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Why Citric Acid?

In 1998, 535 million pounds of citric acid (yes, the same stuff found in oranges) was exported and imported to/from the United States. For what? Did you know that 70 percent of citric acid goes to the production of food and carbonated drinks? The remainder is used to make detergents, cleaners, cosmetics, pharmaceuticals, and in chemical processing. But what can it do for you as a superintendent?

Citric acid can be used as a pH reducer. It can also be used as a tank mix buffer solution, as well as a soil and water pH conditioner.

Citric acid can also be used in a "best management practices" program for reducing the incidence of summer patch. The pathogen that causes this disease is most active at a higher pH during the spring (though the damage is not evident until summer). As a result, some superintendents apply acidifying fertilizers in the early spring to lower the pH of their thatch/soil interface. Citric acid can be easily integrated into this application for even greater lowering of your pH levels.

Citric acid is a naturally occurring, organic acid. This is welcome news for superintendents in environmentally sensitive areas and/or those who would like to stay away from corrosive acids.

What are some of the other uses and benefits of citric acid?

Citric acid is a lot gentler on your turfgrass. You won't run into problems like root pruning (which is quite common when using harsher acids like phosphoric and sulfuric). And almost any superintendent will tell you that healthy roots greatly contribute to the establishment of healthy turfgrass.

Citric acid is also very safe for YOU. Corrosive acids bring with them inherent risks like chemical burns on skin and destroyed clothes. Where safety is concerned, working with our citric acid is like handling common vinegar. Unless you have a cut, you won't even feel it on your skin. And our citric acid will NOT eat through your clothes. Mineral acids (like phosphoric, nitric, sulfuric, and hydrochloric) are classified HazMats, which also means they will wreak havoc on your beneficial microbe populations.

Organic, carbon-based citric acid also acts as a potential food source for your beneficial microbes (they feed on carbon). This will help keep your "good" microbe population happy, while avoiding unhealthy, anaerobic conditions.

The best part of all is that citric acid really works. In fact, it does all of the "good" things that mineral acids do, but in a much gentler fashion. It also does some things that mineral acids aren't able to.

Unlike mineral acids, Citric acid will not change your N-P-K ratio. How does this work? Well, nitric acid contains nitrogen. With Phosphoric acid, you've got phosphorus. And with sulfuric acid, you're adding sulfur. By using citric acid, you'll get its acidifying benefits, without adding additional nutrient sources, so there's no need to re-think your N-P-Ks after applying it.

Citric acid also helps chelate essential minerals that are bound up in the soil. Applications of citric acid will take these insoluble, oxidized micronutrients and make them available for uptake and use by your turf. Citric acid is also part of the Krebs cycle, and transports micronutrients through the xylem.

Growth Products' pH Reducer is an organic-based material that is a natural and environmentally sound management tool. It is especially good for use in alkaline conditions.

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