are present for a rapid influx of organic fertilizers.

Organic fertilizers, by their very nature, are low-analysis materials. Hence, unit nutrient costs are high — generally too high for extensive use by commercial agriculture. So where is the prime market? The turf industry. Where else could one sell nitrogen for as much as \$2.00 or more per pound?

Each of the organics has its own unique characteristics. Sustane, for example, releases N to turfgrass faster than does Milorganite, but consequently has a shorter response time. All have their distinctive odors, some more tolerable than others. Some have excellent physical properties, while others do not. On the other hand, all the organics do have two things in common. Release of N from them requires microbial breakdown. For this reason, they are not good cold weather N

sources. Second, one-half or more of the organic N present is very slow to be released. Consequently, turf-grass recovery of N from the organics generally lags behind materials such as urea, SCU, UF, IBDU, etc.

Call it a bandwagon if you will, but the organics are in the marketplace for very understandable reasons. Each has its own characteristics and none are miracle products. My guess is that fairly soon the market will approach saturation and some of these products will disappear. Those that remain are the ones with which turf managers have become familiar, know what to expect from a particular product, and have successfully integrated the product into their fertilization program.

Q: Probably the most radical piece of machinery introduced at the GCSAA show in Orlando last winter was Toro's Hydrojet aerifier. I was quite impressed by the machine, yet, something troubles me. We aerify turfed areas not only to relieve compaction, but to bring up soil that will mix with the thatch and provide biological control of that thatch. It seems to me that the Hydrojet is somewhat limited in its use because no soil is brought to the surface. What do you think, Dr. Kussow? (COLUMBIA COUNTY)

A: Reading a bit into your comments, I'll assume that your concern is about turfed areas that are aerified but not topdressed. Otherwise, I don't foresee a limitation.

The Hydrojet does lack the feature of bringing soil to the surface. Doing away with core removal was one of the guiding forces behind its development. Thus, in situations where mixing of soil with thatch is one of the desired outcomes of aeration, the Hydrojet is not the machine of choice.



