



## Questions From The Floor

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*Q. I recently looked over a soils map of Wisconsin and could not help notice that we have significant acreage of organic soils. Why is it we seem to have to go out of state for a peat to use as a top dressing component for our greens and tees? TREMPEALEAU COUNTY*

A. Wisconsin does have significant acreage of organic soils — about 1.7 million acres. Despite that, you are going out of state for peat. There are several reasons for this.

**1. Quality:** A very high percentage of our organic soils are mucks rather than peats. Muck soil contains little or no plant fiber and have unacceptably high ash, silt and clay contents, low moisture holding capacities and relatively high bulk densities.

**2. Variability in Composition:** Peat bogs in Wisconsin are noted for having highly variable composition, both laterally and vertically. It is not at all uncommon to encounter layers or lenses of material that are totally unsuitable for golf course use.

**3. Bog Size:** Many of our bogs with good quality peat are too small to be considered for commercial exploitation. Unlike in places like Michigan, our bogs formed in pot holes resulting from glacial activity rather than along the margins of large ancient lakes.

**4. Government Restrictions:** Unless a bog is on privately owned land and is hydrologically isolated from nearby lakes or streams, chances of obtaining a permit for commercial exploitation of the bog are virtually zero.

*Q. Not long ago I read about some changes in the way the Wisconsin State Soils Lab will report results of soil samples tested there. How will this change the way I interpret my fairway samples I just sent? WAUPACA COUNTY*

A. The changes you read about pertain only to agronomic crops. Soil test interpretations and reporting procedures for turfgrass are not being changed at this time. My personal

view is that evaluation of the turfgrass soil testing program is overdue. Clients often have a difficult time understanding the recommendations and we need to look at the recommendations themselves and ask how good they really are.

*Q. Within the past six months I have listened to some very convincing information about products containing seaweed extracts and animal manure extract. Do you feel these and similar products have merit or are they merely golf course "snake oils"? WASHINGTON COUNTY*

A. Compared to agriculture, the influx of products such as those mentioned into the turfgrass industry has just begun. Researchers from 12 north-central universities annually meet to share information and experiences on what they call "non-conventional soil additives". Their 1986 listing of such additives names 340 products being sold in the region and nearly 10 percent of these contain extracts of fish or animal waste, marine algae, kelp or seaweed.

The universities do not begin to have the resources to test all the nonconventional soil additives being marketed. Approximately 20% have been tested in field experiments. To date, none have been found to consistently live up to their claims.

When you are confronted with new and somewhat unusual products, I suggest you seek the answers to several questions.

**1. What are the ingredients?** Bewary of any products whose composition has to be kept shrouded in secrecy or non-sensical terms in order to "protect the interests of the manufacturer". Several years ago the sales representative of such a product showed up in the department requesting inclusion of the product in field trials. When pressured to reveal the composition of the product, the answer was "Only God knows and He ain't talking." That was the end of the conversation.

**2. Are the claims reasonable?** If they sound too good to be true, then

most likely they are not. Beware of products such as one claiming to be a "Biocatalytic agent" that "digests and/or emulsifies the molecular shrouds which encapsulate elements locked in an otherwise dormant soil." As a general rule, I am very leery of any product whose mode of action is stimulation or modification of the microbial population of soils. Supplying an energy source will always stimulate microbial activity, but the effect is always short-lived and non-lasting.

For years soil microbiologists have sought without much success to introduce and maintain populations of new and beneficial microbes in soil. Failure to do so relates to a very fundamental ecological principle. The organisms in soil are there because of natural selection processes. Foreign organisms rarely have the competitive ability to survive among the native population of microbes already present.

A significant number of non-conventional products claim to contain algae that fix nitrogen from the atmosphere, excrete substances that improve soil structure, etc. Always keep in mind that algae are photosynthetic plants. They can only thrive in the presence of sunlight at the soil surface and in a continuously moist environment. As we all know, maintaining good quality turf in soil with excess moisture is a losing battle. Hence, the bottom line here is that algae and turfgrass are not ecologically compatible.

**3. Are the claims backed by research data from replicated, long-term experiments conducted by an independent research group?** Beware of testimonials or research conducted at a single location for a single growing season. Testimonials are generally given in good faith, but are normally based on site-specific, non-quantitative observations made without comparison to a suitable control area. To illustrate the problem with these types of testimonials and with short-term research or non-replicated observations let me cite