

A "sweeping" view of synthetic turf maintenance



By Rebecca Roach and Chris Harrison

With their vastly improved durability and playability, the new generation of synthetic turf fields is being built all over the country. In order to keep the field in optimal playing condition, maintenance of the infilled synthetic surface must be done. Organizations cannot think that they can put these systems in and just walk away. The longevity of the fields depends on daily, monthly, and yearly maintenance.

General surface cleaning, grooming, and brushing are the basic requirements for synthetic turf maintenance. The Synthetic Turf Council (STC) has created minimum maintenance guidelines for synthetic turf fields. The STC's intent is to augment the maintenance instructions provided by the manufacturers or initial providers of a new artificial turf field.

The first objective for any field manager is to keep the playing surface clean. STC says the longevity of the field and the effectiveness of the maintenance is quite dependent upon the use of proper tools and equipment and the skills of the operator. No matter what equipment is chosen, it should be able to keep the characteristics of the field, without damaging it.

In 2004 the Cincinnati Bengals had a FieldTurf synthetic playing system installed. Darian Daily, head groundskeeper for Paul Brown Stadium, says that trash pickup requires a huge amount of time with the new synthetic field.

"With the old field we could send out one person, for 45 minutes after a game to clean up trash. The mower would take care of getting the peanut shells, sunflower seeds, etc. off the field. The new field requires debris be picked up by hand. This can take in upwards of six to eight hours."



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Once the field has been hand picked, Daily finds that a Buffalo Blower (a pull-behind blower used on golf courses) works best at blowing debris up against the field walls. He says that the Billy Goat Vacuum works well at picking up the peanut shells, fluff from the cheerleaders' pom-poms, and other debris.

At Boston College their synthetic turf field is used year round. Matt Hayes, assistant supervisor of athletic facilities, says they have students hand pick the field after each game during football season. It takes four to five workers about an hour to do the job.

Their stadium is unique in that, in the winter, they erect an inflatable bubble over the field. There is constant hydrostatic air being pumped in from late December to late March. Once the bubble goes up, the field is used for 18 hours a day. It sees more traffic in the off-season than the in-season, Hayes says. The school's sports teams, outside colleges, camps and clinics use the field constantly.

The field is hand-picked every day. They have nothing mechanical to help with the cleaning.

"We cannot stay on top of the maintenance due to the amount of usage and our limited access to the field. We do some maintenance in-house, but have recently had to contract out to Northeast Turf to fix seams," Hayes says.

Once a year, they have an outside contractor come in to clean and groom the field.

Cleaning equipment

There are several different pieces of equipment recommended by the synthetic turf field manufacturers for field cleaning. According to Darren Gill, director of marketing for FieldTurf Tarkett, they leave an estate sweeper with each field sold. This is a lightweight sweeper designed for litter removal: picking up peanut shells, paper, confetti etc., he explains.

This kind of sweeping is quick and easy and should be done on an "as needed" basis, but generally once a week during heavy use.

A-Turf, a synthetic turf provider, recommends a Parker Sweeper to help sweep debris off the field. How often it is used is a function of how often the field is used.

Another STC recommendation for effective maintenance is to have the infill materials evenly distributed. Gill says that FieldTurf has a very heavy fill of sand and rubber that is unlikely to float, even in heavy rain. But routine grooming of the field will assure that the infill is uniformly distributed at all times over the entire field surface.

FieldTurf recommends the GroomAll for all maintenance needs. The GroomAll is equipped with a sweeper component, grooming component, and brush component. It is the only all-in-one machine available in the marketplace today.

Boston College has a FieldTurf system in place. On Friday night before every home game, the field is groomed. Hayes used to use a Greens Groomer, but found "it was very abrasive on the turf. We have all inlaid lines and it was very aggressive to the seams, hashes, and logos."

He chose to go with a less aggressive grooming machine, a Coco Mat. "It doesn't dig in as much, or displace as much rubber, and it stands the field turf straight up."

The Bengals use a GreensGroomer. It has three layers of brushes, each angled at different positions. Daily finds it helps to level out the rubber infill and loosens the top granules.

"When watered, it firms the field up to how players like it," says Daily. In season, the field will be dragged twice a week, three times if there is a home game. This will give an attractive

striping effect that looks just like natural grass.

During the off-season they will drag the field every 7-10 days depending on activity.

The Shoe boots turf

The Buckeyes of Ohio State University do things in big ways. The school is huge, the stadium enormous. So the decision by OSU to go from a natural turf to artificial turf has to be seen as one of the more significant switches in recent years. This happened at a University noted for its turf management research and academic major.

Ohio State selected FieldTurf for installation its legendary Ohio Stadium. The new field at the Horseshoe made its debut when Ohio State hosted Youngstown State on September 1. FieldTurf uses a patented infill mix of silica sand and cryogenic rubber and a patented layering process that delivers a system which emulates natural grass. Additional benefits are found in flexibility for conversion — allowing stadium managers to quickly change from one sport to another or to host concerts and other special events on the surface, according to FieldTurf. The move to artificial emphasizes a more broad-based return to artificial turf. There are 40 NCAA universities with FieldTurf in their stadiums. Many practice on artificial turf. Universities who use it in their football stadiums include Nebraska, Boston College, Rutgers, Oregon, Washington, Kansas State, Louisville, Syracuse, Texas Tech and Missouri. In addition, 21 of the National Football League's 32 teams have it at their stadiums and/or practice complexes.

The Buckeyes had played on natural grass since 1990. Before that, OSU played on an artificial turf surface from 1970-89. This move makes the Buckeyes the fourth Big Ten university to have FieldTurf in their football stadium, joining Michigan, Minnesota and Wisconsin. With the exception of Michigan, all of the Big 10 schools are land grant colleges with a long tradition of ag and turf research.

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Contaminants, germs

Removing airborne contaminants and disease vectors from the field is another STC objective. There are products available to field managers that will remove everything from staph infections to AIDS.

The Bengals have not put any disinfectants on their field. Daily says that there are possibilities of having staph in synthetics. However, they haven't seen any documented cases. So spraying would be a significant investment when it has not been proven that players can contract staph from the synthetic fields.

Daily says that they would be more concerned if their stadium was in a climate-controlled, indoor setting. He feels that the heat (up to 120 degrees) and cold extremes they get from having an outdoor stadium help them. Water cannons are used anytime blood, vomit, or other potential disease-causing waste is on the field.

Hayes states, "We choose to spray a disinfectant to cover our bases." The night before a game the entire field is sprayed with a disinfectant.

When not in season, the field is sprayed once a month.

"The disinfectant neutralizes immediately. It is not something that sits there and disinfects everything that touches it. It's a one-time application. It will kill anything on the field at that point in time. So the next day if someone bleeds on the field, it's not covered." During a game there is always a spray bottle of disinfectant on hand for blood.

A-Turf does not recommend any sort of spray to treat against staph. Jim Dobmeier, President and Founder of A-Turf, Inc. and sister com-

pany, Surface America, Inc. says that there are no documented cases of staph infections coming from synthetic turf.

Where it starts

"Building a synthetic field all starts from underneath. If you have a good base, the field will perform well," says Daily.

This base includes an effective drainage system. STC recommends effective drainage of surface water be maintained throughout the life of the field's surface. The Bengals' synthetic field uses the same drainage system as the old field. This, along with a solid base, has kept them from having many maintenance issues.

The few problems they had were par for the course, requiring the field to settle. Then they were easily solved.

The field at Alumni Stadium is watered the night before a game. They have encountered some irrigation issues.

"We have little dips in the field that can be felt when grooming. There will be standing water in those depressions after a heavy rain. If it pours during the game, we are out there with a squeegee to get rid of the puddles," Hayes says. He adds that fine materials may have worked their way down to the nap of the turf and formed a barrier in the drainage system. ■

Rebecca Roach and Chris Harrison are freelance writers with experience in the turf industry.



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