

FIELD EXPERIMENT HISTORY

Title: Sweet Corn Stand Reduction

Experiment: 16Sweet **Trial ID:** 6256 **Year:** 2018

Personnel: Joe Lauer, Thierno Diallo, Kent Kohn.

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

Supported By: HATCH, National Crop Insurance Services.

Site Information

Field: ARS 373 **Previous Crop:** Soybean **Soil Type:** Plano Silt Loam
Soil Test Date: 11/12/18 **pH:** 7.0 **OM (%):** 2.6 **P (ppm):** 15 **K (ppm):** 109

Plot Management

Tillage Operations: Field Cultivator

	<u>Analysis:</u>	<u>Product Rate lbs/A:</u>	<u>Date:</u>
Fertilizer:			
Preplant :	46-0-0	240	5 /16/18
Starter :	N/A	N/A	N/A
Post plant :	N/A	N/A	N/A
Manure:	N/A	N/A	N/A

Herbicide:	2.4D @ 16 oz/A 5/8/18	Insecticide:	N/A
	Tomahawk @ 32 oz/A 5/8/18	Hybrid:	Syngenta - Overland
	Laudis 3.0 oz/A 6/29/18		
	Accent Q 1.5 oz/A 6/29/18		

Irrigation: N/A

Planting Date: 5/18/18 **Planting Depth:** 1.5" **Row Width:** 30"

Target Plant Density: 27000 plants per acre **Planting Method:** JD1700 w RTK

Harvest Date: 8/16/18 **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 17.4'

Harvest Plant Density: 18933 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 1816-01

**Table:1816-01. Influence of Sweet Corn Stand Reduction on Yield.
Arlington, WI - 2018.**

Thin time	Thin percent	Main	Secondary	5-ear	5-ear	Cut	Fresh	Dry	Tiller		Silking	Plant height	Harvest density
		Unhusked ear yield	Unhusked ear yield	Unhusked yield	Husked yield	grain moisture	grain yield	grain yield	number	hight	day of year		
		%	T/A	T/A	T/A	T/A	%	T/A	T/A	no.	in		
V3		7.9	1.4	9.2	6.4	78.5	4.1	0.9	16	32	200	72	18700
V8		7.8	0.9	8.7	6.4	78.6	4.2	0.9	8	27	199	71	18800
V13		7.2	0.6	7.8	5.9	79.0	3.6	0.8	6	20	200	72	19049
	0	9.5	0.1	9.6	7.8	78.6	4.9	1.0	7	21	200	75	27250
	25	8.6	0.3	9.0	7.1	78.4	4.4	1.0	9	23	199	74	21250
	50	6.5	1.0	7.4	5.2	78.6	3.5	0.7	13	22	200	71	14500
	75	3.5	2.6	6.0	2.8	79.0	1.8	0.4	10	41	199	69	7417
	L50	10.1	0.8	10.9	8.3	78.9	5.4	1.1	11	24	200	71	23832
V3	0	9.4	0.1	9.6	7.7	78.0	4.9	1.1	11	24	200	74	26750
V3	25	8.9	0.5	9.4	7.5	78.0	4.7	1.0	12	25	200	74	22000
V3	50	7.6	1.4	9.0	6.1	78.7	4.1	0.9	23	27	200	71	16250
V3	75	3.8	3.5	7.3	3.1	79.5	2.0	0.4	19	57	200	72	7750
V3	L50	9.5	1.3	10.8	7.5	78.4	5.0	1.1	15	29	200	69	20750
V8	0	10.1	0.2	10.2	8.3	78.7	5.4	1.1	7	18	200	76	27750
V8	25	8.9	0.1	9.0	7.3	78.1	4.6	1.0	8	24	199	74	21750
V8	50	6.0	1.1	7.1	4.9	78.6	3.2	0.7	8	27	199	69	13250
V8	75	3.5	2.9	6.4	2.9	78.9	1.9	0.4	7	46	199	67	7500
V8	L50	10.6	0.4	11.0	8.8	78.7	5.8	1.2	11	20	200	70	23750
V13	0	8.9	0.1	9.0	7.4	79.1	4.3	0.9	4	22	200	74	27250
V13	25	8.1	0.4	8.6	6.5	79.1	4.1	0.8	9	21	199	73	20000
V13	50	5.7	0.5	6.2	4.7	78.6	3.1	0.7	7	13	200	73	14000
V13	75	3.1	1.3	4.4	2.4	78.7	1.5	0.3	4	20	200	67	7000
V13	L50	10.3	0.6	11.0	8.6	79.6	5.3	1.1	7	22	199	73	26995
Mean		7.6	1.0	8.6	6.2	78.7	4.0	0.9	10	26	200	72	18850
Probability(%)													
Thin time (T)		9.6	0.1	0.1	10.8	13.9	1.0	0.3	0.0	0.0	19.4	57.9	82.4
Thin percent (P)		0.0	0.0	0.0	0.0	35.2	0.0	0.0	4.9	0.0	45.3	0.0	0.0
T x P		22.9	1.3	8.6	12.6	34.7	18.8	32.1	4.0	0.1	60.6	3.2	0.2
LSD (0.10)													
Thin time (T)		0.5	0.3	0.6	0.5	NS	0.3	0.1	2	4	NS	NS	NS
Thin percent (P)		0.7	0.4	0.8	0.6	NS	0.4	0.1	3	6	NS	2	1240
T x P		NS	0.7	1.3	NS	NS	NS	NS	5	10	NS	3	2147