



University of Illinois Nitrogen Rate Study – 2008

Corn After Corn (CAC)

Planted: May 5, 2008
Harvested: October 1, 2008
Rows: Six 30" rows
Population: 34,500 seeds/A.
Soil Type: Ipava Silt Loam
Product Tested: BECK 5684VT3
Replications: Three (averaged)

Tillage: Chisel / Field Cultivator
Herbicide: 1.75 pt. SureStart
 26 oz. Roundup Original Max
Insecticide: 1 pint Govern at VT
Fungicide: 6 oz. Headline at VT

RAINFALL	
April	1.88 in.
May	6.41 in.
June	4.44 in.
July	7.05 in.
August	0.91 in.
Total	20.69 in.

Corn After Soybeans (CAB)

Planted: May 13, 2008
Harvested: October 16, 2008
Rows: Six 30" rows
Population: 36,000 seeds/A.
Product Tested: BECK 5684VT3
Replications: Three (averaged)

Tillage: Chisel / Field Cultivator
Herbicide: 1.75 pt. SureStart
 26 oz. Roundup Original Max
Insecticide: 1 pint Govern at VT
Fungicide: 6 oz. Headline at VT

Purpose: This study was set up to help gather nitrogen data for a state-wide database coordinated by University of Illinois. Five nitrogen rates of 0 lb., 50 lbs., 100 lbs., 150 lbs., and 200 lbs. were replicated three times randomly to determine optimum economic rates of nitrogen in a CAC and CAB rotation.

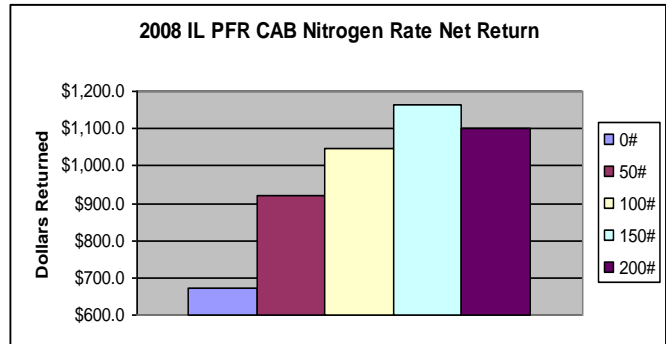
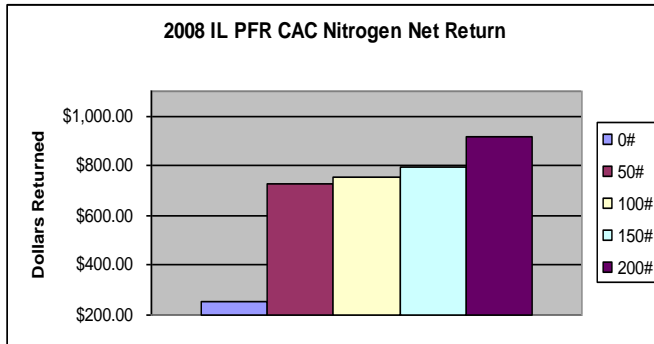
Corn After Corn:

Lbs. of Nitrogen	Percent Moisture	Bushels* Per Acre	Net Income/A.	Cost of Nitrogen	Return on Additional 50 lbs. of N
200 lbs.	24.8	207.4	\$919.40	\$117.86	\$124.14
150 lbs.	24.2	176.7	\$795.00	\$88.39	\$41.79
100 lbs.	23.9	162.4	\$753.21	\$58.93	\$24.13
50 lbs.	23.8	151.7	\$729.08	\$29.46	\$478.02
0 lbs.	26.2	50.2	\$251.06	\$0.00	----
AVERAGE	24.6	149.7			

Corn After Soybeans:

200 lbs.	21.1	244.0	\$1102.10	\$117.86	-\$62.50
150 lbs.	20.6	250.6	\$1,164.60	\$88.39	\$116.20
100 lbs.	20.4	221.5	\$1,048.40	\$58.93	\$127.90
50 lbs.	20.2	190.0	\$920.50	\$29.46	\$246.70
0 lbs.	20.5	134.8	\$673.80	\$0.00	----
AVERAGE	20.6	208.2			

*Bushels per acre corrected to 15% moisture. ^Gross income based on \$5.00/Bu. corn. Nitrogen price based on \$330/ton for 28% liquid nitrogen.



Summary: In the CAC nitrogen study, the more nitrogen we applied the higher the yield. The 200 lb. nitrogen rate gave us the highest yield of 207.4 Bu./A. and also netted the highest return at \$919.40 per acre. This indicated that we needed all of 200 lbs. of nitrogen to get the highest yield. From the start of the growing season, corn after corn needed nitrogen up-front and early and the 0 lb. treatment proved this with an average yield of only 50.2 Bu./A. In comparing 150 lbs. to 200 lbs. of nitrogen, we had a yield increase of 30.7 Bu./A. over the 150 lb. nitrogen treatment. This is the second year that 200 lbs. of nitrogen was the most economic rate in this study. In the CAB study, 150 lbs. nitrogen per acre provided the most yield and greatest return.