

PLANT NUTRIENTS

AdvanSix Sulf-N® Ammonium Sulfate

Evaluation of Corn Response to Sulfur Fertilization in Northeast Iowa

Project conducted by John Sawyer, Department of Agronomy, Iowa State

Introduction

Sulfur (S) deficiency and yield increase from sulfur fertilization were documented on alfalfa in northeast Iowa in 2005 and 2006, especially in fields with areas of low soil organic matter, eroded and side-slope landscape position. In 2006, 10 pounds of sulfur fertilizer increased corn yield by 15 bushels per acre in a study at two sites: one a Seaton silt loam and the other a Renova loam. Also in 2006, at six sites that were selected because corn exhibited strong early plant sulfur deficiency symptoms or had soil conditions conducive to sulfur deficiency, application of sulfur fertilizer increased corn yield by 38 bushels per acre.



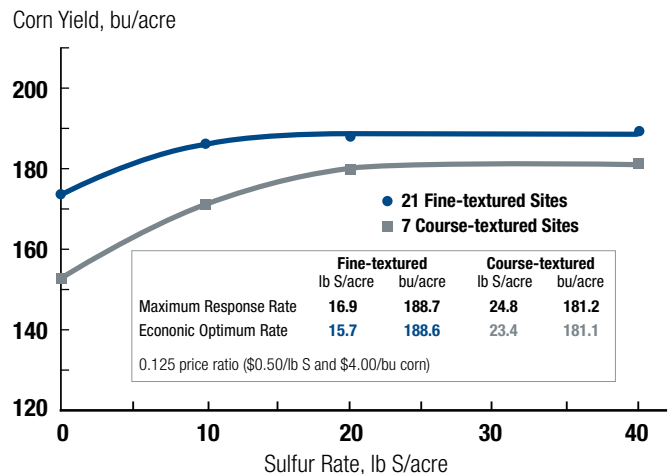
On-farm research trial of corn on Sparta fine loamy sand in northeast Iowa compares no sulfur fertilizer (right) with sulfur fertilizer treatment (left), demonstrating a healthy response to sulfur.

Photo courtesy: B.Lang, Iowa State University Extension

Results

An expanded set of studies were conducted at 45 sites across north-central Iowa in 2007 and 2008, testing four fertilizer rates (0, 10, 20 and 40 pounds of sulfur per acre) applied in the plant-available, sulfate-sulfur form. Corn grain yields significantly responded to sulfate-sulfur fertilization in 21 of the fine-textured soil sites (62%) and seven of the coarse-textured soil sites (64%). Economic optimum rates of 16 and 23 pounds of sulfur per acre were achieved respectively, as shown in graph below.

Corn Grain Yield Response to Sulfur Rate



Source: Better Crops, Vol. 95, 2011

Summary

This research indicates a dramatic change in need for sulfur fertilization in northeast Iowa, and that sulfur application is an economically viable fertilization practice on many soils.

Contact AdvanSix

To learn more about the benefits of Sulf-N® Ammonium Sulfate, visit AdvanSix.com or SulfN.com or call: **1-844-890-8949** (toll free, U.S./Can.) **+1-973-526-1800** (international)

AdvanSix
300 Kimball Drive, Suite 101
Parsippany, NJ 07054

Although AdvanSix Inc. believes that the information contained herein is accurate and reliable, it is presented without guarantee or responsibility of any kind and does not constitute any representation or warranty of AdvanSix Inc., either expressed or implied. A number of factors may affect the performance of any products used in conjunction with user's materials, such as other raw materials, application, formulation, environmental factors and manufacturing conditions among others, all of which must be taken into account by the user in producing or using the products. The user should not assume that all necessary data for the proper evaluation of these products are contained herein. Information provided herein does not relieve the user from the responsibility of carrying out its own tests and experiments, and the user assumes all risks and liabilities (including, but not limited to, risks relating to results, patent infringement, regulatory compliance and health, safety and environment) related to the use of the products and/or information contained herein.



Sulf-N® is a registered trademark of AdvanSix Inc.
September 2019-5. Printed in U.S.A.
©2019 AdvanSix Inc. All rights reserved.

