Sulfur Application to Corn at Side-dress Timing

Harold D. Watters, Ohio State University Extension Field Specialist, Agronomic Systems

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.

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Yield Trt #</th>
<th>bu/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>28% alone</td>
<td>1</td>
<td>143.5</td>
</tr>
<tr>
<td>28 plus 1 gal 11-0-2-25S</td>
<td>2</td>
<td>151.1</td>
</tr>
<tr>
<td>28 plus 2 gal 11-0-2-25S</td>
<td>3</td>
<td>145.1</td>
</tr>
<tr>
<td>28 plus 3.2 gal 11-0-2-25S</td>
<td>4</td>
<td>151.6</td>
</tr>
</tbody>
</table>

LSD 0.10  NSD
C.V.  5.5
Prob > F  0.42

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.

Acknowledgement
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For more information, contact:
Harold D. Watters, Field Specialist Agronomic Systems
OSU Extension
1100 S. Detroit St.
Bellefontaine, OH 43311
watters.35@osu.edu