

Re-using synthetic turf infill

Editor's note: Paul Hollis is executive vice president of Redexim North America.

THE SPORTS TURF INDUSTRY has seen huge growth in the number of synthetic turf sports field both in our nation and the rest of the world over the last decade. The newer infilled playing surfaces now number in the thousands, if not tens of thousands. The quality of play on these fields compared to the first generations of artificial playing surfaces is impressive. A large number of college and professional teams now own synthetic sports fields, either at their stadium or practice facilities. What was once a luxury now seems to be a necessity for many.

The basic construction of a synthetic playing surface consists of synthetic fibers or carpet, the infill (sand or rubber), backing material, a choker stone layer, open grade and soil. In essence the fields are not all that complicated and installations in most cases can be done in a just a few days or weeks at most. While the investment of a synthetic field now seems commonplace and enjoyed by owners for years and years.

A new question is looming on the horizon. What to do with the fields once they have met its life expectancy. There are an alarming number of fields that will be removed over the next decade and some thought should be given on how to dispose of them properly.

The average synthetic field will includes between 300,000-750,000 pounds of infill material varying due to the mix of sand and rubber and over 80,000 square feet of plastic fibers. So what is the answer that would be the most environmentally friendly? Waste Management and many other disposal companies are now signaling that they do not want the materials or they will charge outrageous fees to put them in a landfill.

Many companies now promoting recycling all materials well in advance of their industry peers and are using machines to remove the synthetic fields at the end of their life and separate the components of each to be recycled or reused. Let's take a look at how the materials could possibly be used in a constructive and environmentally sound manner.

Several years ago Dr. Trey Rogers and Tim Vanini from Michigan State University identified that crumb rubber had potential as a possible topdressing material. The approach makes sound agromonic sense, but the use of rubber infill only on a limited basis. Can the application of using crumb rubber as a soil amendment be popularized?

The majority of playing fields are made of plastic fibers produced from polyethylene and polypropylene. The clean surface



fibers of these older fields can be cut, recycled and made into lower density fibers. However, most backing materials cannot be recycled in this manner and are used as a low grade fuel at some smelting plants and cement kilns that harness this energy for producing other goods. A number of synthetic turf manufacturers are now advertising turf made from fully recycled materials ahead of their competition.

There are a relative few turf installers that have discovered that removing, cleaning and reusing materials on site is not only a good method, but also reduces the cost of a replacement field. A mechanical infill remover can take out the old infill separate it and then it can be cleaned for reuse or disposed if necessary. A large portion of rubber infill can be used again in most applications, while sand is disposed of by selling or donating to other sources.

If the playing field is worn, but still has some life left it can be sold or donated to high school or other facilities with lower budgets. There are also stories surfacing of used turf being used as golf tee mats, to line sand traps on golf courses, or other uses. There seems to be a growing number of outlets for used synthetic turf and the world wide net can surprisingly help find an old field a new home.

The Synthetic Turf Council (STC) is the first group to take a pro-active look at these concerns with its End of Life Disposal Task Force. The STC encourages options that avoid landfills once a synthetic turf field has met its life expectancy. Owners can seek advice from them and request copies of publications such as the organization's "Suggested Performance Guidelines" that will help identify when a playing field is nearing its end of life. Check out their website at www.syntheticurfCouncil.org.

The number of equipment manufacturers that produce machines to assist end users in the recycling of synthetic turf and its components is growing. The companies that provide this service will grow exponentially as the thousands of fields start to mature. Look for the increasingly numerous sources to recycle or repurpose the byproducts of your old field before its end of life and you will not only save yourself costs of replacement, but you will also keep your operation environmentally friendly. ■

STMA 2011 Innovation Award winner, g2 turftools

STMA Commercial Vice President Rene Asprion, Diamond Pro/TXI, presented the 2012 STMA Award for Commercial Innovation to g2 turftools during trade show hours at last month's STMA Conference. The award was for their 84-inch Turfplaner, a product judged by the STMA Awards Committee to substantially enhance the efficiency and effectiveness of the Sports Turf Manager, and make playing surfaces safer and more playable for athletes.

Lindsay Merkt of g2 reported:

"g2 turftools, inc. was incorporated 5 years ago to develop and manufacture precision turf equipment to enhance the ability of turf managers to produce and maintain high quality playing surfaces. This year we added the Patent Pending 84-inch Turfplaner to our existing patented product line of turfrollers, turffloat and turfslicer, and turfrack.

"The number one problem all turf managers have is how to deal with high spots on their fields. All fields seem to suffer from high spots, whether caused by infield washes on baseball fields that create lips, topdressing and redistribution of aerification cores, or just poor construction from the beginning.

"The low spots have been relatively easy to manage, since they just need to be filled in, but high spots have been a completely different problem. High spot removal requires removing the turf, removing the excess soil, re-grading, re-compacting, and finally replacing the turf. After many hours of operating a flail mower set to zero to remove minor high spots after new construction, we decided to manufacture a device that would automatically remove high spots while automatically adjusting to grade, through the use of laser or AutoGrade controls. When the recession hit in 2008, we decided to take the chance that a better, faster, cheaper alternative to surface renovations would be accepted by turf managers.

"In January 2008 we started designing the 84-inch turfplaner and by April 2008 we had developed our Patent Pending prototype to start testing. By November 2011, we had turfplaned more than 3 million square feet and produced 2 more BETA versions for additional testing. Other advancements made to the turfplaner have included integrated controls that include Manual, Auto-Grade, and Laser Controls. In December



2011 we sold our first production to our Licensed Service Provider in Louisiana.

"With such new technology we decided early on that the best way to guarantee quality work and the best service possible to the turf managers was to create a network of Licensed Service Providers that would be trained and supported by g2 turftools. These Licensed Service Providers are regional turfplaning experts that can provide all of the necessary equipment and personnel to remove and restore existing turf to a pre determined grade or simply remove surface irregularities to increase the playability and safety. Turfplaning has been performed on baseball, softball, soccer, football fields, polo fields, golf tees and fairways, and has even been used to remove lips from cart paths and roadways. Whether preparing an existing turf surface for new sod, restoring grade, or simply removing surface irregularities, turfplaning promises to be the new standard for turf resurfacing and renovation." ■

Barenbrug USA introduces HGT Kentucky bluegrass

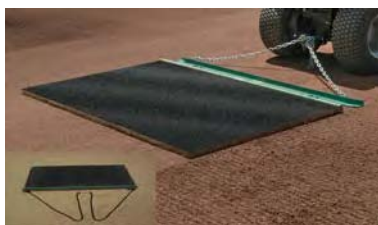
With the development of Healthy Grass Technology (HGT), Barenbrug has developed a hearty bluegrass which is easy to grow, fast to establish and resistant to disease. These tremendous benefits combined with a remarkable tolerance to heavy traffic making HGT the ideal choice for any bluegrass application. All of these benefits add up to significant reduction in chemical usage, saving time, money and reducing environmental impact. Barenbrug scientists took over a decade to develop HGT. They researched and propagated only the most rugged Kentucky bluegrass plants in a variety of challenging environments. Once HGT passed Barenbrug's rigorous research program, it was released for independent evaluation. Extensive trials at universities and by the National Turfgrass Evaluation Program found Barvette HGT far exceeded other top bluegrass varieties in resisting Summer Patch, billbugs, white grubs, tolerating traffic and spring green-up.

Barenbrug USA

Beacon Cocoa Mat Drag

Get a highly professional finish without displacing soil! Unlike steel mat drags the Beacon Cocoa Mat Drag rarely leaves a pile of material to disperse after you pick up the drag. The 6' x 4' drag is available with or without the Beacon Leveling Bar to drag an infield with a tractor. The 6' x 2' hand drag is great for in-game between-inning manicuring, and the 4' x 2' hand Cocoa Drag is good for smoothing baselines, cutouts, mounds and home plate areas. No matter the area, there is a Cocoa Mat Drag for you!

Beacon Athletics



New electric lift on TurfTime infield groomer

Raise and lower the Triple Play Infield Groomer without leaving the driver's seat. TurfTime Equipment's electric lift kit lowers the groomer into working position with the flip of a switch. Big pneumatic tires add even more maneuverability to this sturdy little workhorse. The bolt-on kit can be factory installed, or ordered as the ideal upgrade for units already in the field. From aggressive ripping and grading to leveling and final finishing, the Triple Play is designed to out-perform more expensive groomers.

TurfTime Equipment



Toro San Pro 5040

With an 18-horsepower engine and hydraulic power steering, the Sand Pro 5040 offers the perfect combination of precision and power. Also featuring the new Quick Attach System (QAS), which allows operators, in less than a minute, to switch from among 14 different attachments without the use of any tools.

The Toro Company



PR72-E Pro Groomer

Heying Company produces a full line of quality infield groomers that repair and maintain skin infields. Quickly and easily keep your infield playing surfaces level and in optimal playing condition. Machines available with remote controlled electric lift and manual lift. Adjustable implements perform numerous tasks including breaking up hard infields. Pull with a variety of towing machines. No tools needed to adjust.

Heying Company

