

Managing Sulphur Nutrition on western Canadian Crops

Lyle Cowell the Senior Canadian Agronomist with Nutrien Wholesale supporting the agronomy and sustainability of the N, P, K and S fertilizers manufactured by Nutrien. Lyle has always had the goal of connecting the three points of good research, agronomy extension and farm gate advice and application of soil fertility principles. His presentation will focus on the management of sulphur nutrition of western Canadian crops through 4R Nutrient management and fertilizer practices. The growth of canola acres across the northern prairies on soil often deficient in sulphur required rapid adoption of fertilizers including an understanding of sulphur nutrition and also on wheat and pulses.

Precision Nutrition for Modern Corn: Optimizing N x S to Capture High Yield Gains

Dr. Brian J. Arnall, Extension Nutrient Management Specialist at Oklahoma State University (OSU), is one of North America's leading voices in precision nutrient management, integrating agronomic research, digital tools, variable-rate strategies, and real-time sensing to improve Nitrogen Use Efficiency (NUE) and optimize Sulphur (S) nutrition in wheat, corn, and forage systems. In his session he will highlight 2025 research results from 30 trials across 9 U.S. states. This is the first year of a three-year trial across these locations to better understand the influence of sulfur on corn production and more specifically the impact on the response to nitrogen fertilizer. Nitrogen Use Efficiency/NUE is gaining increased attention as one technique to improve profitability.

A Report on the TSI-IFA-Universities Partnership to Document and Forecast Global Sulfur Fertilizer Flows

Dr. Eve-Lyn Hinckley is an Associate Professor of Ecology and Evolutionary Biology and Fellow of the Cooperative Institute for Research in Environmental Sciences at the University of Colorado, Boulder. In this presentation she will provide an update on the initial findings from the global sulfur fertilizer project now underway. The project is a partnership between TSI, IFA, and the Universities of Colorado, Boulder and Nebraska-Lincoln. She will discuss updates on data contributions from industry and academic partners around the world, modeling of atmospheric sulfur deposition, and compilation of sulfur fertilizer trends by country. Future key next steps, as well as updates on how the TSI Agronomy Roundtable can support the efforts of this project.

Nature and Transformations of Soil Sulphur and Fertilizer Sulphur on the Prairies

Dr. Jeff Schoenau, Professor of Soil Fertility and Professional Agrologist at the University of Saskatchewan, stands as one of Canada's most influential voices in nutrient management research, extension, and education. For more than three decades, Schoenau has shaped modern understanding of soil fertility—especially sulfur (S) behavior in prairie landscapes—through innovative field research, practical agronomic tools, and an unwavering commitment to producer-focused learning. Dr. Schoenau has made several high-impact contributions that have shaped North American understanding of sulfur management. His session will be to provide a foundational overview of soil and fertilizer sulfur fertilizer forms and transformations in prairie soils and relationship to incidence of deficiency, including soil S balance and processes involved, crop requirements, assessing deficiency and following the fate of S in soil, including a examples from his own research.

His work has:

- Elevated sulfur from a secondary nutrient to a primary driver of yield, protein, and NUE in canola, wheat, and pulses, promoting Sulphur as the 4th Major Crop Nutrient.
- Given agronomists reliable tools for diagnosing sulfur deficiency.
- Supported the introduction of new sulfur fertilizers.
- Trained a generation of soil fertility professionals.
- Strengthened the scientific backbone of 4R Nutrient Stewardship across the Prairies