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Synthetic Field Maintenance: Keeping the Grass Greener

By Mary Helen Sprecher

Synthetic turf fields have their own fan club for a reason. They stay green and vibrant, season after season. But like all sports facilities, they do start to show the effects of years of play. If yours hasn't reached the end of its useful life, but could look better, here are some tips to bring it back to its original glory.

Keep It Clean

There's not an athletic surface out there that improves with neglect. Like anything else, a synthetic turf field benefits from regular cleaning. That starts with preventive maintenance. Set rules about what is allowed (and prohibited) on or near the surface. Gum, smoking, food and beverages (except water), chewing tobacco and more should not be brought onto the field. The better you are at enforcing this rule, the cleaner the field will stay.

Use a leaf blower to remove light debris from the field. Pick up anything that can't be blown off the surface. If you see that anything has stained the turf, a mild soap solution should be used first. If the stain remains, contact the turf installer and ask for guidance.

There are always going to be concerns about the cleanliness of athletic surfaces, particularly when athletes might slip, slide, fall or be tackled. There are various EPA-approved, athletic turf-specific products on the market, as well as machinery that can be used for either direct or widespread spraying onto the turf. Whichever product or method is chosen, it should also address mold and mildew, and keep down odor-causing bacteria. (There will always be debate as to the effectiveness and risk of various products; have a discussion with a sports medicine professional if you need guidance).

A Fine, Upstanding Surface

Another aspect of prolonging the life of a field and keeping it looking good is making sure the fibers remain upright. Regular grooming can help accomplish this. Grooming will keep fibers from embedding below the infill, and can help remove debris as well. The frequency and type of grooming will vary according to recommendations from the manufacturer and the amount of use the field gets.

Grooming can take the several forms. Sometimes, it is known as dragging (in which a special brush is dragged behind a utility vehicle). Power-grooming equipment is another option; this type of machinery generally has rotary-action brushes. A third form of grooming is scarification, which involves the use of a sweeper or greens groomer. In all grooming, the goal is the same: preventing or remedying compaction of the surface, redistributing and re-leveling the infill, and bringing fibers upright again. Without this type of rejuvenation, the field will start to look beaten-down.

If motorized equipment is to be used on a synthetic field, it must be equipped with 'turf tires,' in order to minimize the possibility of damage to the surface.

At least once a year, the field should be professionally inspected and tested to make sure its playing qualities remain stable.

Walk the Line

One disadvantage of a synthetic turf field is that unlike its natural grass counterpart, a synthetic field, once damaged, cannot repair itself. If the problem goes unaddressed, the damage will keep getting worse. Make it a point to work through your facility and look for problems. Remember that minor ones may be less expensive to repair if caught early on. And while an experienced maintenance professional may be able to repair problems, it is recommended that the turf installer be contacted for advice first.

Ah, synthetic turf. No watering, no weeding, no worries. It always looks fresh and green, and your school logo stays bright and readable. Face it, it's a field for all seasons.

Before you turn your back on that field, though, remember that it still needs maintenance (though of a different sort from that required by a natural grass facility) to keep it looking and performing its best. After all, it's an investment. You want to make the most of it.

A suggested checklist has been included with this article; individual managers can tailor it to their needs. The manufacturer of the specific turf system also can provide maintenance recommendations. According to the American Sports Builders Association's publication, *Synthetic Turf Sports Fields: A Construction and Maintenance Manual*, any maintenance plan should include routine cleaning and grooming as well as periodic inspection, repair of minor irregularities, testing and top dressing.

On a regular basis (the checklist may be used for reference), make a walk-through of your field. There is absolutely no substitute for this procedure. Carry a notebook and jot down questions about anything on the field that you're not sure about -- an irregularity in the turf, an area of unusual wear, etc. Carry a digital camera and take photos of any questionable areas; these can always be e-mailed to your installer, who can help advise you on whether a development is normal, or whether it is a problem that needs to be addressed immediately.

Clean and Green

Keeping the field at its best means keeping it clean, for starters. And the best way to help it stay clean is to set forth rules that keep away from the field the things that might dirty it up. Prohibit smoking, food and beverages, gum, chewing tobacco and other substances from being brought onto the field. (Athletes may choose to have sports drinks and other items on the sidelines, but they should not be brought out onto the turf). Prominently post signs stating these rules so that everyone sees them.

Keep pets and other animals off the surface as well. (That would seem to go without saying, but there are many community members who will want to use any fenced athletic field as their personal off-leash dog park. Ask facility users to report violators immediately.)

If debris does make its way onto the field, it should be removed promptly so that it does not get the chance to decompose and filter into the turf and down through the infill. Any trash can be a contaminant, including food wrappers, pompon shreds, tape and more, as well as environmental materials such as leaves, bird droppings, seeds, etc.

Use a leaf blower to remove dry debris from the surface of the turf; however, care should be taken not to hold the nozzle too close to the surface since doing so may cause damage to the turf itself. Additionally, do a post-game inspection and clean any spills or stains off the surface by using warm water and a mild soap. (Many manufacturers recommend dish soap, for example). If a stain is not

removable with the mildest treatment, consult the installer or manufacturer of that specific turf system before going to anything stronger.

Unlike natural grass, a synthetic turf field does not contain organisms that break down contaminants such as blood, urine, sweat and vomit. With the increasing concerns over transmission of infections including Methicillin-resistant *Staphylococcus aureus*(MRSA), which enter the body through a break in the skin, care should be taken to disinfect the turf regularly and keep it clean. There are various EPA-approved, athletic turf-specific products on the market, as well as machinery that can be used for either direct or widespread spraying onto the turf. Whichever product or method is chosen, it should also address mold and mildew, and keep down odor-causing bacteria.

To prolong the useful life of a turf surface and to keep it looking and performing its best, installers and manufacturers recommend regular grooming. This keeps fibers from embedding below the infill, and can help remove debris as well. The frequency and type of grooming will vary according to recommendations from the manufacturer and the amount of use the field gets.

One form of grooming is dragging, in which a piece of synthetic turf or a soft brush is dragged behind a utility vehicle. (More information on how such vehicles should be equipped appears in this article). Power-grooming equipment is also available; this type of machinery generally has rotary-action brushes that are mounted on a motorized unit. A third form of grooming is scarification, which involves the use of a sweeper or greens groomer. In all grooming, the goal is the same: preventing or remedying compaction of the surface, redistributing and re-leveling the infill, and bringing fibers upright again. Without this type of rejuvenation, the field will start to look beaten-down.

At least once a year, the field should be professionally inspected and tested to make sure its playing qualities remain stable.

Note: If you must remove snow and/or ice from the field, contact the installer for advice regarding that particular brand of turf. In no case should scrapers, choppers, metal shovels or rock salt be used. Remember that because synthetic turf heats up more quickly than natural grass, and holds heat longer, the snow and/or ice may melt by itself, without any mechanical assistance that might damage the field. (There are heating systems available on the market for fields; however, these must be put in at the time of construction).

Protecting Your Investment

One disadvantage of a synthetic turf field is that unlike its natural grass counterpart, a synthetic field, once damaged, cannot repair itself. And, if the problem goes unaddressed, the damage will keep getting worse because of repeated use, or even abuse. Therefore, prevention of such problems is the best plan. All-around fencing will deter unauthorized use of the facility, as will lights that come on at dusk and shut off at dawn.

Some damage may be caused by well-intentioned (though misguided) maintenance crews. According to the ASBA's sports fields manual, it is essential to keep in good repair any machinery used on or near the turf so that it does not leak oil or other fluids into the sport surface. This machinery should also feature wide soft tires, sometimes referred to as 'turf tires,' and should be driven slowly with wide turns so as to avoid disturbing the aggregate base of the turf. No machinery should ever be parked or allowed to stand on the surface. Heavy equipment of any kind should be prohibited from coming into contact with the turf.

In addition, the surface should always be protected from damage that might occur during alternate uses. If, for example, the field is to be used to host an outdoor graduation, chairs and other furniture should be set on plywood, mats or plastic tiles to distribute the weight and prevent divots. The field should not be used to host any event where there is a potential for unnecessary risk of damage to the surface; for example; fireworks displays, events where charcoal or gas grills are used, etc.

Repair Problems Immediately

Over time and with regular use, some wear and tear on, and damage to, the surface is unavoidable. Areas of high traffic (such as near corner kick areas, lacrosse goals and midfield) will show wear sooner than others. Seams can come loose and drains can clog. Extra infill may need to be added in some areas. Although you're doing regular walk-throughs of your facility, be sure to listen to your athletes, too. If they complain about any specific areas on the field, inspect those areas immediately. After all, the players are out on the field constantly, and are likely to notice problems that you won't see, including irregularities in the surface. Note that the more often a field is in use (as an example, a multi-purpose field), the more often it should be checked for damage and wear.

Although an experienced maintenance professional may be able to repair problems, it is recommended that the turf installer be contacted for advice first. Remember that a problem on the surface can have more than one cause. An experienced contractor can help an owner diagnose what's wrong and give advice on how to fix it. Some problems may be covered under product warranties; in all cases, the installer and owner should work together to understand each other's responsibilities.

While you can't head off every problem, you can take ownership of, and stewardship for, your facility by doing preventive maintenance. Being proactive means that minor flaws won't become major catastrophes, and that the grass will stay greener on your side of the fence. No, you can't prevent all problems, and some will be the result of general wear and tear. But the more proactive you are, the earlier problems can be identified, and the better shape the facility stays in.

Recommended: ASBA's publication: *Sports Fields: A Construction and Maintenance Manual*