



>> THE UNIFORMITY of a field, in terms of both its appearance and its playability is also dependent upon proper upkeep. Photo courtesy of Gale Associates, Inc., Weymouth, MA

# What facility managers NEED TO KNOW about artificial turf

**O**NE OF THE GREAT THINGS about artificial turf is, well, it's artificial turf. No weeding, no need to rest the field between uses no worries that a lacrosse game on a muddy day is going to tear up the surface. That's not to say, though, that an artificial turf field is the invincible super-hero of sports facilities. Like Superman who wants to avoid Kryptonite, your artificial field has vulnerabilities, and part of being a good manager is being able to keep it safe. Here are some pointers compiled from sports facility construction veterans who have expertise in artificial turf.

## MARCHING ORDERS

While it's traditional for the school's marching band to play during halftime, track builders caution against having the band hold regular practices on the artificial turf field.

"Bands can be hard on a turf field," says David Clapp of Baseline Sports Construction LLC in Knoxville, TN "since you have scores of marchers making sharp turns at exactly the same spot, creating worn and depressed areas. This happened on a field that we built in 2005. The band started using it for practice, and by 2008, we had to go back and patch several of those spots."

Builders advise turfgrass managers to request that marching bands practice in a gym, parking lot or elsewhere and to reserve their field time for games only.

## RUNNING IN PLACE

Another problem for athletic fields? Running exercises or routines that are always held in the same area. Whether it's soccer players running drills, runners

## Biggest foe of all: lack of maintenance

**LACK OF MAINTENANCE** can make a turf field look old and worn before its time. Unfortunately, says Dan Wright of Sports Turf Company, Inc. in Whitesburg, GA too many facility owners assume that like a plastic plant, an artificial turf field requires nothing in the way of upkeep.

"Lack of proper maintenance for the synthetic turf field is one of the biggest problems out there," says Wright. "Contrary to popular belief, a synthetic turf field is not maintenance free. It requires regular brooming to maintain the infill level and to keep the turf fibers looking good."

Food and beverages should not be allowed on the field; both can fall onto the field's surface and soak into or be ground into the infill. It should go without saying that smoking and chew tobacco should similarly be forbidden, but reminders never hurt. Remove all litter and debris from the field (and the area around it) immediately using tools approved by the installer and/or manufacturer. Depending upon the product, such tools may include leaf blowers, soft brooms, rubber-tined rakes, special vacuums, or hands wearing rubber gloves.

Try to remove any spilled material

before it causes a stain. Appropriate cleaning will help break down and remove vomit, blood and other fluids from the surface. (Recommendations on cleaning solutions should be obtained from the installer or manufacturer).

Groom the fibers by brushing them so that they continue to stand upright. If the field is groomed regularly, make sure the grooming pattern is varied in order to keep the fibers standing upright and to prevent patterns of wear.

"Keeping the infill at the specified level ensures optimum safety and performance as well as protecting the fiber. Decompacting the infill by grooming and sweeping helps to keep the infill high on the fiber," says Schedler.

Inspect all seams and edges, check the rubber depth (particularly in high-traffic areas), and ascertain the drainage system is working correctly. In addition, stand back from the field and make sure the markings and lines are all straight; in practice areas for athletic teams (or marching bands), the constant force of turning and pivoting in the same direction can actually twist the turf, making the lines appear crooked.-Mary Helen Sprecher. ■

practicing sprints or anyone else, such activities tend to take place in the same area, and eventually, the field will look worn there. This can be a hard battle because many managers have to try to convince coaches, who thrive on routine that they do need to change up the location of practices.

“Moving repetitive routines around the field or just making slight adjustments from time to time will help keep the isolated damage from showing in specific spots,” says John Schedler of Atlas Track & Tennis in Tualatin, OR. “Sprint and touch exercises with or without cones in the same spot can eventually move the turf by planting and accelerating again and again. This will show most on the yard lines.”

### GETTING OFF ON THE WRONG FOOT

Improper footwear is a huge enemy of artificial turf, adds Schedler, who says that the constant shoe/turf interaction can flatten and damage the surface. Surprisingly, flat-



» **TO KEEP A FIELD LOOKING ITS BEST**, educate users in proper use, footwear and more. Photo courtesy of Suburban Consulting Engineers, Mt. Arlington, NJ

soled tennis shoes can be detrimental to the turf as well. Appropriate athletic footwear (many turf manufacturers recommend athletic shoes with rubber cleats) should be mandated.

“Flat soled shoes or street shoes can really damage areas on your field,” Schedler says. “Most fields have a fiber that has some memory and after being compressed will want to go back to its original position. If

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» **MANY TYPES** of users, not just athletes, will use a field. Ascertain that groups including spirit squads (such as cheerleaders, dance teams and baton twirlers), bands and support personnel understand the importance of proper footwear, and of not using the same areas in the turf on a continuing basis, as this can cause damage over time. Photo courtesy of Holcombe Norton Partners, Inc., Birmingham, AL

that fiber gets compressed again and again, or even worse, gets constant compression, the memory will start to fade and it will stay compressed. This is the beginning of the end for most forms of fiber. After an event that has compressed the fiber for an extended time, it is important to groom or brush that fiber back up as quickly as possible.”

### THROWING IT OUT THERE

Having field events on artificial turf can be great—provided they’re the right events. With the increasing use of synthetic turf come concerns over whether throwing events can cause damage to the athletic surface. The UEFA, the European governing body for soccer, has guidelines on synthetic turf which state that shot put and discus do not cause damage, but that hammer and javelin can. Some events, therefore, may need to be shifted around during meets and competitions.

“One of the biggest questions I keep running into about turf is the field activities,” says Sam Fisher of Fisher Tracks in Boone, IA. “It seems that some sales people will say anything to get a job but, in fact, the owner then finds that their warranty is invalidated by conducting such activities.”

According to Fisher, a special tip has been developed for the javelin for use in synthetic turf, but he expresses doubts about the

ability of such a product to protect the turf over repeated use. Facility managers are encouraged to protect their new facility, and to not expose it to unnecessary risks.

### VANDALISM:

Because an artificial turf represents a substantial investment, keeping it safe should be a priority, says Dan Wright. Field managers should be as proactive as possible in order to head off mischief-makers.

“The damage a vandal can cause can be something simple to repair (usually some additional brooming) or something very expensive requiring a complete replacement of the field,” says Wright. “Security of the facility is very important in keeping vandalism under control. I would recommend some video surveillance of the facility if the facility is in an area where vandalism is a high risk.”

### DON'T TRY THIS AT HOME:

According to Norris Legue of Synthetic Surfaces, Inc. in Scotch Plains, NJ some of the worst damage to fields can be inflicted by well-meaning managers, maintenance crew members and others. An example, he adds, would be the person trying to examine a seam which may or may not be coming loose.

“One of the biggest enemies of artificial

turf is what I would call a ‘good-intentioned investigator’ (or overly curious user) whose curiosity exacerbates a small issue and creates a major problem,” says Legue. “In such a case, the investigator might grab the edge of a loose piece of a turf seam and peel it back enough to cause the bond to fail and create a tripping hazard on the field. In the industry, we have terms we call ‘shear strength’ and ‘peel strength’ when referring to the adhesive or bonding of turf at seams. Peel strength is like peeling a banana or orange which is much lower in bond strength. Shear strength is like trying to pull the skin off the orange or banana from the middle of the fruit without an edge to grab onto. Turf seams are similar in nature and the bond is designed to withstand normal athletic competition and activity or force. The bonded seams are not intended to withstand the good intentioned investigator attempting to peel them open like a banana.”

### WATER, WATER EVERYWHERE

Turf managers often water fields in order to keep the playing area cooler; however, in many cases, says Lance Rosenberger of Medallion Athletic Products, Inc. in Mooresville, NC “watering does not seem to help temperatures, it only raises the humidity,” creating an unpleasant playing environment.

In addition, depending upon the surface temperature, watering may not immediately create playable conditions, as it may not bring down the temperature quickly enough to reach a comfortable level. Many who are caring for a turf field for the first time find that it takes about a year to understand the ambient temperature, its relationship to the field temperature, and how long a field needs to be watered in order for a comfortable playing environment to prevail. ■

*Mary Helen Sprecher wrote this on behalf of the American Sports Builders Association, a non-profit association helping designers, builders, owners, operators and users understand quality construction of many sports facilities, including sports fields. [www.sportsbuilders.org](http://www.sportsbuilders.org).*