

FIELD EXPERIMENT HISTORY

Title: Plant Density and Hybrid Influence on Corn Grain and Silage Performance
Experiment: 02PD **Trial ID:** 5944 **Year:** 2015
Personnel: UW: Joe Lauer, Kent Kohn, Thierno Diallo, Randy Shaver
Monsanto: Leo Brown, John Kennicker, Mike Weiss, Todd Vagts
Dairyland Labs: Dave Taysom
Location: Arlington, WI **County:** Columbia
Supported By: Monsanto

Site Information

Field: **Previous Crop:** Alfalfa **Soil Type:** Plano Silt Loam
Soil Test: **Date:** 10/1 /15 **pH:** 6.2 **OM (%)** 4.0 **P (ppm)** 65 **K (ppm)** 129

Plot Management

Tillage Operations: Disk Chisel Field Cultivator Cultivated

	<u>Analysis:</u>	<u>Rate lbs/A:</u>	<u>Date:</u>
Fertilizer: Preplant :	46-0-0	69 lbs/A	4 /21/15
Starter :	10-34-0	3.0 gal/A	5 /1 /15
Post plant :	N/A	N/A	N/A
Manure:	N/A	None	N/A

Herbicide: Dual II Mag 28 oz/A **Insecticide:** Force 3G 4.4 lbs/A
Hornet 4.0 oz/A
Irrigation: None **Hybrid:** See Factors
Planting Date: 5/1/15 **Planting Depth:** 1.5" **Row Width:** 30"
Target Plant Density: See Factors **Planting Method:** Almaco Precision Planter
Harvest Date: S: 9/16/15 **Harvest Method:** S: New Holland 707
G: 10/8/15 G: Massey 8XP

Experimental Design

Design: RCB **Replications:** 3
Plot Size Seeded: 20' x 25' **Experiment Size:** 1.9 A
Harvest Plot Size: S: 2.5' x 23.75' **Harvest Plant Density:** 33744
G: 5' x 23.75'

Factors/Treatments:

<u>Target Plant Density:</u>	<u>Hybrid:</u>
1) 20000	1) Mon 1
2) 26000	2) Mon 2
3) 32000	3) Mon 3
4) 38000	4) Mon 4
5) 44000	5) Mon 5
6) 50000	6) Mon 6
	7) Mon 7
	8) Mon 8

Results: Tables 1502-01, 1502-02 & 1502-03.

Table: 1502-01. Plant Density and Hybrid Influence on Corn Grain.**Arlington, WI - 2015.**

Hybrid	Target	Density		Yield	Moisture	Test	Lodged			AGR
	density	Harvest	Ears			weight	Total	Stalk	Root	\$3.44
	plants/A	plants/A	ears/A	bu/A	%	lbs/bu	%	%	%	\$/A
Mon 1	20000	18952	22743	215	22.7	55	0	0	0	660
Mon 1	26000	25433	28245	254	22.2	54	0	0	0	781
Mon 1	32000	29835	30446	253	23.3	54	1	0	1	774
Mon 1	38000	36071	36193	258	23.0	55	3	0	3	790
Mon 1	44000	41695	41818	260	23.3	55	5	0	5	793
Mon 1	50000	47075	47075	260	24.4	55	19	0	19	787
Mon 2	20000	19075	20664	233	29.4	54	0	0	0	683
Mon 2	26000	24944	24944	259	28.0	54	1	0	0	766
Mon 2	32000	31669	32525	273	28.7	55	2	0	2	805
Mon 2	38000	35215	35215	269	26.9	54	2	0	2	801
Mon 2	44000	42062	42062	274	27.3	54	6	1	5	814
Mon 2	50000	45241	45241	282	26.6	54	9	0	9	844
Mon 3	26000	31188	31310	271	23.4	55	16	0	16	827
Mon 3	32000	28857	28979	262	22.8	56	2	0	2	804
Mon 3	38000	33014	33136	262	23.0	56	32	0	32	801
Mon 3	44000	41695	41695	276	22.8	56	16	0	16	847
Mon 4	26000	29713	29713	243	29.0	55	2	0	2	715
Mon 4	32000	33014	33014	268	28.0	54	5	0	5	794
Mon 4	38000	36927	36927	281	29.0	56	24	0	24	825
Mon 4	44000	39005	39005	294	27.6	55	32	0	32	873
Mon 5	26000	25188	25922	251	22.6	56	0	0	0	771
Mon 5	32000	35093	35582	253	22.2	55	2	0	2	779
Mon 5	38000	38149	38149	268	21.9	56	3	0	3	827
Mon 5	44000	39739	39739	250	21.4	55	26	0	26	772
Mon 6	26000	24455	24699	248	25.6	56	1	0	1	745
Mon 6	32000	31547	31669	274	27.0	56	3	0	3	817
Mon 6	38000	37171	37171	282	26.5	56	3	0	3	844
Mon 6	44000	41818	41818	281	27.0	55	6	0	6	838
Mon 7	26000	28367	28367	199	26.0	55	22	0	21	597
Mon 7	32000	30324	30324	215	25.5	54	7	1	6	649
Mon 7	38000	34603	34603	219	26.6	54	10	0	10	653
Mon 7	44000	44385	44385	201	25.2	55	29	0	29	607
Mon 8	26000	24210	24210	218	31.1	55	11	1	10	633
Mon 8	32000	29346	29957	204	30.2	54	44	0	43	594
Mon 8	38000	34970	34970	213	29.8	54	92	0	92	624
Mon 8	44000	40106	40106	159	29.1	54	89	0	89	467
Mean		33615	33962	250	25.8	55	15	0	14	750
Probability(%)										
Hybrid x Plant Density		0.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0	0.0
LSD (0.10)										
Hybrid x Plant Density		4230	4389	22	2	1	21	1	21	68

Table: 1502-02. Plant Density and Hybrid Influence on Silage Performance.
Arlington, WI - 2015.

Hybrid	Target density plants/A	Whole Plant																	
		Density			Dry Matter Yield	Moist %	Kernel milk %	Plant height inches	KMR 0-5	SMR 0-5	VMR 0-10	Crude protein %	ADF %	NDF %	<i>in vitro</i>			Milk per	
		V5 plants/A	Harvest plants/A	Ears ears/A											Digest %	NDFD %	Starch %	Ton lbs/T	Acre lbs/A
Mon 1	20000	18463	19319	23110	9.0	66	48	116	2.4	2.9	5.4	7.2	26.5	41	83	59	33	3402	30713
Mon 1	26000	22621	23354	26167	8.8	67	48	120	2.4	2.8	5.3	7.5	28.9	46	81	58	30	3244	28476
Mon 1	32000	30324	29468	30079	10.2	65	40	120	2.0	2.0	4.0	6.7	28.0	44	82	60	31	3343	33996
Mon 1	38000	37783	36560	36682	11.6	63	43	118	2.2	1.8	4.0	6.8	24.2	39	85	61	39	3521	40646
Mon 1	44000	40595	43529	43652	10.2	66	47	118	2.3	1.9	4.2	6.7	28.7	45	81	58	32	3255	33246
Mon 1	50000	45853	47198	47198	11.9	63	42	119	2.1	1.7	3.8	6.8	26.4	42	83	59	34	3394	40653
Mon 2	20000	17852	19442	21031	9.1	70	60	117	3.0	3.2	6.2	8.2	25.5	41	83	60	32	3420	31087
Mon 2	26000	23721	24944	24944	8.4	72	60	116	3.0	3.2	6.2	7.6	28.4	46	81	59	28	3269	27609
Mon 2	32000	29468	30446	31302	10.7	68	55	120	2.8	3.1	5.8	7.3	26.8	43	83	61	31	3393	36434
Mon 2	38000	36927	36315	36315	10.9	69	55	117	2.8	2.5	5.2	7.4	26.8	44	83	61	33	3365	36835
Mon 2	44000	40106	41084	41084	10.6	71	53	119	2.7	2.1	4.8	7.2	30.0	46	80	57	28	3215	34453
Mon 2	50000	46342	45364	45364	11.2	68	60	116	3.0	2.4	5.4	7.2	25.4	41	84	60	35	3447	38760
Mon 3	26000	27145	27756	27878	10.6	61	53	117	2.7	2.8	5.5	7.8	24.5	39	84	61	36	3497	37212
Mon 3	32000	30935	31058	31180	11.3	62	55	118	2.8	1.9	4.7	6.9	26.3	44	83	62	33	3387	38249
Mon 3	38000	35948	36438	36560	11.6	62	43	117	2.2	1.9	4.1	6.7	23.9	39	85	61	37	3523	40805
Mon 3	44000	42674	41573	41573	12.5	63	53	119	2.7	1.8	4.5	6.5	23.9	38	85	61	38	3559	44602
Mon 4	26000	25311	27756	27756	10.0	67	62	123	3.1	3.2	6.3	8.1	25.1	40	84	59	33	3441	34600
Mon 4	32000	31058	33258	33258	11.2	67	58	121	2.9	3.1	6.0	8.1	25.8	42	83	59	34	3370	37772
Mon 4	38000	37905	35704	35704	10.9	65	67	124	3.3	2.8	6.2	7.4	26.1	43	83	60	33	3382	36948
Mon 4	44000	42184	36682	36682	10.6	67	60	124	3.0	2.6	5.6	7.5	26.8	43	83	60	31	3375	35906
Mon 5	26000	25555	25677	26411	10.6	64	48	119	2.4	2.1	4.5	7.2	25.9	41	84	60	34	3432	36568
Mon 5	32000	32280	31913	32403	10.4	65	50	121	2.5	1.9	4.4	6.8	27.7	43	82	57	32	3314	34513
Mon 5	38000	37783	37905	37905	11.5	63	50	120	2.5	1.7	4.2	6.6	26.4	41	83	60	35	3434	39444
Mon 5	44000	42796	38761	38761	11.8	64	40	119	2.0	1.4	3.4	6.8	29.6	46	80	58	31	3218	37966
Mon 6	26000	25311	24944	25188	9.4	67	48	119	2.4	3.2	5.6	7.1	26.1	43	83	61	30	3403	32097
Mon 6	32000	30324	30446	30568	10.0	69	45	128	2.3	2.5	4.8	7.6	27.4	46	83	62	28	3341	33531
Mon 6	38000	38027	36438	36438	10.7	68	47	120	2.3	2.4	4.8	7.1	28.0	45	82	60	28	3312	35308
Mon 6	44000	42062	40228	40228	11.4	67	50	118	2.5	1.9	4.4	7.4	25.8	41	83	60	33	3409	39038
Mon 7	26000	30665	30626	30626	9.7	68	60	125	3.0	2.4	5.4	8.1	25.9	42	83	61	34	3419	33358
Mon 7	32000	30691	31424	31424	10.5	65	50	129	2.5	2.2	4.7	7.7	22.5	37	86	62	38	3591	37818
Mon 7	38000	37416	35948	35948	9.1	69	53	124	2.7	2.3	5.0	8.1	28.6	46	82	61	26	3316	30318
Mon 7	44000	42796	40962	40962	9.3	68	43	124	2.2	2.3	4.5	7.8	30.5	48	80	60	24	3195	29666
Mon 8	26000	24822	24332	24332	10.3	68	58	128	2.9	3.3	6.3	8.1	27.7	44	82	58	29	3291	33839
Mon 8	32000	30079	29590	30202	10.4	67	60	134	3.0	2.8	5.8	8.8	26.8	43	81	57	31	3283	34354
Mon 8	38000	37049	36193	36193	8.6	69	60	123	3.0	3.2	6.2	8.6	27.6	45	81	57	29	3189	27588
Mon 8	44000	39617	41940	41940	7.0	68	55	119	2.8	3.2	6.0	8.8	28.0	46	81	59	25	3255	23129
Mean		33625	33460	33807	10.3	66	52	121	2.6	2.5	5.1	7.4	26.7	43	83	60	32	3367	34932
Probability(%)																			
Hybrid x Plant Density		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LSD (0.10)																			
Hybrid x Plant Density		3190	4105	4269	1.7	3	12	5	1	0.5	0.8	0.7	4	6	3	2	6	212	6739

FIELD EXPERIMENT HISTORY

Title: Plant Density and Hybrid Influence on Corn Silage Performance
Experiment: 02PD **Trial ID:** 6008 **Year:** 2015
Personnel: UW: Joe Lauer, Kent Kohn, Thierno Diallo, Randy Shaver
 Monsanto: Leo Brown, John Kennicker, Mike Weiss, Todd Vagts
 Dairyland Labs: Dave Taysom
Location: Montfort, WI **County:** Iowa
Supported By: Monsanto

Site Information

Field: **Previous Crop:** Corn **Soil Type:** Plano Silt Loam
Soil Test: **Date:** 10/1 /15 **pH:** 6.8 **OM (%)** 3.9 **P (ppm)** 135 **K (ppm)** 233

Plot Management

Tillage Operations: Chisel Plow Field Cultivator

	<u>Analysis:</u>	<u>Rate lbs/A:</u>	<u>Date:</u>
Fertilizer: Preplant :	46-0-0	150 lbs/A	N/A
Starter :	10-34-0	3.0 gal/A	5 /13/15
Post plant :	32-0-0	20 gal/A	N/A
Manure:	N/A	N/A	N/A

Herbicide: Lumax 1.5 qt/A **Insecticide:** Force 3G 4.4 lbs/A
 Impact 0.75 oz/A

Irrigation: None **Hybrid:** See Factors

Planting Date: 5/13/15 **Planting Depth:** 1.5" **Row Width:** 30"

Target Plant Density: See Factors **Planting Method:** Almaco Precision planter

Harvest Date: 9/24/15 **Harvest Method:** New Holland 707

Experimental Design

Design: RCB **Replications:** 3
Plot Size Seeded: 10' x 25' **Experiment Size:** 0.8 A
Harvest Plot Size: 2.5' x 23.75' **Harvest Plant Density:** 31382

Factors/Treatments:

<u>Target Plant Density:</u>	<u>Hybrid:</u>
1) 20000	1) Mon 2
2) 26000	2) Mon 4
3) 32000	3) Mon 6
4) 38000	4) Mon 8
5) 44000	5) Mon 9
6) 50000	

Results: Tables 1502-03.

Table: 1502-03. Plant Density and Hybrid Influence on Silage Performance.**Montfort, WI - 2015.**

Hybrid	Target density plants/A	Whole Plant																		
		Density			Dry Matter		Kernel milk	Plant height	KMR 0-5	SMR 0-5	VMR 0-10	Crude		<i>in vitro</i>			Milk per			
		V5 plants/A	Harvest plants/A	Ears ears/A	Yield T/A	Moist %						protein %	ADF %	NDF %	Digest %	NDFD %	Starch %	Ton lbs/T	Acre lbs/A	
Mon 2	20000	17607	20909	20909	8.4	61	57	109	2.8	2.3	5.1	8.1	24.3	41	84	62	34	3455	29225	
Mon 2	26000	21887	24210	24210	9.5	63	47	113	2.3	2.1	4.5	7.8	24.0	40	84	61	35	3470	32940	
Mon 2	32000	29346	30446	30568	10.4	61	50	111	2.5	1.5	4.0	7.4	24.8	40	85	61	34	3484	36345	
Mon 2	38000	32036	32036	32036	9.5	64	45	111	2.3	1.7	4.0	7.4	25.0	41	83	60	35	3413	32412	
Mon 2	44000	31058	32892	32892	11.3	59	52	112	2.6	1.2	3.8	7.4	24.4	38	85	60	36	3506	39520	
Mon 2	50000	44997	45853	45853	10.1	61	18	111	0.9	1.1	2.0	7.3	27.4	42	82	58	31	3344	33815	
Mon 4	26000	22376	28001	28001	8.7	61	55	121	2.8	1.8	4.6	8.8	24.9	40	83	58	32	3380	29362	
Mon 4	32000	25922	29713	29713	10.2	60	52	123	2.6	1.5	4.1	7.7	23.7	38	84	57	35	3444	35133	
Mon 4	38000	35582	36193	36193	11.6	59	53	120	2.7	1.3	4.0	7.8	24.4	40	83	58	35	3412	39704	
Mon 4	44000	38149	38272	38272	11.5	60	55	122	2.8	1.6	4.4	7.7	24.1	38	84	58	35	3450	39548	
Mon 6	26000	21642	24088	24088	8.1	66	53	119	2.7	2.5	5.1	8.0	26.7	43	81	56	30	3257	26485	
Mon 6	32000	29290	33381	33503	10.3	66	22	120	1.1	2.4	3.5	7.8	26.2	42	82	58	31	3345	34388	
Mon 6	38000	32280	33870	33870	10.6	63	25	117	1.3	1.9	3.2	7.8	25.0	41	83	58	33	3385	35921	
Mon 6	44000	34603	36193	36193	11.6	65	42	122	2.1	2.3	4.4	7.7	26.1	43	82	57	32	3307	38491	
Mon 8	26000	22132	22865	22865	10.2	64	55	127	2.8	2.0	4.8	9.1	27.0	43	81	57	31	3253	33099	
Mon 8	32000	27022	28001	28001	9.5	63	40	122	2.0	1.7	3.7	8.3	27.7	43	81	57	30	3259	30962	
Mon 8	38000	34359	33992	33992	10.8	59	57	129	2.8	1.2	4.0	7.8	29.8	46	80	56	27	3146	34225	
Mon 8	44000	35948	33992	33992	8.8	65	53	126	2.7	1.5	4.2	8.5	29.3	46	80	56	26	3171	27925	
Mon 9	26000	22132	23843	23966	10.0	64	43	132	2.2	1.9	4.1	8.8	25.1	40	84	59	33	3423	34092	
Mon 9	32000	28612	30935	31180	9.8	64	33	132	1.7	1.6	3.3	8.1	27.5	43	82	59	30	3322	32395	
Mon 9	38000	36193	35337	35337	9.5	63	27	131	1.3	1.5	2.8	8.3	27.6	44	82	58	29	3281	31119	
Mon 9	44000	41451	39372	39372	10.2	63	28	132	1.4	1.2	2.6	8.0	29.6	46	80	57	28	3194	32529	
Mean		30210	31563	31591	10.0	62	44	121	2.2	1.7	3.9	8.0	26.1	42	82	58	32	3350	33620	
Probability(%)																				
Hybrid x Plant Density		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LSD (0.10)																				
Hybrid x Plant Density		5113	4897	4920	1.4	4	18	5	0.9	0.6	1.2	0.6	3.5	5	3	2	6	196.399	5221.94	

FIELD EXPERIMENT HISTORY

Title: Plant Density and Hybrid Influence on Corn Silage Performance
Experiment: 02PD **Trial ID:** 6006 **Year:** 2015
Personnel: UW: Joe Lauer, Kent Kohn, Thierno Diallo, Randy Shaver
 Monsanto: Leo Brown, John Kennicker, Mike Weiss, Todd Vagts
 Dairyland Labs: Dave Taysom
Location: Fond du Lac, WI **County:** Fond du Lac
Supported By: Monsanto

Site Information

Field: **Previous Crop:** Soybean **Soil Type:** Virgil Silt Loam
Soil Test: **Date:** 10/01/15 **pH:** 6.9 **OM (%)** 3.1 **P (ppm)** 45 **K (ppm)** 118

Plot Management

Tillage Operations: Chisel Plow Field Cultivator

		<u>Analysis:</u>	<u>Rate lbs/A:</u>	<u>Date:</u>
Fertilizer:	Preplant :	46-0-0	160 lbs/A	N/A
	Starter :	10-34-0	3.0 gal/A	4 /30/15
	Post plant :	N/A	N/A	N/A
	Manure:	N/A	N/A	N/A

Herbicide: Lumax 3.0 qt/A **Insecticide:** Force 3G 4.4 lbs/A
Irrigation: None **Hybrid:** See Factors
Planting Date: 4/30/15 **Planting Depth:** 1.5" **Row Width:** 30"
Target Plant Density: See Factors **Planting Method:** Almaco Precision planter
Harvest Date: 9/17/15 **Harvest Method:** New Holland 707

Experimental Design

Design: RCB **Replications:** 3
Plot Size Seeded: 10' x 25' **Experiment Size:** 0.9 A
Harvest Plot Size: 2.5' x 23.75' **Harvest Plant Density:** 33835

Factors/Treatments:

<u>Target Plant Density:</u>	<u>Hybrid:</u>
1) 20000	1) Mon 1
2) 26000	2) Mon 2
3) 32000	3) Mon 3
4) 38000	4) Mon 4
5) 44000	5) Mon 5
6) 50000	6) Mon 6
	7) Mon 7
	8) Mon 8

Results: Tables 1502-04.

Table: 1502-04. Plant Density and Hybrid Influence on Silage Performance.**Fond du Lac, WI - 2015.**

Hybrid	Target density plants/A	Whole Plant																	
		Density			Dry Matter		Kernel milk	Plant height	KMR 0-5	SMR 0-5	VMR 0-10	Crude		<i>in vitro</i>			Milk per		
		V5 plants/A	Harvest plants/A	Ears ears/A	Yield T/A	Moist %						protein %	ADF %	NDF %	Digest %	NDFD %	Starch %	Ton lbs/T	Acre lbs/A
Mon 1	20000	20175	22009	22498	9.4	58	40	109	2.0	2.2	4.2	7.3	22.2	36	86	61	38	3598	33759
Mon 1	26000	26289	25433	25922	9.0	60	43	112	2.2	1.9	4.1	6.8	29.6	48	80	58	28	3179	28528
Mon 1	32000	30324	30813	30813	10.3	55	33	112	1.7	1.8	3.5	6.6	23.2	38	85	60	38	3542	36263
Mon 1	38000	36438	35582	35582	10.5	57	48	113	2.4	1.6	4.0	6.7	24.7	40	85	62	36	3514	36968
Mon 1	44000	41451	39861	39861	11.3	57	42	110	2.1	1.8	3.9	6.4	25.8	41	83	58	34	3410	38429
Mon 1	50000	46831	44752	44752	10.3	57	43	114	2.2	1.6	3.8	6.2	28.5	46	82	60	30	3308	34106
Mon 2	20000	18097	18952	19319	8.6	66	47	111	2.3	2.4	4.7	7.7	25.1	43	84	62	31	3426	29850
Mon 2	26000	25066	25188	25188	8.9	66	50	113	2.5	2.7	5.2	7.6	27.6	46	83	63	27	3336	29699
Mon 2	32000	31791	31058	31058	10	62	42	114	2.1	2.5	4.6	6.8	26.5	43	83	61	31	3405	33927
Mon 2	38000	37171	35459	35459	9.9	63	57	111	2.8	2.0	4.8	7.0	24.7	40	85	61	34	3501	34777
Mon 2	44000	41451	40350	40350	10.2	62	47	109	2.3	2.2	4.5	6.7	23.8	39	85	63	37	3566	36411
Mon 2	50000	42429	42184	42184	11.1	57	47	110	2.3	2.0	4.3	6.5	24.2	40	85	62	36	3528	39093
Mon 3	26000	25311	24332	24455	10.0	58	38	111	1.9	1.8	3.7	7.1	23.0	38	86	63	38	3602	36191
Mon 3	32000	32036	29590	29590	10.0	55	47	111	2.3	1.5	3.8	6.2	25.3	41	84	61	35	3467	34673
Mon 3	38000	37660	35337	35337	10.4	56	48	112	2.4	1.9	4.3	6.7	25.4	41	83	60	34	3438	35816
Mon 3	44000	43774	42429	42429	11.2	57	42	113	2.1	1.9	4.0	6.6	25.5	42	84	62	34	3439	38419
Mon 4	26000	26656	32158	32158	9.9	61	53	115	2.7	2.7	5.3	7.6	23.9	40	84	60	34	3491	34595
Mon 4	32000	32892	33870	33870	9.8	62	58	115	2.9	2.8	5.8	7.1	25.4	41	83	59	32	3410	33463
Mon 4	38000	36682	37538	37538	10.4	61	40	119	2.0	2.1	4.1	7.4	26.2	43	83	60	30	3364	35004
Mon 4	44000	42307	42062	42062	10.6	60	37	118	1.8	1.6	3.4	6.5	26.7	42	82	58	31	3339	35499
Mon 5	26000	26289	25433	25677	9.3	58	37	112	1.8	2.1	3.9	6.9	21.3	34	87	62	40	3691	34214
Mon 5	32000	34146	32753	32753	10.8	56	32	114	1.6	1.7	3.3	6.8	22.8	37	86	61	39	3603	38758
Mon 5	38000	39372	40839	40839	10.9	53	42	115	2.1	1.9	4.0	6.4	23.9	38	84	60	36	3514	38436
Mon 5	44000	45241	43285	43285	10.4	57	42	114	2.1	2.0	4.1	6.6	23.3	37	85	61	36	3570	37159
Mon 6	26000	25677	27267	27267	8.9	60	47	113	2.3	2.6	4.9	6.8	25.1	41	83	60	33	3419	30389
Mon 6	32000	32280	30813	30813	10.4	61	42	114	2.1	1.9	4.0	6.8	21.6	35	86	59	38	3604	37393
Mon 6	38000	38394	36804	36804	9.8	59	37	115	1.8	2.1	3.9	6.5	26.4	43	83	60	31	3367	33135
Mon 6	44000	36438	38883	38883	10.5	61	35	112	1.8	2.1	3.9	7.0	25.0	42	84	60	33	3438	35878
Mon 7	26000	27145	26289	26411	8.5	58	43	115	2.2	1.6	3.8	7.6	23.4	39	86	63	36	3569	30234
Mon 7	32000	32280	32036	32036	9.0	59	42	120	2.1	1.6	3.7	7.0	27.6	46	82	61	30	3325	29997
Mon 7	38000	37660	38394	38638	9.8	57	48	116	2.4	1.8	4.2	7.2	25.3	41	83	60	33	3426	33525
Mon 7	44000	44997	41329	41329	9.3	59	52	122	2.6	1.6	4.2	7.3	28.7	48	82	62	26	3288	30632
Mon 8	26000	25188	24944	24944	9.3	61	53	115	2.7	2.4	5.0	7.5	24.6	40	84	59	34	3460	32034
Mon 8	32000	30691	28979	28979	9.4	60	53	119	2.7	1.9	4.6	7.2	28.6	46	80	57	30	3212	30182
Mon 8	38000	36071	34359	34359	9.4	60	52	116	2.6	1.7	4.3	7.4	28.4	46	81	58	29	3254	30510
Mon 8	44000	40350	39250	39250	9.6	56	53	116	2.7	1.9	4.5	7.4	24.1	39	84	58	36	3477	33417
Mean		34085	33628	33686	9.9	59	45	114	2.2	2.0	4.2	6.9	25.2	41	84	60	34	3447	34205
Probability(%)																			
Hybrid x Plant Density		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LSD (0.10)																			
Hybrid x Plant Density		5113	4897	4920	1.4	4	18	5	0.9	0.6	1.2	0.6	3.5	5	3	2	6	196.399	5222

FIELD EXPERIMENT HISTORY

Title: Plant Density and Hybrid Influence on Corn Silage Performance
Experiment: 02PD **Trial ID:** 6005 **Year:** 2015
Personnel: UW: Joe Lauer, Kent Kohn, Thierno Diallo, Randy Shaver
 Monsanto: Leo Brown, John Kennicker, Mike Weiss, Todd Vagts
 Dairyland Labs: Dave Taysom
Location: Chippewa Falls, WI **County:** Chippewa
Supported By: Monsanto

Site Information

Field: **Previous Crop:** Kidney beans **Soil Type:** Sandy Loam
Soil Test: **Date:** 10/1 /15 **pH:** 6.4 **OM (%)** 2.2 **P (ppm)** 47 **K (ppm)** 148

Plot Management

Tillage Operations: Chisel Plow Turbo-Till Cultivated

	<u>Analysis:</u>	<u>Rate lbs/A:</u>	<u>Date:</u>
Fertilizer: Preplant :	N/A	N/A	N/A
Starter :	10-12-30-6S	174 lbs/A	4 /28/15
Post plant :	82-0-0	160 lbs/A	N/A
Manure:	N/A	N/A	N/A

Herbicide: Capreno 3.0 oz/A **Insecticide:** Force 3G 4.4 lbs/A
Irrigation: Irrigated **Hybrid:** See Factors
Planting Date: 4/28/15 **Planting Depth:** 1.5" **Row Width:** 30"
Target Plant Density: See Factors **Planting Method:** Almaco Precision Planter
Harvest Date: 9/15/15 **Harvest Method:** New Holland 707 Plot Chopper

Experimental Design

Design: RCB **Replications:** 3
Plot Size Seeded: 10' x 25' **Experiment Size:** 0.8 A
Harvest Plot Size: 2.5' x 23.75' **Harvest Plant Density:** 31791

Factors/Treatments:

<u>Target Plant Density:</u>	<u>Hybrid:</u>
1) 20000	1) Mon 1
2) 26000	2) Mon 3
3) 32000	3) Mon 5
4) 38000	4) Mon 7
5) 44000	
6) 50000	

Results: Tables 1502-05.

Table: 1502-05. Plant Density and Hybrid Influence on Silage Performance.
Chippewa Falls, WI - 2015.

Hybrid	Target density plants/A	Whole Plant																	
		Density			Dry Matter		Kernel milk	Plant height	KMR 0-5	SMR 0-5	VMR 0-10	Crude protein	ADF	NDF	<i>in vitro</i>			Milk per	
		V5 plants/A	Harvest plants/A	Ears ears/A	Yield T/A	Moist %									Digest %	NDFD %	Starch %	Ton lbs/T	Acre lbs/A
Mon 1	20000	20175	17730	17730	7.0	67	62	105	3.1	2.7	5.8	7.5	26.7	44	82	58	32	3306	23312
Mon 1	26000	23721	24455	24577	7.6	67	55	102	2.8	1.9	4.7	7.6	27.6	46	81	59	31	3263	24743
Mon 1	32000	27267	28979	28979	7.9	69	58	99	2.9	2.1	5.0	7.3	27.9	44	82	59	31	3300	26067
Mon 1	38000	33870	32280	32280	8.9	69	60	102	3.0	2.2	5.2	7.5	29.3	47	80	58	29	3194	28476
Mon 1	44000	39128	36927	36927	8.8	66	57	102	2.8	1.9	4.7	7.1	25.6	40	83	59	36	3426	30020
Mon 1	50000	43407	39128	39128	8.9	68	60	101	3.0	1.8	4.8	7.4	30.4	49	80	59	28	3156	28112
Mon 3	26000	25555	25188	25188	8.8	65	65	100	3.3	2.0	5.3	7.7	23.5	39	85	61	37	3521	31124
Mon 3	32000	29713	29590	29590	8.8	67	63	107	3.2	2.0	5.2	7.1	26.6	43	82	59	33	3347	29619
Mon 3	38000	29957	31302	31302	8.7	65	67	97	3.3	2.0	5.3	7.0	26.2	43	83	60	33	3368	29057
Mon 3	44000	34726	35459	35459	9.4	66	63	104	3.2	2.0	5.2	7.2	26.8	44	83	62	32	3387	31997
Mon 5	26000	24944	26167	26167	8.4	66	58	98	2.9	2.1	5.0	7.2	24.8	40	83	58	35	3422	28747
Mon 5	32000	32403	33014	33136	9.3	66	60	101	3.0	1.9	4.9	6.8	25.4	40	83	59	36	3435	32088
Mon 5	38000	37049	37905	37905	9.8	66	57	105	2.8	1.9	4.7	6.7	29.2	46	80	57	31	3211	31592
Mon 5	44000	41573	37538	37538	9.1	66	58	95	2.9	1.9	4.8	7.0	26.1	42	83	59	35	3389	30846
Mon 7	26000	21887	23966	23966	6.1	70	60	100	3.0	2.0	5.0	8.4	30.6	50	80	60	24	3160	19314
Mon 7	32000	31791	31791	31791	7.1	70	65	101	3.3	1.8	5.1	7.5	28.9	46	81	59	29	3245	23135
Mon 7	38000	38027	35948	36071	8.3	71	60	110	3.0	2.0	5.0	8.0	31.5	51	79	59	24	3083	25630
Mon 7	44000	41206	38149	38149	8.0	67	68	107	3.4	1.8	5.2	7.6	27.1	44	82	60	31	3338	26825
Mean		32022	31418	31438	8.4	67	61	102	3.0	2.0	5.0	7.4	27.5	44	82	59	31	3308	27817
Probability(%)																			
Hybrid x Plant Density		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LSD (0.10)																			
Hybrid x Plant Density		3759	4280	4298	1.2	3	13	7	0.7	0.4	0.8	0.6	3.6	5	3	2	6	197.96	4694

FIELD EXPERIMENT HISTORY

Title: Plant Density and Hybrid Influence on Corn Silage Performance
Experiment: 02PD **Trial ID:** 6007 **Year:** 2015
Personnel: UW: Joe Lauer, Kent Kohn, Thierno Diallo, Randy Shaver
 Monsanto: Leo Brown, John Kennicker, Mike Weiss, Todd Vagts
 Dairyland Labs: Dave Taysom
Location: Marshfield, WI **County:** Marathon
Supported By: Monsanto

Site Information

Field: **Previous Crop:** Corn **Soil Type:** Withee Silt Loam
Soil Test: **Date:** 10/1 /15 **pH:** 7.1 **OM (%)** 3.7 **P (ppm)** 36 **K (ppm)** 120

Plot Management

Tillage Operations: Chisel Plow Field Cultivator Cultivated

	<u>Analysis:</u>	<u>Rate lbs/A:</u>	<u>Date:</u>
Fertilizer: Preplant :	N/A	N/A	N/A
Starter :	10-34-0	3.0 gal/A	4 /29/15
Post plant :	32-0-0	40 gal/A	6/22/15
	28-0-0	40 gal/A	7/9/15
Manure:	N/A	N/A	N/A

Herbicide: Medal II 1.7 pt/A **Insecticide:** Force 3G 4.4 lbs/A
 Hornet WDG 3.0 oz/A
 Status 3.0 oz/A
Irrigation: None **Hybrid:** See Factors
Planting Date: 4/29/15 **Planting Depth:** 1.5" **Row Width:** 30"
Target Plant Density: See Factors **Planting Method:** Almaco Precision Planter
Harvest Date: 9/29/15 **Harvest Method:** New Holland 707 Plot Chopper

Experimental Design

Design: RCB **Replications:** 3
Plot Size Seeded: 10' x 25' **Experiment Size:** 0.8 A
Harvest Plot Size: 2.5' x 23.75' **Harvest Plant Density:** 30754

Factors/Treatments:

<u>Target Plant Density:</u>	<u>Hybrid:</u>
1) 20000	1) Mon 1
2) 26000	2) Mon 3
3) 32000	3) Mon 5
4) 38000	4) Mon 7
5) 44000	
6) 50000	

Results: Tables 1502-06.

Table: 1502-06. Plant Density and Hybrid Influence on Silage Performance.
Marshfield, WI - 2015.

Hybrid	Target density plants/A	Whole Plant																	
		Density			Dry Matter		Kernel milk	Plant height	KMR			Crude protein	<i>in vitro</i>					Milk per	
		V5	Harvest	Ears	Yield	Moist			0-5	0-5	0-10		ADF	NDF	Digest	NDFD	Starch	Ton	Acre
Mon 1	20000	16996	16262	16262	3.9	69	77	80	3.8	3.3	7.2	7.6	24.3	42	86	66	30	3590	14131
Mon 1	26000	27251	27781	27781	5.3	69	78	81	3.9	3.2	7.1	7.6	22.7	40	87	67	32	3681	19569
Mon 1	32000	28123	26533	26533	5.9	69	83	79	4.2	2.9	7.1	7.8	23.0	41	86	67	31	3651	21653
Mon 1	38000	28490	24455	24455	4.6	70	78	83	3.9	3.0	6.9	8.6	24.2	43	85	65	28	3507	15971
Mon 1	44000	33748	32097	32097	5.2	71	89	80	4.4	3.2	7.6	7.4	25.9	46	86	69	26	3566	18615
Mon 1	50000	39433	40350	40350	5.1	72	81	80	4.1	3.4	7.5	7.5	24.3	43	85	66	28	3576	17997
Mon 3	26000	27205	28072	28072	6.4	67	80	84	4.0	2.9	6.9	7.5	23.2	42	86	67	32	3633	23137
Mon 3	32000	28979	28123	28123	6.2	68	80	83	4.0	3.1	7.1	7.1	25.1	44	85	65	29	3527	21870
Mon 3	38000	36468	30742	30742	5.9	68	83	85	4.2	2.9	7.1	7.0	23.5	41	86	66	33	3632	21494
Mon 3	44000	32647	31913	31913	6.6	68	80	81	4.0	2.6	6.6	7.2	24.0	42	86	66	31	3606	23738
Mon 5	26000	36829	37318	37318	7.3	68	80	85	4.0	3.1	7.1	7.3	22.5	39	87	67	34	3695	26852
Mon 5	32000	31791	31302	31302	6.3	69	78	84	3.9	2.9	6.9	7.2	24.3	42	85	64	31	3560	22218
Mon 5	38000	33381	31730	31913	5.8	67	78	88	3.9	3.2	7.1	7.0	24.2	42	84	62	32	3512	20483
Mon 5	44000	34848	35704	35704	6.5	68	85	79	4.3	2.8	7.1	7.5	22.6	40	87	66	34	3664	23728
Mon 7	26000	28808	28229	28229	5.8	69	80	80	4.0	2.7	6.7	7.8	22.3	40	87	68	32	3690	21352
Mon 7	32000	33870	32158	32158	4.9	71	80	84	4.0	3.1	7.1	8.2	25.4	46	85	66	27	3522	17048
Mon 7	38000	34237	35093	35093	6.0	70	83	85	4.2	2.3	6.5	7.8	26.2	46	84	66	25	3467	20863
Mon 7	44000	31180	30324	30324	4.9	69	77	84	3.8	3.1	6.9	8.4	24.7	45	86	69	26	3539	17310
Mean		31349	30455	30465	5.7	69	81	82	4.0	3.0	7.0	7.6	24.0	42	86	66	30	3590	20446
Probability(%)																			
Hybrid x Plant Density		0.0	0.0	0.0	0.0	0.1	0.6	0.4	0.6	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LSD (0.10)																			
Hybrid x Plant Density		8766	8368	8367	1.4	3	8	9	0.4	0.6	0.6	0.7	2.9	5	2	3	6	148	5067