

## FIELD EXPERIMENT HISTORY

**Title:** Tillage in Corn and Soybean Production Systems  
**Experiment:** 17Tillage **Trial ID** 6680 **Year** 2022  
**Personnel:** J. G. Lauer, T. H. Diallo, K. D. Kohn  
**Location:** Arlington, WI **County:** Columbia  
**Supported By:** HATCH

### Site Information

**Field:** 396 **Previous Crop:** Corn / Soybean **Soil Type:** Plano Silt Loam  
**Soil Test:** **Date** 12/7/2022 **pH** 5.9 **OM (%)** 3.4 **P (ppm)** 8 **K (ppm)** 84

### Plot Management

<b>Tillage Operations:</b> See Factors		<u>Analysis:</u>	<u>Product Rate lbs/A:</u>	<u>Date:</u>
<b>Fertilizer:</b>	<b>Preplant :</b>	N/A	N/A	N/A
	<b>Starter :</b>	N/A	N/A	N/A
	<b>Post plant :</b>	32-0-0	CC:593 CS: 500	6/20/22 6/20/22
	<b>Manure:</b>	N/A	N/A	N/A

**Herbicide:** 22 Jun-22 Roundup PowerMAX @ 30 oz/acre

**Irrigation:** NO

**Planting Date:** C: 5/10/22  
S: 5/25/22

**Planting Method:** JD1700 w RTK

**Target Plant Density:** 35000 **Plants/Acre**

**Hybrid/Variety:** C: Jung 56SS538  
S: Asgrow 1243R2X

**Row Width:** 30"

**Planting Depth:** C: 1.5"  
S: 1"

**Harvest Method:** C: MF 8XP plot combine  
S: Almaco plot combine

**Harvest Date:** C: 10/24/22  
S: 10/18/22

**Notes:**

### Experimental Design

**Design:** RCB Split-plot

**Replications:** 4

**Plot Size Seeded:** 10' x 50'

**Experiment Size:** 3.6 A

**Harvest Plot Size:** 5' x 46'

**Factors/Treatments:**

**Rotation**

**Tillage:**

**Density:**

- 1) CC
- 2) CS

- 1) Rotational tillage: NT since 2016.
- 2) T1: Fall Strip-Till, Knife 9in Full berm.
- 3) T2: Fall Strip-Till, Knife 9in no berm.
- 4) T3: Fall Strip-Till, Knife 6in Full berm.
- 5) T4: Fall Strip-Till, Knife 6in no berm.
- 6) NT: Spring 1-13-wave coulter with trash whippers on planter.

- 1) S1 - 35000 ppa
- 2) S2 - 45000 ppa

**Results: Tables 2217-01 & 2217-02**

**Table:2217- 01 .Tillage in Corn and Soybean Production Systems - Corn  
Arlington, WI - 2022.**

Rotation	Tillage	Fungicide	Yield bu/A	Moisture %	Test weight lbs/bu	Lodged			Harvest density plants/A	AGI \$6.09/bu \$/A
						Total %	Stalk %	Root %		
CC			179	27.9	51.2	13.4	1.1	12.2	38188	848
CS			197	27.2	51.1	1.6	0.9	0.7	39167	936
	NT		174	27.8	50.6	0.0	0.0	0.0	38563	827
	RT		186	27.6	51.0	27.9	2.3	25.6	39125	883
	T1		188	27.6	51.6	0.7	0.0	0.7	38000	891
	T2		198	27.3	51.3	11.0	1.9	9.1	39750	940
	T3		193	27.5	51.3	2.2	0.4	1.8	37750	920
	T4		188	27.4	51.0	3.1	1.4	1.7	38875	893
		35000	190	27.2	51.3	8.3	0.9	7.5	34396	902
		45000	186	27.9	51.0	6.6	1.1	5.4	42958	882
CC	NT		169	27.8	50.8	0.0	0.0	0.0	38250	803
CC	RT		172	28.7	51.2	53.0	2.8	50.2	37250	812
CC	T1		185	28.2	51.4	1.4	0.0	1.4	37250	878
CC	T2		191	26.5	51.6	20.0	2.6	17.4	39750	911
CC	T3		181	28.3	51.0	2.0	0.0	2.0	37500	854
CC	T4		175	27.7	51.1	3.7	1.4	2.3	39125	830
CS	NT		180	27.8	50.4	0.0	0.0	0.0	38875	851
CS	RT		200	26.5	50.9	2.7	1.8	0.9	41000	954
CS	T1		190	27.0	51.8	0.0	0.0	0.0	38750	904
CS	T2		204	28.2	51.0	2.0	1.2	0.8	39750	968
CS	T3		206	26.6	51.6	2.3	0.7	1.6	38000	985
CS	T4		201	27.1	50.9	2.4	1.4	1.0	38625	955
CC		35000	184	27.2	51.5	15.4	0.5	14.9	33917	874
CC		45000	174	28.6	50.9	11.4	1.8	9.6	42458	823
CS		35000	196	27.2	51.1	1.3	1.2	0.1	34875	930
CS		45000	198	27.2	51.1	1.8	0.5	1.3	43458	941
	NT	35000	183	27.6	50.9	0.0	0.0	0.0	34500	867
	NT	45000	166	28.1	50.4	0.0	0.0	0.0	42625	788
	RT	35000	188	26.9	51.0	31.6	3.0	28.7	34250	895
	RT	45000	184	28.4	51.1	24.1	1.7	22.4	44000	871
	T1	35000	188	27.1	52.3	1.0	0.0	1.0	34375	896
	T1	45000	187	28.1	50.9	0.4	0.0	0.4	41625	886
	T2	35000	199	27.5	51.4	13.4	1.1	12.3	35125	946
	T2	45000	196	27.2	51.2	8.6	2.8	5.8	44375	933
	T3	35000	188	27.6	51.4	2.2	0.7	1.4	34250	892
	T3	45000	199	27.3	51.2	2.2	0.0	2.2	41250	947
	T4	35000	192	26.5	51.0	1.8	0.3	1.5	33875	916
	T4	45000	184	28.4	51.0	4.3	2.4	1.8	43875	869
CC	NT	35000	173	26.9	51.3	0.0	0.0	0.0	35000	826
CC	NT	45000	165	28.8	50.4	0.0	0.0	0.0	41500	781
CC	RT	35000	181	27.3	51.2	59.6	2.3	57.3	31500	858
CC	RT	45000	163	30.2	51.2	46.5	3.3	43.1	43000	767

continue



**Table:2217- 02 .Tillage, Rotation and Planting Density  
in Corn and Soybean - Soybean . Arlington, WI - 2022**

Tillage treatment	Yield bu/A	Moisture %	*AGI \$13.85/bu \$/A
NT	58	11.8	790
RT	57	11.6	776
T1	58	11.7	785
T2	60	11.7	817
T3	59	11.5	797
T4	58	11.5	789
Mean	58	11.6	792
<b>Probability(%)</b>			
Tillage (T)	86.6	41.2	86.6
<b>LSD(0.10)</b>			
Tillage (T)	NS	NS	NS

\*AGI - Adjusted Gross Income