FIELD EXPERIMENT HISTORY

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

Experiment: 02PD **Trial ID:** 5767 **Year:** 2014

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:** 10/01/14 **pH:** 6.9 **OM (%)** 3.3 **P (ppm)** 70 **K (ppm)** 184

Plot Management

Tillage Operations: Chisel Plow Field Cultivator

		Analysis:	Rate lbs/A:	Date:
Fertilizer:	**Preplant :**	N/A	N/A	N/A
	Starter :	10-34-0	3.0 gal/A	5 /7 /14
	Post plant :	N/A	N/A	N/A
	Manure:	N/A	N/A	N/A

Herbicide: Dual II Mag 28 oz/A
Hornet 4.0 oz/A
Accent Q 1.0 oz/A
Callisto 3.0 oz/A

Insecticide: Force 3G 4.4 lbs/A

Irrigation: None **Hybrid:** See Factors

Planting Date: 5/7/14 **Planting Depth:** 1.5" **Row Width:** 30"

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

Harvest Date: S: 9/11/14
G: 10/24/14

Harvest Method: S: New Holland 707
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
G: 5' x 23'

Harvest Plant Density: 35795

Factors/Treatments:

Target Plant Density:

1) 26000
2) 32000
3) 38000
4) 44000

Hybrid:

1). Mon 93
2). Mon 95
3). Mon 97
4). Mon 100
5). Mon 105
6). Mon 106.1
7). Mon 106.2
8). Mon 107

Results: Tables 1402-01 & 1402-02.

Table: 1402-01. Plant Density and Hybrid Influence on Corn Grain. Arlington, WI - 2014.

Hybrid	Target density	Density Harvest	Density Ears	Yield	Moisture	Test weight	Lodged Total	Lodged Stalk	Lodged Root	AGR $3.67
	plants/A	plants/A	ears/A	bu/A	%	lbs/bu	%	%	%	$/A
Mon 93		36994	37121	224	23.7	54	0	0	0	733
Mon 95		35574	35858	173	27.9	52	15	15	0	551
Mon 97		36047	36174	225	25.0	53	1	1	0	731
Mon 100		34816	34911	215	25.4	53	0	0	0	698
Mon 105		33964	34785	171	30.4	51	10	10	0	539
Mon 106.1		37626	37657	218	31.0	52	0	0	0	683
Mon 106.2		36332	36332	219	29.6	52	0	0	0	693
Mon 107		35006	35227	227	29.8	51	1	1	0	717
	26000	28519	28914	202	27.7	52	1	1	0	645
	32000	33159	33333	206	28.5	52	4	4	0	654
	38000	38573	38683	215	27.6	52	4	4	0	688
	44000	42929	43102	214	27.6	52	5	5	0	684
Mon 93	26000	30555	30555	214	22.7	54	0	0	0	705
Mon 93	32000	33459	33712	213	26.3	53	0	0	0	686
Mon 93	38000	40403	40403	234	23.3	53	0	0	0	768
Mon 93	44000	43560	43813	235	22.5	54	1	1	0	774
Mon 95	26000	27525	28030	191	29.5	51	5	3	1	605
Mon 95	32000	33585	33838	165	28.4	52	18	18	0	524
Mon 95	38000	37626	37878	168	27.8	52	18	18	0	537
Mon 95	44000	43560	43686	166	25.8	52	21	21	0	537
Mon 97	26000	28535	28787	218	25.1	52	0	0	0	709
Mon 97	32000	33838	33838	221	25.7	52	0	0	0	716
Mon 97	38000	38636	38636	226	24.5	53	2	2	0	737
Mon 97	44000	43181	43434	234	24.8	53	2	2	0	762
Mon 100	26000	27399	27525	194	25.2	53	0	0	0	630
Mon 100	32000	32197	32323	209	25.1	53	0	0	0	680
Mon 100	38000	38257	38257	231	25.9	53	0	0	0	746
Mon 100	44000	41414	41540	226	25.3	53	0	0	0	733
Mon 105	26000	27020	28787	184	28.5	51	3	3	0	586
Mon 105	32000	30808	31439	161	31.8	51	11	11	0	502
Mon 105	38000	35858	36363	171	30.1	51	11	11	0	539
Mon 105	44000	42171	42550	168	31.0	51	16	16	0	526
Mon 106.1	26000	29671	29671	199	30.5	52	0	0	0	624
Mon 106.1	32000	35479	35479	226	30.7	52	0	0	0	710
Mon 106.1	38000	40277	40277	231	30.3	52	0	0	0	728
Mon 106.1	44000	45075	45201	216	32.5	52	1	1	0	671
Mon 106.2	26000	29419	29419	197	29.7	52	0	0	0	623
Mon 106.2	32000	33712	33712	218	29.3	52	0	0	0	691
Mon 106.2	38000	38510	38510	232	29.1	52	0	0	0	737
Mon 106.2	44000	43686	43686	229	30.3	53	0	0	0	720
Mon 107	26000	28030	28535	215	30.2	51	0	0	0	678
Mon 107	32000	32197	32323	231	30.4	52	0	0	0	725
Mon 107	38000	39015	39141	227	30.1	51	2	2	0	714
Mon 107	44000	40782	40909	235	28.5	51	2	2	0	749
Mean		35795	36008	209	27.8	52	4	4	0	668
Probability(%)										
Hybrid (H)		0.0	0.1	0.0	0.0	0.0	0.0	0.0	49.9	0.0
Plant Density (D)		0.0	0.0	0.0	15.9	10.4	0.3	0.1	49.8	0.0
H x D		94.8	92.6	0.0	12.1	5.3	8.2	2.3	47.5	0.0
LSD (0.10)										
Hybrid (H)		1264	1233	6	1	0	3	3	NS	21
Plant Density (D)		894	872	4	NS	NS	2	2	NS	15
H x D		NS	NS	12	NS	1	5	5	NS	43

Table: 1402-02. Plant Density and Hybrid Influence on Silage Preformance.
Arlington, WI - 2014.

		Whole Plant																	
	Target	Density			Dry Matter		Kernel	Plant	KMR	SMR	VMR	Crude			*in vitro*			Milk per	
Hybrid	density	V5	Harvest	Ears	Yield	Moist	milk	height	0-5	0-5	0-10	protein	ADF	NDF	Digest	NDFD	Starch	Ton	Acre
	plants/A	plants/A	plants/A	ears/A	T/A	%	%	inches				%	%	%	%	%	%	lbs/T	lbs/A
Mon 93		37878	38433	38446	12.0	56	38	110	1.9	0.6	2.4	5.9	23.6	39	85	61	38	3523	42322
Mon 95		38005	36972	37310	11.2	59	49	122	2.4	0.6	3.1	6.4	25.2	42	84	62	34	3446	38726
Mon 97		37878	36845	36868	11.2	63	55	113	2.7	1.4	4.1	6.3	25.4	42	83	61	35	3432	38576
Mon 100		35984	36463	36426	11.1	61	39	109	1.9	1.1	3.0	6.1	24.3	40	84	61	36	3497	38964
Mon 105		34974	34812	36237	11.5	63	63	125	3.1	0.8	3.9	6.4	28.0	47	81	59	30	3260	37527
Mon 106.1		37247	37988	37815	10.7	67	52	110	2.6	2.4	5.0	6.6	24.7	42	84	61	33	3439	36913
Mon 106.2		37121	37734	37499	11.0	64	55	113	2.7	2.0	4.7	6.5	24.3	41	84	60	34	3459	37957
Mon 107		36395	36654	36868	10.8	67	54	106	2.7	2.3	5.0	6.5	24.5	41	84	61	35	3472	37522
	26000	28093	28809	29419	10.5	63	50	112	2.5	1.7	4.2	6.5	24.8	42	84	61	34	3440	36040
	32000	33869	34748	34880	11.3	62	51	114	2.6	1.5	4.1	6.3	24.8	41	84	61	34	3452	38984
	38000	40309	39830	39804	11.5	62	51	114	2.5	1.2	3.7	6.2	25.1	42	84	61	35	3445	39634
	44000	45470	44563	44633	11.6	62	50	114	2.5	1.2	3.6	6.2	25.3	42	83	61	34	3428	39596
Mon 93	26000	28282	31254	31060	11.0	59	40	106	2.0	0.8	2.8	6.1	24.8	42	83	60	35	3429	37623
Mon 93	32000	34469	37353	37626	12.5	54	32	107	1.6	0.6	2.2	6.0	21.9	37	86	62	40	3620	45105
Mon 93	38000	42676	39894	39646	12.4	55	45	112	2.3	0.5	2.8	5.7	23.6	39	85	61	38	3546	44061
Mon 93	44000	46085	45230	45454	12.1	57	33	116	1.7	0.3	2.0	5.8	24.2	40	84	60	38	3496	42498
Mon 95	26000	30303	27443	28282	10.3	62	47	124	2.3	1.1	3.4	6.8	24.7	41	84	61	34	3472	35756
Mon 95	32000	33585	35320	35606	11.9	58	51	120	2.5	0.8	3.4	6.4	24.9	42	84	61	34	3440	41066
Mon 95	38000	42045	39386	39646	11.7	57	47	123	2.3	0.5	2.8	6.1	26.2	44	83	62	32	3398	39749
Mon 95	44000	46085	45738	45706	11.1	58	52	119	2.6	0.2	2.7	6.1	24.8	42	84	62	35	3473	38333
Mon 97	26000	28914	28459	28787	10.2	64	57	111	2.8	1.5	4.4	6.5	25.5	42	83	60	34	3418	34982
Mon 97	32000	35227	32271	32070	10.9	63	57	112	2.8	1.3	4.2	6.3	25.1	42	84	61	34	3439	37643
Mon 97	38000	40151	41164	40909	11.5	63	52	113	2.6	1.3	3.9	6.4	26.1	43	83	60	34	3385	38742
Mon 97	44000	47222	45484	45706	12.3	61	53	114	2.7	1.4	4.1	5.9	24.9	41	84	62	35	3488	42937
Mon 100	26000	26894	29222	29293	10.7	61	37	106	1.8	1.5	3.3	6.2	25.6	43	84	62	34	3434	36707
Mon 100	32000	32070	33033	33080	10.9	62	40	111	2.0	1.3	3.3	6.0	24.9	41	84	61	35	3475	38009
Mon 100	38000	39520	40402	40151	11.5	62	43	109	2.2	0.8	2.9	6.2	23.7	39	85	61	38	3532	40453
Mon 100	44000	45454	43197	43181	11.5	59	35	109	1.8	0.7	2.4	5.9	23.3	38	85	61	39	3549	40685
Mon 105	26000	27146	26935	30303	11.0	62	58	124	2.9	1.1	4.0	6.3	25.6	43	83	60	33	3380	37272
Mon 105	32000	32702	34049	35101	11.3	63	72	123	3.6	0.7	4.3	6.3	28.0	46	81	58	30	3256	36823
Mon 105	38000	37373	37607	38383	12.1	62	63	124	3.2	0.7	3.9	6.2	27.3	45	82	60	31	3312	40243
Mon 105	44000	42676	40656	41161	11.6	65	58	130	2.9	0.6	3.5	6.6	31.1	52	79	59	24	3091	35769
Mon 106.1	26000	27525	31254	31060	10.3	66	55	109	2.8	2.7	5.4	7.0	24.3	42	83	60	33	3432	35358
Mon 106.1	32000	35101	36845	36616	10.8	68	50	114	2.5	2.5	5.0	6.7	24.2	41	84	61	34	3469	37659
Mon 106.1	38000	40277	39640	39393	10.6	68	48	109	2.4	1.8	4.2	6.1	25.6	43	83	61	32	3413	36146
Mon 106.1	44000	46085	44213	44191	11.2	68	55	109	2.8	2.5	5.2	6.4	24.6	42	84	61	33	3442	38490
Mon 106.2	26000	28156	27697	27525	10.1	64	52	112	2.6	2.3	4.9	6.5	24.5	41	83	60	34	3440	34853
Mon 106.2	32000	34217	36590	36363	11.3	63	53	116	2.7	2.0	4.7	6.5	23.2	38	85	60	36	3518	39902
Mon 106.2	38000	40151	41418	41161	11.4	65	53	111	2.7	1.7	4.4	6.7	24.3	41	84	60	35	3462	39679
Mon 106.2	44000	45959	45230	44949	11.0	65	60	113	3.0	1.8	4.8	6.3	25.2	42	83	60	33	3415	37396
Mon 107	26000	27525	28205	29040	10.2	67	53	105	2.7	2.9	5.6	6.9	23.5	40	85	62	35	3513	35766
Mon 107	32000	33585	32525	32575	10.5	69	57	108	2.8	2.7	5.5	6.5	26.2	44	83	61	32	3396	35664
Mon 107	38000	40277	39131	39141	10.8	66	55	108	2.8	1.9	4.7	6.5	24.3	40	85	62	37	3510	38000
Mon 107	44000	44191	46754	46717	11.7	65	50	103	2.5	1.8	4.3	6.3	24.2	41	84	61	35	3468	40657
Mean		36935	36987	37184	11.2	62	50	113	2.5	1.4	3.9	6.3	25.0	42	84	61	34	3441	38563
Probability(%)																			
Hybrid (H)		0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.5
Plant Density (D)		0.0	0.0	5.1	0.0	66.0	90.4	47.1	90.4	0.0	0.6	0.3	70.2	72.8	84.8	97.9	83.9	84.5	0.0
H x D		59.8	0.7	0.2	75.5	66.2	87.4	56.2	87.4	62.5	81.4	27.4	11.6	10.0	11.3	85.5	11.2	10.1	46.9
LSD (0.10)																			
Hybrid (H)		1110	1198	836	0.5	2	6	3	0.3	0.3	0.4	0.2	1.2	2	1	1	2	64.74	2189.3
Plant Density (D)		785	847	1182	0.4	NS	NS	NS	NS	0.2	0.3	0.2	NS	NS	NS	NS	NS	NS	1548.1
H x D		NS	2395	2365	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

FIELD EXPERIMENT HISTORY

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

Experiment: 02PD **Trial ID:** 5809 **Year:** 2014

Personnel: UW: Joe Lauer, Kent Kohn, Thierno Diallo, Randy Shaver
Monsanto: Leo Brown, John Kennicker, Mike Weiss, Todd Vagts
Dairyland Labs: Dave Taysom

Location: Lancaster, WI **County:** Grant

Supported By: Monsanto

Site Information

Field: **Previous Crop:** Soybean **Soil Type:** Fayette Silt Loam

Soil Test: **Date:** 10/01/14 **pH:** 7.6 **OM (%)** 1.9 **P (ppm)** 30 **K (ppm)** 87

Plot Management

Tillage Operations: Chisel Plow Turbo-Till

		Analysis:	Rate lbs/A:	Date:
Fertilizer:	**Preplant :**	46-0-0	193 lbs/A	N/A
	Starter :	10-34-0	3.0 gal/A	5 /8 /14
	Post plant :	N/A	N/A	N/A
	Manure:	N/A	N/A	N/A

Herbicide: Lumax 3.0 qt/A **Insecticide:** Force 4.4 lbs/A

Irrigation: None **Hybrid:** See Factors

Planting Date: 5/5/14 **Planting Depth:** 1.5" **Row Width:** 30"

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

Harvest Date: 9/17/14 **Harvest Method:** New Holland 707

Experimental Design

Design: RCB **Replications:** 3

Plot Size Seeded: 10' x 25' **Experiment Size:** 0.4 A

Harvest Plot Size: 2.5' x 22' **Harvest Plant Density:** 38034

Factors/Treatments:

Target Plant Density:

1) 26000
2) 32000
3) 38000
4) 44000

Hybrid:

1). Mon 105
2). Mon 106.1
3). Mon 106.2
4). Mon 107
5). Mon 108

Results: Tables 1402-03

Table: 1402-03. Plant Density and Hybrid Influence on Silage Preformance.

Lancaster, WI - 2014.

		Whole Plant																	
	Target	Density			Dry Matter		Kernel	Plant	KMR	SMR	VMR	Crude			*in vitro*			Milk per	
Hybrid	density	V5	Harvest	Ears	Yield	Moist	milk	height	0-5	0-5	0-10	protein	ADF	NDF	Digest	NDFD	Starch	Ton	Acre
	plants/A	plants/A	plants/A	ears/A	T/A	%	%	inches				%	%	%	%	%	%	lbs/T	lbs/A
Mon 105		36237	36908	37689	9.5	53	38	115	1.9	0.6	2.5	6.9	26.5	46	82	60	30	3324	31524
Mon 106.1		36584	38051	37626	9.9	61	44	102	2.2	2.4	4.6	7.1	23.6	41	85	63	32	3517	34695
Mon 106.2		37136	39084	38824	10.5	58	55	106	2.8	2.1	4.9	6.8	22.4	38	85	61	37	3573	37488
Mon 107		37499	38115	38005	9.3	59	40	99	2.0	1.6	3.6	6.3	24.4	42	85	64	33	3528	33012
Mon 108		37279	38012	38461	9.2	53	39	109	2.0	0.6	2.6	6.4	25.9	46	83	62	30	3382	31218
	26000	28181	29577	30101	9.5	57	45	105	2.2	1.7	4.0	6.8	24.1	42	84	62	33	3482	33154
	32000	34848	35574	35555	9.8	56	42	104	2.1	1.5	3.6	6.7	24.5	42	84	61	33	3458	33941
	38000	39772	40268	40188	10.0	55	42	108	2.1	1.2	3.4	6.7	24.3	42	84	62	33	3479	34741
	44000	44987	46716	46639	9.4	58	44	107	2.2	1.3	3.5	6.6	25.4	44	84	63	31	3440	32514
Mon 105	26000	27272	27951	30050	10.1	51	48	114	2.4	0.5	3.0	6.5	25.4	44	83	60	33	3382	34254
Mon 105	32000	34217	35320	36363	9.3	55	40	110	2.0	0.8	2.8	6.9	28.4	49	81	60	26	3229	30079
Mon 105	38000	39772	38623	38131	10.6	52	33	120	1.7	0.5	2.2	7.2	25.8	44	82	59	32	3350	35533
Mon 105	44000	43686	45738	46211	7.9	53	28	115	1.4	0.4	1.9	7.0	26.5	46	82	60	30	3336	26228
Mon 106.1	26000	28156	29222	29040	9.0	63	40	99	2.0	2.3	4.3	7.4	24.3	42	84	62	31	3475	31298
Mon 106.1	32000	34848	35828	35353	9.4	60	38	99	1.9	2.8	4.7	6.8	23.6	42	85	65	33	3533	33165
Mon 106.1	38000	39898	39894	39393	10.1	59	50	105	2.5	1.7	4.2	7.1	22.2	39	86	63	35	3579	36156
Mon 106.1	44000	43434	47263	46717	10.9	63	48	103	2.4	2.6	5.0	7.2	24.5	42	84	63	30	3483	38163
Mon 106.2	26000	28914	31763	31565	9.7	59	57	104	2.8	2.6	5.4	6.8	22.3	38	85	61	37	3579	34760
Mon 106.2	32000	34974	36082	35858	10.6	57	53	101	2.7	1.9	4.6	6.9	22.2	38	85	60	37	3556	37601
Mon 106.2	38000	39772	40243	40337	10.7	58	64	106	3.2	2.1	5.3	6.7	22.9	39	85	62	36	3570	38421
Mon 106.2	44000	44886	48247	47534	10.9	57	47	114	2.3	1.8	4.1	6.7	22.1	37	85	61	38	3585	39170
Mon 107	26000	28535	29984	29798	9.2	61	37	97	1.8	1.8	3.6	6.8	24.1	41	85	64	33	3545	32406
Mon 107	32000	34469	34812	34595	10.1	60	48	102	2.4	1.9	4.3	6.5	23.5	39	85	61	36	3540	35774
Mon 107	38000	39898	40910	40909	9.6	57	32	100	1.6	1.7	3.3	6.1	24.2	42	85	65	33	3545	34253
Mon 107	44000	47095	46754	46717	8.5	58	42	96	2.1	1.0	3.1	5.8	25.8	44	84	65	31	3482	29616
Mon 108	26000	28030	28967	30050	9.6	54	42	113	2.1	1.5	3.6	6.5	24.4	43	83	61	32	3429	33051
Mon 108	32000	35732	35828	35606	9.6	50	30	108	1.5	0.3	1.8	6.4	24.7	42	83	61	34	3432	33087
Mon 108	38000	39520	41672	42171	8.8	52	32	109	1.6	0.2	1.8	6.5	26.4	47	83	62	28	3354	29342
Mon 108	44000	45833	45579	46019	8.9	57	53	107	2.7	0.6	3.2	6.3	28.0	50	82	65	25	3313	29390
Mean		36947	38034	38121	9.7	57	43	106	2.2	1.5	3.6	6.7	24.6	42	84	62	33	3465	33587
Probability(%)																			
Hybrid (H)		0.0	0.0	0.0	33.6	13.7	87.4	20.8	87.4	0.3	4.5	65.5	26.1	25.2	73.0	25.7	33.5	62.9	38.7
Plant Density (D)		45.6	9.1	50.1	1.1	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.1
H x D		85.6	69.6	59.9	1.4	14.9	2.2	24.5	2.2	0.4	0.3	20.5	33.8	18.7	87.7	39.5	23.1	74.9	4.0
LSD (0.10)																			
Hybrid (H)		1184	1095	1155	NS	NS	NS	NS	NS	0.2	0.4	NS	NS	NS	NS	NS	NS	NS	NS
Plant Density (D)		NS	1225	NS	0.6	2	7	4	0	0.3	0.4	0.3	1	2	1	2	3	69	2526.7
H x D		NS	NS	NS	1	NS	14	NS	1	1	1	NS	NS	NS	NS	NS	NS	NS	5053

FIELD EXPERIMENT HISTORY

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

Experiment: 02PD **Trial ID:** 5758 **Year:** 2014

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:** 10/01/14 **pH:** 7.5 **OM (%)** 2.7 **P (ppm)** 41 **K (ppm)** 131

Plot Management

Tillage Operations: Chisel Plow Field Cultivator

		Analysis:	Rate lbs/A:	Date:
Fertilizer:	**Preplant :**	46-0-0	150 lbs/A	N/A
	Starter :	10-34-0	3.0 gal/A	5 /23/14
	Post plant :	32-0-0	60 lbs/A	6 /27/14
	Manure:	N/A	N/A	N/A

Herbicide: Lumax 3.0 gal/A **Insecticide:** Force 3G 4.4 lbs/A

Irrigation: None **Hybrid:** See Factors

Planting Date: 5/23/14 **Planting Depth:** 1.5" **Row Width:** 30"

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

Harvest Date: 9/25/14 **Harvest Method:** New Holland 707

Experimental Design

Design: RCB **Replications:** 3

Plot Size Seeded: 10' x 25' **Experiment Size:** 0.6 A

Harvest Plot Size: 2.5' x 23' **Harvest Plant Density:** 37805

Factors/Treatments:

Target Plant Density:

1) 26000
2) 32000
3) 38000
4) 44000

Hybrid:

1). Mon 93
2). Mon 95
3). Mon 97
4). Mon 100
5). Mon 105
6). Mon 106.1
7). Mon 106.2
8). Mon 107

Results: Tables 1402-04

Table: 1402-04. Plant Density and Hybrid Influence on Silage Preformance.

Fond du Lac, WI - 2014.

		Whole Plant																	
	Target	Density			Dry Matter		Kernel	Plant	KMR	SMR	VMR	Crude			*in vitro*			Milk per	
Hybrid	density	V5	Harvest	Ears	Yield	Moist	milk	height	0-5	0-5	0-10	protein	ADF	NDF	Digest	NDFD	Starch	Ton	Acre
	plants/A	plants/A	plants/A	ears/A	T/A	%	%	inches				%	%	%	%	%	%	lbs/T	lbs/A
Mon 93		38289	38687	38510	8.1	60	51	95	2.5	1.1	3.7	6.3	23.9	41	84	61	35	3464	28167
Mon 95		38352	38941	38699	7.6	66	61	105	3.0	1.8	4.9	6.4	27.0	47	82	62	27	3298	25070
Mon 97		38131	38051	37815	8.9	65	60	98	3.0	2.1	5.2	6.2	24.7	43	84	62	32	3438	30752
Mon 100		36868	36654	36553	8.6	63	58	96	2.9	1.7	4.6	6.2	24.1	41	83	60	33	3442	29454
Mon 105		37373	36908	37058	8.3	65	70	111	3.5	1.9	5.4	6.5	27.6	48	81	60	27	3229	26722
Mon 106.1		37184	37797	37563	8.4	69	58	97	2.9	3.0	5.8	6.6	24.6	42	83	61	30	3399	28447
Mon 106.2		37720	37162	36931	8.2	67	60	99	3.0	2.3	5.3	6.6	25.2	43	83	60	30	3358	27507
Mon 107		37626	38242	38131	8.5	66	53	95	2.6	2.5	5.1	6.1	24.4	42	84	62	32	3462	29265
	26000	28188	28586	28630	8.0	65	56	100	2.8	2.2	5.0	6.4	25.3	44	83	60	31	3367	27094
	32000	35022	34812	34627	8.4	64	58	100	2.9	2.1	5.0	6.4	24.5	42	83	61	32	3426	28643
	38000	41051	40751	40498	8.6	65	60	99	3.0	2.0	5.0	6.5	25.3	44	83	61	30	3379	29042
	44000	46511	47072	46874	8.3	66	61	99	3.1	1.9	4.9	6.2	25.6	44	83	61	30	3373	27914
Mon 93	26000	28535	28967	29040	7.5	61	48	97	2.4	1.5	3.9	6.5	22.9	40	84	60	37	3492	26131
Mon 93	32000	34595	36082	35858	8.8	61	42	99	2.1	1.2	3.3	6.4	26.4	45	82	60	30	3325	29137
Mon 93	38000	42045	41927	41666	8.7	59	55	97	2.8	0.7	3.5	6.1	23.0	40	85	63	36	3536	30894
Mon 93	44000	47979	47771	47474	7.6	60	58	86	2.9	1.1	4.0	6.2	23.4	41	84	62	37	3504	26506
Mon 95	26000	28787	30492	30303	8.1	66	57	108	2.8	1.6	4.4	6.5	28.5	49	80	59	26	3185	25888
Mon 95	32000	36489	35828	35606	8.4	62	50	107	2.5	1.5	4.0	6.9	26.1	46	83	63	28	3374	28477
Mon 95	38000	42045	41672	41414	6.7	69	68	104	3.4	2.4	5.8	6.2	26.3	45	83	62	28	3336	22329
Mon 95	44000	46085	47771	47474	7.2	68	68	99	3.4	1.8	5.2	6.2	27.1	47	83	64	26	3296	23586
Mon 97	26000	28409	28713	28535	8.1	64	58	94	2.9	2.4	5.4	6.2	24.1	42	84	61	34	3448	28055
Mon 97	32000	35479	35574	35353	8.6	64	62	100	3.1	2.0	5.1	5.9	25.0	43	83	61	32	3409	29459
Mon 97	38000	40277	39640	39393	9.0	64	60	97	3.0	2.4	5.4	6.3	23.5	41	85	63	33	3510	31414
Mon 97	44000	48358	48279	47979	10.1	65	62	101	3.1	1.7	4.8	6.2	26.1	45	83	63	30	3386	34082
Mon 100	26000	27651	26935	26767	8.2	64	57	96	2.8	1.6	4.4	6.4	25.3	43	82	59	31	3368	27389
Mon 100	32000	33712	34049	33838	7.9	63	68	96	3.4	2.1	5.6	6.2	22.6	39	85	61	35	3537	27775
Mon 100	38000	40025	39131	38888	9.2	63	55	99	2.8	1.5	4.3	6.2	25.1	43	83	60	32	3380	31261
Mon 100	44000	46085	46500	46717	9.0	63	52	94	2.6	1.5	4.1	6.0	23.4	40	84	60	35	3483	31389
Mon 105	26000	27777	27951	28787	8.1	66	75	111	3.8	2.3	6.0	6.3	27.7	48	81	60	26	3241	26139
Mon 105	32000	33712	33033	33080	8.5	65	70	114	3.5	2.0	5.5	6.6	26.7	46	81	58	30	3252	27678
Mon 105	38000	41161	40402	40151	8.5	65	68	104	3.4	2.1	5.5	7.0	28.6	50	80	60	25	3163	26795
Mon 105	44000	46843	46246	46211	8.1	64	68	114	3.4	1.4	4.8	6.2	27.6	48	81	61	27	3260	26276
Mon 106.1	26000	28030	28967	28787	8.3	68	47	98	2.3	3.1	5.4	6.4	24.2	42	83	60	31	3404	28192
Mon 106.1	32000	35984	36082	35858	8.4	69	60	92	3.0	3.3	6.3	6.7	24.3	42	84	61	30	3398	28619
Mon 106.1	38000	40025	41164	40909	9.1	68	63	98	3.2	2.7	5.9	6.8	23.3	41	84	60	32	3471	31694
Mon 106.1	44000	44696	44976	44696	7.6	71	60	99	3.0	2.7	5.7	6.5	26.6	45	82	60	28	3324	25284
Mon 106.2	26000	28156	27951	27777	7.6	67	58	93	2.9	2.6	5.5	6.6	25.0	42	83	59	30	3374	25500
Mon 106.2	32000	34848	32779	32575	8.2	66	60	100	3.0	2.1	5.1	6.8	22.8	40	85	61	33	3518	28994
Mon 106.2	38000	41287	41672	41414	8.0	68	60	100	3.0	2.3	5.3	6.7	25.4	43	83	60	29	3352	26895
Mon 106.2	44000	46590	46246	45959	9.0	68	62	103	3.1	2.2	5.3	6.4	27.5	46	81	59	26	3187	28641
Mon 107	26000	28156	28713	29040	8.6	67	50	100	2.5	2.7	5.2	6.0	24.8	43	84	63	30	3427	29459
Mon 107	32000	35353	35066	34848	8.1	65	53	91	2.7	2.7	5.4	6.0	22.2	39	86	63	36	3594	29003
Mon 107	38000	41540	40402	40151	9.5	66	50	97	2.5	1.8	4.3	6.4	27.0	46	81	60	29	3286	31051
Mon 107	44000	45454	48787	48484	7.8	67	58	92	2.9	2.6	5.5	6.1	23.5	40	85	63	34	3542	27546
Mean		37693	37805	37657	8.3	65	59	99	2.9	2.1	5.0	6.4	25.2	43	83	61	31	3386	28173
Probability(%)																			
Hybrid (H)		0.0	0.0	0.0	41.0	9.8	39.6	93.1	39.6	9.7	95.9	25.7	17.8	16.3	27.0	13.0	32.1	22.1	35.0
Plant Density (D)		23.9	0.5	1.1	20.6	0.0	0.1	0.0	0.1	0.0	0.0	2.2	0.0	0.0	0.0	0.1	0.0	0.0	3.4
H x D		64.0	37.0	30.1	35.8	20.5	52.4	13.6	52.4	22.5	11.1	74.9	1.2	1.0	0.2	8.0	4.7	0.5	69.0
LSD (0.10)																			
Hybrid (H)		771	769	757	NS	1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Plant Density (D)		NS	1088	1070	NS	1	7	4	0	0.3	0.5	0.3	1	2	1	1	2	73	2712.4
H x D		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	2	4	2	2	5	146	NS

FIELD EXPERIMENT HISTORY

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

Experiment: 02PD **Trial ID:** 5807 **Year:** 2014

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:** Corn **Soil Type:** Sandy Loam

Soil Test: **Date:** 10/1 /14 **pH:** 5.7 **OM (%)** 2.2 **P (ppm)** 61 **K (ppm)** 105

Plot Management

Tillage Operations: Chisel Plow Turbo-Till Cultivated

		Analysis:	Rate lbs/A:	Date:
Fertilizer:	**Preplant :**	N/A	N/A	N/A
	Starter :	10-34-0	3.0 gal/A	5 /15/14
	Post plant :	82-0-0	160 lbs/A	6 /25/14
	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: 5/15/14 **Planting Depth:** 1.5" **Row Width:** 30"

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

Harvest Date: 9/23/14 **Harvest Method:** New Holland 707 Plot Chopper

Experimental Design

Design: RCB **Replications:** 3

Plot Size Seeded: 10' x 25' **Experiment Size:** 0.3 A

Harvest Plot Size: 23' x 2.5' **Harvest Plant Density:** 36352

Factors/Treatments:

Target Plant Density:	Hybrid:
1) 26000	1). Mon 93
2) 32000	2). Mon 95
3) 38000	3). Mon 97
4) 44000	4). Mon 100

Results: Tables 1402-05

Table: 1402-05. Plant Density and Hybrid Influence on Silage Preformance.

Chippewa Falls, WI - 2014.

		Whole Plant																	
	Target	Density			Dry Matter		Kernel	Plant	KMR	SMR	VMR	Crude			*in vitro*			Milk per	
Hybrid	density	V5	Harvest	Ears	Yield	Moist	milk	height	0-5	0-5	0-10	protein	ADF	NDF	Digest	NDFD	Starch	Ton	Acre
	plants/A	plants/A	plants/A	ears/A	T/A	%	%	inches				%	%	%	%	%	%	lbs/T	lbs/A
Mon 93		37121	37289	37626	8.3	58	47	96	2.3	0.5	2.8	6.2	23.7	42	84	61	34	3469	28862
Mon 95		37279	36463	36868	8.1	63	64	107	3.2	1.4	4.6	6.4	25.0	45	83	63	30	3410	27765
Mon 97		36458	36972	37752	8.1	63	63	97	3.2	0.9	4.1	6.3	23.9	43	84	63	32	3483	28307
Mon 100		35858	34685	35921	8.0	60	65	95	3.3	1.5	4.8	6.5	22.9	41	85	62	35	3517	28264
	26000	27935	27951	29293	7.5	62	63	98	3.2	1.2	4.4	6.5	23.7	42	84	62	33	3467	26156
	32000	33238	33224	33522	8.4	60	61	100	3.1	1.0	4.1	6.3	22.7	41	85	63	35	3537	29890
	38000	39141	39830	40467	8.0	62	58	98	2.9	1.1	4.0	6.4	24.6	44	83	62	31	3426	27540
	44000	46401	44404	44886	8.6	61	58	98	2.9	1.1	3.9	6.2	24.4	43	84	62	32	3449	29612
Mon 93	26000	28282	28967	29545	7.5	59	48	90	2.4	0.6	3.0	6.2	23.0	41	84	60	36	3482	26207
Mon 93	32000	33207	32017	32070	8.7	57	55	98	2.8	0.6	3.4	6.5	22.3	40	85	62	36	3555	31101
Mon 93	38000	40530	42689	42676	8.6	58	42	99	2.1	0.4	2.5	6.3	25.5	45	83	61	31	3377	29171
Mon 93	44000	46464	45484	46211	8.4	59	42	95	2.1	0.4	2.5	5.9	23.9	42	84	61	35	3463	28968
Mon 95	26000	28661	27951	28282	8.2	61	70	114	3.5	1.4	4.9	6.7	23.2	42	84	62	34	3486	28595
Mon 95	32000	33585	34049	34343	8.6	61	60	107	3.0	1.1	4.1	6.1	24.8	44	84	63	31	3433	29594
Mon 95	38000	39393	40910	41414	8.0	64	68	106	3.4	1.6	5.0	6.5	26.1	47	82	61	28	3325	26649
Mon 95	44000	47474	42943	43434	7.7	65	58	100	2.9	1.3	4.2	6.5	25.9	47	83	64	27	3397	26221
Mon 97	26000	26641	27951	29798	7.4	65	67	97	3.3	1.1	4.5	6.5	25.2	45	83	62	30	3401	25305
Mon 97	32000	34090	34049	34595	8.2	62	60	99	3.0	0.9	3.9	6.4	22.3	40	85	64	35	3572	29461
Mon 97	38000	38383	39386	40403	8.0	63	67	95	3.3	0.7	4.1	6.2	24.4	44	84	64	31	3465	27559
Mon 97	44000	46717	46500	46211	8.8	63	60	96	3.0	1.0	4.0	6.2	23.9	43	84	63	33	3496	30902
Mon 100	26000	28156	26935	29545	7.0	61	68	91	3.4	1.6	5.1	6.6	23.6	42	84	63	33	3500	24517
Mon 100	32000	32070	32779	33080	8.2	61	70	95	3.5	1.4	4.9	6.4	21.6	38	86	62	37	3589	29403
Mon 100	38000	38257	36336	37373	7.6	61	53	92	2.7	1.6	4.3	6.6	22.3	40	85	62	36	3538	26779
Mon 100	44000	44949	42689	43686	9.4	58	70	101	3.5	1.5	5.0	6.2	24.1	42	83	60	34	3440	32358
Mean		36679	36352	37042	8.2	61	60	99	3.0	1.1	4.1	6.4	23.9	43	84	62	33	3470	28299
Probability(%)																			
Hybrid (H)		0.0	0.0	0.0	0.1	44.9	65.5	47.8	65.5	87.4	76.5	29.3	5.7	7.4	4.3	60.1	19.1	4.2	0.1
Plant Density (D)		25.9	2.5	20.7	76.5	0.0	0.6	0.0	0.6	0.1	0.1	37.5	5.3	1.6	9.9	2.8	0.7	6.7	72.3
H x D		81.1	17.2	31.6	3.1	42.7	73.7	0.0	73.7	99.2	94.3	63.9	33.8	43.6	35.6	42.0	34.7	39.4	6.3
LSD (0.10)																			
Hybrid (H)		1319	1475	1592	0.4	NS	NS	NS	NS	NS	NS	NS	1.2	2	1	NS	NS	66	1614.8
Plant Density (D)		NS	1475	NS	NS	2	9	2	0	0.4	0.8	NS	1.2	2	1	1	3	66	NS
H x D		NS	NS	NS	1	NS	NS	5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	3230

FIELD EXPERIMENT HISTORY

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

Experiment: 02PD **Trial ID:** 5808 **Year:** 2014

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:** Wood

Supported By: Monsanto

Site Information

Field: **Previous Crop:** Soybean **Soil Type:** Loyal Silt Loam

Soil Test: **Date:** 10/1 /14 **pH:** 6.3 **OM (%)** 3.3 **P (ppm)** 45 **K (ppm)** 85

Plot Management

Tillage Operations: Turbo-Till

		Analysis:	Rate lbs/A:	Date:
Fertilizer:	**Preplant :**	46-0-0	46 lbs/A	N/A
	Starter :	10-34-0	3.0 gal/A	5 /19/14
	Post plant :	28-0-0	120 lbs/A	6 /30/14
	Manure:	N/A	N/A	N/A

Herbicide: Medal II 1.7 pt/A
Hornet WDG 3.0 oz/A
Status 3.0 oz/A

Insecticide: Force 3G 4.4 lbs/A

Irrigation: None **Hybrid:** See Factors

Planting Date: 5/19/14 **Planting Depth:** 1.5" **Row Width:** 30"

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

Harvest Date: 9/29/14 **Harvest Method:** New Holland 707 Plot Chopper

Experimental Design

Design: RCB **Replications:** 3

Plot Size Seeded: 10' x 25' **Experiment Size:** 0.3 A

Harvest Plot Size: 23' x 2.5' **Harvest Plant Density:** 33112

Factors/Treatments:

Target Plant Density:	Hybrid:
1) 26000	1). Mon 93
2) 32000	2). Mon 95
3) 38000	3). Mon 97
4) 44000	4). Mon 100

Results: Tables 1402-06

Table: 1402-06. Plant Density and Hybrid Influence on Silage Preformance.

Marshfield, WI - 2014.

		Whole Plant																	
	Target	Density			Dry Matter		Kernel	Plant	KMR	SMR	VMR	Crude			*in vitro*			Milk per	
Hybrid	density	V5	Harvest	Ears	Yield	Moist	milk	height	0-5	0-5	0-10	protein	ADF	NDF	Digest	NDFD	Starch	Ton	Acre
	plants/A	plants/A	plants/A	ears/A	T/A	%	%	inches				%	%	%	%	%	%	lbs/T	lbs/A
Mon 93		34880	32271	32260	8.6	66	70	98	3.5	2.0	5.5	7.0	24.6	43	84	63	35	3483	29789
Mon 95		35669	34939	34785	8.3	70	71	107	3.6	2.7	6.3	7.6	27.0	48	82	63	30	3333	27628
Mon 97		34280	33097	33017	8.5	68	74	98	3.7	3.0	6.7	7.1	23.8	43	85	66	33	3547	29981
Mon 100		31250	32144	32007	7.9	68	70	94	3.5	2.5	6.0	7.3	24.7	43	84	63	33	3478	27433
	26000	24842	27570	27588	7.7	67	69	100	3.5	2.7	6.2	7.3	24.1	43	85	65	33	3520	27102
	32000	30492	30810	30681	8.3	68	73	97	3.6	2.6	6.2	7.2	25.0	45	84	64	33	3461	28625
	38000	37815	35828	35732	8.6	68	72	99	3.6	2.5	6.1	7.2	25.0	44	84	64	34	3460	29752
	44000	42929	38242	38068	8.6	69	73	100	3.6	2.4	6.0	7.2	26.0	46	83	63	32	3399	29353
Mon 93	26000	26136	27697	27525	7.7	66	67	101	3.3	2.2	5.5	7.0	23.2	41	85	64	35	3560	27419
Mon 93	32000	31439	28967	29040	8.7	66	75	96	3.8	2.0	5.8	6.9	25.0	44	84	64	35	3478	30290
Mon 93	38000	38510	34558	34595	8.6	66	75	98	3.8	1.9	5.7	7.1	25.4	44	83	62	34	3435	29611
Mon 93	44000	43434	37861	37878	9.2	66	65	96	3.3	1.8	5.1	6.9	24.9	43	84	62	35	3458	31836
Mon 95	26000	26389	25410	25252	7.9	69	63	109	3.2	2.8	6.0	7.7	25.4	45	83	63	33	3422	27258
Mon 95	32000	33207	32525	32323	8.5	70	70	105	3.5	2.6	6.1	7.4	27.1	47	81	61	31	3294	27867
Mon 95	38000	37626	36590	36616	8.4	70	70	104	3.5	2.7	6.2	7.5	27.0	48	82	64	30	3348	28037
Mon 95	44000	45454	45230	44949	8.4	71	82	108	4.1	2.7	6.8	7.7	28.5	51	81	63	28	3268	27352
Mon 97	26000	23232	25664	26010	7.6	67	77	96	3.8	3.2	7.0	7.4	22.4	41	86	66	35	3606	27508
Mon 97	32000	28914	32271	32070	8.4	67	75	99	3.8	2.8	6.6	6.8	24.1	45	85	67	30	3548	29993
Mon 97	38000	39015	36845	36616	8.7	68	72	100	3.6	3.2	6.8	7.2	24.1	44	85	66	35	3540	30786
Mon 97	44000	45959	37607	37373	9.1	68	73	96	3.7	2.7	6.4	7.0	24.8	44	84	65	34	3493	31639
Mon 100	26000	23611	31508	31565	7.5	68	70	92	3.5	2.6	6.1	7.1	25.4	45	85	66	29	3493	26222
Mon 100	32000	28409	29476	29293	7.5	69	70	90	3.5	2.8	6.3	7.6	24.0	42	85	64	35	3524	26349
Mon 100	38000	36111	35320	35101	8.7	66	70	93	3.5	2.2	5.7	7.0	23.6	41	84	62	36	3518	30576
Mon 100	44000	36868	32271	32070	7.9	69	70	99	3.5	2.3	5.8	7.3	26.0	45	82	61	32	3376	26584
Mean		34019	33112	33017	8.3	68	71	99	3.6	2.5	6.1	7.2	25.0	44	84	64	33	3460	28708
Probability(%)																			
Hybrid (H)		0.0	0.0	0.0	2.8	23.9	52.3	56.7	52.3	44.7	88.7	81.2	10.1	32.5	5.8	23.0	73.3	7.9	23.6
Plant Density (D)		1.6	37.5	38.3	21.8	0.0	37.1	0.0	37.1	0.0	0.0	0.4	0.2	0.4	0.0	0.3	8.0	0.0	13.0
H x D		40.3	10.1	9.3	79.9	47.5	6.4	34.7	6.4	83.4	40.3	39.8	72.4	65.5	92.0	39.5	34.1	92.8	85.2
LSD (0.10)																			
Hybrid (H)		2302	2986	2930	0.6	NS	NS	NS	NS	NS	NS	NS	NS	NS	1	NS	NS	75.47	NS
Plant Density (D)		2302	NS	NS	NS	1	NS	3	NS	0.3	0.4	0.3	1	2	1	2	3	75	NS
H x D		NS	NS	5860	NS	NS	9	NS	0	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS