

What I wished I had learned in turf school

JOSH MCPHERSON, CSFM, University of Missouri

I wish I knew that I should apply for scholarships. After serving on a board that gives away a scholarship, I was surprised at the lack of people that actually apply for them. I never applied for scholarships in school because I never thought I would receive one. The same philosophy can be carried over to the STMA's Field of the Year program. I believe many people do not

apply for Field of the Year because they do not think they can win.

ABBY MCNEAL, CSFM, Wake Forest University

I wish I had learned stronger communication skills to better talk with coaches, athletes, parents, and user groups. These are the irate people that we have to teach about our jobs, yet all of them think they can do a better job since they each have their own home lawn.

Sports turf managers are always training these people about the importance of our work and why they need to adapt some of their needs/desires to provide a good playing surface for all. Apparently we have the ability to grow grass overnight and make field surfaces dry during rain (or snow) events, so they make requests that are reasonable to them and out of the world to us. The ability to talk in a manner that they understand would certainly have paid off by now.

Another skill that I wished I had learned is the ability to manage the wild ideas that marketing/ promotions departments provide for fan entertainment. I always thought the fans are there for the game, so why do we need confetti,

Coaches and general managers are on everyone's list of people we need to communicate with regularly...

>> **ERIC FASBENDER, CSFM,**
right, jokes with LSU baseball
Coach Paul Mainieri.



fireworks, race cars, motorcycles, 100+ dancers with pompoms that leave debris everywhere, animals (live mascots), and mattress races?

Lastly, I wish I would have found the course that would have taught me about "other duties as assigned." I would take that class several times now, where can I sign up?

LUKE YODER, San Diego Padres

When I was at Clemson from 1990-1994, I did not know what email was and no one had a laptop. I still had an electronic typewriter. It would have been nice to learn a little about computers but I missed out on that boat

I could have benefitted from spending more time, or taking a class, dedicated to reel and bedknife adjustment, sharpening, grinding, adjusting height of cut, and so on, or in other words on specialized golf and turf equipment maintenance

Another good class would have been "Infield Skin 101," covering maintenance, installation, renovation, etc., that really got into Particle Size Analysis of infield skin, percentage of sand/silt/clay, and breaking down each size of sand, etc., really getting into how they test infield material, and how to read a report.

Or how about one on how to evaluate different types of soil reports and tissue tests from different labs and different soils across the country, and how to make adjustments with minor and macro nutrients in order to get to a level that the plant will maximize growth without compromising long term or short term health.

Finally, a class that would teach you how to never say "NO" to upper management when they ask "Can we do this on the field?" This class would teach you how to give a very diplomatic/politically correct answer that would make you look like a team player while clearly stating the pros and cons, i.e., "Sure we can do it but this is what it will cost and this is what will result when we do."

ERIC FASBENDER, CSFM, Louisiana State University

It is a terrifying but exciting thing when you realize that you have graduated college and have to enter the real world. You are trading the relative safety of the classroom

and getting together with friends in the evening hours for a beverage in favor of the unknown world where you have to make decisions in real time that can affect the outcomes of games and players experiences. Disease always looks different on a slide projector in a classroom than when you are looking at it in person and having to devise a solution. The knowledge we gain through or formal education and continuing education is an important foundation to our careers but there are also invaluable lessons to be learned outside the classroom.

One topic that I wish my professors touched on more was the development of your working relationships. The people you surround yourself with and the relationships we build off the field are a key component in how successful we can be on the field. Developing relationships not only with your crew, but with coaches and the other departments within your organization can help you to dodge or sidestep possible damage or wear to our playing surfaces and also increase our visibility when our fields are look-

ing good. Too many times we are only recognized when something bad happens.

Coaches and general managers are on everyone's list of people we need to communicate with regularly, but how many of us just pop in to say hello to our marketing department, equipment managers or sports information staff? These are the people that can help us avoid potential problems because they are on the front lines with us. Once you take the time to get to know them and have a chance to educate them about what our job is all about, you can work together to minimize the impact to all parties involved. The more people you can have in your corner, that understand what it is that you are trying to accomplish, the better your fields can perform.

The important thing to remember is that whether you have been in this industry for 30 years or just recently graduated, it is never too late to implement new ideas and you are not alone. Once we realize that the more people we have on board with what we are doing, the easier our job becomes. ■

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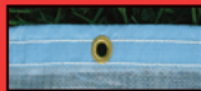
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One option for keeping your indoor facility clean

Editor's note: This article was supplied by Robert Kravitz of Altura Solutions Communications, a firm that works for building-related manufacturers and organizations.

KYLE FREY, a 21-year-old junior from Drexel University in Philadelphia, was one of his school's star wrestlers when he noticed a small lesion, much like a pimple, on his arm. Frey, who worked out with his team on an almost daily basis, thought little of it at the time.

A few days later, however, following a match, Frey noticed the "pimple" had grown considerably and was beginning to hurt. By the next

morning, the pimple was as large as a golf ball and very painful.

Frey's trainer rushed him to the emergency room, where Frey learned he had methicillin-resistant *Staphylococcus aureus* (MRSA), a potentially deadly infection that usually requires treatment with several antibiotics in very large quantities. Frey was released after a 5-day hospital stay, healthy but curious about where he acquired the disease. His doctors believed he might have caught it from another wrestler—someone who had the disease and wasn't aware of it—or, more likely, he caught it from a contaminated wrestling mat and/or gym equipment, or even from surfaces such as benches in the locker room.

This is happening in exercise facilities, gyms, and fitness centers across the country; in fact, MRSA infections are now a risk literally anywhere people go to exercise and stay in shape.

Most who frequent the gym have avoided the kind of dramatic, life-threatening experience that befell Kyle Frey. However, according to a position paper just released by the National Athletic Trainers Association (NATA), "Skin infections, along with other infectious diseases, are extremely common" among people who use gym facilities. In fact, the paper goes on to say, skin infections lead to more than half of all the outbreaks of infectious diseases among participants in competitive sports.

"Prevention is key to minimizing the problem and, in all fairness, gym and locker room users, young and old, can also do a lot themselves to stay healthy," says John Richter, technical director for Kaivac, developers of the No-Touch Cleaning system.

Richter has several suggestions for facility managers that can help keep facilities and those who use them healthy:

- Managers should communicate with facility users regarding the problem. The more people are aware infections can be transmitted in gym and locker room settings, the more careful and cautious they are likely to be.
- Facility users should follow proper hand hygiene. Gym users should either wash their hands after using gym equipment or use

Pay **SPECIAL ATTENTION** to mats

WRESTLING MATS, along with mats used for tumbling, aerobics, and other sports/workout activities, are of special concern when it comes to preventing the spread of disease in gym/workout facilities. These mats should be cleaned daily or more often if used frequently throughout the day. Mats that are not affixed to the floor should be rolled up so that the underside of the mat and the floor beneath may be cleaned as well.

Because our goal is to eliminate cross-contamination, an EPA-registered disinfectant should be used to wipe down mats. A knowledgeable distributor should be able to help gym owners/managers select the best disin-

fectants for their particular needs.

It is important to note that disinfecting is typically a two-step process. Clean the mat first, using an all-purpose type cleaner, to remove debris, stains, etc. Then, once the mat is clean and dry, disinfect using an EPA-approved product.

Always use the disinfectant exactly as instructed. This includes dilution as well as the "dwell" time noted on the label. Most disinfectants must dwell on a surface for several minutes in order to be effective. Further, if using terry cloth or microfiber cleaning cloths make sure they are clean and change them frequently. Recent studies indicate that as the

cloth becomes soiled, it can spread as many or more contaminants than it collects, defeating the entire disinfecting process.

Another option is to use a no-touch or spray-and-vac machine to clean the mats. First, the machine applies chemicals to the mat. Then, after proper dwell time, the area is rinsed by the machine and the built-in wet vac can be used to speed up drying. This process tends to be much faster than cleaning through manual practices. Further, some no-touch systems, using just water, are now recognized as "sanitation devices" per EPA criteria. This is a much "greener" way to clean sports mats as well as a chemical cost savings. ■

disinfectant wipes, which many gyms are now providing to their users. Gym equipment can be a breeding ground for serious infections.

- Visitors should always shower after exercising. Women tend not to shower after exercise, while men are more likely to do so. However, showering with antibacterial soap can wash away germs and bacteria before they have the opportunity to develop into a disease or infection.

- Users should avoid sharing personal items such as razors, towels, or soaps. Sharing of such items can lead to the spread of infectious illnesses.

- Managers should make sure soap dispensers are kept clean. Consider using soap dispensers refilled with soap cartridges rather than systems that have soap poured into them; studies report that these types of dispensers are healthier and more sanitary.

- Visitors should bring two sets of clothes. Gym clothes should be worn only at the gym and washed after each workout; street clothes should be worn after taking a shower. This limits the possibility that germs and bacteria that may have gathered on gym clothes are transmitted to the wearer or others.

As mentioned earlier, exercise equipment can become contaminated during the course of the day. Yet in the past, most gyms were cleaned only at the end of the day, just like other types of facilities.

“However, this has not proven adequate in gyms because of the way they are used and the number of people coming and going, using the facilities,” notes Richter.

Instead of cleaning only at the end of the day, many private gyms now prefer a method best described as “continuous cleaning.” Continuous cleaning means that sanitation professionals frequently mop floors; wipe down machines, mats, mirrors, sinks, counters, and restroom fixtures; and perform other cleaning tasks throughout the day while the facility is open and in use.

“This type of cleaning can sometimes prove disruptive in an office-type situation but surprisingly, it can work very well in a gym or exercise-type facility,” Richter says.

However, more extensive cleaning, what Richter refers to as “hygienic cleaning,” is required in shower and locker room areas.

“This may also mean rethinking the way locker rooms have been cleaned for decades and adopting new methods, products, and technologies,” he says. “We are dealing with public health threats that simply were not much of an issue a decade ago, but which now call for [the use of] new and more effective tools and systems.”

His suggestions for hygienic cleaning include:

- Using EPA-registered disinfectants designed to kill a broad spectrum of germs and bacteria.

- Using microfiber cleaning cloths and mop heads, which have proven to be much more effective at cleaning floors and surfaces. Color-coded microfiber cloths allow users to designate a color for cleaning each type of surface — so, for example, only red cloths would be used to clean toilets, eliminating the risk of cross contamination.

- Using microfiber “smart” towel cloths. These cloths are divided into eight quadrants, allowing users to use a fresh, clean quadrant for each surface they clean. This is another way to reduce the risk of cross contamination.

- Using spray-and-vac cleaning equipment. Even with microfiber

cloths — and certainly with conventional cleaning cloths and mop heads — cleaning tools can spread germs and bacteria from one surface to another as they are used. Spray-and-vac systems eliminate this problem. Similar to indoor pressure washers, they effectively remove contaminants from surfaces, which are then vacuumed up or released down floor drains.

COST QUESTIONS

As much of the country faces continued financial issues, gyms and other fitness centers may have a drop in membership and revenue. The question arises: Can such facilities afford to adopt continuous cleaning programs or more thorough, hygienic cleaning methods?

Richter says many facilities have faced this challenge by having existing staff members take over many cleaning tasks. As to the hygienic cleaning suggested for locker rooms, “Considerable savings can be realized by switching to spray-and-vac cleaning systems,” he says. “[This is because] studies indicate fixtures, restrooms, and locker rooms can be cleaned in one-third the time using this equipment” (based on studies conducted by worldwide cleaning association ISSA and published in *The Official ISSA 554 Cleaning Times*, updated October 2009).

Robert Kravitz is a writer for the professional cleaning, health care, building, hospitality, and education industries. He may be reached at info@alturasolutions.com. ■

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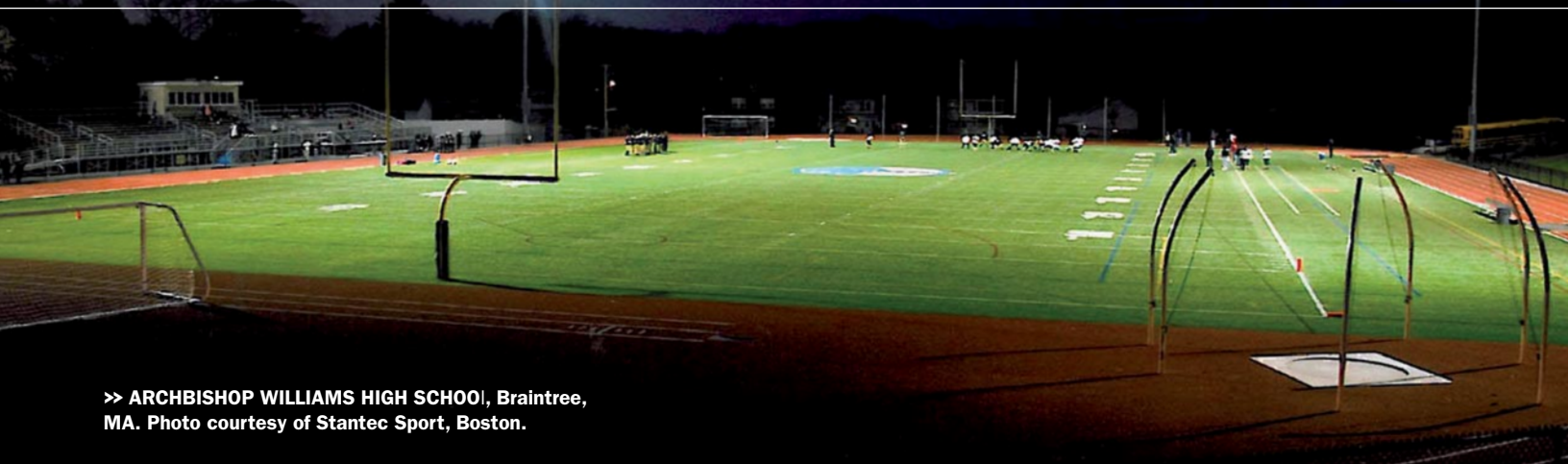
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Tips on maintaining infill synthetic turf

For the better part of the past 15 years, the sports turf landscape has been swamped with filament style, infilled synthetic fields. Although there is no doubt they are a vast improvement over the original Astroturf, they have still sparked debates of all kinds within the groundskeeping community.

Synthetic fields have gotten better and better over the years with millions of research dollars going into finding ways to make them look and play more like real grass, and dramatically improved construction methods are a far cry from the early days when it seemed like every field was installed by a road builder who thought he could grade for an athletic field.

While there is no doubt that synthetic turf has a place in the industry, no self-respecting groundskeeper wants one as his prized game field. After all, we are in this business to grow grass and to make it lush, green, and beautiful, not to groom plastic. Still, we have evolved enough to recognize that having a synthetic field or two for a Division I or professional football team for two-a-day practices, etc., can be a savior for turf managers fighting the daily battle against the damage the ever larger players

can do to field in a short period of time.

In fact an actual game seems like a walk in the park compared to practice because the number of players on the field at any given time is limited to 22 and the play is, for the most part, spread all over the field, without the dreaded repetition of drill after drill in the same location. The same is true for all the overused high school and community fields with no realistic budget or proper level of manpower to manage them correctly.

MAINTENANCE FREE MYTH

As turf managers, we have learned a tremendous amount about these infill synthetic fields over the years and the equipment available to maintain them has grown by leaps and bounds, largely driven by a market need that now makes it profitable to manufacture this equipment.

We have learned it is a myth to believe these fields do not require any maintenance. In fact they are anything but, and some calculations have shown that factoring in the cost of the initial installation, plus the investment in specific equipment for their maintenance, and the inevitable replacement of the field 8-10 years down the road, means there may be very little, or even no savings at all over that time. The issues with these fields are well documented; some have been improved, some are curable, and some simply cannot be cured. Dr. Andy McNitt at Penn State has been conducting a very extensive study for 10 years addressing every conceivable aspect of the surfaces and using natural grass fields as a sort of benchmark for how they stack up, can be changed, improved, and maintained to minimize some of the less desirable issues that they pose.

Some of the early problems that were not anticipated involve compaction of the infill to levels that rival the hardness of Astroturf and cause leg fatigue and concussions, extreme heat on the surface caused by the black rubber infill and underlayment, silica sand dust from the sand infill that has been linked to silicosis, and bacteria that grows on the largely sterile surfaces. The results of some of these studies have given rise to solutions to some of these problems; some have proven to be less of an issue than originally thought, but some have proved they cannot be overcome with any reasonable activity. Altogether however, this is

Some moisture in the field gives the players better footing, and cuts down the sand and rubber flying that we see on very dry fields.

where the no-maintenance theory has been dispelled, and in fact proven that to have a quality field; it is actually rather maintenance intensive.

One of the issues that has been shown cannot really be overcome though any conventional means is the heat or temperature issue. These fields have been measured with infrared thermometers in the south, in the summer, just when most football teams are headed to summer camp, at temperatures of up to 160 degrees Fahrenheit on the surface. The bottom of athletes shoes have measured as high as 125 degrees. This has caused a shift in the way these fields are used to confine practices to times of the day when the sun is not as intense and the field temperatures are lower. For two-a-days, 7 am and 7 pm are the preferred practice times.

It was originally thought that the application of water to the fields would lower the temperature, although no one had provided for a way to do this since it seemed unnecessary at first. Water cannons were brought in to run down the middle of the fields as if growing in a natural grass field. This was not the best solution however, as it typically takes a cannon 2 hours to travel the length of a football or soccer field. Nevertheless, at first this seemed as though it may be a viable exercise. Initial application of water to a hot synthetic field showed a drop in surface temperature of sometimes 50 degrees or more. This seemed promising, however it was soon discovered that this drop in temperature was very short lived and often lasted no more than 15 minutes. On top of that, it added an element of humidity in some cases, right at the level the athletes were working, that some reported to make the situation even worse.

There are some very positive effects to having water available for a synthetic field that were initially overlooked however. In the summer of 2002, Southern Methodist University in Dallas decided to replace its bermudagrass game field with a synthetic field to accommodate the football team being able to practice in the stadium every day. As head groundskeeper I saw an opportunity to take advantage of an irrigation system that was already in place.

We left the system under the field (it was already a 100% sand-based rootzone and that was also left intact in the event we would ever

want to go back to natural grass), and only removed the heads, capped the swing joints and turned them down in the sand, removing the valves and altering the plumbing slightly to insure there could be no water under the field. We then took the perimeter lines and moved them out to the edge of the rubberized warning track, change the heads from sports field heads to golf course heads so that nearly 100% of the field could be reached with just a perimeter system.

The reason this was important, and I'm so glad we had the foresight to do it, was because I knew what was on my field after every practice, game, or for that matter, any event. Think about some of the substances that are deposited on a field during a contest (substances that I would typically wash out with post game irrigation anyway, although the primary importance of that was to begin the healing process for the natural grass as quickly as possible). You have blood, vomit, sweat, spit, potentially other bodily fluids (believe me, I've seen it, even in a packed stadium), and of course the obligatory 10-20 gallons of sugar-filled Gatorade or other sports drink dumped directly on the field by the trainers after every game as they packed up to leave the field.

Now think about all the available living microbes in a natural grass field that would typically render all of this a non-issue. Not so on a sterile synthetic surface, so as soon as the field was clear, the equipment removed, and the bench tarps rolled up, on would go the irrigation to begin the flushing and cleaning process. I believe this to be one of the biggest tools we had available to us in maintaining that field and in keeping what is now an 8-year-old field still looking like one of the best synthetic fields in the country.

There were other benefits to being able to apply water that we found advantageous. Many groundskeepers with sand-based rootzones, particularly with Bermuda, have seen that a wet field actually plays better than a dry field, even in a light rain. This is because the rootzone is firmer and allows for better footing. As long as there is no soil which gets slippery when it is wet, this is a proven improvement. The same is true for a synthetic field. Some moisture in the field gives the players better footing, and cuts down the sand and rubber flying that we see on very dry fields.

This is no small issue to the players who have to deal with these substances in their eyes and noses and can be a bigger problem than is often publicized. It will also cut down on the displacement of the infill, especially at the line of scrimmage where the most aggressive footwork takes place, and it cuts down on static electricity, whether you use a fabric softener or not. This helps with the static attachment of the rubber particles to helmets, but has become an even more significant benefit as more and more players have gone to clear plastic face shields. If you watch closely, you will routinely see these particles attached to all parts of the uniform, but especially the plastic parts like the helmets and shields.

A good soaking of the field during the early morning on game day, or even the night before, will allow you to realize these benefits during the game, and with any required painting complete and the game set up not yet in place, the timing works out perfectly. Only in very hot climates and in the early part of the season, when it is typically warmer everywhere may the moisture not last for the entire game, but it will last a long time and is always worth the effort.

It is important to remember that very little of this can be accomplished without an in-ground system just like you would use for a natural grass field and although it is not recommended to place live irrigation lines directly under the playing surface (it can be done however) because of the obvious repair nightmares should something go wrong, and it can (synthetic grass cannot simply be removed and replaced like natural grass), perimeter irrigation is a fantastic tool that very few groundskeepers think about.

You should demand it if you have to make a change, or build a new field, and field designers should recommend it when designing a field. Its cost is minimal in the grand scheme of the project and it pays untold dividends that are rarely considered, even if cooling the surface is not one of them. There are ever emerging, new technologies, albeit expensive, that will one day address that issue for sure. ■

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