

Starter Sulphur Yield Impacts on Corn

Purpose:

To evaluate the impact of sulphur fertilization on Corn yields since Sulphur is a key macronutrient, essential for crop growth and development. Sulphur is a key component of protein quality in wheat. Historically, sulphur additions were a key component of fertilizer programs. Sulphur has not been required in Ontario for the last 50 years.

Recent studies have shown response to sulphur that was not found in previous studies. Sulphur deposition from acid rain and dry deposition, a result of air pollution, has dropped dramatically as efforts to reduce sulphur emissions have been implemented. Sulphur additions from the atmosphere have dropped from a high of ~30 pounds/acre/year in the 1970's, to approximately 10 pounds/acre/year from 1998 to 2003.

Methods:

Side by side on-farm trials were conducted to evaluate the yield response of corn to additions of sulphur in starter fertilizer blends at 15 sites.

Results:

Yield results from 10 sites are expressed in Table 1 and show that no difference in corn response to addition of sulphur was observed.

Table 1: Harvest Moisture and Yield Associated with Sulphur Addition

Treatment	Moisture	Yield
	%	bu/ac
Sulphur	21.2	168.3
No Sulphur	21.3	169.0

Soil test S levels were not different between treatments when sampled in late May to June period.

Summary:

No differences in corn response to additions of Sulphur fortified starter fertilizer could be detected in this project.

Next Steps:

The results

Acknowledgements:

OSCIA-OMAFRA Major Grant via Middlesex SCIA.

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