

## FIELD EXPERIMENT HISTORY

**Title:** Plant Density and Row Spacing Effects on Yield and Quality of Corn Silage  
**Experiment:** 06PDxRS **Trial ID:** 5788 **Year:** 2014  
**Personnel:** Joe Lauer, Kent Kohn, Thierno Diallo  
**Location:** Arlington, WI **County:** Columbia  
**Supported By:** HATCH

### Site Information

**Field:** **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>
<b>Fertilizer:</b>			
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:** Rifle 12.0 oz/A  
 Dual II Mag 1.5 pt/A  
 Hornet 4.0 oz/A  
 None

**Insecticide:** None  
**Hybrid:** Dekalb DKC 57-75

**Planting Date:** 5/22/14 **Planting Depth:** 1.5" **Row Width:** See Factors

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

**Harvest Date:** S:10/1/14  
 G:11/5/14 **Harvest Method:** S:USDA Kemper  
 G:MF 8XP

### Experimental Design

**Design:** RCB **Replications:** 4  
**Plot Size Seeded:** 10' x 100' **Experiment Size:** 1.45 Acre  
**Harvest Plot Size:** S:5' x 22'  
 G:5' x 72' **Harvest Plant Density:** 34530

#### **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 1406-01.**

**Table: 1406-01. Plant Density and Row Spacing Effects on Corn Silage Yield and Quality  
Arlington, WI - 2014.**

Target Density plants/A	Row spacing inches	Grain							Return \$3.67 \$/A
		Harvest Density plants/A	Yield bu/A	Moisture %	Test weight lbs/bu	Lodged			
						Total %	Stalk %	Root %	
	15	33688	216	19.7	51	1	0	0	724
	30	35375	206	19.5	51	0	0	0	693
26000		27125	210	20.8	51	1	1	0	699
32000		31625	213	20.0	51	1	0	0	714
38000		37750	211	19.1	51	0	0	0	710
44000		41625	210	18.7	51	0	0	0	710
26000	15	26500	213	20.9	51	1	1	0	709
32000	15	30250	217	20.0	51	1	1	1	728
38000	15	36750	217	19.2	51	0	0	0	732
44000	15	41250	215	18.9	51	0	0	0	726
26000	30	27750	206	20.6	51	0	0	0	689
32000	30	33000	209	20.0	51	0	0	0	701
38000	30	38750	204	19.0	51	1	1	0	687
44000	30	42000	205	18.5	51	0	0	0	694
Mean		34531	211	19.6	51	0	0	0	708
<b>Probability(%)</b>									
Row Spacing (S)		6.2	0.0	17.8	54.3	33.0	42.5	32.9	0.0
Density (D)		0.0	63.4	0.0	52.1	72.3	77.2	41.2	47.4
S x D		85.3	71.0	77.0	82.1	40.2	36.6	41.2	69.9
<b>LSD (0.10)</b>									
Row Spacing (S)		1473	4	NS	NS	NS	NS	NS	12
Density (D)		2084	NS	0.4	NS	NS	NS	NS	NS
S x D		NS	NS	NS	NS	NS	NS	NS	NS

Continued

