

Tillage x Fertility Study.

Project Code: 06-19A-W330 Location: Belleville Research Center
 Investigator: Bryan Young

Investigator: Bryan Young, Associate Professor, Southern Illinois University

City State Zip Country: Belleville IL 62221 US
Trial Status: Final **Updated:** 12-1-06

Objective:

Evaluate effects of tillage and fertility in a corn soybean rotation.

Crop 1: ZEAMX corn, field **Variety:** 33K44
Planting Method: Seeded **Planting Date:** 4-27-06
Rate: 28000 S/A **Depth:** 1.5 IN
Row Spacing: 30 IN

Plot Width, Unit: 20 FT **Plot Length, Unit:** 25 FT **Reps:** 4
Tillage Type: See treatment list **Study Design:** Randomized complete block

Previous Crop, Year: GLXMA, 2005

Field Prep./Maintenance: See treatment list

APPLICATION DESCRIPTION**A**

Application Method: NA
Application Timing: NA

CROP STAGE AT EACH APPLICATION**A**

Crop 1 Code, Stage: ZEAMX NA
Height, Unit: NA NA

NOTES:

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Weed Code				
Crop Code				
Rating Data Type		ZEAMX	ZEAMX	ZEAMX
Rating Unit		Moisture	Yield	Plants
Rating Date		Percent	bu/A	000/A
Trt-Eval Interval		10-9-06	10-9-06	9-8-06
				9-8-06

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Prod Rate	Prod Unit	Grow Stg	Appl Code				
1	CONTINUOUS CONVEN-TILL								14.0	114	29.6	91.3
1	NO FERTILIZER											
2	CONTINUOUS CONVEN-TILL								15.2	179	29.3	100.0
2	N 175 LB/A											
3	CONTINUOUS CONVEN-TILL								14.9	226		
3	NPK 175-50-150 LB/A											
4	CONTINUOUS CONVEN-TILL								14.8	223	29.6	110.3
4	NPK 175-50-150 LB/A											
5	CONTINUOUS CONVEN-TILL								14.8	220		
5	NPK 175-50-150 LB/A											
6	ALTERNATE/NO-TILL 2000-01								14.1	110	29.3	94.0
6	NO FERTILIZER											
7	ALTERNATE/NO-TILL 2000-01								15.2	184	31.2	97.0
7	N 175 LB/A											
8	ALTERNATE/NO-TILL 2000-01								15.1	222		
8	NPK 175-50-150 LB/A											
9	ALTERNATE/NO-TILL 2000-01								15.4	217	30.3	109.0
9	NPK 175-50-150 LB/A											
10	ALTERNATE/NO-TILL 2000-01								15.3	215		
10	NPK 175-50-150 LB/A											
11	CONTINUOUS CHISEL								14.3	126	29.6	101.0
11	NO FERTILIZER											
12	CONTINUOUS CHISEL								15.5	179	29.4	101.8
12	N 175 LB/A											
13	CONTINUOUS CHISEL								15.2	222		
13	NPK 175-50-150 LB/A											
14	CONTINUOUS CHISEL								15.2	225	28.9	109.8
14	NPK 175-50-150 LB/A											
15	CONTINUOUS CHISEL								15.2	209		
15	NPK 175-50-150 LB/A											
16	CONTINUOUS NO-TILL								14.2	91	29.5	91.3
16	NO FERTILIZER											
17	CONTINUOUS NO-TILL								15.1	141	29.8	98.8
17	N 175 LB/A											
18	CONTINUOUS NO-TILL								15.2	216		
18	NPK 175-50-150 LB/A											
19	CONTINUOUS NO-TILL								15.1	214	29.2	110.3
19	NPK 175-50-150 LB/A											
20	CONTINUOUS NO-TILL								14.8	229		
20	NPK 175-50-150 LB/A											
LSD (P=.05)									0.52	21.8	2.94	7.34
Treatment F									6.199	35.181	0.339	7.902
Treatment Prob(F)									0.0001	0.0001	0.9706	0.0001

Trial Comments

1. Protocol: SIU, continuous tillage treatments since 1970.
2. Alternate/No-till 2003-04 = 2 years of no-till (2003 and 2004), 1 year conventional tillage (2005), then repeated.
3. Fertility treatments were modified in 2000 to better reflect current trends in corn production.
4. For tilled plots, tillage was plow and chisel on 4-26-06.
 P + K applied 4-13-06. N applied 4-28-06.
 Lumax 2.9 lbai/A + Atrazine 1.25 lbai/A applied on 4-27-06.
5. 000/A = Thousands per acre.
6. Harvested 10-9-06, (2) 30 inch rows by 22 ft.