

# The Benefits of Tiger Sulphur on High pH Soils



## Soil Challenges

Obtaining the maximum economic yield can be difficult due to the large number of challenges and factors that come into play. Soils are complex environment of minerals, organic matter, water and gases populated by a host of living organisms.

In 1862 a German chemist Justus von Leibig outlined his Law of the Minimum, stating that plant yield was affected by the most limiting factor in crop production, whether it is an essential plant nutrient, amount of rain fall, poor crop stand, increased weed pressure, farm management practices or soil chemistry issues such as pH.

## Soil pH Matters!

Many soils in North America have a pH above the recommended range of 6.5 pH, and in some cases reaching 8.0 to 9.0 pH. We can use the acidulating power of elemental sulphur to decrease soil pH and improve phosphate and micronutrient availability.

## Use Tiger 90CR™ Sulphur to reduce soil pH

Tiger 90CR™ Sulphur is a unique degradable Elemental Sulphur that allows for enhanced oxidation due to its unique swelling characteristics which degrades the elemental Sulphur into a range of fine Sulphur particles once it is applied to the soil.

Once Tiger 90CR™ Sulphur is applied to the soil the natural Sulphur oxidizing bacteria (present in all soils) can consume the Elemental Sulphur converting it to sulphuric acid (H<sub>2</sub>SO<sub>4</sub>). The rapid oxidation of Elemental Sulphur is essential for crop

Sulphate produced as a percentage of competitor A in Laboratory tests

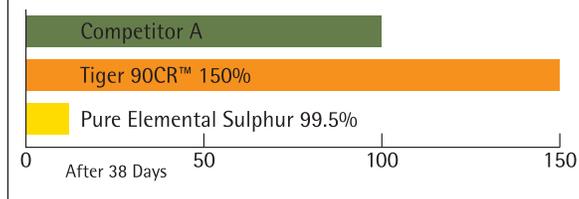


Figure 1

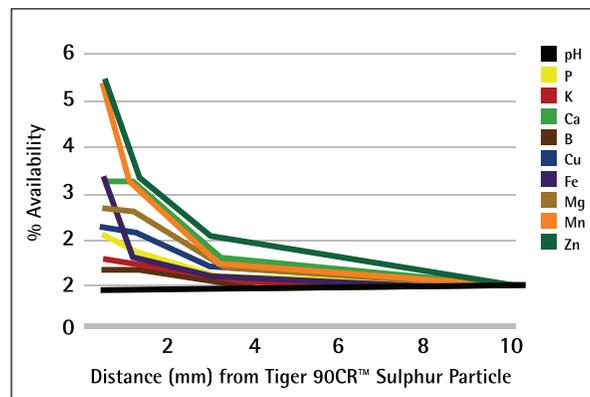


Figure 2

production. Research has shown that Tiger 90CR™ Sulphur is 50% quicker converting than other degradable products, while pure 99.5% Elemental Sulphur shows little oxidation in the 38 day period. (Fig 1)

The effect of Tiger 90CR™ Sulphur on high pH soil can be seen if the soil micro site surrounding the Sulphur is studied. Research conducted by Tiger-Sul Products and Elston Solberg (formerly with Alberta Agriculture) showed that the production of the sulphuric acid on high pH soil lowered the pH and increased the phosphate and micronutrient availability in the soil. (Fig 2)

The results of this research showed the importance of the oxidizing Tiger Sulphur when placed on high pH soil for crop production. The strategy of applying

Tiger 90CR™ Sulphur in the seed row provides many benefits. Many producers will apply Tiger 90CR™ or Tiger 50CR™ Sulphur / Sulphate fertilizer with their starter fertilizer blend to increase nutrient availability in the seed rooting zone.

Tiger-Sul Products has produced Sulphur based fertilizers since 1984. As the leading degradable sulphur manufacturer in the world, Tiger-Sul produces Tiger 90CR™ Sulphur, Tiger 50CR Sulphur / Sulphate and various forms of granular Tiger Micronutrients™ Fertilizers.

For more information on Tiger 90CR™ Sulphur or Tiger 50CR™ Sulphur / Sulphate fertilizers contact Tiger-Sul Products.



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