



Buyer Beware

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The annual GCSAA meeting in Orlando was a mentally enriching experience. The education workshops, the seminars, the guest speakers, the social events, Houston Couch, Joe Vargas, the Turf Bowl, the conversations with old/new friends and the environmental session (which showcased an "Egghead" from Cornholio University) were all highlights.

The trade show stood out as well. It alone could have kept one interested for several days. I was amazed at the number of new biologicals that were being promoted as disease management tools. I define "biologicals" as any product that contains organisms, food for organisms or stimulants that may in some way increase the performance of turfgrasses or the turfgrass environment to aid against disease. As Bob Hampton, president of the Wisconsin Better Business Bureau (1-800-273-1002), would say, "Buyer Beware." Superintendents need to learn more about new turfgrass disease management tools before they invest in them.

Some new turfgrass disease management products promise to be the magic potion that cures and prevents all turfgrass diseases. If it sounds too good to be true, it probably is. There are products made from fish oil, molasses, seaweed, composts, common soil organisms, natural by-products, etc., etc. Granted, there are some good products mixed in with these. Unfortunately, there are quack products in the marketplace and care should be taken to avoid being snookered. Superintendents must be able to separate the good from the bad. Don't assume that a product is good just because they are selling the product at the trade show. Buyer beware.

When talking to a vendor at a trade show, you should ask some basic questions. First of all, ask the vendors for a copy of the data that supports

their claims. Simply ask, "Where's the data?" This should eliminate the pretenders and the alchemists. If they don't have the data to support the claims of the product, don't buy it. If they do have data, find out who did the research and where it was done. Is the researcher respected by his/her peers? Ask other scientists and researchers if they have heard of the researcher and the institution or facility that conducted the research.

When inquiring about biologicals that contain beneficial organisms, ask, "What are the names of the microbes?" Here you want a Latin binomial of the organisms. Specifically, ask for the genus and species. Another good question to ask is, "What is the mode of action of this biological? Does the organism out-compete pathogens for food by direct competition or do the organisms attack plant pathogens?" If the vendor doesn't

know the mode of action of the biological, don't buy it.

One product that is a hot item these days contains a fungus called Trichoderma. The fungus Trichoderma has been rediscovered as a biological. Trichoderma is a common soil fungus that does attack plant pathogens. It is a hyperparasite, which is an organism that is parasitic on a parasite. Trichoderma is already present on your soil. It is ubiquitous. This fungus is not new to the world of plant pathology. It was touted years ago as a powerful tool in reducing plant disease. The fungus is currently being mixed with fertilizer. It didn't work well then and it is not going to work well now. Also, Trichoderma has also been linked with a rare and hard to diagnose lung disease. Just because the product is natural it doesn't mean that it can't hurt you. Buyer beware.

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There is much debate over which method should be used to increase the microbiological health of your root zone mix. Should you add organisms to the root zone environment or should you feed the ones that are already there? Research and experience have taught us that if you add a new organism to a root zone environment, it will most likely die off or be reduced to levels that have little or no efficacy on plant disease. On the other hand, if you start to feed and nurture the root zone organisms that are already present you may be feeding pathogens as well as beneficial organisms. Both approaches have benefits and drawbacks. Again, buyer beware.

Some biologicals work extremely well under laboratory conditions, but fail in the field. Lab experiments usually look at a small amount of factors when investigating the efficacy of biologicals. Unfortunately, when these biologicals are introduced to the environment they are often consumed by other organisms or starve to death and vanish from the system. The biologicals just can't survive harsh conditions presented by the real world. Biologicals can win at home in a petri dish, but they have a poor record under field conditions. It is important to read the information given to you by the biological vendor. Put more faith in field experiments than lab experiments. If the biological hasn't been tested under field conditions, don't buy it.

Testimonials are often used to sell products. They do have some value, but not as much as hard data. Hard data comes from research that has been repeated over several years and by different researchers across a wide range of turfgrass situations. Sometimes other superintendents will claim disease-free turfgrass due to the application of a certain biological.

Did these managers separate out other factors that could have influenced the health of the turfgrass? Was fertility a hidden factor? What turfgrass quality was rated? Is that person qualified to give such an appraisal? Ask the person giving the testimonial about his educational background and experience. Put more weight on a person with a four year degree or higher. Who does the person work for? What does this person have to gain? These are some key questions to ask of the person giving the testimonial.

Another vendor strategy that is commonly used is the "Mr. Gift" technique. Vendor gifts can be successfully used to distract customers from asking tough questions. Avoid being softened by these gimmies. Besides, how much junk do you already have? Do you really need another water bottle or a coloring book? Everybody likes free stuff and the vendors utilize this inherent weakness in human beings to sell products. Look past the freebies and concentrate on the worth of the product.

However, not all gifts are moot. Breath mints are a valued gift because they save you from the embarrassment of that onion covered chili dog you ate for lunch. Yes, stinky breath is a common trade show ailment and you should always keep a roll of mints in your pocket. Nobody likes talking to a person with dog breath!

Let's say you asked all the tough questions and received a stack of data supporting the claims of the biological. Take the information home and read it and ponder it over for several days. Ask the experts at the O.J. Noer Facility at the University of Wisconsin-Madison and elsewhere about the worth of the product that you are interested in buying. Don't make an impulse purchase. Vendors can tempt you with a discount at the show, but unless you have researched the product beforehand, I advise delaying the decision.

One plan of attack would be to order a small amount of the biological and conduct a do-it-yourself field experiment. Setting up and conducting a field experiment can be laborious and tedious, but also educational and fun. There are some important steps that you must take if you are going to dabble in research. First of all, you must create a question to try and answer. This question is called the hypothesis. A hypothesis example would be: "Does the application of this biological reduce the amount of dollar spot on fairway #9?" There must be a control treatment. The control treatment is the standard with which you will assess the worth of the biological. There must be at least four equal replicates for each treatment and control. The experimental area must be uniform across all of the treatments and the experiment must be conducted over several seasons with differing maintenance levels. The disease ratings should be taken routinely until the disease subsides. Take the four differ-

ent ratings of each replicate and average them together. Also, record the range of the ratings at each rating date. There are many statistical methods that can be used to analyze the raw data but an average and range are some simple and quick methods that anyone can calculate. A simple scatter plot of the data points is a nice way to illustrate what happened. Sounds easy huh? Why don't you give it a try? Science is fun.

Today there are more turf products to choose from than ever before. Some products are worthless, yet others may eventually prove to be effective disease management tools. Superintendents need to learn more about new turfgrass disease management tools before they invest in them. Ask questions and expect the best before you buy. Don't be snowed by claims of miracle tonics or magical dusts. Listen carefully to what your peers are saying. Use your head and get as much information as possible. Take time to consider all of your options. You can do what you want, but please ask some tough questions before you make your decision. Maybe even dabble a bit in research. When cruising the trade show remember what our friend Bob Hampton always warns, "Buyer beware." (And carry some breath mints.)

Viva Las Vegas: Excuse me while I digress in this paragraph about a Wisconsin superintendent who has been using a unique technique to increase the microbial health of her/his root zone environment. The technique seems to be consistently successful as few diseases pitch tents on her/his greens. This innovator uses an 80-10-10 root zone mixture to topdress greens. There is something valuable in this tactic that needs to be investigated and documented. The topdressing is 80% sand, 10% peat and 10% composted aerification cores. This is a very innovative way to increase microbial health of your root zone environment. The idea is so good, in fact, that I believe she/he should be giving a seminar on it during the "Innovative Superintendent" session next year in Las Vegas. Wouldn't that be nice to see a Wisconsinite giving an "Innovative Superintendent Seminar"? Please let me know if anyone wants to present a seminar next year in Las Vegas because I can help you make your slides, etc. On Wisconsin! 🍷