

Soil and Nutrient Management

Increases in sulfur needs in Southern Wisconsin – *K.A. Kelling, P. Speth, & S. Van Sychen, Soils Dept.*

Sulfur deficiency has been identified for more than 30 years on sandy, low organic matter soils of northern and western Wisconsin that has not been manured. In recent years, responses to applied S have been reported on the medium-textured soils in the southern and eastern part of the state. To confirm these shortages, we 1) conducted several on-farm S trials and 2) collected alfalfa plant tissue samples from non-manured fields. Collectively these data suggest that the potential for S responses is higher in southern and eastern Wisconsin than it was a few years ago. Half of the 16 on-farm trials showed responses to S and 37% of the nearly 200 plant samples collected to date showed low or deficient (0.25%) S levels. On soils where manure or S fertilizer have not been applied for 2 or 3 years, where soil organic matter is less than 3%, where a high S-demanding crop is being grown, and where there is a tendency toward sandiness, there appears to be some potential for sulfur responses. As has been our recommendation in the past, any uncertainty about the need for sulfur can be addressed by doing plant tissue analysis. It is an excellent confirmation tool.