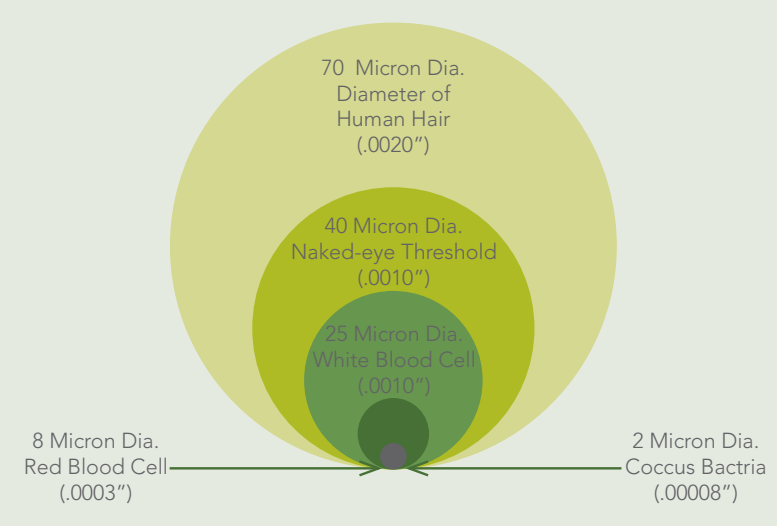
HOW BIG IS A MICRON?

POWERED BY MST®

This probably isn't a question you ask when talking about fertilizer, but micron size is very important when talking about Smart Nutrition™ MAP+MST®.

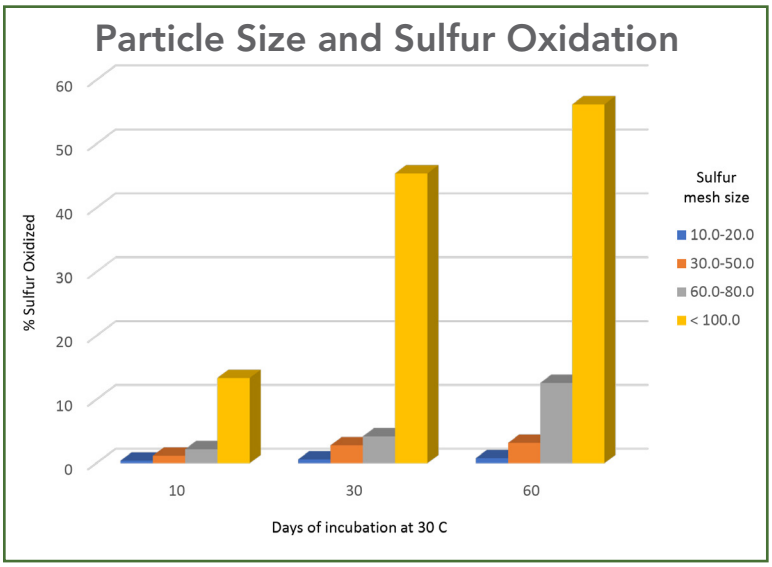
Smart Nutrition MAP+MST analysis is 9-43-0 with 16% sulfur and the sulfur is mostly (around 90%) elemental sulfur. We know elemental sulfur needs to be oxidized into a sulfate form to become available to the crop. This requires warm soils and soil microorganisms to be active. The size of the sulfur particles can also help speed up the process. The smaller the size, the more surface area, and therefore oxidation can be sped up.



So, how big is a micron?
The sulfur size in Smart Nutrition MAP+MST is an average of 15 microns. How does that micron size compare?

As you can see from Figure 1, 15 microns is very small, but how does that help with speeding up oxidation?

The study, listed in Figure 2 demonstrates that the smaller micron size oxidizes quicker. It shows in 60 days at a controlled temperature of 30C (86F) the smaller micron size was nearly 60% oxidized.



Since the sulfur is in the elemental form, Smart Nutrition MAP+MST is ideal for fall applications, but with an average of 15 microns, Smart Nutrition MAP+MST can also be applied in the spring.

In a spring application, the addition of a sulfate form of sulfur is recommended to supply some sulfur early to the crop. This is due to soil temperatures being cool in the early spring and soil microorganisms not as active to oxidize the elemental sulfur. The slow release (oxidation) of the sulfur from Smart Nutrition MAP+MST will then supply the sulfur needed throughout the growing season when the crop needs it most.

If sulfur is not a regular part of your crop nutrient plan, you could be missing some yield potential.

Smart Nutrition™ MAP + MST®

Nutrien™