

FIELD EXPERIMENT HISTORY

Title: Corn and Soybean Rotation Study
Experiment: 09CS-Biochar **Trial ID:** 3376 **Year:** 2010
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Location: Arlington **County:** Columbia
Supported By: HATCH

Site Information

Field: 334 E **Previous Crop:** Corn/Soybean **Soil Type:** Plano Silt Loam
Soil Test: **Date:** 10/21/09 **pH** 5.9 **OM (%)** 3.1 **P (ppm)** 14 **K (ppm)** 129

Plot Management

Tillage Operations: See Factors

Fertilizer:	<u>Analysis:</u>	<u>Rate lbs/A:</u>	<u>Date:</u>
Preplant :	Biochar	122.7 lb/ plot	5 /5 /09
Starter :	N/A	N/A	N/A
Post plant :	28-0-0	200	6 /25/10
Manure:	N/A	N/A	N/A
Herbicide:	Dual II Mag: 24 oz/A 4/28/10 Mirage plus: 22 oz/A 6/17/10	Insecticide: N/A	
Irrigation:	None	Hybrid: C: DKC52-59 S: NK S21N6	
Planting Date:	Corn: 5/6/10 Soybean: 5/20/10	Planting Depth: C: 1.5" S: 1"	Row Width: 30"
Target Plant Density:	Corn: 32500 Plants/A Soybean: 150000 Plants/A	Planting Method: Kinze 2000 Interplant planter	
Harvest Date:	Corn: 10/15/10 Soybean: 10/27/10	Harvest Method: C: Kincaid plot combine S: Almaco plot combine #2	
Notes:			

Experimental Design

Design: RCB split-split plot **Replications:** 4
Plot Size Seeded: 10' x 35' **Experiment Size:** 1.0 A
Harvest Plot Size: 5' x 31'

Factors/Treatments:

<u>Tillage:</u>	<u>Rotation:</u>	<u>Applied Fertilizer:</u>
No-Till	Continuous Corn or Soybean	Corn & Soybean: 1-Biochar
Conventional	Alternating Corn - Soybean	2-UTC
	Corn 5yrs. / Soybean 5 yrs.	

Results: Tables C-41 and C-42

**Table C-42. BioChar in Corn- Soybean Cropping Systems - Soybean
Arlington, WI - 2010.**

Tillage	Fertilizer	Yield bu/A	Moisture %	Grower return \$/A
	Biochar	45	10.3	508
	UTC	50	10.3	566
CT		47	10.3	532
NT		48	10.3	542
CT	Biochar	44	10.3	501
CT	UTC	49	10.3	562
NT	Biochar	45	10.3	514
NT	UTC	50	10.3	569
Means		47	10.3	537
<u>Probability(%)</u>				
Tillage (T)		57	72.3	57
Fertilizer (F)		13	80.5	13
T x F		83	5.7	83
<u>LSD(0.10)</u>				
Tillage (T)		NS	NS	NS
Fertilizer (F)		NS	NS	NS
T x F		NS	0.1	NS