

## FIELD EXPERIMENT HISTORY

**Title:** Corn and Soybean Rotation Study  
**Experiment:** 09CS-Biochar **Trial ID** 3289 **Year:** 2009  
**Personnel:** J. G. Lauer, J.M. Gaska, K. D. Kohn, T. H. Diallo  
**Location:** Arlington **County:** Columbia  
**Supported By:** HATCH

### Site Information

**Field:** **Previous Crop:** Corn/Soybean **Soil Type:** Plano Silt Loam  
**Soil Test:** **Date:** 10/26/09 **pH** 6.3 **OM (%)** 3.7 **P (ppm)** 18 **K (ppm)** 137

### Plot Management

**Tillage Operations:** See Factors

<b>Fertilizer:</b>	<u>Analysis:</u>	<u>Rate lbs/A:</u>	<u>Date:</u>
<b>Preplant :</b>	Biochar	122.7 lb/ plot	5 /5 /09
<b>Starter :</b>	N/A	N/A	N/A
<b>Post plant :</b>	32-0-0	200	6 /10/09
<b>Manure:</b>	N/A	N/A	N/A
<b>Herbicide:</b> Honcho plus 24 oz/A	6/10/09	<b>Insecticide:</b> N/A	
<b>Irrigation:</b> None		<b>Hybrid:</b> C: DKC52-59 S: NKS21-N6	
<b>Planting Date:</b> Corn: 5/12/09 Soybean: 5/21/09	<b>Planting Depth:</b> C: 1.5" S: 1"	<b>Row Width:</b> 30"	
<b>Target Plant Density:</b> Corn: 32500 Soybean: 150000		<b>Planting Method:</b> Kinze 2000 Interplant planter	
<b>Harvest Date:</b> Corn: 11/3/09 Soybean: 11/4/09		<b>Harvest Method:</b> C: Kincaid plot combine S: Almaco plot combine #2	

**Notes:**

### Experimental Design

**Design:** RCB split-split plot **Replications:** 4  
**Plot Size Seeded:** 10' x75' **Experiment Size:** 1.0  
**Harvest Plot Size:** Corn: 5' x 71'

### **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-36, C-37**



**Table C-37. Fertilizer in Corn- Soybean Cropping Systems - Soybean  
Arlington, WI - 2009.**

Fertilizer	Yield bu/A	Moisture %	Grower return \$/A
BioChar	35	13.3	345
UTC	41	13.2	405
Mean	38	13.2	375
<u>Probability(%)</u>			
Fertilizer(F)	2.0	55.4	2.0
<u>LSD(0.10)</u>			
Fertilizer(F)	3.2	NS	31.4