width:** 30"

Target Plant Density: See Factors **Planting Method:** Almaco Plot Planter

Harvest Date: 10/9/20 **Harvest Method:** Massey 8XP

Notes:

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:** 30292

Factors/Treatments:

Target Plant Density:	Hybrid:
1) 20000	1) Jung 48DP420 98RM
2) 26000	2) Jung 56SS538 106RM
3) 32000	
4) 38000	
5) 44000	
6) 50000	

Results: Tables 2002-05.

Table: 2002-05. Plant Density and Hybrid Influence on Corn Grain. Fond du Lac, WI - 2020.

Hybrid	Target density	Density Harvest	Density Ears	Yield	Moisture	Test weight	Lodged Total	Lodged Stalk	Lodged Root	AGR $3.58
	plants/A	plants/A	ears/A	bu/A	%	lbs/bu	%	%	%	$/A
Jung 48DP420		31439		208	24.1	52	0.3	0.3	0.0	663
Jung 56SS538		29145		201	31.0	56	0.4	0.3	0.0	612
	20000	18055		168	27.4	53	0.3	0.3	0.0	523
	26000	20896		190	27.1	52	0.0	0.0	0.0	592
	32000	28156		221	27.1	52	0.0	0.0	0.0	688
	38000	32007		209	27.4	61	0.5	0.5	0.0	651
	44000	38762		216	27.7	51	0.6	0.6	0.0	673
	50000	43876		225	28.7	53	0.6	0.4	0.1	696
Jung 48DP420	20000	18813		176	23.8	53	0.0	0.0	0.0	560
Jung 48DP420	26000	19570		186	24.7	52	0.0	0.0	0.0	591
Jung 48DP420	32000	27904		217	23.5	51	0.0	0.0	0.0	692
Jung 48DP420	38000	36237		220	23.5	52	1.0	1.0	0.0	701
Jung 48DP420	44000	38131		221	24.2	51	0.6	0.6	0.0	701
Jung 48DP420	50000	47979		231	24.9	52	0.0	0.0	0.0	731
Jung 56SS538	20000	17298		160	31.0	53	0.7	0.7	0.0	486
Jung 56SS538	26000	22222		193	29.4	52	0.0	0.0	0.0	594
Jung 56SS538	32000	28409		225	30.7	54	0.0	0.0	0.0	684
Jung 56SS538	38000	27777		198	31.3	69	0.0	0.0	0.0	602
Jung 56SS538	44000	39393		212	31.2	52	0.6	0.6	0.0	645
Jung 56SS538	50000	39772		219	32.5	53	1.1	0.8	0.3	660
Mean		30292		205	27.6	54	0.3	0.3	0.0	637
Probability(%)										
Hybrid (H)		5.3		22.9	0.0	17.3	61.1	75.7	32.8	1.0
Plant Density (D)		0.0		0.0	36.2	43.2	53.5	60.6	44.1	0.0
Hybrid x Plant Density		2.7		59.6	45.6	50.2	24.8	36.0	44.1	54.2
LSD (0.10)										
Hybrid (H)		1926		NS	0.8	NS	NS	NS	NS	31
Plant Density (D)		3336		17	NS	NS	NS	NS	NS	54
Hybrid x Plant Density		4717		NS	NS	NS	NS	NS	NS	NS

FIELD EXPERIMENT HISTORY

Title: **Plant Density and Hybrid Influence on Corn Grain**

Experiment: 02PD **Trial ID:** 6511 **Year:** 2020

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 /15/20 **pH** 5.2 **OM (%)** 4.6 **P (ppm)** 65 **K (ppm)** 113

Plot Management

Tillage Operations: Field Cultivator

		Analysis:	Rate lbs/A	Date:
Fertilizer:	**Preplant :**	46-0-0 21-0-0-24S 18-46-0	217 lbs/A 100 lbs/A 100 lbs/A	N/A
	Starter :	9-11-30-6S-1Zn	200 lbs/A	4 /29/20
	Post plant :	N/A	N/A	N/A
	Manure:	N/A	N/A	N/A

Herbicide: Dual II Mag 3.0 pt/A
Callisto 3.0 oz/A

Insecticide: Force 3G 4.4 lbs/A

Irrigation: None **Hybrid:** See Factors

Planting Date: 4/29/20 **Planting Depth:** 1.5" **Row Width:** 30"

Target Plant Density: See Factors **Planting Method:** Almaco Plot Planter

Harvest Date: 10/13/20 **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:** 32428

Factors/Treatments:

Target Plant Density:

1) 20000
2) 26000
3) 32000
4) 38000
5) 44000
6) 50000

Hybrid:

1) Jung 48DP420 98RM
2) Jung 56SS538 106RM

Results: Tables 2002-06.

Table: 2002-06. Plant Density and Hybrid Influence on Corn Grain. Galesville, WI - 2020.

Hybrid	Target density	Density Harvest	Density Ears	Yield	Moisture	Test weight	Lodged Total	Lodged Stalk	Lodged Root	AGR $3.58
	plants/A	plants/A	ears/A	bu/A	%	lbs/bu	%	%	%	$/A
Jung 48DP420		33396		251	20.3	57	0.1	0.0	0.1	816
Jung 56SS538		31460		271	24.5	58	1.0	0.8	0.2	861
	20000	19507		204	22.3	58	0.0	0.0	0.0	656
	26000	26515		249	21.9	57	0.2	0.2	0.0	803
	32000	30050		272	22.1	57	0.6	0.4	0.2	875
	38000	34911		277	22.5	57	0.4	0.2	0.2	888
	44000	40151		280	22.7	57	1.1	1.0	0.2	896
	50000	43434		284	22.7	56	1.0	0.6	0.4	911
Jung 48DP420	20000	20075		201	19.7	57	0.0	0.0	0.0	656
Jung 48DP420	26000	27651		232	20.0	56	0.0	0.0	0.0	757
Jung 48DP420	32000	29924		259	20.2	57	0.4	0.0	0.4	843
Jung 48DP420	38000	36742		269	20.6	57	0.0	0.0	0.0	873
Jung 48DP420	44000	41919		270	20.4	55	0.0	0.0	0.0	878
Jung 48DP420	50000	44065		273	20.7	56	0.3	0.0	0.3	887
Jung 56SS538	20000	18939		207	24.9	58	0.0	0.0	0.0	655
Jung 56SS538	26000	25378		267	23.9	57	0.5	0.5	0.0	849
Jung 56SS538	32000	30176		285	24.1	58	0.8	0.8	0.0	906
Jung 56SS538	38000	33080		284	24.3	57	0.8	0.4	0.4	903
Jung 56SS538	44000	38383		289	25.0	59	2.3	1.9	0.3	915
Jung 56SS538	50000	42802		296	24.7	57	1.8	1.2	0.6	936
Mean		32428		261	22.4	57	0.6	0.4	0.2	838
Probability(%)										
Hybrid (H)		0.3		0.0	0.0	4.4	0.1	0.4	44.7	0.1
Plant Density (D)		0.0		0.0	66.7	79.9	8.1	31.8	42.4	0.0
Hybrid x Plant Density		36.8		28.1	71.3	50.9	12.1	31.8	48.7	36.8
LSD (0.10)										
Hybrid (H)		996		6	0.5	1	0.4	0.4	NS	21
Plant Density (D)		1724		10	NS	NS	0.7	NS	NS	36
Hybrid x Plant Density		NS		NS	NS	NS	NS	NS	NS	NS

FIELD EXPERIMENT HISTORY

Title: **Plant Density and Hybrid Influence on Corn Grain**

Experiment: 02PD **Trial ID:** 6512 **Year:** 2020

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 /15/20 **pH** 5.7 **OM (%)** 0.9 **P (ppm)** 48 **K (ppm)** 117

Plot Management

Tillage Operations: Soil Finisher

		Analysis:	Rate lbs/A	Date:
Fertilizer:	**Preplant :**	11-52-0	100 lbs/A	N/A
	Starter :	9-11-30-6S-1Zn	200 lbs/A	4 /30/20
	Post plant :	21-0-024S	152 lbs/A	N/A
		32-0-0	331 lbs/A	N/A
		46-0-0	126 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: 4/30/20 **Planting Depth:** 1.5" **Row Width:** 30"

Target Plant Density: See Factors **Planting Method:** Almaco Plot Planter

Harvest Date: 10/9/20 **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:** 34259

Factors/Treatments:

Target Plant Density:	Hybrid:
1) 20000	1) Jung 48DP420 98RM
2) 26000	2) Jung 56SS538 106RM
3) 32000	
4) 38000	
5) 44000	
6) 50000	

Results: Tables 2002-07.

Table: 2002-07. Plant Density and Hybrid Influence on Corn Grain. Hancock, WI - 2020.

Hybrid	Target density	Density Harvest	Density Ears	Yield	Moisture	Test weight	Lodged Total	Lodged Stalk	Lodged Root	AGR $3.58
	plants/A	plants/A	ears/A	bu/A	%	lbs/bu	%	%	%	$/A
Jung 48DP420		34511	34722	224	19.9	54	0.4	0.2	0.2	732
Jung 56SS538		33712	33796	221	26.2	53	0.9	0.4	0.5	693
	20000	19949	20265	189	23.3	55	0.0	0.0	0.0	602
	26000	26704	26957	216	23.2	55	0.2	0.2	0.0	691
	32000	32197	32197	229	22.8	53	0.2	0.2	0.0	735
	38000	36363	36363	225	22.9	53	1.6	0.5	1.1	722
	44000	42361	42676	236	22.9	53	0.0	0.0	0.0	756
	50000	47095	47095	240	23.1	53	1.6	0.8	0.8	768
Jung 48DP420	20000	20075	20581	189	20.9	56	0.0	0.0	0.0	613
Jung 48DP420	26000	27020	27525	212	20.5	55	0.0	0.0	0.0	689
Jung 48DP420	32000	32197	32197	231	19.3	54	0.4	0.4	0.0	757
Jung 48DP420	38000	36363	36363	229	18.9	53	1.0	0.0	1.0	752
Jung 48DP420	44000	42929	43181	234	20.2	54	0.0	0.0	0.0	763
Jung 48DP420	50000	48484	48484	250	19.5	53	0.8	0.8	0.0	817
Jung 56SS538	20000	19823	19949	188	25.8	55	0.0	0.0	0.0	592
Jung 56SS538	26000	26389	26389	221	25.9	55	0.5	0.5	0.0	693
Jung 56SS538	32000	32197	32197	227	26.4	52	0.0	0.0	0.0	712
Jung 56SS538	38000	36363	36363	222	26.9	52	2.2	1.1	1.1	693
Jung 56SS538	44000	41792	42171	238	25.6	52	0.0	0.0	0.0	748
Jung 56SS538	50000	45706	45706	230	26.8	53	2.5	0.8	1.7	718
Mean		34111	34259	223	23.0	54	0.6	0.3	0.3	712
Probability(%)										
Hybrid (H)		4.4	3.1	33.2	0.0	2.1	23.9	23.2	32.3	0.2
Plant Density (D)		0.0	0.0	0.0	96.2	1.0	6.2	6.4	12.0	0.0
Hybrid x Plant Density		28.5	39.6	23.2	18.6	85.6	66.7	19.9	48.0	14.7
LSD (0.10)										
Hybrid (H)		643	691	NS	0.7	1	NS	NS	NS	19
Plant Density (D)		1114	1198	10	NS	1	1.2	0.5	NS	33
Hybrid x Plant Density		NS	NS	NS	NS	NS	NS	NS	NS	NS

FIELD EXPERIMENT HISTORY

Title: **Plant Density and Hybrid Influence on Corn Grain**

Experiment: 02PD **Trial ID:** 6513 **Year:** 2020

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 /15/20 **pH** 6.0 **OM (%)** 3.0 **P (ppm)** 36 **K (ppm)** 113

Plot Management

Tillage Operations: Spring Chisel Field Cultivator

		Analysis:	Rate lbs/A	Date:
Fertilizer:	**Preplant :**	28-0-0	678 lbs/A	N/A
	Starter :	9-11-30-6S-1Zn	200 lbs/A	4 /27/20
	Post plant :	32-0-0	56 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: 4/27/20 **Planting Depth:** 1.5" **Row Width:** 30"

Target Plant Density: See Factors **Planting Method:** Almaco Plot Planter

Harvest Date: 10/8/20 **Harvest Method:** Massey 8XP

Notes:

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:** 32965

Factors/Treatments:

Target Plant Density:	Hybrid:
1) 20000	1) Jung 48DP420 98RM
2) 26000	2) Jung 56SS538 106RM
3) 32000	
4) 38000	
5) 44000	
6) 50000	

Results: Tables 2002-08.

Table: 2002-08. Plant Density and Hybrid Influence on Corn Grain. Janesville, WI - 2020.

Hybrid	Target density	Density Harvest	Density Ears	Yield	Moisture	Test weight	Lodged Total	Lodged Stalk	Lodged Root	AGR $3.58
	plants/A	plants/A	ears/A	bu/A	%	lbs/bu	%	%	%	$/A
Jung 48DP420		33354	33375	225	17.5	55	0.2	0.2	0.0	744
Jung 56SS538		32491	32554	247	25.3	55	1.6	1.6	0.0	779
	20000	19949	20202	191	21.9	54	0.3	0.3	0.0	614
	26000	25947	25947	218	21.7	55	1.0	1.0	0.0	703
	32000	29608	29608	232	21.1	55	1.8	1.8	0.0	751
	38000	34911	34911	250	20.9	55	1.8	1.8	0.0	810
	44000	41098	41098	263	21.1	55	0.0	0.0	0.0	849
	50000	46022	46022	261	21.8	55	0.6	0.4	0.1	842
Jung 48DP420	20000	19823	19949	181	17.9	55	0.7	0.7	0.0	598
Jung 48DP420	26000	26136	26136	210	17.8	55	0.0	0.0	0.0	693
Jung 48DP420	32000	30303	30303	226	17.2	55	0.0	0.0	0.0	749
Jung 48DP420	38000	35984	35984	236	17.6	56	0.0	0.0	0.0	781
Jung 48DP420	44000	41666	41666	248	17.0	56	0.0	0.0	0.0	822
Jung 48DP420	50000	46211	46211	249	17.6	55	0.3	0.3	0.0	823
Jung 56SS538	20000	20075	20454	200	26.0	54	0.0	0.0	0.0	629
Jung 56SS538	26000	25757	25757	227	25.5	55	2.0	2.0	0.0	714
Jung 56SS538	32000	28914	28914	238	25.0	55	3.5	3.5	0.0	754
Jung 56SS538	38000	33838	33838	264	24.2	55	3.5	3.5	0.0	839
Jung 56SS538	44000	40530	40530	278	25.2	55	0.0	0.0	0.0	876
Jung 56SS538	50000	45833	45833	274	25.9	55	0.8	0.6	0.3	861
Mean		32923	32965	236	21.4	55	0.9	0.9	0.0	762
Probability(%)										
Hybrid (H)		1.7	2.1	0.0	0.0	16.4	3.6	4.0	32.8	0.4
Plant Density (D)		0.0	0.0	0.0	38.6	66.1	54.1	51.4	44.1	0.0
Hybrid x Plant Density		38.0	29.0	62.4	69.0	84.1	32.8	30.5	44.1	70.0
LSD (0.10)										
Hybrid (H)		571	567	6	0.6	NS	1.1	1.1	NS	18
Plant Density (D)		990	982	10	NS	NS	NS	NS	NS	32
Hybrid x Plant Density		NS	NS	NS	NS	NS	NS	NS	NS	NS

FIELD EXPERIMENT HISTORY

Title: **Plant Density and Hybrid Influence on Corn Grain and Silage Performance**

Experiment: 02PD **Trial ID:** 6514 **Year:** 2020

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 /15/20 **pH** 6.9 **OM (%)** 3.3 **P (ppm)** 24 **K (ppm)** 146

Plot Management

Tillage Operations: Field Cultivator

		Analysis:	Rate lbs/A	Date:
Fertilizer:	**Preplant :**	N/A	N/A	N/A
	Starter :	9-11-30-6S-1Zn	200 lbs/A	5 /1 /20
	Post plant :	30-0-02.6S	390 lbs/A	N/A
	Manure:	Dairy	25 ton	N/A

Herbicide: Instigate 6.0 oz/A
Breakfree 3.8 pt/A

Insecticide: Force 3G 4.4 lbs/A

Irrigation: None **Hybrid:** See Factors

Planting Date: 5/1/20 **Planting Depth:** 1.5" **Row Width:** 30"

Target Plant Density: See Factors **Planting Method:** Almaco Plot Planter

Harvest Date: S: 9/23/20 **Harvest Method:** S: New Holland 707
G: Massey 8XP

Notes:

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:** 35037

Factors/Treatments:

Target Plant Density:	Hybrid:
1) 20000	1) Dekalb DKC43-75RIB 93RM
2) 26000	2) Jung 48DP420 98RM
3) 32000	
4) 38000	
5) 44000	
6) 50000	

Results: Tables 2002-09 & 2002-10.

Table: 2002-09. Plant Density and Hybrid Influence on Corn Grain. Marshfield, WI - 2020.

Hybrid	Target density	Density Harvest	Density Ears	Yield	Moisture	Test weight	Lodged Total	Lodged Stalk	Lodged Root	AGR $3.58
	plants/A	plants/A	ears/A	bu/A	%	lbs/bu	%	%	%	$/A
Dekalb DKC43-75RIB		34111	35164	203	25.2	49	2.6	1.3	1.3	642
Jung 48DP420		34469	34911	207	27.1	48	0.3	0.3	0.0	646
	20000	18876	22159	171	27.5	50	0.0	0.0	0.0	532
	26000	26578	27335	200	26.3	49	0.2	0.2	0.0	628
	32000	31186	31628	213	25.3	48	0.0	0.0	0.0	671
	38000	38068	38068	219	25.8	49	0.2	0.2	0.0	689
	44000	42297	42297	215	26.1	49	6.4	2.5	3.9	675
	50000	48737	48737	213	25.9	48	1.7	1.7	0.0	668
Dekalb DKC43-75RIB	20000	18560	22727	168	26.7	49	0.0	0.0	0.0	525
Dekalb DKC43-75RIB	26000	26389	27904	201	25.4	49	0.0	0.0	0.0	633
Dekalb DKC43-75RIB	32000	30808	31439	206	24.5	49	0.0	0.0	0.0	653
Dekalb DKC43-75RIB	38000	38510	38510	211	25.1	50	0.0	0.0	0.0	666
Dekalb DKC43-75RIB	44000	42424	42424	225	24.2	51	12.6	4.8	7.8	713
Dekalb DKC43-75RIB	50000	47979	47979	209	25.1	49	2.9	2.9	0.0	659
Jung 48DP420	20000	19192	21591	174	28.3	50	0.0	0.0	0.0	540
Jung 48DP420	26000	26767	26767	200	27.2	49	0.5	0.5	0.0	622
Jung 48DP420	32000	31565	31818	219	26.1	48	0.0	0.0	0.0	688
Jung 48DP420	38000	37626	37626	227	26.4	48	0.3	0.3	0.0	711
Jung 48DP420	44000	42171	42171	205	28.0	47	0.3	0.3	0.0	636
Jung 48DP420	50000	49494	49494	217	26.7	47	0.5	0.5	0.0	677
Mean		34290	35037	205	26.2	49	1.4	0.8	0.7	644
Probability(%)										
Hybrid (H)		30.5	63.4	23.7	0.0	0.9	28.6	23.9	32.8	72.1
Plant Density (D)		0.0	0.0	0.0	16.8	61.5	46.0	37.9	44.1	0.0
Hybrid x Plant Density		44.0	65.2	4.4	65.3	7.7	47.7	46.0	44.1	5.5
LSD (0.10)										
Hybrid (H)		NS	NS	NS	0.8	1	NS	NS	NS	NS
Plant Density (D)		1014	1556	9	NS	NS	NS	NS	NS	33
Hybrid x Plant Density		NS	NS	13	NS	2	NS	NS	NS	47

Table: 2002-10. Plant Density and Hybrid Influence on Silage Preformance.

Marshfield, WI - 2020.

Hybrid	Target density	Harvest density	Dry Matter Yield	Moist	Kernel milk	KMR 0-5	SMR 0-5	VMR 0-10	Crude protein	*In Vitro* ADF	*In Vitro* NDF	*In Vitro* Digest	*In Vitro* NDFD	*In Vitro* Starch	Milk per Ton	Milk per Acre
	plants/A	plants/A	T/A	%	%				%	%	%	%	%	%	lbs/T	lbs/A
Dekalb DKC43-75RIB		32533	9.6	64.4	59.2	3.0	1.0	4.0	6.0	19.8	38.3	85.4	62.0	29.0	3120	30046
Jung 48DP420		34259	9.9	66.6	61.7	3.1	1.0	4.1	6.0	21.4	40.1	84.3	61.0	25.6	2930	29019
	20000	19823	8.4	65.1	60.8	3.0	1.4	4.4	6.5	19.0	37.4	86.6	64.4	27.7	3078	25788
	26000	25883	9.3	65.9	57.5	2.9	1.3	4.1	6.2	20.0	38.5	85.3	62.0	28.2	3078	28735
	32000	30303	10.0	64.2	60.8	3.0	0.8	3.8	6.0	20.0	38.6	85.2	61.7	28.3	3067	30661
	38000	34974	10.1	66.2	63.3	3.2	0.9	4.1	5.8	20.7	39.3	84.6	60.9	27.3	3002	30325
	44000	42550	10.4	65.4	53.3	2.7	0.9	3.6	5.9	22.0	40.5	83.7	59.9	26.9	3002	31150
	50000	46843	10.4	66.3	66.7	3.3	0.8	4.1	5.7	22.0	40.8	83.7	60.1	25.5	2922	30537
Dekalb DKC43-75RIB	20000	19697	8.3	64.3	61.7	3.1	1.5	4.6	6.6	18.5	37.1	87.2	65.5	28.3	3132	25892
Dekalb DKC43-75RIB	26000	25000	8.7	66.6	55.0	2.8	1.4	4.2	6.1	20.3	38.8	85.0	61.6	27.4	3027	26256
Dekalb DKC43-75RIB	32000	30303	10.1	63.3	61.7	3.1	0.8	3.9	6.0	19.3	37.7	85.3	61.2	30.4	3174	31984
Dekalb DKC43-75RIB	38000	32828	10.0	65.0	68.3	3.4	0.8	4.2	5.8	18.7	36.8	86.0	62.1	32.1	3291	32895
Dekalb DKC43-75RIB	44000	41919	10.5	62.3	40.0	2.0	0.8	2.8	6.0	20.7	39.3	84.7	61.0	28.7	3091	32397
Dekalb DKC43-75RIB	50000	45454	10.3	64.9	68.3	3.4	0.7	4.1	5.7	21.2	39.9	84.3	60.6	27.0	3004	30854
Jung 48DP420	20000	19949	8.4	65.9	60.0	3.0	1.2	4.2	6.5	19.5	37.8	86.1	63.3	27.1	3024	25685
Jung 48DP420	26000	26767	10.0	65.3	60.0	3.0	1.1	4.1	6.2	19.7	38.1	85.6	62.5	28.9	3129	31214
Jung 48DP420	32000	30303	9.9	65.2	60.0	3.0	0.8	3.8	6.0	20.6	39.5	85.0	62.2	26.1	2960	29337
Jung 48DP420	38000	37121	10.2	67.5	58.3	2.9	1.1	4.0	5.7	22.8	41.7	83.1	59.6	22.4	2712	27755
Jung 48DP420	44000	43181	10.3	68.5	66.7	3.3	1.1	4.4	5.8	23.2	41.8	82.7	58.8	25.1	2913	29903
Jung 48DP420	50000	48232	10.6	67.6	65.0	3.3	0.9	4.1	5.6	22.8	41.7	83.1	59.5	24.1	2840	30220
Mean		33396	9.8	65.5	60.4	3.0	1.0	4.0	6.0	20.6	39.2	84.8	61.5	27.3	3025	29533
Probability(%)																
Hybrid (H)		15.7	27.5	8.1	64.7	64.7	79.2	63.5	47.1	14.9	17.6	21.1	32.9	10.9	11.2	43.5
Plant Density (D)		0.0	0.0	50.9	66.2	66.2	1.2	67.9	0.0	13.6	26.0	9.9	3.5	79.2	70.6	7.5
Hybrid x Density (H x D)		25.7	22.5	11.3	32.3	32.3	43.3	41.2	92.7	56.1	61.1	67.7	63.6	20.3	13.9	17.5
LSD (0.10)																
Hybrid (H)		2273	1	2	14	1	0	1	0.2	2	3	2	2.3	4	203	3101
Plant Density (D)		1649	0.5	2	14	1	0.3	0.9	0.2	2	3	2	2	4	196	3173
Hybrid x Density (H x D)		2433	1	3	20	1	0	1	0	3	4	3	3	5	279	4487

FIELD EXPERIMENT HISTORY

Title: **Plant Density and Hybrid Influence on Corn Grain**

Experiment: 02PD **Trial ID:** 6515 **Year:** 2020

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 /15/20 **pH** 5.3 **OM (%)** 3.2 **P (ppm)** 10 **K (ppm)** 130

Plot Management

Tillage Operations: Strip-Till

		Analysis:	Rate lbs/A	Date:
Fertilizer:	**Preplant :**	32-0-0 12-0-026S	443 lbs/A 108 lbs/A	N/A N/A
	Starter :	9-11-30-6S-1Zn	200 lbs/A	4 /27/20
	Post plant :	N/A	N/A	N/A
	Manure:	N/A	N/A	N/A

Herbicide: Explorer 3.0 oz/A
Zidua 3.25 oz/A
Atrazine 4L 32.0 oz/A
Roundup 25.6 oz/A

Insecticide: Force 3G 4.4 lbs/A

Irrigation: None **Hybrid:** See Factors

Planting Date: 4/27/20 **Planting Depth:** 1.5" **Row Width:** 30"

Target Plant Density: See Factors **Planting Method:** Almaco Plot Planter

Harvest Date: 10/15/20 **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:** 30528

Factors/Treatments:

Target Plant Density:	Hybrid:
1) 20000	1) Jung 48DP420 98RM
2) 26000	2) Jung 56SS538 106RM
3) 32000	
4) 38000	
5) 44000	
6) 50000	

Results: Tables 2002-11.

Table: 2002-11. Plant Density and Hybrid Influence on Corn Grain. Montfort, WI - 2020.

Hybrid	Target density	Density Harvest	Density Ears	Yield	Moisture	Test weight	Lodged Total	Lodged Stalk	Lodged Root	AGR $3.58
	plants/A	plants/A	ears/A	bu/A	%	lbs/bu	%	%	%	$/A
Jung 48DP420		31881		247	21.8	56	31.2	2.0	29.2	795
Jung 56SS538		29175		246	28.7	57	49.3	8.9	40.4	757
	20000	20454		218	24.7	56	30.8	1.3	29.5	689
	26000	23800		233	25.8	55	22.1	7.5	14.6	733
	32000	27967		259	24.3	57	30.0	5.8	24.2	821
	38000	32197		257	25.8	56	45.6	7.6	38.0	808
	44000	37373		257	25.7	57	54.3	5.5	48.8	809
	50000	41377		253	25.4	56	58.6	4.9	53.8	797
Jung 48DP420	20000	20959		218	21.9	55	11.8	0.0	11.8	704
Jung 48DP420	26000	25000		231	24.0	55	13.1	0.5	12.6	736
Jung 48DP420	32000	29040		253	20.6	57	19.6	0.5	19.2	821
Jung 48DP420	38000	34343		254	21.4	55	46.7	2.6	44.1	820
Jung 48DP420	44000	38636		275	21.7	56	37.8	5.2	32.6	886
Jung 48DP420	50000	43307		249	21.4	56	58.4	3.2	55.2	803
Jung 56SS538	20000	19949		217	27.5	57	49.8	2.6	47.2	674
Jung 56SS538	26000	22601		235	27.6	56	31.2	14.5	16.7	730
Jung 56SS538	32000	26894		265	28.0	57	40.4	11.1	29.3	820
Jung 56SS538	38000	30050		260	30.2	56	44.6	12.7	31.9	796
Jung 56SS538	44000	36111		239	29.8	59	70.8	5.8	65.0	732
Jung 56SS538	50000	39446		258	29.4	56	58.8	6.5	52.4	792
Mean		30528		246	25.3	56	40.3	5.4	34.8	776
Probability(%)										
Hybrid (H)		0.0		89.1	0.0	23.0	2.3	0.0	11.2	11.9
Plant Density (D)		0.0		1.9	47.9	72.7	5.6	2.7	2.7	1.7
Hybrid x Plant Density		68.9		46.3	9.4	96.2	55.1	0.8	27.6	40.7
LSD (0.10)										
Hybrid (H)		1073		NS	0.9	NS	12.7	1.9	NS	NS
Plant Density (D)		1858		22	NS	NS	22.0	3.2	20	69
Hybrid x Plant Density		NS		NS	2.3	NS	NS	4.5	NS	NS

FIELD EXPERIMENT HISTORY

Title: **Plant Density and Hybrid Influence on Corn Grain**

Experiment: 02PD **Trial ID:** 6516 **Year:** 2020

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 /15/20 **pH** 7.1 **OM (%)** 2.4 **P (ppm)** 128 **K (ppm)** 128

Plot Management

Tillage Operations: Chisel Plow FieldCultivator

		Analysis:	Rate lbs/A	Date:
Fertilizer:	**Preplant :**	46-0-0 11-52-0	152 lbs/A 155 lbs/A	N/A N/A
	Starter :	9-11-30-6S-1Zn	200 lbs/A	5 /4 /20
	Post plant :	32-0-0	331 lbs/A	N/A
	Manure:	N/A	N/A	N/A

Herbicide: Capreno 4.0 oz/A
Atrazine 0.75 lbs/A

Insecticide: Force 3G 4.4 lbs/A

Irrigation: None **Hybrid:** See Factors

Planting Date: 5/4/20 **Planting Depth:** 1.5" **Row Width:** 30"

Target Plant Density: See Factors **Planting Method:** Almaco Plot Planter

Harvest Date: 10/19/20 **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:** 29850

Factors/Treatments:

Target Plant Density:

1) 20000
2) 26000
3) 32000
4) 38000
5) 44000
6) 50000

Hybrid:

1) Dekalb DKC43-75RIB 93RM
2) Jung 48DP420 98RM

Results: Tables 2002-12.

Table: 2002-12. Plant Density and Hybrid Influence on Corn Grain. Seymour, WI - 2020.

Hybrid	Target density	Density Harvest	Density Ears	Yield	Moisture	Test weight	Lodged Total	Lodged Stalk	Lodged Root	AGR $3.58
	plants/A	plants/A	ears/A	bu/A	%	lbs/bu	%	%	%	$/A
Dekalb DKC43-75RIB		29629		174	18.0	57	4.0	4.0	0.0	575
Jung 48DP420		30071		182	18.6	55	4.0	4.0	0.0	597
	20000	19949		173	18.8	56	0.0	0.0	0.0	568
	26000	25820		189	19.8	55	0.0	0.0	0.0	617
	32000	29166		175	17.7	55	1.3	1.3	0.0	577
	38000	31881		173	17.7	56	5.9	5.9	0.0	570
	44000	34722		181	18.1	56	6.6	6.6	0.0	598
	50000	37563		178	17.7	57	10.2	10.1	0.1	588
Dekalb DKC43-75RIB	20000	19949		170	18.2	58	0.0	0.0	0.0	559
Dekalb DKC43-75RIB	26000	26136		178	19.1	56	0.0	0.0	0.0	582
Dekalb DKC43-75RIB	32000	29545		181	17.6	56	0.4	0.4	0.0	598
Dekalb DKC43-75RIB	38000	31060		172	17.9	56	4.9	4.9	0.0	567
Dekalb DKC43-75RIB	44000	33207		172	17.3	57	6.4	6.4	0.0	570
Dekalb DKC43-75RIB	50000	37878		175	18.1	57	12.4	12.1	0.3	575
Jung 48DP420	20000	19949		176	19.5	54	0.0	0.0	0.0	577
Jung 48DP420	26000	25505		201	20.5	55	0.0	0.0	0.0	651
Jung 48DP420	32000	28787		169	17.9	55	2.2	2.2	0.0	557
Jung 48DP420	38000	32702		173	17.6	55	7.0	7.0	0.0	573
Jung 48DP420	44000	36237		191	18.9	55	6.8	6.8	0.0	625
Jung 48DP420	50000	37247		181	17.3	57	8.1	8.1	0.0	600
Mean		29850		178	18.3	56	4.0	4.0	0.0	586
Probability(%)										
Hybrid (H)		70.0		25.6	35.6	0.2	99.9	98.0	32.8	28.2
Plant Density (D)		0.0		64.5	34.6	38.6	1.1	1.3	44.1	70.9
Hybrid x Plant Density		90.0		66.0	83.6	23.6	91.1	93.0	44.1	67.0
LSD (0.10)										
Hybrid (H)		NS		NS	NS	1	NS	NS	NS	NS
Plant Density (D)		3372		NS	NS	NS	5.2	5.2	NS	NS
Hybrid x Plant Density		NS		NS	NS	NS	NS	NS	NS	NS

FIELD EXPERIMENT HISTORY

Title: **Plant Density and Hybrid Influence on Corn Grain**

Experiment: 02PD **Trial ID:** 6517 **Year:** 2020

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 /15/20 **pH** 7.1 **OM (%)** 3.1 **P (ppm)** 12 **K (ppm)** 71

Plot Management

Tillage Operations: Chisel Plow Field

		Analysis:	Rate lbs/A	Date:
Fertilizer:	**Preplant :**	N/A	N/A	N/A
	Starter :	9-11-30-6S-1Zn	200 lbs/A	5 /6 /20
	Post plant :	32-0-0	443 lbs/A	N/A
	Manure:	Dairy	10000 gal/A	N/A

Herbicide: TripleFlex 3.0 qt/A
Realm Q 4.0oz/A
Atrazine 1.0 lb/A

Insecticide: Force 3G 4.4 lbs/A

Irrigation: None **Hybrid:** See Factors

Planting Date: 5/6/20 **Planting Depth:** 1.5" **Row Width:** 30"

Target Plant Density: See Factors **Planting Method:** Almaco Plot Planter

Harvest Date: 9/17/20 **Harvest Method:** Massey 8XP

Notes:

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:** 29692

Factors/Treatments:

Target Plant Density:	Hybrid:
1) 20000	1) Dekalb DKC43-75RIB 93RM
2) 26000	2) Jung 48DP420 98RM
3) 32000	
4) 38000	
5) 44000	
6) 50000	

Results: Tables 2002-13.

Table: 2002-13. Plant Density and Hybrid Influence on Corn Grain. Valders, WI - 2020.

Hybrid	Target density	Density Harvest	Density Ears	Yield	Moisture	Test weight	Lodged Total	Lodged Stalk	Lodged Root	AGR $3.58
	plants/A	plants/A	ears/A	bu/A	%	lbs/bu	%	%	%	$/A
Dekalb DKC43-75RIB		32154	32407	198	22.7	54	0.6	0.6	0.0	635
Jung 48DP420		27230	28030	207	24.8	52	0.4	0.4	0.0	655
	20000	19381	20391	181	24.9	53	0.6	0.6	0.0	572
	26000	24305	25000	207	22.9	53	0.0	0.0	0.0	664
	32000	27841	27967	209	22.9	54	0.0	0.0	0.0	669
	38000	31502	31881	210	23.7	53	0.4	0.4	0.0	671
	44000	35101	35606	213	23.4	53	0.5	0.5	0.0	681
	50000	40025	40467	193	24.8	53	1.5	1.5	0.0	613
Dekalb DKC43-75RIB	20000	20833	21212	172	24.6	54	1.3	1.3	0.0	546
Dekalb DKC43-75RIB	26000	25883	26262	209	21.6	54	0.0	0.0	0.0	673
Dekalb DKC43-75RIB	32000	30176	30176	198	21.0	55	0.0	0.0	0.0	642
Dekalb DKC43-75RIB	38000	31818	31944	198	22.8	55	0.5	0.5	0.0	635
Dekalb DKC43-75RIB	44000	40025	40530	218	23.4	55	0.3	0.3	0.0	697
Dekalb DKC43-75RIB	50000	44191	44318	192	22.6	53	1.4	1.4	0.0	615
Jung 48DP420	20000	17929	19570	189	25.1	52	0.0	0.0	0.0	597
Jung 48DP420	26000	22727	23737	206	24.1	52	0.0	0.0	0.0	654
Jung 48DP420	32000	25505	25757	220	24.7	52	0.0	0.0	0.0	696
Jung 48DP420	38000	31186	31818	223	24.7	52	0.3	0.3	0.0	706
Jung 48DP420	44000	30176	30681	208	23.4	51	0.7	0.7	0.0	665
Jung 48DP420	50000	35858	36616	195	26.9	52	1.6	1.6	0.0	610
Mean		29692	30218	202	23.7	53	0.5	0.5	0.0	645
Probability(%)										
Hybrid (H)		3.0	4.6	25.0	1.0	0.0	55.9	55.9	-	43.7
Plant Density (D)		0.0	0.0	15.2	48.5	95.0	1.9	1.9	-	13.5
Hybrid x Plant Density		80.5	73.9	71.3	54.0	41.5	46.3	46.3	-	77.6
LSD (0.10)										
Hybrid (H)		3647	3547	NS	1.3	1	NS	NS	-	NS
Plant Density (D)		6317	6144	NS	NS	NS	0.7	0.7	-	NS
Hybrid x Plant Density		NS	NS	NS	NS	NS	NS	NS	-	NS