FIELD EXPERIMENT HISTORY

Title: **Sweet Corn Leaf Area Reduction**

Experiment: 16Variability **Trial ID** 6679 **Year** 2022

Personnel: Joe Lauer, Thierno Diallo, Kent Kohn.

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

Supported By: HATCH, National Crop Insurance Services.

Site Information

Field: ARS 374 **Previous Crop:** Soybean **Soil Type:** Plano Silt Loam

Soil Test: **Date** 11/12/18 **pH** 6.7 **OM (%)** 2.6 **P (ppm)** 32 **K (ppm)** 106

Plot Management

Tillage Operations: Field Cultivator 2x

		Analysis:	Rate lbs/A:	Date:
Fertilizer:	**Preplant :**	32-0-0	40 lbs	5 /11/22
	Starter :	N/A	N/A	N/A
	Post plant :	N/A	N/A	N/A
	Manure:	N/A	N/A	N/A

Herbicide: Bellum @ 6 oz/acre 5/24/22
Medal II EC @ 24 oz/acre 5/24/22
Roundup PowerMax @ 40 oz/acre 6/13/2022
Medal II EC @ 24 oz/acre 6/13/22

Insecticide: N/A

Hybrid: Syngenta - Overland

Irrigation: N/A

Planting Depth: 1.5" **Row Width:** 30"

Planting Date: 5/23/22

Planting Method: JD1700 w RTK

Harvest Date: 8/29/2022

Harvest Method: Hand Harvest

Experimental Design

Design: RCB 5 x 4 Factorial **Replications:** 4

Plot Size Seeded: 10' x 25' **Experiment Size:** 0.7 A

Harvest Plot Size: 5' x 17.5'

Factors/Treatments:

Percent leaf area reduction @ stages:

1 - 0% Control 1
2 - 0% Control 2
3 - 0% Control 3
4 - 100% reduction @ V5
5 - 25% reduction @ V8
6 - 50% reduction @ V8
7 - 75% reduction @ V8
8 - 100% reduction @ V8
9 - 25% reduction @ V13
10 - 50% reduction @ V13
11 - 75% reduction @ V13
12 - 100% reduction @ V13
13 - 25% reduction @ Tassel
14 - 50% reduction @ Tassel
15 - 75% reduction @ Tassel
16 - 100% reduction @ Tassel
17 - 25% reduction @ Blister
18 - 50% reduction @ Blister
19 - 75% reduction @ Blister
20 - 100% reduction@ Blister

Results: Table 2216-01

Table:2216-01. Influence of Sweet Corn Leaf Area Reduction on Yield.
Arlington, WI - 2022

Thin time	Reduction percent	Main Unhusked ear yield	Secondary Unhusked ear yield	Total Unhusked yield	5-ear Unhusked yield	5-ear Husked yield	Cut grain moisture	Fresh grain yield	Dry grain yield	Average		Harvest density	Tiller propensity
										Leaf/plant	Ear/plant		
	%	T/A	T/A	T/A	T/A	T/A	%	T/A	T/A	no.	no.	plants/A	0 - 6
Control 1	0	7.7	0.9	8.6	10.8	8.8	75.8	6.3	1.5	-	1.0	24250	1
Control 2	0	7.5	0.7	8.2	9.9	8.2	75.8	5.7	1.4	-	1.0	23000	2
Control 3	0	7.2	0.7	7.9	9.6	8.0	75.4	5.7	1.4	-	0.9	24000	2
V5	100	7.4	0.5	7.9	10.2	8.0	76.9	5.8	1.4	7	0.9	25250	3
V8	25	7.4	0.8	8.2	10.4	8.4	75.4	6.1	1.5	10	1.0	23750	1
V8	50	8.5	0.4	8.9	10.6	9.0	74.8	6.5	1.6	10	1.0	24500	2
V8	75	7.8	0.9	8.7	10.5	8.7	74.9	6.3	1.6	11	1.0	23750	2
V8	100	7.1	0.6	7.7	9.6	8.1	74.6	5.8	1.5	11	0.9	23500	1
V13	25	7.6	0.8	8.4	9.9	8.3	75.5	5.8	1.4	11	1.0	23750	1
V13	50	6.6	1.1	7.7	10.1	8.6	75.1	6.1	1.5	12	0.9	25500	2
V13	75	5.7	1.1	6.9	8.5	7.1	75.5	5.0	1.2	12	1.0	24000	1
V13	100	0.2	1.4	1.6	0.7	0.6	72.7	0.4	0.4	12	0.3	23250	1
Tassel	25	8.1	0.4	8.5	9.8	8.0	74.0	6.0	1.5	12	1.1	23000	1
Tassel	50	7.6	0.7	8.3	10.1	8.6	75.0	6.3	1.6	12	0.9	24250	2
Tassel	75	5.5	1.6	7.1	9.1	7.7	74.9	5.5	1.4	12	1.0	23500	1
Tassel	100	0.2	1.3	1.5	0.8	0.6	75.2	0.5	0.3	12	0.4	22250	1
Blister	25	7.8	0.8	8.6	10.1	8.6	75.6	6.1	1.5	12	1.0	23500	2
Blister	50	6.7	1.0	7.7	10.0	8.3	74.6	4.7	1.2	12	0.9	24000	1
Blister	75	6.5	1.4	7.9	9.3	7.9	74.7	5.7	1.4	12	1.0	24750	2
Blister	100	2.7	2.0	4.7	5.9	4.5	75.1	2.9	0.7	12	1.0	22750	0
Mean		6.3	1.0	7.2	8.8	7.3	75.1	5.2	1.3	11	0.9	23825	1
Probability(%)													
Reduction time (T)		0.0	0.8	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	29.9	3.4
Reduction percent (P)		0.0	0.2	0.0	0.0	0.0	27.6	0.0	0.0	26.5	0.0	10.8	7.3
T x P		0.0	23.2	0.0	0.0	0.0	10.2	0.0	0.0	95.8	0.0	99.0	84.0
LSD (0.10)													
Reduction time (T)		0.9	0.4	0.7	0.8	0.6	0.7	0.7	0.2	1	0.1	NS	1
Reduction percent (P)		0.7	0.3	0.5	0.6	0.5	NS	0.5	0.1	NS	0.1	NS	1
T x P		1.3	NS	1.0	1.2	1.0	NS	1.0	0.3	NS	0.1	NS	NS