

Feasibility of a New Granular Rapid Release Elemental S (RRES) Fertilizer in Preventing S Deficiency in Canola on a S-deficient Soil

Our previous research has indicated that granular elemental S fertilizers were not effective in the year of application and also not consistently as effective as sulphate-S in increasing seed yield of canola, especially when applied in spring, due to poor dispersion of elemental S particles from granules for subsequent oxidation to sulphate-S.

The field experiment was established in autumn 2010 to compare the relative effectiveness of rapid release elemental S (RRES, called Vitasul, manufactured/provided by Sulvaris Inc., Calgary, Alberta) and sulphate-S fertilizers on seed yield, oil and protein concentration in seed, and N and S uptake of canola on a S-deficient Gray Luvisol loam soil near Star City, Saskatchewan.

The 11 treatments included two granular S sources (RRES and potassium sulphate) and five application time/placement method combinations (broadcast in autumn, broadcast in spring pre-tillage, broadcast in spring pre-emergence, sidebanded in spring and seedrow-placed in spring), plus a zero-S control. This experiment will be completed in 2012 growing season.