

FIELD EXPERIMENT HISTORY

Title: Sweet Corn Leaf Area Reduction
Experiment: 16Sweet **Trial ID:** 6546 **Year:** 2021
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** 6.3 **OM (%)** 2.9 **P (ppm)** 25 **K (ppm)** 144

Plot Management

Tillage Operations: Field Cultivator

	<u>Analysis:</u>	<u>Rate lbs/A:</u>	<u>Date:</u>
Fertilizer: Preplant :	32-0-0	32 gal	5 /17/21
Starter :	N/A	N/A	N/A
Post plant :	N/A	N/A	N/A
Manure:	N/A	N/A	N/A

Herbicide: Mesotrione 4SC @ 7 oz/acre 5/18/21 **Insecticide:** N/A
 Moccasin II Plus @ 24 oz/acre 5/18/21 **Hybrid:** Syngenta - Overland
 Accent Q @ .9 oz/acre 6/16/2021

Irrigation: N/A **Planting Depth:** 1.5" **Row Width:** 30"
Planting Date: 5/17/21 **Planting Method:** JD1700 w RTK
Harvest Date: 8/23/2021 **Harvest Method:** Hand Harvest

Experimental Design

Design: RCB 5 x 4 Factorial **Replications:** 4
Plot Size Seeded: 10' x 25' **Experiment Size:** 0.5 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 2116-01

Table:2116-01. Influence of Sweet Corn Leaf Area Reduction on Yield.**Arlington, WI - 2021**

Thin time	Reduction percent	Main	Secondary	Total	5-ear	5-ear	Cut	Fresh	Dry	Average		Harvest	Tiller
		Unhusked	Unhusked	Unhusked	Unhusked	Husked	grain	grain	grain	Leaf/plant	Ear/plant	density	propensity
		ear yield	ear yield	yield	yield	yield	moisture	yield	yield	no.	no.	plants/A	0 - 6
	%	T/A	T/A	T/A	T/A	T/A	%	T/A	T/A				
Control 1	0	8.1	0.8	8.8	10.9	9.4	76.0	6.3	1.5	-	1.0	25500	2
Control 2	0	8.6	0.3	8.9	10.0	8.7	76.3	5.7	1.3	-	1.0	24000	1
Control 3	0	8.9	0.4	9.3	10.2	9.0	76.0	5.9	1.4	-	1.0	24750	1
V5	100	8.6	0.9	9.5	10.5	8.9	76.2	5.8	1.4	7	1.0	26750	2
V8	25	8.9	0.1	9.0	9.7	8.5	76.0	5.8	1.4	11	1.0	24000	2
V8	50	7.8	0.4	8.2	10.1	8.8	75.7	5.9	1.4	11	0.9	25000	2
V8	75	7.7	0.7	8.4	10.1	8.8	76.0	5.9	1.4	10	1.0	24750	1
V8	100	7.9	0.1	8.0	9.0	7.9	76.1	5.2	1.3	11	1.0	23250	1
V13	25	8.1	0.5	8.6	9.9	8.5	76.2	5.7	1.3	14	1.0	23750	1
V13	50	6.2	0.6	6.9	8.2	7.0	76.6	4.6	1.1	13	1.0	19750	2
V13	75	5.8	1.4	7.2	9.2	8.0	75.9	5.3	1.3	14	1.0	23250	1
V13	100	0.6	1.9	2.5	2.5	2.2	75.2	1.4	0.4	14	0.6	23000	1
Tassel	25	7.2	0.7	7.9	9.5	8.3	76.6	5.4	1.3	13	1.0	22750	1
Tassel	50	7.4	0.5	7.9	9.4	8.3	76.1	5.6	1.3	13	1.0	22250	2
Tassel	75	7.1	0.9	7.9	9.4	8.3	75.6	5.6	1.4	13	1.0	24750	2
Tassel	100	0.4	2.0	2.4	2.1	1.7	75.2	1.2	0.6	13	0.5	25500	1
Blister	25	7.8	0.6	8.5	9.7	8.3	75.5	5.4	1.3	13	1.0	24250	1
Blister	50	8.5	0.2	8.8	9.7	8.5	75.6	5.7	1.4	12	1.0	24000	2
Blister	75	7.9	0.3	8.2	8.2	7.1	75.8	4.7	1.1	12	1.2	21250	1
Blister	100	5.5	1.2	6.7	8.2	7.1	78.3	4.5	1.0	12	1.0	24750	0
Mean		6.9	0.7	7.7	8.8	7.7	76.1	5.1	1.2	12	1.0	23863	1
Probability(%)													
Reduction time (T)		0.0	0.4	0.0	0.0	0.0	75.4	0.0	0.0	0.0	0.0	36.3	7.5
Reduction percent (P)		0.0	0.0	0.0	0.0	0.0	56.7	0.0	0.0	22.7	0.0	59.2	1.1
T x P		0.0	4.5	0.0	0.0	0.0	0.0	0.0	0.1	85.5	0.0	30.2	90.8
LSD (0.10)													
Reduction time (T)		0.9	0.5	0.8	1.0	0.8	NS	0.6	0.1	0	0.1	NS	0.8
Reduction percent (P)		0.7	0.3	0.6	0.7	0.6	NS	0.4	0.1	NS	0.1	NS	1
T x P		1.4	0.7	1.3	1.4	1.3	0.9	0.9	0.2	NS	0.1	NS	NS