

FIELD EXPERIMENT HISTORY

Title: Plant Density and Row Spacing Effects on Yield and Quality of Corn Silage
Experiment: 06PDxRS **Trial ID:** 6053 **Year:** 2016
Personnel: Joe Lauer, Kent Kohn, Thierno Diallo
Location: Arlington, WI **County:** Columbia
Supported By: HATCH

Site Information

Field: ARS392 **Previous Crop:** Soybean **Soil Type:** Plano Silt Loam
Soil Test: **Date:** 10/1 /14 **pH:** 6.9 **OM (%)** 2.9 **P (ppm)** 51 **K (ppm)** 124

Plot Management

Tillage Operations: Disk Chisel Field Cultivator

		<u>Analysis:</u>	<u>Rate lbs/A:</u>	<u>Date:</u>
Fertilizer:	Preplant :	46-0-0	150 lbs/A	N/A
	Starter :	N/A	N/A	N/A
	Post plant :	N/A	N/A	N/A
	Manure:	N/A	None	N/A

Herbicide: Medal II EC 1.5 pt/A **Insecticide:** None
 Hornet 4.0 oz/A **Hybrid:** Pioneer P0157AMX
 None

Planting Date: 5/18/16 **Planting Depth:** 1.5" **Row Width:** See Factors

Target Plant Density: See Factors **Planting Method:** Kinze InterRow Planter

Harvest Date: S: 9/27/16 **Harvest Method:** S:USDA Kemper
 G:10/21/16 G:MF 8XP

Experimental Design

Design: RCB **Replications:** 3
Plot Size Seeded: 10' x 60' **Experiment Size:** 1.0 Acre
Harvest Plot Size: S:3.75' x 23' **Harvest Plant Density:** 33688
 G:5' x 33'

Factors/Treatments:

<u>Row Spacing:</u>	<u>Plant Density: (plants/A)</u>
1) 15 inch	1) 26000
2) 30 inch	2) 32000
	3) 38000
	4) 44000

Results: Table 1606-01.

**Table: 1606-01. Plant Density and Row Spacing Effects on Corn Silage Yield and Quality
Arlington, WI - 2016.**

Target Density plants/A	Row spacing inches	Grain									Silk doy
		Harvest	Ear	Yield bu/A	Moisture %	Test weight lbs/bu	Lodged			AGI \$3.44 \$/A	
		Density plants/A	Density plants/A				Total %	Stalk %	Root %		
	15	30938	34438	232	20.7	56	0	0	0	722	202
	30	36438	38063	245	20.4	56	0	0	0	762	203
26000		27000	30000	225	20.8	57	0	0	0	699	202
32000		30250	34375	235	20.6	56	0	0	0	731	202
38000		36250	38000	245	20.3	56	0	0	0	765	203
44000		41250	42625	248	20.4	56	1	0	1	772	203
26000	15	23250	27250	211	20.8	57	0	0	0	654	202
32000	15	26750	32500	227	20.9	56	0	0	0	706	202
38000	15	33750	36000	243	20.4	56	0	0	0	755	202
44000	15	40000	42000	248	20.6	56	1	0	1	771	203
26000	30	30750	32750	240	20.8	56	0	0	0	745	203
32000	30	33750	36250	243	20.3	56	1	0	1	756	203
38000	30	38750	40000	248	20.2	56	1	1	0	774	203
44000	30	42500	43250	248	20.3	56	0	0	0	772	203
Mean		33688	36250	238	20.5	56	0	0	0	742	203
Probability(%)											
Row Spacing (S)		0.0	0.0	0.0	2.1	9.6	73.6	41.2	55.8	0.0	4.0
Density (D)		0.0	0.1	0.0	1.0	49.5	95.2	32.9	72.6	0.0	9.1
S x D		11.1	46.8	0.9	24.0	88.3	29.1	41.2	30.3	1.1	53.7
LSD (0.10)											
Row Spacing (S)		1838	2286	7	0.3	1	NS	NS	NS	22	1
Density (D)		1299	1616	5	0.2	NS	NS	NS	NS	16	0
S x D		NS	NS	10	NS	NS	NS	NS	NS	31	NS

Continued

