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» **Top Left: Kirkwood Community College winners**, L to R: Student Challenge sponsor Hunter Industries' Lynda Wightman, Luke Perkins, Tyler Dean, Tim Sims, Tyler Timmerman, and coach Troy McQuillen.



» **Bottom Left: Purdue University winners**, L to R: Student Challenge sponsor Hunter Industries' Lynda Wightman, Zak Peterson, John Thackery, Ben Baumer, Joey Gerking, and coach Tracy Tudor.

Student Challenge winners put their prize money to use

EVERY YEAR the SAFE Foundation presents \$4,000 cash awards to the first place 2-year and 4-year institutions that participate in the STMA Student Collegiate Challenge. The funds provided by SAFE are meant to benefit the turfgrass science programs at the winner's schools. Use of the awards can include creating an athletic sports field learning lab, purchasing athletic sports field specific equipment and products, or other items or projects approved by the STMA Student Challenge Committee. Funds are required to be spent before the next year's STMA annual conference.

The 2012 winners of the Student

Challenge were Kirkwood Community College Team 204 in the 2-year division and Purdue University Team 402 in the 4-year division. The students from Kirkwood Community College used the award money to purchase specific lab tools that could help with hands-on lab competencies in the Athletic Field Maintenance class. The resources purchased include a Graco line painter, Spectrum Technologies' TDR moisture meter, and temperature meters. The line painter gives students the opportunity to operate and understand painting procedures. The moisture meter has been used to teach the importance of irrigation efficiency and moisture testing,

and the temperature meters have been used to educate students about maintaining turfgrass canopy temperatures. The award money helped make great improvements to the Athletic Field Maintenance curriculum and student education.

Students at Purdue University have used the award money to renovate a 2-year-old, multi-field soccer complex that is heavily used by youth soccer leagues in the surrounding community. Students aerified, overseeded, topdressed, and fertilized the field in spring 2012 to increase safety and tolerance to stress. Students' hard work and outreach efforts had an extremely positive impact on the local community.

The 2013 STMA Student Collegiate Challenge takes place Friday, January 18, 2013 from 8:00-10:30 am at the Ocean Center in Daytona Beach, FL. Registration for the Student Challenge is now open. A maximum of four undergraduates can compete on a team and must declare if they are representing a 2-year or 4-year institution. Competitors receive complimentary conference registration. All Student Challenge competitors are **REQUIRED** to register online before December 15. No paper registration forms will be accepted. You can send in a paper form to register for optional events. Please contact Kristen Althouse at kalthouse@stma.org with questions about the Student Challenge.

The mission of the SAFE Foundation is to enrich communities through championing safe, sustainable sports and recreation fields for all athletes. As a 501 (c) (3) non-profit corporation and the charitable arm of the Sports Turf Managers Association (STMA), it also provides scholarships and funds education to help sports turf managers with the challenges they face in managing athletic fields. For more information, go to www.safefields.org. ■

JOHN MASCARO'S PHOTO QUIZ

Answers from page 17

THE BROWN TURF is a result of an army worm infestation. This year has been particularly bad for army worms in the Eastern United States and on a Friday afternoon, this sports turf manager observed a slight browning on the turf near the warning track on this 419 bermudagrass baseball field. By Monday morning at 7 am, the sports turf manager returned to the area and found that the army worms had eaten most of the right field. A bifenthrin insecticide was applied and the army worms began curling up within 30 minutes after spraying. The following day the sports turf manager applied a 21-0-4 turf fertilizer with 0.067% Acelepryn insecticide. It is unclear where the army worms came from although the field and surrounding area were rebuilt about 2 months before the infestation and large rolls of straw were brought in and used to stabilize the banks behind the field. Since army worms show up in large numbers but eat mostly bermudagrass leaves, the damage was largely superficial and grew out fairly quickly after the pests were controlled.

Photo submitted by Steve Jett, Director of Grounds and Athletic Fields at Martin Methodist College, Pulaski, TN.



If you would like to submit a photograph for John Mascaro's Photo Quiz please send it to John Mascaro, 1471 Capital Circle NW, Ste # 13, Tallahassee, FL 32303 call (850) 580-4026 or email to john@turf-tec.com. If your photograph is selected, you will receive full credit. All photos submitted will become property of *SportsTurf* magazine and the Sports Turf Managers Association.

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Bermudagrass in 70 days AT DePauw University

DEPAUW UNIVERSITY is the pride of Greencastle, IN. Nestled just 3 hours south of a homonymously similar school in Chicago, the NCAA Division III institution sits at the northern edge of the transition zone.

Its location makes the school's choice to switch from cool-season turf on its soccer field to bermudagrass all the more notable, although part of what is becoming a trend in and around the Midwest.

The 2011 project started a year and a half before when Assistant Director of Facilities and Grounds, Rob Harper, and I drove an hour west to Terre Haute, IN to step foot on the Patriot bermudagrass (*cynodon dactylon*) football fields of the Fightin' Engineers of Rose Hulman Institute of Technology in the fall of 2010. The trip was a fact-finding mission for Harper to see if bermudagrass was an option for his athletic fields in the transition zone.

Harper saw a healthy, strong stand of bermuda on the practice fields in the height of use of the football season. DePauw's practice

» **TURF** in late August 2012.

football field would be converted to Patriot bermudagrass.

The other major decision would be to seed or sprig. The primary benefit of seeding is cost effectiveness. Most assume that a sprigged field will have 100% cover quicker than does seeding. As such, DePauw opted for the safer bet of sprigging.

The field was sprigged in early June and ready for play by August 1, 2011. On-time, on-budget and better rooted to handle the rigors of 300-pound linemen than its previous cool season version had ever been, the practice football field was a success. In fact, DePauw's women's field hockey coach opted to vacate her varsity field using instead the football practice field for not only her team's practices but also its games.

In the ultimate testament in support of bermuda fields, DePauw's Harper liked the results of the 2011 project so that he decided to go it again this year. Harper said, "The Patriot field was a tremendous success in 2011. The field was easier to manage, and provided a far superior surface to the existing bluegrass/ryegrass surfaces." In the spring of 2012, DePauw's varsity soccer fields began renovation to bermudagrass. For this project, coated Riviera bermudagrass from

» **DEPAUW UNIVERSITY** practice field, November 2010



Johnston Seed Company was the cultivar of choice. Riviera was chosen because of the cost savings from sprigs, the ability to overseed with more Riviera in future years, and the ability to more successfully overseed the bermudagrass with ryegrass.

In early April 2012, glyphosate was applied to the existing bluegrass/ryegrass surface. Two weeks later, another application was applied and the soccer field was scalp mowed. The first 2 weeks of May consisted of the tilling of the old turf to blend the old biomass of the field into the topsoil. Minor irrigation adjustments were made. Finally, the rootzone was laser-graded to ensure positive drainage. The field was crowned with a .75% grade.

The field was seeded less than 6 weeks into the process on May 15. The rate for the coated Riviera seed was 3 lbs/1,000 sq ft and a starter fertilizer (16-28-12) at a rate of .73 lbs of nitrogen per acre. The seed was spread with a rotary spreader and dimpled into the soil using a Frontier dimple seeder.

After seeding, irrigation was applied frequently at short intervals. The goal of the irrigation frequency was to wet the rootzone just short of standing water.

On June 10, germination was evident across the field. As expected, better germination was found in areas that were receiving the most irrigation. Starting in mid-June, the field was cut with a fairway unit at 7/8 inch and fertilized every 2 weeks with ammonium sulfate (21-0-0) at a rate of .5 lbs/N/1,000 sq ft.

The field was topdressed every 2 weeks from June 15 to September 1 with 25 tons of USGA rootzone sand. In the northern transi-

Bermudagrass in transition zone

THE PATRIOT AND RIVERA BERMUDAGRASS FIELDS have both performed well at DePauw. As expected, the Patriot field in year two has two times more shear strength than the 4-month old Riviera field. Rob says, "I am looking forward to next year on year number two of the Riviera. When establishing Riviera, this should be considered when looking at traffic and scheduling for the first year."

Looking forward, the ryegrass will be sprayed with Katana in April. Following the application, the field will be on a consistent aerification program with core aerification taking place monthly in June, July and August. Topdressing will also continue to take place every 2 weeks at a rate of 25 tons per application. The fertilizer program consisting of ammonium sulfate (21-0-0) at a rate of .5 lbs/N/1,000 sq ft. will continue as well.

Bermudagrass definitely has a fit in the northern transition zone. If seeding a field is considered, timing of the seeding is critical for success. A seeding window from May 15 - June 15 is the best time to seed. Irrigation is critical to success and well as a well graded rootzone as a sand cap will be developed quickly. Finally, overseeding with ryegrass should be considered if late fall or early spring play will take place on the field. ■

tion zone, bermudagrass responds extremely well to frequent topdressing during grow-in. The sand on the surface allows the field to retain heat, mimicking the conditions of warmer climates where bermuda is the norm for high-performance athletic fields.

A positive byproduct of the topdressing is a sand cap is developed over time. When considering conversion, first consider laser grading the existing rootzone before renovations begin.

DePauw's soccer fields made tremendous strides from June 10 to July 1. Not uncommon, the field began to show signs of crabgrass and goosegrass. Two applications of MSMA easily took care of the problem without slowing down the bermuda's progress.

The soccer field benefited from an un-

usually hot and dry weather pattern in central Indiana during the summer of 2012, as did the bermudagrass practice football field installed in 2011. Consistent with other bermudagrass fields in this area, both fields were overseeded with perennial ryegrass at a rate of 20 lbs per 1,000 sq ft. on September 1. At the time of overseeding, a starter fertilizer application (16-28-12) was applied at a rate of .73 lbs of nitrogen per acre. Finally, one last topdressing event was applied. The cutting height for the two bermuda fields is maintained at 7/8 inch. ■

Jamie Mehringer is president of J & D Turf, a sports turf consulting, construction, maintenance, and distribution company. He blogs frequently at janddturf.blogspot.com

>> **DEPAUW PRACTICE FIELD**, November 2011.



TILLED FIELD before laser grading.



GROW-IN period.



STILL growing in.



Fencing and netting on sports turf 101



Photo courtesy of Cameron McCarthy, Eugene, Oregon



Courtesy of Huntress Associates, Inc., Andover, Massachusetts



Courtesy of Stantec Sport, Boston, MA

TURF COLOR? That's a subject everyone loves to talk about. Fencing and netting? Not so much. But when it comes to playing area delineation, equipment requirements and just good old-fashioned safety, it's fencing and netting that actually come into play. Let's spend some time, then, considering the options field managers are faced with.

ON THE FENCE

If you're making decisions about the fence for the periphery of your field, you'll have several considerations. Chain link has long been the obvious choice. It's fairly economical, effective at defining boundaries, and depending upon the height, can limit or prohibit unauthorized access and use of your field after hours. Other more decorative options may exist, including vinyl or wood, but chain link remains the standard in athletic fields.

In athletic installations, chain link is seen in both galvanized and vinyl-clad form. Both

are acceptable. Vinyl cladding is more expensive, but may be ordered to match school or institutional colors, and can help keep a fence looking newer longer. It also enhances the durability of the fence fabric, particularly in corrosive environments, such as areas where air pollution is a problem, or in seaside areas, where exposure to salt water is a possibility. Top rails are usually installed on all chain link fences for stability and appearance. Mid rails are often used as well. Bottom rails keep fence fabric from bulging. In some cases, the less expensive option of a tension wire is used

along the bottom of a fence instead of a rail; however, a player who falls and slides into or partially under the fence risks more danger from this arrangement.

Galvanized fencing, if chosen, should be kept free of barbs or other projections which sometimes occur in the galvanizing process. (Such projections often referred to as 'burrs,' can cause injury to an athlete or spectator). All fencing should have selvages or edges, both top and bottom, bent double (the industry term is 'knuckled') to prevent injuries and to minimize the possibility of leaves, litter, grass clippings or other

Courtesy of Beals Alliance, Folsom, California

debris from collecting or becoming snagged there.

The height of your fence will depend, first, upon the use of the field it encloses. According to the Major League Baseball website, the average height of outfield fencing is 8 feet; however, 4- to 6-foot fencing is often used on recreational fields for both baseball and softball. For higher levels of play, the top edge of the fence may be padded with 3 inches of foam (or capped with a commercially made product) to help ensure safety of players who want to attempt challenging plays.

The height of fencing that is meant to keep balls in play must be carefully considered, say the experts.

"We don't know any entity that directs the fencing and netting heights for non-professional sports," notes Derek McKee of Verde Design in Santa Clara, CA. "We have gone to games to record foul balls and heights to give us a record for design."

Also used in softball and

baseball is a backstop (the wing like fence structure behind home plate that protects spectators and others from flying balls and tossed bats). It too can be made of chain link fencing, although some are constructed of nets and cables, depending upon the use of the field and the level of play involved.

Many sports, particularly those for equipment-heavy sports, use chain link equipment cages so that players can keep their gear secure, and in one location while playing. These cages may be completely fenced in chain link, or may be open on top, or the top may be covered by sports netting (more on this material in a minute).

Fields for sports such as soccer, field hockey and lacrosse, as well as rugby and football also are generally delineated by fencing, and again, it is usually chain link. This fencing may be 4 to 6 feet in height, although occasionally, higher fences are used for security purposes. Sports fields in general also have a setback, or safety zone, around them, to keep spectators and players clear of one another. This area too must be taken into consideration when making plans to delineate space between fields. Before installing fencing, check to make sure setbacks are correct, and that all current regulations are being followed. Remember that in some sports, such as soccer, field dimensions will vary, depending on whether athletes are high school, college or professional players.

In chain link fencing, gates should be wide enough to comply with all regulations concerning handicap accessibility. In addition, field maintenance equipment and if necessary, emergency vehicles and personnel must be able to access the field.

NET RESULT

Netting also is used to great effect in athletic fields. It is light and airy, and provides excellent visibility for players and spectators. Netting can be used to contain balls and keep them in play, as well as to keep spectators from injury in the case of loose equipment or balls.

On soccer, field hockey and lacrosse fields, netting is often set at a height of 20 feet (although heights up to 40 feet may be used). Netting may be installed only behind goals or at the ends of fields, or it may encircle the field. (It may be more commonly used in some sports than others; for example, football fields often use netting only behind goals, and may raise it only during field goal efforts). In addition, netting may be used when athletes in the same area might interfere with one another; for example, in a case where a running track encircles an athletic field, a net might be set up to keep soccer players from interfering with track athletes while both are practicing.

Some netting is set in posts on the surface of the field and can be taken down as needed, while in other installations, extension poles may be attached to an assembly on the top of the existing chain link fence posts. (This results in less expense for netting, plus a sturdy base on the field). Netting is also used in track and field installations, particularly in throwing events, such as shot put and discus.

In athletic uses, netting should have openings no larger than 1-1/2 inch square. (The exception to this is netting that surrounds a driving range, or will be used as impact netting for

golfers; this requires a much smaller mesh). Driving ranges and golf courses also may have specific requirements pertaining to height. Some may even require a netted roof, depending upon local codes, insurance concerns and more.

Athletic netting is usually black, but may be purchased in other colors, such as white or green. It can be procured from a variety of sports-specific sources; ascertain that you are getting the correct mesh size for the sport(s) your field hosts. (Fun fact: Netting is available for multiple other sports as well, including tennis and archery, so be sure to have a full list).

Netting that is used in athletic installations of any type should be tough, UV-resistant, weather-resistant and easily repaired.

As with all other fencing, netting that encircles a field must be able to be easily removed in order to allow access to emergency vehicles, maintenance equipment and all other legitimate uses. It may also become necessary to remove netting from time to time in the event of high winds or other extreme conditions, as well as after the playing season has ended.

Mary Helen Sprecher wrote this article on behalf of the American Sports Builders Association. Available at no charge is a listing of all publications offered by the ASBA, as well as their Membership Directory. For info, 866-501-2722 or www.sportsbuilders.org. ■

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Products you can see at January's STMA Exhibition in Daytona Beach



TS90 series sports field sprinkler with TurfCup

The TS90 Series Sprinkler with TurfCup, field proven at the UEFA Euro 2012 soccer tournament, combines the benefit of on-field installation, with smaller, less expensive rotors that provide true head-to-head coverage, with the safety and flawless playing surface that comes from a perimeter-only, "big-gun" installation. The TS90 with TurfCup provides:

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The TS90 Series Sprinkler with TurfCup provides the best features of on-field and perimeter-only irrigation.

Toro Irrigation

Xtreme Cleaning from Xtreme Turf Makeover

Xtreme Turf Makeover launched in 2012, bringing synthetic turf rejuvenation services throughout the United States. Through diagnostic field tests and three levels of environmentally-friendly services, Xtreme Turf Makeover can restore an aging field's performance and safety conditions. The company's featured service is the patent pending Xtreme Cleaning, available with Level 2 and 3 offerings. With Xtreme Cleaning, they extract the field's existing infill, which is then filtered and separated during cleaning. After all dust, debris, sediment and yarn are removed, the infill is as clean as or cleaner than the original infill. The sand and rubber granules are then recycled back into the field, and additional infill may be added to restore performance levels. With Xtreme Turf Makeover, nothing is taken to the landfill; all infill and turf are recycled or repurposed.

Xtreme Turf Makeover



Campey Turf Care Systems to showcase new products at STMA 2013

Campey Turf Care Systems is a UK company that distributes sports turf renovation and maintenance machinery across the world. We will be exhibiting at STMA 2013 in Daytona Beach with an array of new and proven products including the new Koro by Imants Field Top Maker, the Koro FTM 1200 with UNIVERSE Rotor, and the Koro FTM 2000 with TERRAPLANE Rotor. Alongside these will be the Imants Shockwave 2.10 and Imants Rotoknife. Both of these machines have revolutionized the way aeration and compaction is tackled within the sports industry with some amazing results. Other products on display include the Koro Speed harrow 2000, and a new 2013 model of Koro Recycling Dresser the RD 1900, which aerates the underlying soil vertically and horizontally, removing soil from the rootzone and re-distributing it across the playing surface as topdressing, thus leaving a level decompacted rootzone, ready for top class play.

Campey Turf Care

Latitude 36 bermudagrass

Latitude 36 bermudagrass, developed and released by Oklahoma State University, is a high quality, sterile triploid hybrid adapted for use on sports fields. It offers outstanding cold hardiness and high traffic tolerance, with exceptional visual quality equal to or exceeding that of Tifway 419. Latitude 36 is an excellent choice for use in the transition zone and the upper region of bermudagrass adaptation. In its first year commercially available, Latitude 36 has already been used on the University of Virginia's football and baseball fields, UVA's track facility and the University of Missouri's baseball stadium. Turfgrass research, development and marketing company, Sod Solutions, will be the licensing and marketing agent for Latitude 36.

Sod Solutions

TurfCat out-front rotary with 60" fine-cut flail deck

Jacobsen has paired its legendary workhorse TurfCat mower with the industry's only 60-inch fine-cut flail cutting deck. The TurfCat's flail deck eliminates unsightly rows of clippings on your sports field by discharging grass down into the turf for a more attractive after-cut appearance. The flail is also a safer choice because its downward discharge reduces the danger of thrown projectiles. The TurfCat tractor is popular with mechanics because its hydraulic deck eliminates the need for a gear box, drive shaft or clutch, providing a highly-efficient transfer of power that requires very little maintenance. In addition to the fine-cut flail, the TurfCat offers five other deck configurations, including 60-inch, 63-inch and 72-inch hydraulic-drive rotary decks.

Jacobsen



Continued from page 6

A well designed slit drain system installed into a level or undulating surface will overcome drainage problems.

False. Surface water must be able to move laterally over the surface to reach slit drains, and there should be adequate gradient in a single cross-fall or on either side of a camber. Average rainfalls of around 13/64" to 31/64" per 24 hour day hardly promote surface movement over relatively flat surfaces, and water will accumulate and be lost only by evaporation. Undulating pitches will promote run-off to depressions. Initially, slit drains will take in the surplus water in these depressions, but the wetter conditions created in these locations will make the surface softer. They will be more subject to deformation from play and prone to collecting silt containing water run-off that, in time, caps off the opening in slit drains and nullifies their effectiveness.

French drains or pipe drains, with pea gravel to the surface, will control surface water moving down cut slopes on to the pitch.

False. Water run-off moving down a cut slope will always contain silt passing over the soil surface. This continual silt content will eventually blind open drains, temporarily sealing the surface. It is just a matter of time before grass growth covers the silt covered aggregate. Furthermore, at times of high intensity rainfall, surface run-off will not stop at drains to gain entry; water flow will simply find its way on to the pitch. A manageable solution is the creation of a shallow, mowable swale at the toe of cut slopes with a pipe drain installed in the invert of the swale.

Any local sharp sand covering pea gravel in a pipe drain trench will serve the required need and enable satisfactory water inflow.

False. It is vital that the gravel and the sand are chosen with the particle size distribution of each material being such that the acceptable bridging factor is attained. Fine particles in the sand moving down into the gravel soon restrict the drainage performance by occupying the voids necessary to enable satisfactory downward water movement. Of particular concern is the fine material content in the sand (less than 1/64") which ideally should be less than 10%.

Drainage design must be adequate enough to accommodate all water not retained after high intensity rainfall.

False. Only sand pitches can accommodate rainfall of 1"/hour (considered the maximum expected intensity over a 20-year period). Heavy clay loam soils on pitches permit infiltration of up to 13/64"/hour. Even the best maintained 1-yard spaced slit drained surface will not permit a drainage rate of much in excess of 9/32"/hour after continual use, even if regular sand dressings are applied. Hence, with rainfall intensity of 1" in 1 hour, over half the water volume will be subject to run-off and this water will simply flow to the lowest areas and off the pitch.

Vertidrainage or deep aeration into heavy subsoils will improve the drainage of a sports pitch.

False. When clay loam topsoil and clay subsoil is loosened by aerating and creating holes, this will only create more water retention which will develop into water-logged areas. The main aim in maintaining heavy loam soils in a condition in which to

play football must hinge on retaining a firm surface, with adequate removal of surplus water by means of a suitable by-pass system. Allowing the topsoil to become loose at the onset of winter promotes the development of soft areas that are prone to displacement and the formation of puddles after rain.

A slit drainage system without annual sand dressings is still better than no drainage installation.

False. The system is entirely dependent on the slit drains being 'open' at the surface, and the sand topping remaining uncontaminated with surrounding clay topsoil spread with play activity. The only way this can be achieved is by applying sand dressings to create a sandy medium in the shortest period of time to at least 1" thickness over the slit drains, at least with the application of annual dressings for 5 years or more. Without these dressings, the drains soon become capped with clay loam topsoil, and the installation cost has become a waste of money. ■

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Surface MoundMaster Blocks and Professional Mound Clay

No two areas of the diamond receive more abuse and constant wear than the pitcher's mound and plate. Make sure they are built and maintained properly with the best, virgin packing clays in the industry. Surface clays provide a superior degree of plasticity and offer unmatched footing and wear resistance. Surface MoundMaster Blocks are hydraulically packed blocks of clay that create the perfect foundations for the mound and in the batter's and catcher's boxes. Packaged in 8 blocks per bag this product is ready to use right out of the bag and makes fast work of mound and plate construction. Surface Professional Mound Clay is the same virgin clay as our MoundMaster Blocks and is finely shredded for easy shaping the mound and also helps with ongoing plate and mound maintenance.

Profile Products



First Products VC-60: raising the bar in verticutting

Thatch removal is critical to sports fields and grounds management and the new First Products VC-60 raises the bar in verticutting. The patented swing hitch allows the unit to turn during operation increasing maneuverability, and the belt drive provides a faster blade RPM improving quality of cut. The VC-60 is designed for continuous heavy-duty operation on sports fields, and depth adjustment can be made in the field with no tools. It also boasts a quiet all-belt design, meaning there are no chains to maintain. For deep cutting with minimal turf disturbance, you need the First Products VC-60.

First Products



Field Commander from Kromer

Sports turf managers have enough to worry about and field condition/appearance need not be one of them. The Kromer Company's Field Commander tractor along with its hydraulically actuated synthetic field grooming attachments will make creating a safe, playable and aesthetically pleasing field a manageable task. Knowing what to do and when to do it has been difficult for field maintenance staff to decipher. Kromer has simplified this process and incorporated all grooming functions into a complete and thorough 2-step grooming process. This process addresses problems associated with infill compaction, fiber entanglement/capping, poor water infiltration, dust/dirt contamination, uneven infill distribution and field appearance.

Kromer Company



A-Turf Titan fiber system

A-Turf Titan is a blended fiber system featuring the industry's most-proven, premium Mono and XP fibers in the same stitch. It's an amazingly plush, natural looking surface with outstanding performance attributes. The dense carpet holds infill in place better, reducing infill movement during play. The fibers are well rooted into the super-durable primary and secondary backings. It's so durable that it comes with a 12-year warrant, 50% longer than other warranties. While the A-Turf Titan surface feels and plays "firm & fast," the shock-absorbing underlayment helps deliver the best safety rating of all synthetic turf systems on the market. A-Turf backs the greatest turf system in the world with having best installation craftsmanship and over-the-top client service.

A-Turf



Buffalo Turbine adds Monsoon misting system to product line

The Compact Fan Assisted Misting System will be used for evaporative cooling at golf courses, country clubs, sports fields, stadiums and outdoor banquet facilities. Evaporative cooling is increasingly popular with athletes, employees and customers offering much relief on hot, dry days. Lightweight and portability are features that set this apart from others. The MFA110 Misting System uses a proprietary high speed rotary atomizer distributing a fine mist of water in excess of 50 feet. The Misting System does not use small nozzle tips and is not prone to plugging. This compact system has a standard 110 volt plug along with a 3/4-inch garden hose connection.

Buffalo Turbine



New Toro Workman MD series

The new Toro Workman MD Series of utility vehicles combine a coil-over shock absorber suspension design with a patented Active In-Frame twister joint. These features deliver SRQ - Superior Ride Quality for added operator comfort and vehicle control. Front suspension is Independent A-Frame design with coil-over shock absorbers. Rear suspension is Swing Arm design with coil-over shock absorbers. Benefits include operator comfort, safety, reduced operator fatigue, and productivity and efficiency gains. The innovative Active In-Frame Twister Joint allows each axle to react independently to the terrain. The result is the smoothest ride over the most undulating surfaces. All four wheels maintain constant contact with the ground for better traction, stability and less potential turf damage.

The Toro Company



Hilltopper Infield System

On running tracks, proper stiffness matched with the runner's leg produces 3% faster running times. On an infield surface, the proper stiffness, or load bearing strength required by the athlete is determined by the moisture content in the soil, ideally 4%-12% water. The Hilltopper Infield system replaces needed moisture content with patented polymer technology. Also when you eliminate the need for water, you eliminate the variability that occurs from water. For the first time ever the Hilltopper Infield System gives you full control over how you want your field to play without interference from water. For a fast field, simply roll the Hilltopper Infield. For a traditional surface, use our new cutting edge spiking tool and add Hilltopper Conditioner.

Stabilizer Solutions Inc.