

RESEARCH FOR RESULTS



Total Soil Management (TSM) Holden Farm Trial

OVERVIEW: This trial compares corn yields among different pre-plant nitrogen treatments (**4 – Ultra Boost** Impregnated Urea, ESN and untreated urea) versus a check using only starter fertilizer to demonstrate how long nitrogen can be held in the soil and available to the crop.

LOCATION: SCHONERT – Holden Farms, 1.5 miles North of Oakwood, IL.

VARIETY: Pioneer 1197 AMXT. Previous Crop = Corn.

PLANTING DATE: April 24, 2017

HARVEST DATE: October 16, 2017

POPULATION: 32,422

PRE-PLANT: Fall tillage was chisel plowing and 2 passes of a field cultivator in the spring.

WEED TREATMENT: 4/18/2017. 48 ounces Glyphosate, 2 ounces Prequel, 1 quart Atrazine with 20 gallons total spray volume

TREATMENTS:

- #1. CHECK – No nitrogen applied except a starter (approx. 5 to 6 units of N)
- #2. 100 Units of Urea N plus starter (10-34-0 at 5 gallons), with added **SoilBiotics 4 - Ultra Boost**
- #3. 100 Units of ESN plus starter (10-34-0 at 5 gallons)
- #4. 100 Units of Urea plus starter (10-34-0 at 5 gallons)

Holden Corn Plot Results

Treatment	Plot	Moisture	Yield
1	124	15.8	150.6
2	125	15.4	159.6
3	126	15.9	146.3
4	127	15.7	178.7
2	224	15.5	161.6
3	225	15.9	179.2
4	226	15.6	155.2
1	227	15.6	137.1
3	324	15.8	153.6
4	325	15.8	150.4
1	326	15.5	99.8
2	327	14.8	155.0
4	424	15.8	151.5
1	425	15.4	124.6
2	426	15.8	158.7
3	427	15.8	153.4

Treatment	Cost per Acre	Cost per Unit of N
1	\$0	\$0
2	\$49.14	\$0.49
3	\$54.55	\$0.55
4	\$46.74	\$0.47

Treatment	Yield Avg.
1	128.0
2	158.7
3	158.1
4	159.0

SUMMARY: There were no significant yield differences among the urea nitrogen treatments (**SoilBiotics 4 - Ultra Boost**, ESN and Urea), all applied and incorporated pre-plant at 100 units N. Plot yields from all three urea treatments were significantly higher than the starter fertilizer only treatment. It appears that nitrogen loss by leaching was minimal in this dry growing season, and nitrogen management treatments made no difference. However, the cost in use of **4 – Ultra Boost** Impregnated Urea was significantly less than ESN.