FIELD EXPERIMENT HISTORY

Title: Sweet Corn Stand Reduction

Experiment:	16Sweet	**Trial ID:** 6421	**Year:** 2019

Personnel: Joe Lauer, Thierno Diallo, Kent Kohn.

Location: Arlington, WI   **County:** Columbia

Supported By: HATCH, National Crop Insurance Services.

Site Information
Field: ARS 375   **Previous Crop:** Soybean   **Soil Type:** Plano Silt Loam

Soil Test Date: 11/12/19   **pH:** 7.0   **OM (%):** 2.6   **P (ppm):** 15   **K (ppm):** 109

Plot Management

Tillage Operations: Field Cultivator   cultivated 7/11/19

		Analysis:	Product Rate lbs/A:	Date:
Fertilizer:	Preplant :	46-0-0	240	5 /14/19
	Starter :	N/A	N/A	N/A
	Post plant :	N/A	N/A	N/A
	Manure:	N/A	N/A	N/A

Herbicide: Medal II EC @ 24 oz/A 5/17/19   **Insecticide:** N/A
Explorer @ 5 oz/A 5/17/19   **Hybrid:** Syngenta - Overland

Irrigation: N/A

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

Target Plant Density: 24000   plants per acre   **Planting Method:** JD1700 w RTK

Harvest Date: 8/26/19   **Harvest Method:** Hand Harvest

Notes:

Experimental Design

Design: RCB 3 x 4 Factorial   **Replications** 4

Plot Size Seeded: 10' x 25'   **Experiment Size:** 0.5 A

Harvest Plot Size: 5' x 17'.5"   **Harvest Plant Density:** 22900 **plants per acre**

Factors/Treatments:

Stand reduction or Leaf removal @ stage:

1) 0% @ 5 leaf stage (approximately V3 stage by collar method)
2) 25% @ 5 leaf stage (approximately V3 stage by collar method)
3) 50% @ 5 leaf stage (approximately V3 stage by collar method)
4) 75% @ 5 leaf stage (approximately V3 stage by collar method)
5) Leaf removal of 50% @ 5 leaf stage (approximately V3 stage by collar method)
6) 0% @ 10 leaf stage (approximately V8 stage by collar method)
7) 25% @ 10 leaf stage (approximately V8 stage by collar method)
8) 50% @ 10 leaf stage (approximately V8 stage by collar method)
9) 75% @ 10 leaf stage (approximately V8 stage by collar method)
10) Leaf removal of 50% @ 10 leaf stage (approximately V8 stage by collar method)
11) 0% @ 15 leaf stage (approximately V13 stage by collar method)
12) 25% @ 15 leaf stage (approximately V13 stage by collar method)
13) 50% @ 15 leaf stage (approximately V13 stage by collar method)
14) 75% @ 15 leaf stage (approximately V13 stage by collar method)
15) Leaf removal of 50% @ 15 leaf stage (approximately V13 stage by collar method)

Results: Table 1916-01

Table:1916-01. Influence of Sweet Corn Stand Reduction on Yield.
        Arlington, WI - 2019.

Thin time	Thin percent	Main Unhusked ear yield	Secondary Unhusked ear yield	5-ear Unhusked yield	5-ear Husked yield	Cut grain moisture	Fresh grain yield	Dry grain yield	Tiller number	Tiller height	Silking day of year	Plant height	Harvest density
	%	T/A	T/A	T/A	T/A	%	T/A	T/A	no.	in	DOY	in	plants/A
V3		7.7	0.8	8.5	7.2	74.3	5.1	1.3	5	24	210	63	18250
V8		7.7	0.8	8.5	7.0	73.8	4.8	1.3	2	22	210	61	17750
V13		6.8	1.1	7.9	6.8	74.0	4.8	1.3	3	22	210	62	17500
	0	8.6	0.7	9.3	8.6	73.5	6.0	1.6	2	22	210	65	22917
	25	7.9	0.8	8.7	7.0	73.9	5.0	1.3	4	22	210	62	17583
	50	6.6	1.2	7.8	6.5	74.1	4.4	1.2	5	23	210	61	15167
	75	5.7	0.8	6.5	4.3	74.7	3.0	0.7	3	25	211	60	9833
	L50	8.2	0.9	9.2	8.6	73.9	6.1	1.6	3	21	210	63	23667
V3	0	8.3	0.7	9.0	8.4	73.4	5.8	1.5	2	23	210	65	22500
V3	25	8.1	0.7	8.7	7.3	73.5	5.3	1.4	5	19	210	63	18500
V3	50	7.4	1.0	8.4	7.0	74.6	5.0	1.3	7	23	211	62	16750
V3	75	6.5	1.1	7.5	5.3	75.7	3.6	0.9	5	35	211	63	11500
V3	L50	8.4	0.4	8.8	8.3	74.4	5.8	1.5	4	22	210	63	22000
V8	0	9.1	0.4	9.6	8.4	74.1	5.7	1.5	2	19	210	65	21750
V8	25	8.3	0.9	9.2	6.7	73.6	4.7	1.2	3	26	210	62	16500
V8	50	6.2	1.4	7.5	6.8	73.3	4.3	1.2	4	26	209	61	15000
V8	75	5.9	0.4	6.3	4.4	74.3	3.1	0.8	2	17	210	57	10250
V8	L50	9.1	0.7	9.8	8.6	73.7	6.1	1.6	2	20	210	62	25250
V13	0	8.4	0.9	9.3	9.2	72.9	6.6	1.8	4	25	210	64	24500
V13	25	7.4	0.9	8.2	7.0	74.6	4.9	1.2	4	21	210	63	17750
V13	50	6.3	1.1	7.4	5.7	74.4	4.0	1.0	5	21	211	61	13750
V13	75	4.8	0.9	5.7	3.1	74.1	2.2	0.6	1	22	211	60	7750
V13	L50	7.1	1.7	8.8	8.9	73.8	6.3	1.6	3	23	210	64	23750
Mean		7.4	0.9	8.3	7.0	74.0	4.9	1.3	3	23	210	62	17833
Probability(%)													
Thin time (T)		0.3	0.4	5.0	59.3	39.7	54.5	74.4	2.9	39.0	26.7	5.4	71.2
Thin percent (P)		0.0	0.6	0.0	0.0	16.3	0.0	0.0	4.2	75.6	72.0	0.0	0.0
T x P		24.8	0.0	17.0	44.0	31.2	41.6	40.3	84.7	1.9	31.4	22.5	28.2
LSD (0.10)													
Thin time (T)		0.5	0.2	0.5	NS	NS	NS	NS	1	NS	NS	1.2	NS
Thin percent (P)		0.6	0.2	0.6	0.9	NS	0.7	0.2	2	NS	NS	2	2005
T x P		NS	0.4	NS	NS	NS	NS	NS	NS	8	NS	NS	NS