



Evolving waterless soils solve mechanical moisture issues

As I write this, the collegiate baseball/softball season is underway and pitchers and catchers have reported to spring training. Recently, while managing the production plant for Stabilizer Solutions, Inc., an urgent order came across my production board written in all caps, SURPRISE SPORTS COMPLEX- HILLTOPPER WARNING TRACK. Surprise had already received their typical infield mix order much earlier in the winter, and the Pac-12/Big-10 Challenge Tournament was quickly approaching. They wanted their regular warning track to be “waterless” just in time for games to start.

BACKGROUND

In the 80’s our company conducted research with the Massachusetts Institute of Technology (MIT) focused on moisture and soil interaction. The key breakthrough: no matter the structural composition of a surface, the mechanical properties will change across moisture contents. For ideal mechanical performance, the athlete needed between 4-12% moisture content, or a damp soil consistency. This was related to running track research proving proper firmness increased running speeds *and* reduced injury potential.

The research results showed that Stabilizer infield amendment helped maintain the mechanical properties of soil across varying moisture contents, thus “stabilizing” the soil. This was good news for groundskeepers who could till Stabilizer into their existing infields. We began engineering infield mixes with specific particle distributions; pre-blended with Stabilizer. Stabilized Infield Mix installations now include the American Softball Association Hall of Fame Stadium, TD Ameritrade Park, other collegiate and professional fields, and most Cactus League spring training complexes, including Surprise Sports Complex.

EVOLUTION OF WATERLESS

On a professional field like Surprise, the warning track takes most of the abuse and receives very little of the water. Removing water altogether seemed like a natural progression. Building upon our moisture research and soil engineering experience, we developed a process that coated soil particles with a waterless polymer coating. The numbers are compelling. Arizona Diamondbacks’ Grant Trenbeath calculated Hilltopper Warning Track saved 500 man hours a year. Our own calculations show him saving 200,000 gallons of water annually. Current users include the Angels, Diamondbacks, Yankees, and Astros. We’ve also seen rapid adoption in college softball infields as the Hilltopper does not freeze.

Usually installation is a much longer process. In this case, there wasn’t even enough time to excavate the existing warning track. Going over the top of the existing track was the ideal short term fix. The process began by removing ¼ inch of warning track using a box blade and grading the track towards the outside wall. Next we dripped polymer onto the track, worked it in with a nail attachment, and later soaked the track with water. We then topdressed with 65 tons of Hilltopper Warning Track Mix and mat dragged. Next we used our spike drum tool to relieve compaction from vehicles and completed a final mat drag.

The unorthodox process helped achieve a “waterless” warning track in just 3 days. Korean League teams training at Surprise have already used the stadium field for practice games. The warning track is performing without water and most importantly, there isn’t any dust, but that’s not really a *surprise*. ■

-Clay Hubbs, director of operations, Stabilizer Solutions, Inc., Phoenix

Tools & Equipment



Synthetic sports turf groomer

GreensGroomer's synthetic groomer is newly designed for 2014 with brush dimensions and angles to allow grooming in four directions, standing up turf fibers and leveling infill material. The unit has 16 blue brushes set at various angles to the direction the unit is being towed, with balance side to side and front to back, allowing for smooth brushing with no hops. The electric actuator provides almost infinite adjustment control, from wheels down transport to wheels up brushing. Works on all infill surfaces in wet or dry conditions.

GreensGroomer



Deere introduces 4M, 4R series compact utility tractors

"With compact utility tractors, it's all about finding the right machine to match customer needs," said Scott Schadler, John Deere product marketing manager. "Customers told us they wanted to spend less time installing and removing implements, wanted the ability to carry and store more tools, desired a more comfortable ride, and requested the ability to work in low-light conditions." The 4M and 4R models feature powerful, Final Tier 4 engines ranging from 43 to 66 hp to power through tough tasks. The 4M machines are equipped with a hydrostatic transmission with Twin Touch Pedals that provide operators with simple, comfortable-to-use hydrostatic controls to find the right speed for the job at hand.

John Deere



Software provides digital irrigation mapping

Groundskeeper Tech introduces their mapping software SprinklerMaps, developed by Mike D'Ascanio in response to a pressing need he identified while working as a head groundskeeper.

As an alternative to ineffective paper landscape maps, SprinklerMaps gives users the ability to plot their irrigation and utility systems with pinpoint precision on a live satellite map. Additional features include a square footage estimator, Sprinkler Radius Viewer, GPM tallies, and the ability to "flag" markers for repair. Coupled with the built-in communication tools that iPads already provide, SprinklerMaps is pioneering the future of technology in the landscape industry.

The benefits of the SprinklerMaps solution includes greatly increased efficiency for maintenance workers who use the tool to locate and document repairs.

Groundskeeper Tech



New topdresser from Earth & Turf

Earth & Turf Products, LLC, announces its Model 60SP, an economical, very maneuverable, self-propelled topdresser, ideal for spreading dry or wet compost and sand, plus a variety of other materials. It features easy loading into its 6.7 cu. ft. hopper. Maximum load weight is 650 Lbs. (296 kg) Optional loading chutes will increase capacity for lighter materials such as compost. A wide-spread beater produces an even spread pattern up to 42 inches wide. The 60SP is powered by a 190 cc Briggs & Stratton, 875 series, 6.5 HP engine. Drive is by CV belt, forward and reverse. This extremely economical self-propelled topdresser is the latest example of Simple, Well-built Products from Earth & Turf Products, LLC.

Earth & Turf Products, LLC



Turfco's New Torrent blower & wireless controller

Turfco's new patent-pending Torrent Blower delivers high-velocity, high-volume airflow with a new level of control for year-round productivity. You now have greater command over air speed, air direction, noise management and fuel consumption. Turfco developed a new wireless, handheld controller to adjust blower functions and multiple air-speed settings. The controller allows the operator to dial in the exact nozzle direction for unprecedented precision. Faster nozzle rotation speed dramatically increases productivity, because operators won't need to slow down to wait for the blower at the end of each pass. The controller is also equipped with a unique idle/resume button enabling users to idle down the machine when bystanders are near and quickly resume operation at their original setting when the area is clear.

Turfco



Beacon tarp cart with tarp pin holders

This cart is a great addition to your grounds crew. Designed to store and transport up to four area tarps and your field weights or tarp pins. Conveniently keep rolled up tarps and pins together for easy transport and storage. Perfect for stowing area rain tarps, weighted tarps, infield protectors, sideline turf protectors, track protectors and growth covers. The cart may be manually pushed along in wheelbarrow fashion or towed by a utility vehicle

Beacon Athletics

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*There must already be a national sports turf member from your facility or commercial member from your company before you may sign up in the Associate category.

Phone: 800-323-3875

www.STMA.org

For more on the latest news, please visit www.sportsturf.com and www.stma.org.

New educational bulletin highlights Environmental BMPs

STMA's Environmental Committee and Information Outreach Committee have collaborated to produce the technical bulletin "Best Management Practices to Reduce Stormwater Runoff and Pollution at your Sports Facility."

Stormwater runoff is generated from excessive irrigation, rainfall, or snowmelt that flows over land or impervious surfaces and does not infiltrate into the ground. As the runoff flows over land and impervious surfaces, it can accumulate debris, chemicals, sediment, and other pollutants that can negatively affect water quality if runoff is left untreated.

Stormwater runoff is a problem because of

its volume and rate from impervious surfaces, such as parking lots and other paved areas, and concentration of pollutants in the runoff. High volumes of runoff can cause changes in hydrology and water quality such as habitat modification and loss, increased flooding, decreased aquatic biological diversity, and increased sedimentation and erosion.

Sports and recreational areas can contaminate stormwater runoff with pesticides, sediment, fertilizer, and other pollutants. A simple change in behavior and maintenance practices can result in reduced inputs, cost savings, and cleaner, safer waterways. It is more cost effective and environmentally sound to put management practices

in place before aquatic systems are affected. Restoring a polluted water body is much more difficult and expensive than utilizing best management practices from the start. Reducing stormwater pollution can be achieved by implementing various management systems.

Check out STMA.org to read the full bulletin and get more information on BMPs for bare soil, spill response and prevention, good storage practices, materials management, fueling areas, property and equipment maintenance, irrigation, fertilizers, pesticides/IPM, stormwater runoff collection areas, and educational outreach.

Destination Denver! Mile High City memories await in 2015

Denver, CO is one of America's most eclectic, exciting cities. Founded in the mid-1850's by gold prospectors who hoped to strike it rich, similar to those lucky few in California only 9 short years earlier, this "...log city of 150 dwellings, not three-fourths completed nor two-thirds inhabited, nor one-third fit to be" (as described by newspaper editor and politician Horace Greeley) nestled in the foothills of the Rocky Mountains quickly grew to become the bustling metropolis we know today.

STMA heads to Denver for its 26th Conference & Exhibition and conference planning communities are gearing up for the experience to be one of the most rewarding

ever: a record number of submissions were received during our Call for Presentations and our conference tours are sure to stop at some must-see facilities.

Denver's unique neighborhoods feature a cuisine, attraction, or interest for every taste. According to the Denver Convention and Visitor's Bureau, these are the ones to see:

All information courtesy of the Denver Convention & Visitors Bureau located at denver.org

LODO / LARIMER / RIVERFRONT

Denver's hip, historic district, with a huge independent bookstore, brewpubs, Western

wear, Coors Field, and dozens of dining and nightlife options.

CHERRY CREEK

Denver's premier shopping destination, with 320 independent shops, restaurants and galleries and Cherry Creek Shopping Center's 160 name brand stores.

GOLDEN TRIANGLE MUSEUM DISTRICT

Explore the spectacular Denver Art Museum and a neighborhood brimming with galleries, restaurants, music venues, theatres and remarkable architecture.

UPTOWN

One of Sunset Magazine's "hippest 'hoods," thanks to Restaurant Row, and proximity to City Park, Denver Zoo and Denver Museum of Nature & Science.



All information courtesy of the Denver Convention & Visitors Bureau located at denver.org



HIGHLANDS

Panoramic patio dining, art galleries on Tennyson St., and Victorian homes highlight the Highlands, one of Men's Journal's top neighborhoods.

ART DISTRICT ON SANTA FE

Join fellow art lovers during The Art District On Santa Fe's popular monthly First Friday Art Walk, with galleries, shops, and restaurants open late.

FIVE POINTS

Rich in African American culture, head to this neighborhood for authentic BBQ joints, the Five Points Jazz Fest, and the Black American West Museum

RINO / RIVER NORTH

RiNo is "where art is made" — a hotspot for creative types, with a renovated dry ice factory providing artists with space to create cutting edge works.

CAPITOL HILL / CONGRESS PARK

The gold-domed Colorado State Capitol anchors this hilltop neighborhood, which

features art galleries, brewpubs and restaurants lining 6th Ave.

EAST COLFAX

Here, music lovers flock to the Fillmore Auditorium and Ogden Theatre, bookworms browse the expansive Tattered Cover, and foodies find eclectic eats.

OLD SOUTH GAYLORD

Just blocks from Washington Park, kick back with locals in this pedestrian-friendly 'hood sipping brews at pubs, sampling sushi, and browsing shops.

SOUTH BROADWAY

South Broadway buzzes with activity year-round. Experience hip rock clubs, Antique Row, an arthouse movie theater and plenty of raved-about eateries.

SOUTH PEARL

Relax in bistros and browse shops, offering 37 different beers, 24 types of sushi, and Denver's oldest folk music center.

STAPLETON / NORTHFIELD

Stroll trails linking this "new urban" neighbor-

hood's parks and shops. Catch the Colorado Rapids play soccer at nearby Dick's Sporting Goods Park.

GOLDEN

Golden bursts with Wild West flavor, thanks to an old-fashioned downtown, the Colorado Railroad Museum, Coors Brewery and the Buffalo Bill Museum & Grave.

LITTLETON

Littleton's Main Street is lined with turn-of-the-century buildings and shops. The city also features two living history farms, perfect for family outings.

OLDE TOWN ARVADA

Grab a gourmet pizza on Arvada's turn-of-the-century Main Street, and see a smash Broadway musical at the Arvada Center for the Arts & Humanities.

BELMAR / LAKEWOOD

Belmar's 22-square city block pedestrian district hosts a European-style market during the summer, as well as the Festival Italiano every September.- By Shant S. Thomas, Sales & Marketing Manager, STMA

5 Years of membership

STMA recognizes and thanks the following members for being part of the association since 2009:

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Colorado Sports Turf Managers Association: www.cstma.org

Florida #1 Chapter (South):
 305-235-5101 (Bruce Bates) or
 Tom Curran CTomSell@aol.com

Florida #2 Chapter (North): 850-580-4026,
 John Mascaro, john@turf-tec.com

Florida #3 Chapter (Central): 407-518-2347,
 Scott Grace, scott@sundome.org

Gateway Chapter Sports Turf Managers Association: www.gatewaystma.org

Georgia Sports Turf Managers Association: www.gstma.org

Greater L.A. Basin Chapter of the Sports Turf Managers Association: www.stmalabasin.com

Illinois Chapter STMA: www.ILSTMA.org

Intermountain Chapter of the Sports Turf Managers Association: <http://imstma.blogspot.com/>

Indiana - Contact Clayton Dame, Claytondame@hotmail.com or Brian Bornino, bornino@purdue.edu or Contact Joey Stevenson, jstevenson@indyindians.com

Iowa Sports Turf Managers Association: www.iowaturfgrass.org

Kentucky Sports Turf Managers Association: www.kystma.org

Keystone Athletic Field Managers Org. (KAFMO/STMA): www.kafmo.org

Michigan Sports Turf Managers Association (MiSTMA): www.mistma.org

Minnesota Park and Sports Turf Managers Association: www.mpstma.org

MO-KAN Sports Turf Managers Association: www.mokanstma.com

New England STMA (NESTMA): www.nestma.org

Sports Field Managers Association of New Jersey: www.sfmanj.org

Sports Turf Managers of New York: www.stmony.org

North Carolina Chapter of STMA: www.ncsportsturf.org

Northern California STMA: www.norcalstma.org

Ohio Sports Turf Managers Association (OSTMA): www.ostma.org

Oklahoma Chapter STMA: 405-744-5729;
 Contact: Dr. Justin Moss okstma@gmail.com

Oregon STMA Chapter: www.oregonsportsturfmanagers.org
oregonstma@gmail.com

Ozarks STMA: www.ozarksstma.org

Pacific Northwest Sports Turf Managers Association: www.pnwstma.org

Southern California Chapter: www.socalstma.com

South Carolina Chapter of STMA: www.scstma.org

Tennessee Valley Sports Turf Managers Association (TVSTMA): www.tvstma.com

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May 2014 - Expires September 2014 - RS1405

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- F Sports Complex G Athletic Field and/or Park Architect/Designer
 T School, College or University P Park
 H Other (please specify) _____

2 Which of the following best describes your title? (check ONLY ONE)

- A EXECUTIVE/ADMINISTRATOR — President, Owner, Partner, Director, General Manager, Chairman of the Board, Purchasing Agent, Athletic Director
 B MANAGER/SUPERINTENDENT — Superintendent, Landscape/Ground Maintenance Manager, Foreman, Supervisor
 C GOVERNMENT OFFICIAL — Government Commissioner, Agent, Other Government Official
 D SPECIALIST — Architect, Designer, Consultant, Agronomist, Horticulturist, Certified Specialist
 F COACH
 E Other (please specify) _____

3 Do you have the authority to buy, specify or recommend products and/or services for your business or organization?

- Y Yes N No

4 Yearly operating expenditures (excluding salaries)

- F Over \$1 million C \$50,001 - \$100,000
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 D \$100,001 - \$500,000 A \$25,000 and under

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From the Sidelines

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may warrant not verticutting as planned so be flexible as with any cultural practice,” Bergdoll wrote. “On native soils, irrigate the field before verticutting to soften the soil allowing the blades to cut into the soil easier. The material that is removed from verticutting can be used to sprig bare or thin areas.”

Daily said, “Don’t be afraid to do it. The first time I verticut, I thought I had killed the plant with all the thatch and vegetation that

was pulled up. Two weeks later the plants were in incredible shape, growing vigorously and healthy. Also, try and get down into the thatch layer at least once to help control the organic matter the natural grass produces.” ■





Q&A with Dr. Grady Miller

Professor, North Carolina State University

Questions? Send them to Grady Miller at North Carolina State University, Box 7620, Raleigh, NC 27695-7620, or email grady_miller@ncsu.edu. Or, send your question to David Minner at Iowa State University, 106 Horticulture Hall, Ames, IA 50011 or email dminner@iastate.edu.

The importance of research

Can you provide an explanation of why research is important to Field Managers?

— North Carolina

This was a request I had from one of our region's most respected turf industry representatives. He wanted me to develop my response into a presentation for a meeting he was hosting. For this Q&A, I thought I would "reverse-engineer" the talk to cover some of the high points for this forum.

When I think about research results I think about change. The focus of research is evaluating "unknowns." If these unknowns pan out, then we often look for ways to incorporate them into the everyday. Of course the area of fastest change we commonly experience probably revolves around the internet. For instance, online every 60 seconds, there are 72 million Google searches, 204 million emails sent, 41 thousand Facebook posts, 15 thousand songs downloaded from iTunes, and 571 new websites created.

Turfgrass research and discovery probably does not result in change as fast as some internet applications but it has been every bit as important. Turf research is responsible for discovery of new information and development of new products. Most turf research studies are focus on validating performance of an unknown compared to a control. During the research process there are often discoveries (new products, uses, rates, etc) that bring about change.

You may think that the turf management has not changed much in your career, but all you need to do is look back at field pictures or videos taken between the 70s and today to realize that there

have been enormous changes. One of my favorite examples of change in our turfgrass management is depicted in this 1933 picture of a football field at a NC College. The field has at best 50% turf cover. And the grass that is growing must be at least 10 inches tall. Even with players standing next to wooden walls and bleachers one would more likely guess they are standing on a cattle pasture than a college football field.

So, how has research directly influenced a change in turfgrass management? Consider the development of the iconic Tifway bermudagrass. Or products such as 2,4-D, glyphosate (Round-Up), or chlorothalonil (Daconil). We all now understand the importance of the core aerifier and we appreciate the availability of automatic irrigation control. These were all transformative for turfgrass management.

For more recent examples, consider how you would answer your common, everyday questions without research. Questions such as: What pesticide controls a certain weed? How long will I see a response from this fertilizer? Should I cover my field tonight to protect it from cold? Will my field hold up during this tournament? The answers to these questions and thousands of others are often discovered through controlled research studies. And I would also add that knowledge gained through experience is research. So considering that statement, you may be your own best researcher.

We often talk about a research cycle. This is a more elaborate version of what is known as the "scientific method". The steps include: 1) having a concept or hypothesis, 2) design an experiment to test the hypothesis, 3) fund the experiment, 4)

implement the experiment, 5) analyze the collected data, 6) disseminate the results, 7) evaluate and recommend based on the results, and then 8) formulate a new hypothesis based on knowledge gained. So, step 8 is the same as step 1 providing the cyclic nature of research.

I purposefully mention funding because research can be very expensive and is typically the most limiting factor in conducting research. For example, the expense of discovery, development, and registration to bring a new pesticide active ingredient to market has been estimated to be about \$180 million over about 10 years. While this is not all research expenses, a big portion of that will be directly or indirectly tied to research. On a positive side, studies have estimated that for agriculture research, there is a \$19 return for each \$1 invested.

In terms of University research, there are very few expenses covered with state or federal funding outside the salaries of faculty and an investment into basic infrastructure. There are almost no state-funded technicians or graduate student assistantships left at universities. Most all research conducted is now paid by a private sponsor via grants or gifts.

Looking back over the years, I am not sure if turf quality has driven us to higher expectations or if higher expectations has increased our quality. Either way research is central to our present-day fields to look and perform better than those of previous times. So, get to know your researchers, provide them concepts to test based on your experiences, support their work in whatever way you can, and help them evaluate results by implementing their recommendations. In the end your contribution will bring about positive change and the entire industry will benefit. ■