



# DIAMOND PRO®

PROFESSIONAL GROUNDSKEEPING PRODUCTS



## PROFESSIONAL MOUND CLAY

50 lb. Bags / 40 Bags Per Pallet

See Diamond Pro Professional Mound Clay in the Baseball Mound Clays Study by Virginia Tech



## RED INFIELD CONDITIONER

50 lb. Bags / 40 Bags Per Pallet  
Bulk Delivery (10, 15 and 24 tons)



## STAY CONNECTED

TO EVERYTHING DIAMOND PRO



800.228.2987  
diamondpro.com

AVAILABLE IN  
BULK NATIONWIDE

# 24 TONS





SVL SERIES

## Work grows. Quality pays.

Kubota defines quality equipment with features like high performance, low maintenance and everyday durability. When your workload's busy, Kubota quality pays by increasing work-day productivity. Keep moving on the job with an all-Kubota SVL compact track loader or Kubota's rugged, workhorse utility vehicle. Or power up a Kubota TLB for the versatility of three tractors in one. Kubota quality pays.



Financing available to qualified customers through Kubota Credit Corporation, U.S.A.  
 For product and dealer information, call 1-888-4-KUBOTA, ext. 408  
 or go to [www.kubota.com](http://www.kubota.com). Optional equipment may be shown.



©Kubota Tractor Corporation, 2011



RTV1140CPX



M59TLB





# SportsTurf Contents

OCTOBER 2011 | VOLUME 27 | NUMBER 10

## Features

### Field Science

- 8** Quantitative and qualitative comparison of baseball mound clays
- 12** Wear injury on sports fields: BMP approach
- 16** Sustainability: it is not a small world after all
- 20** Athletic field cultivation & topdressing: How much field area does your program actually impact?
- 22** The Soil Profile: Stockton College of New Jersey

### Facilities & Operations

- 26** Prepping for the powder: how to prepare for any snow event
- 32** STMA Professional Development Series: The value of implementing an internship at your facility

### Irrigation & Drainage

- 30** Winterizing your irrigation system

### Tools & Equipment

- 34** Getting the most out of your reel mowers
- 35** Snow removal and other equipment

### Field of the Year

- 38** 2010 College Soccer Field of the Year—Cobb Stadium, University of Miami, Coral Gables, FL

---

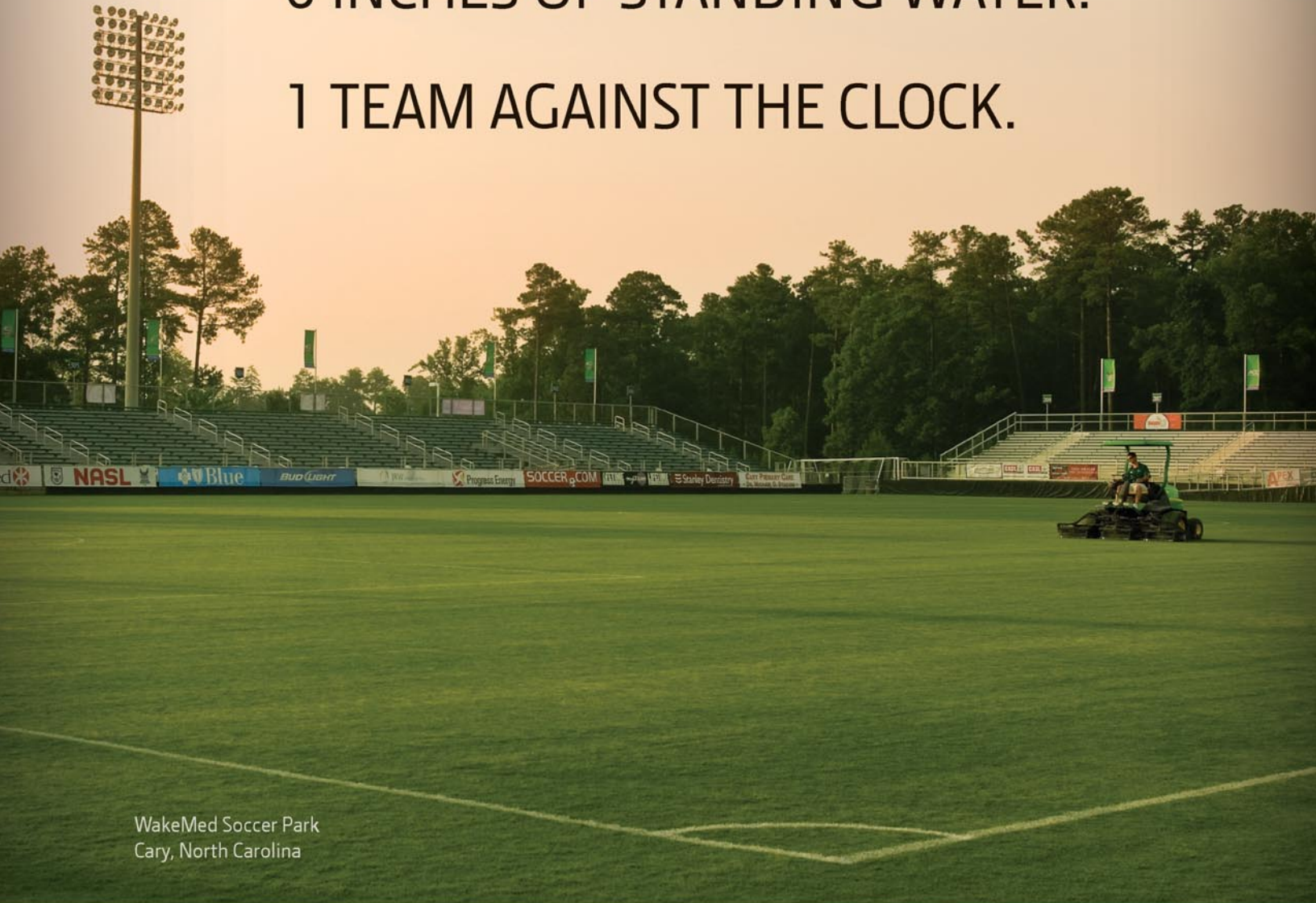
## Departments

- 6** From the Sidelines
  - 7** STMA President's Message
  - 17** John Mascaro's Photo Quiz
  - 42** Ask a CSFM
  - 42** STMA Chapter Contacts
  - 43** STMA in Action
  - 44** Marketplace
  - 45** Advertisers' Index
  - 46** Q&A
- 



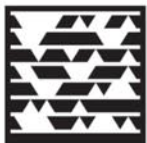
**On the cover:** L to R: Jose Gutierrez, Chris Denson, Sebastian the Ibis, Geovani DeArmas, and German Larios of the College Soccer Field of the Year at the University of Miami (FL).

1 TORNADO.  
6 INCHES OF STANDING WATER.  
1 TEAM AGAINST THE CLOCK.



WakeMed Soccer Park  
Cary, North Carolina

April 16, 2011. A tornado ripped through Wake County in North Carolina leaving this field underwater. Thanks to the rigorous focus on safety and excellence of the Town of Cary's Sports Turf team, play went off on schedule three hours later. Get the whole story. Scan here to watch how Cary works with its local John Deere dealer on Sports Turf solutions.



Every field has a story.

See our full line of Sports Turf Equipment at  
[JohnDeere.com/SportsTurf](http://JohnDeere.com/SportsTurf).

Get the free mobile app at  
<http://gettag.mobi>

49170



# From the Sidelines



**Eric Schroder**  
Editor

[eschroder@m2media360.com](mailto:eschroder@m2media360.com)

717-805-4197

## Leaders failing college athletics

**“THERE’S NOTHING IN THE WORLD SO DEMORALIZING AS MONEY,”** Sophocles wrote long ago, words that could serve as a subtitle to every fresh, tumultuous report of big-boy college football conference hopping and cheating scandal. As I write Pittsburgh and Syracuse have joined the Atlantic Coast Conference, which isn’t quite the geographical stretch their former brethren in the Big East Conference made last year when inviting Texas Christian to join it.

But heck, Colorado is in the Pacific 12 And Looking for More Conference, Texas A&M is the new western front for the Southeastern Conference (SEC), and Oklahoma and Texas are available to the highest bidder. Who wants Boise State and their fluorescent cleats?

University presidents are scrambling in their game of musical conferences and the quiet kid in the room, representing the Soul of College Athletics, is heading for a long stand in the corner. No president can afford to miss out on television deal dollars or other revenue produced by college football and basketball. Last year the SEC cleared \$1 billion in athletic revenue and some schools e.g., Florida, Michigan, Penn State, Texas and others earn \$40-\$80 million in profits a year.

These presidents hide behind the NCAA’s amateurism principle (no legal definition of “amateur” exists) to justify their actions; they don’t want a college football playoff because of concern for “student athletes” (a purposely ambiguous term invented by the NCAA) when in reality they just don’t want to share the Bowl Championship Series (BCS) revenue. A recent report from an athletes’ advocacy group calculated that if college sports shared their revenues the way pro sports do, the average BCS player would be worth \$121,000 per year, while the average basketball player at that level would be worth \$265,000.

Historically the NCAA has controlled, and I use that term loosely, college sports only because the controlees, the schools, have allowed it and they receive lots of money. Then in the mid-1980s the NCAA lost its TV-money cartel in a court case, and Big-Time Football schools no longer had to share revenue with smaller schools. (March Madness basketball money kept the NCAA afloat.)

And whatever authority that organization once had is pretty much history as well, as story after story emerges of “cheating” (as defined by the 250-page rulebook that is enforced selectively and subjectively) followed by a charge of “lack of institutional control,” a slap on the wrist and then it’s back to making dough.

I’ve ridden the “scholarship should be payment enough” bandwagon for a long time but now that the schools are making it clear they are money-obsessed, hiking donor club dues and ticket prices, creating personal seat licenses, and making horrible fashion choices for money (here’s looking at you, Terrapins), I now say you have to pay the players something.

Tradition may be too important to me; tailgating is just as fun no matter who your team is playing, after all. But something is ailing the soul of college athletics and there is no leadership from college presidents or the NCAA. Everyone’s too busy counting their money.

# SportsTurf

1030 W. Higgins Road  
Suite 230  
Park Ridge, IL 60068  
Phone 847-720-5600  
Fax 847-720-5601

The Official Publication Of The Sports Turf  
Managers Association

**SportsTurf**  
MANAGERS ASSOCIATION

**PRESIDENT:** Troy Smith, CSFM  
**IMMEDIATE PAST PRESIDENT:** Chris Calcaterra, M.Ed., CSFM, CPRP  
**PRESIDENT-ELECT:** James Michael Goatley, Jr., PhD  
**SECRETARY/TREASURER:** Martin Kaufman, CSFM  
**VICE PRESIDENT-COMMERCIAL:** Chad Price, CSFM  
**PROFESSIONAL FACILITIES:** Allen Johnson, CSFM  
**HIGHER EDUCATION:** Ron Hostick, CSFM  
**K-12:** Mike Tarantino  
**PARKS & RECREATION:** David Pinsonneault, CSFM, CPRP  
**ACADEMIC:** Pamela Sherratt  
**COMMERCIAL:** Rene Asprion  
**AT LARGE:** Jeff Fowler,  
**AT LARGE:** Jeff Salmond, CSFM

**CHIEF EXECUTIVE OFFICER** Kim Heck

**STMA Office**  
805 New Hampshire Suite E  
Lawrence, Ks 66044  
Phone 800-323-3875 Fax 800-366-0391  
Email [STMAinfo@STMA.org](mailto:STMAinfo@STMA.org)  
[www.STMA.org](http://www.STMA.org)

**Editorial**  
**EXECUTIVE VICE PRESIDENT** Charles Forman  
**EDITOR** Eric Schroder  
**TECHNICAL EDITOR** Dr. James Brosnan  
**ART DIRECTOR** Brian Snook  
**PRODUCTION MANAGER** Karen Kalinyak  
**EDITORIAL DIRECTOR** Richard Brandes

**STMA Editorial Communications Committee**  
Jim Cornelius, CSFM, Jason Henderson, PhD, Paul Hollis, Clayton Hubbs, Joshua McPherson, CSFM, Brad Park, David Schlotthauer, & Grant Spear



SportsTurf (ISSN 1061-687X) (USPS 000-292) (Reg. U.S. Pat. & T.M. Off.) is published monthly by m2media360, a Bev-AI Communications company at 1030 W. Higgins Road, Suite 230, Park Ridge, IL 60068. **POSTMASTER: Send address changes to Sportsturf, PO Box 4290, Port Jervis, NY 12771.** For subscription information and requests, call Subscription Services at (845) 856-2229. Subscription rates: 1 year, \$40 US & Poss.; 2 years, \$65 US & Poss.; 1 year, \$65 Canada/Foreign Surface, 1 year, \$130 Air-mail. All subscriptions are payable in advance in US funds. Send payments to Sportsturf, PO Box 4290, Port Jervis, NY 12771. Phone: (845) 856-2229. Fax: (845) 856-5822. Single copies or back issues, \$8 each US/Canada; \$12 Foreign. Periodicals postage paid at Park Ridge, IL and additional mailing offices. COPYRIGHT 2011, SportsTurf. Material may not be reproduced or photocopied in any form without the written permission of the publisher.

Member of BPA Worldwide.

# President's Message

Troy Smith,  
CSFM

[troy.smith@broncos.nfl.net](mailto:troy.smith@broncos.nfl.net)



## M2MEDIA360 PRESIDENT/CEO

Marion Minor

## VP OF FINANCE AND OPERATIONS

Gerald Winkel

## VP OF CIRCULATION AND COLLATERAL SALES

Joanne Juda-Prainito

## PRODUCTION & OPERATIONS DIRECTOR

Mary Jo Tomei

## DIRECT MAIL LIST SALES

Cheryl Naughton 678-292-6054  
[cnaughton@m2media360.com](mailto:cnaughton@m2media360.com)

## SUBSCRIPTION SERVICES

Phone 845-856-2229 Fax 845-856-5822

## REPRINTS

Cheryl Naughton 678-292-6054  
[cnaughton@m2media360.com](mailto:cnaughton@m2media360.com)

## Account Representatives:

### Joy Gariepy

16267 W. 14 Mile Rd., Ste 202  
Beverly Hills, MI 48025 • Ph: 248-530-0300,  
ext. 1401  
[jgariepy@m2media360.com](mailto:jgariepy@m2media360.com)

### Bruce Loria

626 Wilshire Blvd., Ste 500  
Los Angeles, CA 90017 • Ph: 213-596-7226  
[bloria@m2media360.com](mailto:bloria@m2media360.com)

## Classified Sales/Marketplace:

### Glenn Datz

Phone: 213-596-7220  
Fax: 213-624-0997  
[gdatz@m2media360.com](mailto:gdatz@m2media360.com)

**PUBLISHER'S NOTICE:** We Assume No Responsibility For The Validity Of Claims In Connection With Items Appearing In Sportsturf. Reader Service Numbers Are Given To Facilitate Further Inquiry. Commercial Product Names Are Used For The Convenience Of The Reader. Mention Of A Commercial Product Does Not Imply Endorsement By Sportsturf Or M2MEDIA360, Or Preference Over Similar Products Not Mentioned.

## Make your plans for Long Beach conference

**I** HOPE THAT YOU ARE LOOKING FORWARD TO LONG BEACH IN JANUARY! We are excited to be back on the West Coast. The Long Beach Convention Center is very accessible from the Hyatt and the Westin; and we are right on the water and right in the heart of the city. Long Beach works so well for the conference, exhibition, after hours fun, and as a great departure spot for a vacation with your family, pre- or post-conference.

As perfect as Long Beach is as a location, our conference education surpasses that, hands down. By now you should have received the conference brochure, and seen the extensive education program. There are more than 70 educational sessions in a variety of formats and 57 speakers packed into 3 days. This includes Turfgrass 101, presented in Spanish. We introduced this session in 2009 when our conference was in San José, and we are committed to continuing to reach out to those in the profession who are Spanish-speaking.

Our online registration is live now, so go to [www.STMA.org](http://www.STMA.org) to register. STMA also accepts purchase orders and can work out a payment plan, if you need to pay in installments. Just contact headquarters.

The SAFE Foundation, our charity, is funding an important grant for our students, the Gary Vanden Berg Internship Grant. Gary is well-known throughout the industry and Major League Baseball for his excellent internship programs. He is a mentor to many, and the SAFE Foundation has established this \$1,000 grant to honor Gary's commitment to helping young people get a great start in this profession. SAFE will award the first grant retroactively at the 2012 conference in Long Beach, to a student who interned this summer. The grant will help to reimburse the student for expenses incurred while interning and provide a subsidy to wages. If you had a student intern this summer, even if that student graduated in May, please encourage him or her to apply. Information can be found at [www.STMA.org](http://www.STMA.org).

Our committees have been very busy. In particular, the Bylaws Committee has completed its task of developing language for a new Retired category of membership. Although retirement may seem far in the future for many of you, this category is being established so that STMA can keep its experienced members engaged. You will have the opportunity to vote on this addition to the Bylaws. You can review the Bylaws language and SOP in this issue and cast your vote with your election ballot, which will be mailed to you in November.

As our fall season gets busier, it is important to take the time to thank those around us for the jobs that they do. I want to extend a very sincere "thank you" to an important segment of our membership, our commercial members. Our commercial companies support STMA through membership, advertising, exhibiting, and STMA program sponsorships. Their support helps STMA enhance our programs and services so that you have a better experience.



» CHAD KROPFF checking elevation of landing areas

## Quantitative and qualitative comparison of baseball mound clays

**P**ITCHERS VARY IN THEIR PREFERENCE for mound clays used for toe plates and landing areas mostly based on differences in their aggressiveness of delivery. Field managers need information about mound clays in terms of ease of installation and repair, but they must also keep pitcher preferences in mind. Ultimately, a clay should be chosen that meets the preferences of the majority of home team pitchers while not requiring undue maintenance and expense. This study was conducted with these constraints in mind.

### MATERIALS AND METHODS

A 4-mound bullpen was constructed at the Virginia Tech Recreational Sports Facility in February 2011. A sandy loam was hauled in and used for fill to ensure level mound and catcher's areas. The toe plates were set and leveled at 10 inches, and then a 2 x 2 foot landing area was installed of each individual clay product. A 1 inch per 1 foot grade was maintained using string lines. Toe plates and landing areas were checked with a transit,

with clay being added or removed to ensure proper elevation relative to home plate.

The clay products used in this study were donated by their respective companies. They were:

- Mar Mound (Southern Athletic Fields, Inc.)
- Turface Professional Mound Clay (Profile Products LLC)
- Diamond Pro Professional Mound Clay (Diamond Pro/TXI)
- Pro's Choice Pro Mound (Pro's Choice Sports Field Products)

Qualitative comments about the four materials:

Mar Mound is a red clay that is very soft and fine. It flowed directly out of the bag and was quite easy to work with. No preparation out of the bag was required.

Turface has a purplish-brown color and is also quite soft and fine. Turface acted more like a sand as you could pour it out of the bag and it was very easy to break up small clumps. No preparation out of the bag was required.

Diamond Pro Professional Mound Clay is a unique product compared to the others. It was extremely dry out of the bag and required wetting for 24 hours before mound use. We found it easiest to pour a few bags at a time onto a concrete floor and add water as needed until a workable consistency was reached. However, using a concrete mixer for this process would have been more efficient. Once mixed, it tended to get clumpy requiring much more hand-work as opposed to the Mar Mound and Turface products which could simply be raked out.

Pro's Choice Pro Mound packing clay was also unique compared to the other products. The bagged product was clumpy and hard, with many of the chunks too large to use right away. Bags had to be poured onto a concrete floor and chunks broken apart with tamps, sledge hammers, or digging bars. Water was then added to soften the product and make it easier to work. Similar to Diamond Pro, this product was hard to rake and had to be formed by hand to install.



» MOUND CLAYS: Each product had a distinct color, particle size, and workability when taken directly from the bag.





# THE REAL DEAL.

**We're more than a product source, we're your business resource.**

Customers not only get a wide variety of top product choices in irrigation, hardscape, water features, lighting, landscape and turf, but also have access to business and credit resources, education services, product training, online ordering and more. Stop by your local branch or go online to see how we can help grow your business and provide more value for your buck.

**FIND US:**  
[www.ewing1.com](http://www.ewing1.com)

**TALK TO US:**  
800.343.9464

Check out our **earn** partner program  
and take advantage of money-saving offers!

**EWING**

IRRIGATION | TURF PRODUCTS | LANDSCAPE LIGHTING | EROSION CONTROL | WATER FEATURES | HARDSCAPE



**Table 1. MOUND WEAR** (clay displacement) in weeks 1 and 4 with the four products

Bullpen date	Pitches since last rebuild	Rain (inches)	Wear per 100 Pitches (inches)			
			Mar Mound	Surface	Diamond Pro	Pro's Choice
Mar 14	30	0.01	9.2	3.3	1.9	3.8
Mar 15	45	0.07	4.4	NA	NA	3.3
Mar 16	60	--	2.7	2.0	1.5	1.1
Mar 17	45	--	2.2	6.5	3.5	3.7
Mar 18	25	0.05	4.0	7.1	5.4	2.9
Wk 1 Total or Mean		0.13	4.5	4.7	3.1	3.0
Week 2 and 3 data not shown						
Apr 4	100	0.06	1.3	1.6	1.1	2.1
Apr 5	150	0.73	0.9	1.1	1.2	1.5
Apr 6	60	--	3.1	5.4	2.2	3.8
Apr 7	80	--	2.5	2.3	2.0	2.5
Apr 8	115	0.24	1.8	1.9	1.7	1.9
Wk 4 Total or Mean		1.03	1.9	2.5	1.6	2.4

**HOW THE CLAYS WERE EVALUATED**

In an attempt to simulate four different “intensities” of maintenance programs, bullpen was thrown Monday through Friday for 4 weeks. During week 1 (March 14-18) the mounds were re-worked each morning before bullpen being thrown; in week 2 (March 21-25), the mounds were only re-worked on Monday, Wednesday and Friday; in week 3 (March 28-April 1),

the mounds were re-worked on Tuesday and Thursday; and in week 4, mound re-working occurred only on Wednesday. Each pitcher practiced off one mound for an entire week and then rotated to the next mound type in week 2 and so on. A tight schedule was kept so that each mound would receive the same number of pitches each week.

Quantitative data was collected at the end of each day on the depth of greatest

clay displacement on the toe plate and landing areas and summed. These numbers, along with the number of pitches thrown since the last rebuild, were used to calculate a value of clay displacement (or deflection) per 100 pitches thrown. At the end of each bullpen pitchers filled out a daily assessment sheet to subjectively rate the firmness, shape, consistency, moisture, and cleat indentation characteristics of the mound on a 1 to 10 scale, with 1 = worst and 10 = best. These subjective data are not presented, but they greatly influenced the overall qualitative judgments expressed later in the report.

**RESULTS**

**Mar Mound:** On the first day of the study Mar Mound did not perform well. The first bullpen resulted in the highest measured clay displacement of the study at 9.2 inches/100 pitches (Table 1). The pitcher dug into it easily at the toe plate and landing area, leaving a small hole instead of simple cleat indentations. At the end of week 1, the average wear per 100 pitches was 4.5, which was second only to Surface. However, no other product showed more improvement through the 4 weeks as Mar Mound, ending at a 1.9 inch wear

