

FIELD EXPERIMENT HISTORY

Title: Plant Density and Row Spacing Effects on Yield and Quality of Corn Silage
Experiment: 06PDxRS **Trial ID:** 5946 **Year:** 2015
Personnel: Joe Lauer, Kent Kohn, Thierno Diallo
Location: Arlington, WI **County:** Columbia
Supported By: HATCH

Site Information

Field: ARS372 **Previous Crop:** Soybean **Soil Type:** Plano Silt Loam
Soil Test: **Date:** 10/1 /15 **pH:** 6.3 **OM (%)** 2.5 **P (ppm)** 9 **K (ppm)** 74

Plot Management

Tillage Operations: 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:	Dual II Mag 1.5 pt/A Hornet 4.0 oz/A None	Insecticide: None	Hybrid: Dekalb DKC 57-75RIB
Planting Date: 5/12/15	Planting Depth: 1.5"	Row Width: See Factors	
Target Plant Density: See Factors	Planting Method: Kinze InterRow Planter		
Harvest Date: S: 9/28/15 G: 10/26/15	Harvest Method: S: USDA Kemper G: MF 8XP		

Experimental Design

Design: RCB **Replications:** 3
Plot Size Seeded: 10' x 100' **Experiment Size:** 1.5 Acre
Harvest Plot Size: S: 3.75' x 22'
G: 5' x 72' **Harvest Plant Density:** 331935

Factors/Treatments:

<u>Row Spacing:</u>	<u>Plant Density: (plants/A)</u>
1) 15 inch	1) 20000
2) 30 inch	2) 26000
	3) 32000
	4) 34000
	5) 38000
	6) 44000

Results: Table 1506-01.

**Table: 1506-01. Plant Density and Row Spacing Effects on Corn Silage Yield and Quality
Arlington, WI - 2015.**

Target Density	Row spacing	Grain								AGI \$3.44 \$/A
		Harvest Density	Ear Density	Yield	Moisture	Test weight	Lodged			
plants/A	inches	plants/A	Ears/A	bu/A	%	lbs/bu	Total %	Stalk %	Root %	
	15	32672	32672	184	24.0	52	3	3	0	560
	30	33631	33686	182	24.4	52	2	2	0	551
20000		23619	23785	179	24.0	53	0	0	0	544
26000		28155	28155	193	24.6	52	2	2	0	584
32000		33355	33355	184	23.8	52	1	1	0	561
34000		35014	35014	186	24.2	52	4	3	1	562
38000		37780	37780	178	24.2	52	5	5	0	540
44000		40988	40988	179	24.4	52	2	2	0	542
20000	15	20356	20356	175	23.1	54	0	0	0	536
26000	15	26108	26108	189	24.4	52	5	5	0	572
32000	15	33189	33189	185	23.7	53	1	1	0	564
34000	15	35844	35844	190	24.2	52	6	4	2	576
38000	15	38056	38056	180	23.9	52	7	7	0	547
44000	15	42481	42481	186	24.6	52	0	0	0	564
20000	30	26883	27215	183	24.9	52	0	0	0	552
26000	30	30202	30202	197	24.8	52	0	0	0	596
32000	30	33520	33520	183	23.9	52	1	1	0	557
34000	30	34184	34184	181	24.2	52	2	2	0	548
38000	30	37503	37503	176	24.6	52	2	2	0	533
44000	30	39494	39494	171	24.1	52	5	5	0	520
Mean		33152	33179	183	24.2	52	2	2	0	555
Probability(%)										
Row Spacing (S)		36.3	33.2	73.5	24.5	3.4	27.9	39.2	5.9	67.3
Density (D)		0.0	0.0	82.1	85.1	7.6	49.3	56.0	1.0	81.6
S x D		10.9	8.8	92.3	61.3	87.2	33.3	34.8	1.0	93.3
LSD (0.10)										
Row Spacing (S)		1774	1754	NS	NS	0	NS	NS	0	NS
Density (D)		3072	3038	NS	NS	1	NS	NS	1	NS
S x D		NS	4296	NS	NS	NS	NS	NS	1	NS

Continued

