Polysulphate®

Prolonged nutrient release pattern of Polysulphate® fertilizer

Reduces the potential for sulphate leaching

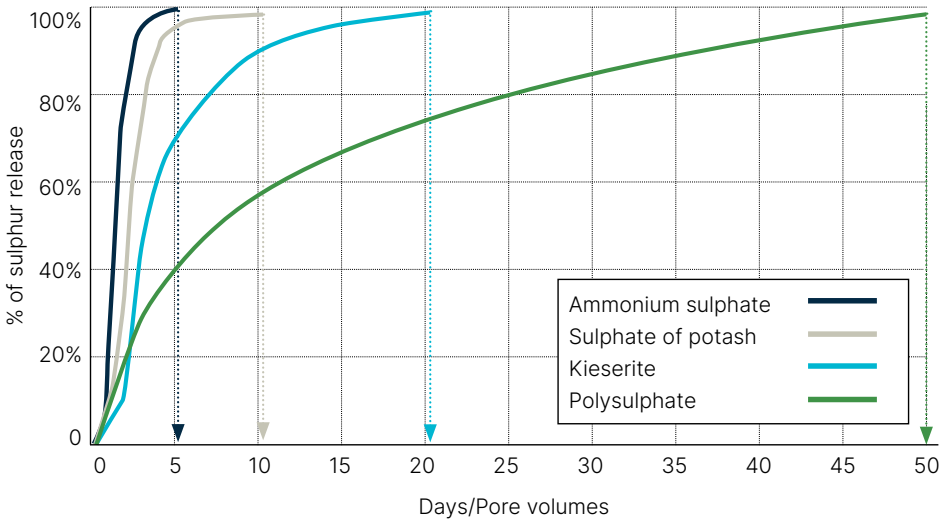
Sulphur is an essential macro-nutrient so there is usually a need for fertilization. Like nitrate, sulphate is prone to leaching and needs be managed carefully to minimize that risk. Polysulphate, a new multi nutrient fertilizer mined in the UK at Cleveland Potash, helps reduce the risk of leaching due to its prolonged release characteristics.

In order to compare the rate of release of sulphate in soil from Polysulphate™ fertilizer with that from sulphate of ammonia, sulphate of potash and kieserite (all granular form), a soil column experiment was set up at the University of Nottingham, UK. The fertilizers, at equivalent rates of sulphur, were added to the tops of replicated columns of loam soil which had previously been leached. In order to determine how much sulphate became available each day from the different sources, the columns were leached (flushed) daily with de-ionised water, and the sulphate contents of the leachates were measured.

University of Nottingham

Polysulphate

Release of sulphate - Polysulphate vs. other sources



The soil column apparatus

The chart illustrates the prolonged release characteristics of Polysulphate. All of the sulphate from the ammonium sulphate was released and recovered in the leachate within six days, compared to 12 days for sulphate of potash and 21 days for kieserite, whereas sulphate from Polysulphate was released for crop uptake into the upper soil horizon for about 50 days.

These were extreme tests but they show that the release pattern of sulphate from Polysulphate matches the major growth period and demand of a crop. Unlike some other sources Polysulphate continues to supply the crop with sulphate even after heavy rainfall events following application.

Polysulphate is suitable as a source of sulphate for inclusion with multiple dressings of fertilizers over the season, but its particular strength is that it can be recommended as a single early dressing without causing a sudden high concentration of sulphate in the soil and with minimum risk of loss through leaching.

Mined in the UK, ICL is the first – and only – producer in the world to mine polyhalite, marketed as Polysulphate.

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