

Sulfur Application to Corn at Side-dress Timing

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Objective

To determine if row-applied sulfur at side-dress timing impacted corn yield.

Background

Crop Year: 2012

Location: Hodge Farms

County/Town: Miami/ Tipp City

Soil Type: Brookston SiCL

Drainage: Pattern tiled

Previous Crop: Soybean

Tillage: No-till

Soil Test: Rental farm, not sampled

Planting Date: April 12, 2012

Nitrogen: as 28% 160 N/A

Seeding Rate: 34,479

Harvest Date: September 14, 2012

Methods

Sulfur as liquid fertilizer was applied at nitrogen side-dress timing. Four rates were applied on May 25th with a 16-row side dress applicator with rolling coulter and knife. Treatments included 28% UAN alone, or 28% UAN + 1, 2 or 3.2 gallons of 11-0-2-25 S in a randomized complete block with four replications. The nitrogen rate was held constant across all S treatments.

Treatment size was 40 feet wide by 1064 feet long. Harvest was accomplished with a Gleaner 8-row combine and weighed with a grain cart with on-board scale.

Results

Results are shown below for corn yield in bushels per acre, corrected to 15% moisture. An ANOVA (analysis of variance) was conducted to determine the differences among the treatments. The probability value of 0.42 indicates a very low likelihood of a response from these treatments.

Trt #	Yield bu/A	Treatment
1	143.5	28% alone
2	151.1	28 plus 1 gal 11-0-2-25S
3	145.1	28 plus 2 gal 11-0-2-25S
4	151.6	28 plus 3.2 gal 11-0-2-25S
<i>LSD 0.10</i>	<i>NSD</i>	
<i>C.V.</i>	<i>5.5</i>	
<i>Prob > F</i>	<i>0.42</i>	

Summary

Sulfur (S) is now often cited as a limiting element in crop production in Ohio due to the reduced sulfur pollution from coal burning power plants. Results of the trial indicate that the addition of

sulfur at side-dress timing did not increase corn yield. Additionally, there was no rate response. The grower reported that rainfall in 2012 was well below average for adequate corn growth, as a result yields were about 75% of expected.

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