Growing CORN IN USA

A CASE FOR POLY4

- Mid-western Minnesota is the fourth largest corn producing state in USA.
- Standard practice is to apply NPK fertilizer. S deficiency and fertilizer use have increased throughout the region.
- POLY4 supplies plant available sulphur in sulphate form as well as K, Ca, Mg and micro nutrients.
- POLY4 has a sustained nutrient delivery which can meet ongoing crop demand. This is important for increasing yield potential during later periods of high K demand, particularly during grain fill.

poly4.com
Across the five trials MOP + POLY4 fertilized corn had significantly higher yield than MOP. POLY4 treatment also achieved a higher number of grains per square metre and greater thousand grain weight. Corn fertilized with MOP + POLY4 had the greatest revenue. The MOP + POLY4 treatment had the highest starch content indicating improved grain fill and plant nutrition.

Notes: 1) Trials were considered responsive if MOP and/or MOP + POLY4 had significantly (P<0.1) higher yield than N + P (control); Five out of ten corn trials conducted in 2017 and 2018 were responsive; responsive trials were located at Waseca in 2018 (cv. DKC54-38) and Lamberton and St Charles in 2017 and 2018 (cv. P0157); 2) N and P was from urea and DAP at 90 kg N ha$^{-1}$ and 60 kg P$_2$O$_5$ ha$^{-1}$ in 2017, MOP + POLY4 treatment had 20% of K$_2$O supplied by POLY4; 3) Initial soil tests: Lamberton 2017: pH 5.4, 1.2% SOM, 7 mg P kg$^{-1}$, 125 mg K kg$^{-1}$, 415 mg Mg kg$^{-1}$, 1966 mg Ca kg$^{-1}$; Lamberton 2018: pH 5.5, 4.6% SOM, 13 mg P kg$^{-1}$, 133 mg K kg$^{-1}$, 6 mg S kg$^{-1}$, 501 mg Mg kg$^{-1}$, 1982 mg Ca kg$^{-1}$; St Charles 2017: pH 6.6, 2.9% SOM, 8 mg P kg$^{-1}$, 81 mg K kg$^{-1}$, 8 mg S kg$^{-1}$, 263 mg Mg kg$^{-1}$, 1548 mg Ca kg$^{-1}$; St Charles 2018: pH 6.7, 2% SOM, 9 mg P kg$^{-1}$, 73 mg K kg$^{-1}$, 4 mg S kg$^{-1}$, 256 mg Mg kg$^{-1}$, 1607 mg Ca kg$^{-1}$; Waseca 2018: pH 6.0, 6.1% SOM, 9 mg P kg$^{-1}$, 161 mg K kg$^{-1}$, 5 mg S kg$^{-1}$, 638 mg Mg kg$^{-1}$, 3617 mg Ca kg$^{-1}$; 4) Analysed by Genstat ANOVA analysis. Fishers LSD at 5% level used to separate means; 5) Crop price: US$130/mt.