

Fact or Fiction About Foliar Fertilization?

It is always heartening when you get off the phone with a long time customer and they say "... thanks so much, now I understand how your slow release nitrogen works! I have been using it for years and really like it. You hear a lot from the competition and it can get confusing."

It is very important to listen to your customers, so let's revisit the whole concept of LIQUID fertility products... because frankly, there is fact and there is fiction.

Q - What is SRN?

Simply put, SRN (Slow Release Nitrogen) is an advanced nitrogen molecule. Think of a chain-link fence. One link is N, the next Carbon, the next N. The chain averages about 10 carbons long, and is labeled a "water soluble nitrogen form". Nitro-30 is Growth Products proprietary SRN. Check product label's guaranteed analysis to see what form of nitrogen you are getting. If it is not listed on the label, it isn't in there!

Slow Release nitrogen has three important properties: **1) has no salt index – safe for plants.** **2) Is highly tacky/sticky will stick to the leaf tissue and/or the soil particles.** Will not washed away, even in heavy rainfall, or frequent irrigation. **3) Fasten to the leaf cuticle.** Nitro-30 will be reserved in the leaf cuticle, breaks down slowly through UV radiation, and absorbed by stomatal openings.

Q-How does this compare to other ingredients in liquid products?

If all you see on a product label is urea, nitrate or ammonical nitro-

gen, they are all FAST release sources with high salt index and what's more, if applied at too high a rate, the plant cannot utilize a large dose all at once. When absorbed, the plant converts them into an ammonical form. If too much is absorbed, the plant goes into ammonia shock. In some plant species this is desirable because it will produce more fruit or seeds. In turf grass this is not good, especially on Poa. What the plant can't take up is simply lost through leaching or volatilization.

Q- What are amino acids? There is a lot of talk about them lately.

Amino acid science is not a mystery. It is part of human and plant physiology. They are made up of nitrogen and carbon. They are found in the phloem sap of plants. The plant arranges them to form complex protein molecules. Outside the plant they are found in the soil, predominantly from the cell walls of microorganisms. They are also released from plant roots.

Q- Is there University research that documents Amino Acids improve foliar nutrient uptake?

We have never come across any university research verifying the fact that amino acids increase nutrient absorption through the leaf tissue. A few companies boast of this property, but independent research is lacking.

Q- Can a company list Amino Acids on the fertilizer labels so that I know they are really in the product?

Absolutely! If a product boasts of having the benefit of amino acids, it should be no secret. Washington and Florida require that you list them under "Non Plant Food Ingredients". If there is no listing on a label, most likely they aren't there!

Q- Do Amino Acids serve a practical use by the plant?

Yes! Under special conditions certain amino acids have the ability to chelate metal ions: arginine and glutamic acid for example. Some however are listed as "too weak" and can only form "organic salts". They are an excellent source of organic nitrogen/ carbon. Can the plant absorb the entire amino acid? The jury is still out!

Q- Any added benefits?

There is good research showing that Amino acids will help degrade pesticides. So if an over application has happened, your only salvation may be AMINO ACIDS!

Q - What is a superintendent to choose?

Slow Release Nitrogen (SRN) remains the best choice nitrogen source. It is a science that has been proven over the last 20 years that it far surpasses those of urea. What superintendent in the 21st century would take a bag of urea, dump it in their spray truck, and claim that's advanced nitrogen fertility?

Amino Acids are important in good fertility management. Be sure to choose a product that guarantees the analysis and %. Growth Products offers Essential Plus 1-0-1 with 2.75% L-Amino Acids, and now our classic 18-3-6 with 8.66% of the highest quality L-Amino Acids.