

Cleaning and the condition of artificial surfaces

MUST TELL YOU that I have never been a proponent of artificial surfaces even though I know they have their place and certainly have made an impact in the sports world. My background as a head groundskeeper, for both the Cleveland Indians and Cleveland Browns, gave me a good understanding of sport surfaces. I occasionally dealt with artificial practice fields, but most of my activity was on natural grass.

When I started my own field maintenance company we competed with artificial field companies and I saw different aspects of these surfaces. I got to see the evolution from the directional Astroturf, improved Astroturf, poly-grass and infill cushioned turf. Most of them are sold as maintenance-free surfaces. I am not aware of anything that is maintenance free. Owners and managers were totally unaware that cleaning was a normal part of owning these surfaces. The life of these surfaces also was a question. Various materials performed differently and cleanliness is a factor.

Years ago, the first indication for me that cleaning could be an issue came from Spin Martin, head groundskeeper of the Indianapolis Colts. He suggested that I get into the artificial surface cleaning business; he said he was cleaning and spraying the Colts'

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surfaces regularly. I then talked to some executives at the leading artificial turf supplier in the US about disinfecting and cleaning turf. They seemed to be in denial about the subject.

I was worried about the liabilities that my company might face from both the players and the surface manufacturers. Years went by, and then my current business partner, Steve Smetana, reintroduced it to me. He has experience working and playing on turf in many uses and was looking into the cleaning process.

EQUIPMENT IMPROVEMENTS

The cleaning process has been improved due to the better cleaning equipment now available and more attention paid to player/disease questions. The early blades were difficult to clean due to their rough surface and shape. The newer poly blades are better because they are smooth and slick, but before the newer equipment it was impossible to clean and not remove the rubber infill. But those issues have been solved if you have the right equipment.

No matter which carpet materials are used, cleaning makes it last longer. Brushing will not remove dirt nor clean, but in fact drives the dirt down to the backing. Many facilities brush to clean. Brushing will pick up the blades and spread the infill, and the leaves appear cleaner, but in fact it will not remove the dirt.

The dirt we are concerned about is mostly hair, bodily fluids and skin, but we find pins, paper, uniform parts and various things that show up from the participants. I was very surprised at the amount of hair and dirt that we collect. Some indoor facilities even have dog shows and other non-sport activities, but do not clean afterwards. You would think that cleaning would be the natural thing to do, as most people consider it as a part



>> VACUUM BAG with surface debris.

of standard of living. Most testing done on artificial surfaces for bacteria and fungus are on new surfaces. I am sure that growth on the new carpet samples is not a question, but growth on the nasty debris that accumulates in the surface is a different story.

In the 1930's and 1940's salesmen went door to door selling vacuum cleaners. The sales pitch was to vacuum on half of an area and then dump the collected material, removed from the carpet, on the rest of the carpet. This demonstrated how much dirt was still in the carpet.

I was surprised that the owners and operators of synthetic turf fields do not seem to worry about the buildup of dirt that is in playing surfaces. I suppose the question is what responsibility the owners or operators have or what should the customer expect. I would be taken aback if the hotel room I book does not have a clean floor, clean towels and sheets. Is this different? I do not think so. We are presently doing the same thing as the vacuum salesman of yesteryear and it still works.

Most facilities we visit do a great job cleaning locker rooms, eating and spectator areas. Why should it stop at the playing surface door? You know that a dirty locker room is not a good sign of the quality of the operation, but you cannot see the dirt in the field. There are also ways to make this a positive for a business. As in the hotel business, the customers want to know you have their interest at heart. Signs for the cleaning times do work. We have owners who say that they want the customers to know that they are spending time cleaning.

DISINFECTING

Disinfecting is a different process and just as important. The NFL has set some parameters and some of the surface manufacturers have as well. I do not know if there is presently a problem with bacteria or fungus growth, but in time it is possible. (Editor's note: Dr. Andy McNitt, director of The Center for Sports Surface Research at Penn State, says outdoor synthetic fields do not need disinfectant applications but indoor synthetic fields should be disinfected, and that using a solution with Tide detergent is as effective as commercial disinfectants.) As mentioned before, the disease that one would worry about would more likely be a host of the accumulated dirt. Another problem is the ever-changing reaction that people have to viruses and bacteria. Disinfecting slows



or stops that process and will make any surface safer.

I have not mentioned the difference between the outdoor surfaces and the indoor surfaces. It is easy to see that indoor surfaces, with consistent heat and moisture, make a better environment for bacteria growth.

Outdoor surfaces have the help of the sun, rain and freezing weather to curb bacteria and fungus growth. For your information, the beauty of natural grass surfaces is that the soil and grass comes with its own bacteria that eliminates or competes with the unwanted strains. It is understood that the natural grass surface cannot survive around the clock activities, but they do cost less to install, last longer and if you have enough area for all the activities, will provide a good surface.

One other factor regarding any surface is the cushion capability. This is measured in the form of G-Max. This science is rather new, and I am not sure that the understanding of the data is conclusive. We do know that it will measure consistency of cushion throughout the surface. These measurements do change in any playing surface do to use, age and weather. The same is true for both natural grass and artificial surfaces. Softness, cushion and cleanliness change the characteristics of foot release, which can be a safety concern. The early synthetic surfaces actually got sticky when they were dirty.

The bottom line for most field improvement is the cost and benefits. The money spent on each facility can be affected by competition. In some situations, the competition between sports may take competitors to different venues. The Hertz rental car theory is, "The cleaner the vehicle, the better the customer takes care of it" has always been of interest to me. If the entrance to a building, parking lot or associated areas are trashed, what would you think the inside looks like? Cleaning is a part of any presentation and cost effective.

David Frey is a former groundskeeper for the Cleveland Indians and Cleveland Browns, a past president of STMA, owner of Field Specialties, a sports and equestrian surface contractor, and a partner of Pro Turf Clean, Inc.



Turf textbooks 101: what's currently being taught

Editor's note: The idea behind this article was hatched at a meeting for STMA Committee members before the association's conference opened in Austin last January. Chad Follis, a horticulture instructor at Mineral Area College, Park Hills, MO gets an "A" for thinking it would be interesting to poll turfgrass professors on their favorite textbooks.

ERE ARE THE QUES-TIONS we sent some of the most prominent turfgrass teaching professionals in the country:

What textbook(s) is required for your introductory college course on turfgrass management? Why was this book chosen?

What textbook(s) is required for any advanced courses college courses related to pest management, soils, plant science?

Besides your introductory turf text and, most likely, *Sports Fields: A Manual for Design, Construction and Maintenance*, what other turf book(s) would you recommend turf managers have on their reference shelves?

GREG BELL, PhD, Oklahoma State

I use Nick Christians' book, *Fundamen*tals of *Turfgrass Management*, for my introductory turfgrass class and will be using my own book, *Turfgrass Physiology and Ecology: Advanced Management Principles* that was published in January, for my advanced class. I also like Al Turgeon's *Turfgrass Management*, as an introductory text. However, I prefer the Christians' book slightly because it is a little more practical and a little bit easier to read.

I believe that Jim Beard's *Turfgrass: Sci*ence and Culture, is still a good reference in spite of being published in 1973, and his book, *Turf Management for Golf Courses*, and the Bert McCarty et al. book, *Best Golf Course Management Practices*, are also excellent for understanding and practicing the agronomic practices necessary for sports field management.

For basic field construction and maintenance questions I usually refer to Puhalla, Krans, and Goatley, *Sports Fields: A Manual for Design, Construction, and Maintenance.* The McEntire and Jakobsen book, *Practical Drainage for Golf, Sportsturf, and Horticulture* is great for learning drainage principles, and the Pira book, *A Guide to Golf Course Irrigation System Design and Drainage*, is good for learning more advanced design and theory for both drainage and irrigation. I look to Carrow, Waddington, and Rieke, *Turfgrass Soil Fertility and Chemical Problems: Assessment and Management*, for help with soil problems.

My favorite disease book is Houston Couch, *Diseases of Turfgrass*, although it predates some of the recently discovered diseases and some major problems such as gray leaf spot on perennial rye. The *Compendium of Turfgrass Diseases*, 3rd edition, by Smiley, Dernoeden, and Clarke is also very good, reasonably priced, and more up to date. My favorite insect book is Dan Potter's *Destructive Turfgrass Insects*.

TROY MCQUILLEN, Kirkwood Community College (IA)

Fundamentals of Turfgrass Management by Nick Christians of Iowa State University is the required textbook for our introductory

Teaching in an applied science program, it's nice to have textbooks that reflect the hands-on learning techniques we as faculty promote in the classroom. college course on turfgrass management. We like it because it was written by an Iowa author who often reflects what you might expect from turfgrass in the Midwest. Teaching in an applied science program, it's nice to have textbooks that reflect the hands-on learning techniques we as faculty promote in the classroom. This book like many adds lots of color images in the appendix sections and has industry-related photos that grab the students' attention when reading the chapters.

The book was also chosen because it's an "easy read." I believe that when you are in the field and need to reference back to a textbook you want something that has a detailed index that allows you to flip to the chapter/section of the textbook for a quick refresher and then back to work. This book does that really well.

Other books I would recommend to turf managers: *Sports Fields: A Construction and Maintenance Manual*, from the American Sports Builders Association; *Mathematics of Turfgrass Industry*, by Nick Christians and Michael Agnew; *Practical Drainage for Golf, SportsTurf, and Horticulture* by McIntyre and Jakobsen; and *Poa Annua*, by Vargas and Turgeon.

BRANDON HORVATH, PhD, University of Tennessee

For the introductory turfgrass lab course I teach I recommend *The Mathematics of Turfgrass Maintenance* by Nick Christians and Michael Agnew. Other texts I would recommend for a reference shelf would include: *Management of Turfgrass Diseases* by Joseph M. Vargas Jr., and *Compendium of Turfgrass Diseases*, edited by Richard Smiley, Peter Dernoeden, and Bruce Clarke.

JOHN STIER, PhD, University of Wisconsin

Fundamentals of Turfgrass Science by Dr Nick Christians. It is complete and by far the best value for the money of any book available. University faculties are under tremendous pressure to reduce the cost of textbooks, both from the public media and from academic administrators.

I like the book *Practical Drainage for Golf, SportsTurf, and Horticulture*, Christians and Agnew's book on turfgrass mathe*Fundamentals of Turfgrass Science* by Dr Nick Christians. It is complete and by far the best value for the money of any book available. University faculties are under tremendous pressure to reduce the cost of textbooks, both from the public media and from academic administrators. — John Stier, PhD

matics, and Jim Beard's 1973 *Turfgrass Science and Culture*. It's dated but still the best book available beyond an introductory text.

FRANK ROSSI, PhD, Cornell University

I use Bob Emmons' *Turfgrass Science and Management* from Delmar Publishing because it is THE most practical text I have found. It lays an excellent foundation for students to know the basics.

The problem with textbooks is that beyond the basics things are changing so rapidly that by the time a book comes out it is already 2-3 years old. Therefore I don't recommend texts as much as I used to for managers but instead recommend that they access the Turfgrass Information File (TGIF) at Michigan State (STMA members they can access it free) for specialized content.

I am very fond of Doug Brede's *Turfgrass Maintenance Reduction Handbook* for turf management beyond the sports field. It is the only text I have seen that takes a progressive look at where we need to be heading as an industry.

GRADY MILLER, PhD, North Carolina State

I do not teach our introductory course at NC State so I'm not 100% sure what





I am still very partial to every turfgrass manager having a copy of Beard's 1973 *Turfgrass Science and Culture* regardless of how old it is. I was always told it was "The Bible" for turfgrass managers and I still think it is if one really wants to get into the nitty gritty of why grasses do what they do. — *Michael Goatley, PhD*

text is used. My understanding is that they do not require a text, but give several texts as suitable for reference. The library can hold these so our students can go by and use them as needed. To be honest, it does not take a very sophisticated text for the introductory class.

There are a number of suitable texts that fit into an "introductory turfgrass text" classification, including: *Turfgrass Management* by Turgeon, *Turfgrass Science and Management* by Emmons, and *Fundamentals of Turfgrass Management* by Christians. All these have multiple editions.

Faculty prefer to use "course-packs" with lectures/handouts for students and rely on students to seek out additional references if additional information is needed.

I consider Sports Fields: A Manual for Design, Construction and Maintenance, to be a more specialized book that would be used in a second class or a more specialized class. I think it is an excellent reference for field managers. I would highly suggest Best Golf Course Management Practices by Bert McCarty. While this by title seems to be only a golf course text, it really is not. The reference material on items such as soil and tissue testing, water quality, turfgrass mathematics, etc., is excellent for sport turf managers. Plus, many of the grasses used on golf courses are also used on sports fields, so all the extensive pest management chapters are also excellent.

Lastly, I really suggest managers get a copy of *The Site Calculations Pocket Reference* by Ed Hannan. It has every calculation or conversation for turfgrass construction and management situation that could be imagined.

ANDREW MCNITT, PhD, Penn State

Our introductory turf book *Turfgrass Management* by Al Turgeon. Another great textbook/reference is *Turfgrass Soil Fertility and Chemical Problems* by Carrow, Waddington, and Rieke. Outstanding book.

A third that will be coming out later this year is the *Turfgrass Monograph* from the Crop Science Society of America. It is not a text but a reference used mostly by researchers and it has a listing and updates on most all the peer-reviewed research in turfgrass. It likely will be available on agronomy.org eventually.

BETH GUERTAL, PhD, Auburn University

I do not have a required textbook. If I were to pick one it would be Nick Christians' as it is an excellent basic resource, especially for those working with cool-season grasses, as that is a bit of the focus of the text. Instead, I use a combination of web resources and extension documents; because so many of my students stay and work in the warm-season systems of the Southeast that is why I do not require the text. I do recommend it as an excellent resource.

For reference shelves, I would recommend *Turfgrass Soil Fertility and Chemical Problems* by Carrow, Waddington, and Rieke. It is a thorough and well written text. Quite useful. Turgeon's book is good, too.

BRIAN SCOTT, PROFESSOR, Mt. San Antonio College

We use Nick Christians' book. It has great photos and illustrations plus it is easy to read and understand. Other books that I recommend are the *Western Fertilizer Handbook* (latest Horticulture Edition available) and the *Mathematics of Turfgrass Manage-* *ment* put out by GCSAA. And even though it's all in metric, *Growing Media for Turf and Ornamental Plants* by Handrek, from Australia, has great practical applications.

MICHAEL GOATLEY, PhD, Virginia Tech

I have used both Christians' Fundamentals of Turfgrass Management and Turfgrass Management by Al Turgeon for intro turf texts over the years and like both of them very much; both are well written, comprehensive, and contain excellent ideas for labs, projects, etc. The only reason I changed up was just to try something new for class. I am still very partial to every turfgrass manager having a copy of Beard's 1973 Turfgrass Science and Culture regardless of how old it is. I was always told it was "The Bible" for turfgrass managers and I still think it is if one really wants to get into the nitty gritty of why grasses do what they do. The other books I use a lot as references and think that sports turf managers would

also use are Turfgrass Soil Fertility and Chemical Problems by Carrow, Waddington, and Rieke, Managing Turfgrass Pests by Watschke, Dernoeden, and Shetlar, and whatever the latest edition is of The Mathematics of Turfgrass Maintenance. That's just me. I've got a slew of other books on my shelf by some other great authors, and a few of them are very specific to topic (like Houston Couch's Diseases of Turfgrasses) but these are the ones I think folks would reach for fairly regularly. And though you didn't ask, I still regularly look at The Seven Habits of Highly Effective People by Stephen Covey to put focus and perspective on things from time to time.

TREY ROGERS, PhD, Michigan State

I have always used the Turgeon book on turfgrass management, at least seven editions to my knowledge. Have looked at books by both Emmons and Christians, and they would be acceptable to me as well,

I really do not focus too much on specific books for sports turf. But, the soils book by Waddington, Rieke, and Carrow should be automatic.

but just have not changed [from Turgeon]. I also use my paperback book published in 2007, *Lawn Geek*. I think you need a book or two regarding pest management but here you might buy where you live/work, as location may play a role. Since I actually do about 90-10 ratio teaching of golf vs. sports turf (people outside of Michigan just associate me with the latter because of projects/research) I really do not focus too much on specific books for sports turf. But, the soils book by Waddington, Rieke, and Carrow should be automatic.



When it's "Showtime," you can't just show up

Editor's note: This is the first in a series of 2011 Professional Development articles provided by the Sports Turf Managers Association.

OU HAVEN'T TOUCHED THE CHICKEN CORDON BLUE that is still laminated onto your plate. You drained your ice water glass four times, but your mouth still feels like you used a Q-tip instead of a toothpick. You nervously fidget in your chair as the chairman of the parks district board of trustees starts to introduce you.

"Oh, my God. I've got to go to the bath-room."

"And here to tell you about how your local Parks and Rec Department is doing fantastic work in preserving the environment . . . let me introduce your director, Mr. Ron Dayvoo. Let's hear it for Ron."

Your knees buckle as you approach the podium. Your stomach growls. You gasp for one last breath.

Welcome to the world of public speaking. Think that scenario only describes the beginners? Think again. Even the experienced pros feel a little of that when it's "showtime."

Bear in mind, some of that nervousness is a good thing. It will ensure you are awake, alert and ready to perform. Because that's what you are about to do—perform. And how you do in that performance may go a long way in shaping the public perception of how well you do your day job. So keep in mind: *public speaking comes with the job*.

If you follow the steps of brainstorm, gather, organize, produce, practice and present you will find proper preparation makes speaking easier. Not easy, just easier.

BRAINSTORM

First consider the difference between choosing a topic and being assigned a topic. That can run the range of being invited to "talk to us about the recent changes in pesticide use that has led to improvements in run-off" to a more generic, "talk about anything you want to talk about." The first sceIn every case, try to build your topic around you and your audience's common interests. Do remember, a live speech works very well if you want to deliver an emotional message. If you must deliver lots facts, stats and data to your audience, prepare a handout.



nario will likely occur when a particular organization has a special interest in a topic of your expertise, such as a professional conference. The second scenario will likely occur when those civic organizations with monthly or even weekly meetings require a speaker, and the organization contacts you to fill a slot on the program.

Next consider the audience. The more you know about them the better you can prepare. Belaboring points your audience already knows has the same deadly result as taking a knowledge base for granted and talking over your audience's heads.

Find out what the members of your audience do for a living. Are these professional people, blue-collar workers, retirees, students? You will find it helpful to also know the age and sex of your audience. If you're speaking to an audience of Baby Boomers, a pop culture mention of Woodstock or Mrs. Robinson might help you make a point. An audience of current college students would greet those same references with a head scratch, a yawn or both. Consider what areas of agreement you will have with your audience. On what points will they disagree?

In every case, try to build your topic around you and your audience's common interests. Do remember, a live speech works very well if you want to deliver an emotional message. If you must deliver lots facts, stats and data to your audience, prepare a handout.

GATHER

Yes, you want to deliver an emotional message, but you will need a fact base to set that up. The fact base often comes from your education and experience. That's probably why you got invited to speak in the first place. Personal experiences and anecdotes will be invaluable when you begin to organize your presentation.

Just don't be afraid to expand that fact base beyond your experiential base. Use the Internet or the library (you do remember what a library is, don't you) and see if any new information has become available. Use your contact network you've acquired through your participation in the Sports Turf Managers Association and contact your fellow professionals. The STMA headquarters may also be able to steer you to additional resources. Not matter how you do it, specifics sell your ideas better than generalities.

ORGANIZE

Think in terms of a thesis statement. Just what point do you want to make with that audience? If you can't state it simply, then perhaps you haven't focused your topic enough, or you may be working on more than one focus, which means you are working on more than one speech A solid thesis statement does more than just describe. It gives context and perspective and goes a long way in answering the "so what" and "who cares" questions.

Consider the difference between the following statements.

• We are going to install the newest version of Monsanto's artificial turf that feels like real grass.



• The new Monsanto Turf promises to reduce serious abrasion-type injuries more than 30 percent.

The first statement provides mere description. The second statement delivers context and explains the importance of the topic. Get to your thesis very early in the speech. Use the old adage of "tell 'em what you're going to tell 'em, tell 'em and tell 'em speakers end up being a joke. Sometimes that happens because the joke is unrelated to the topic at hand. Sometimes that happens because the joke is in poor taste. Sometimes that happens because the joke just isn't funny. Sometimes it's all of the above.

The moral of the story is if you must use humor, keep it related to the topic at hand,



>> BOARD MEMBER Mike Tarantino presents during the 2011 STMA National Conference in Austin.

what you just told 'em" as the basic organizational structure of the speech.

That will help you provide a beginning, a middle and an end. The beginning grabs the audience and sets the thesis. The middle provides the evidence to prove your thesis. The end should make the final reference to the thesis, leaving the audience, hopefully wanting more, rather than making them glad this whole speech is over.

PRODUCE

Once you've decided on your topic and have turned that into a thesis, you now must decide how you will present it. Let's start with what *not* to do.

Do not try to imitate David Letterman. Dave has carved out a nice career saying funny things in front of live audiences. He also employs a number of people to help him write those funny things. Far too many speakers think you must start your presentation with a joke. As a result, far too many show good taste, and for goodness sake, make it funny. Former CBS Television President Van Gordon Sauter once began a speech about the decline in quality of television news. He recalled working his way through graduate school refereeing high school basketball games. One night he tossed the opening tip-off and a player acci-

dentally knocked off his glasses and smashed them as his feet came back to the floor. Sauter confessed he couldn't see a thing without his glasses. He also had not brought an extra pair to the game, so he would have to officiate without the benefit of clear eyesight. He promptly decided that whenever he would blow his whistle, he would "sell" the call with great conviction.

At the game's end he noted he had not received any more complaints from the coaches, questions from the players or boos from the fans than normal.

"That was my first lesson that style triumphs over substance," he said.

Then he went on to prove style was triumphing over substance in television news. Pertinent, tasteful and closely tied to the topic.

Generally speaking, if you can come up with a personal experience or anecdote, often one that pokes fun at yourself, you will have found an attention-grabbing way of starting your speech. Just don't start thinking you're the next David Letterman.

The second item on the big no-no list is DO NOT READ FROM A PREPARED SCRIPT. If you do it will look and sound like you're reading from a prepared script. Working from an outline usually provides sufficient structure to keep your mind at ease and your speech on track. It also provides enough departure so you won't sound like you're reading it from a prepared script.

Extemporaneous is clearly the best way. It allows you to connect better with the audience because your focus is on them, not your note cards or script. It's also the most dangerous one, dangerous because if you ever forget where you're going or where you've been, the awkward silence of trying to get back on pace will turn out to be a speech killer. The audience will remember you all right—just for the wrong reasons.

Keep in mind you got invited because your inviters knew that you knew a lot about the subject. You probably talk about that subject virtually every day. You don't need note cards to talk to your boss or a member of the city council or a coach.



>> **STMA PRESIDENT** Troy Smith, CSFM informally presents to a group during the educational roundtable sessions that closed the conference education program in Austin.

With enough preparation and practice you can at least get by with a modest number of note cards or points in an outline.

PowerPoint can help you get your point across, but sometimes PowerPoint just gets in the way of getting your point across. PowerPoint offers an advantage of visualization of your ideas. So if you are offering visual ideas, then PowerPoint works well. PowerPoint also offers some distinct disadvantages. You can't adjust the presentation during the presentation. Think of the times you've seen a presenter fly through the final three slides as time started to run out.

PowerPoint users also have a tendency to put too many words on a slide. That leads to reading the slide, which is the visual, but equally annoying, equivalent of reading a script. The use of standard PowerPoint templates suggests a lack of creativity if not a lack of preparation. Click on the template called "Dad's tie." Tell me you can live without ever seeing it again.

PRACTICE

Nothing special about the advice here: practice, practice, practice.

PRESENT

In the 1979 movie "All That Jazz," Roy Scheider plays a boozing, drug-addicted, sleepless Broadway choreographer/dancer. In several scenes you see him rise from the dressing room couch looking like the boozing, drug-addicted, sleepless dancer he was. He walks up to the mirror, opens his bloodshot eyes, squirts in a few eye drops, blinks and loudly proclaims, "It's Showtime." He then proceeds on stage and does his magic. Perhaps you can close your eyes for a moment and think, "It's Showtime," before you take the podium.

Listen to your introduction. If the person doing the intro doesn't establish your credibility, make sure you blend that into the early part of the speech. If that intro does establish your expertise, don't repeat it in your speech.

Part of "Showtime" is being enthusiastic. If you can't show interest in your topic, how can you expect your audience to show interest?

Use your voice. Most often you will be using a microphone. That allows for easy changes in volume. A very soft voice can get additional attention. So can a louder voice. Vary your pace. The "pause" and the resulting silence can be a most effective device. Other times talking fast can deliver a dramatic effect. If you are using a podium microphone you will be tied to the podium, but if you are equipped with a lavaliere mic feel free to move around. It can help you maintain eye contact with different parts of the room. Use gestures to help communicate key points, but avoid constant movement that resembles a sapling flapping in the wind.

Above all, be yourself. That's really tough to do when you're nervous, but perhaps that practice we talked about earlier can make that easier to accomplish. That way when it's "showtime" you'll be ready for the show.

Dr. Max Utsler teaches journalism at the University of Kansas.

World Cup World Class



TifSport was the grass of choice for Moses Mabhida Stadium for the 2010 World Cup in Durban, South Africa. No wonder it's also a favorite for professional, collegiate and high school fields right here in the USA. At Irving, Texas on the Dallas Cowboys practice fields. At the University of Oklahoma. At UNC and GA Tech. Football, soccer, baseball - any sport played on natural grass is a natural for TifSport Bermudagrass. If you're looking for a sports turf that can handle non-stop

action, a cooler transition zone climate and heavy overseeding, TifSport's your answer. It's ideal for intramural fields, practice fields and gameday venues, where everything has to be perfect. Coaches and players love the way it looks and plays, and you and your crew will appreciate how easy it is to manage. TifSport can only be sold as certified sod or sprigs and only by licensed members of the TifSport Growers Assoc. For more information visit us at www.tifsport.com or call 706 552-4525.



New panel technology for field bases

Editor's note: This article was written by the designer of a new field base panel system. The system was first installed earlier this year at the Tampa Bay Rays spring training facility.

AVE YOU EVER ASKED YOURSELF, "Why isn't there an alternative to rock and gravel for building bases for athletic fields?" For more than 10 years I have pursued the science of manufacturing polymeric interlocking panel base systems to replace traditional stone base work. With more than 2 million square feet of Tour Links panels installed around the globe, I began to concentrate my efforts on panel systems for athletic field construction, from rooftops to natural turf retrofits. This spring at the Port Charlotte, FL training home of the Tampa Bay Rays, Ultra-BaseSystems made its debut after we were contacted by our friends at AstroTurf to help retrofit a practice infield at the Rays facility. The goal was simple: allow the team to practice on the same Astroturf Game Day Turf 3D system that was being installed at the team's permanent home in St. Petersburg. One little hitch, however; we only had a few days to accomplish the task before the team reported to spring training.

Below Left: OTHER THAN THE DRAINAGE DITCH FILL, no additional material was used to build the sub-base, only the existing soils that remained after the turf removal. Below Middle: THE AREAS AROUND THE BASES and mound were carefully measured, marked and easily trimmed using a jigsaw. Below Right: THE TURF was carefully seamed, rolled and allowed to dry.



Below: Starting at second base and working evenly towards first and third base, the panels were installed symmetrically to ensure the area remained perfectly square.



We made quick work of removing the existing sod, being certain to excavate exactly 2 ½ inches down, which would allow the finished panel and turf system to sit slightly above the existing base paths. Once the sod was removed, the area was scraped clean to assure a smooth, properly pitched base on which to construct the system.

BASE PREP WORK

The AstroTurf engineers requested a simple drainage system be installed around the perimeter of the base paths, and then the entire field was meticulously groomed and thoroughly compacted. Other than the drainage ditch fill, no additional material was used to build the sub-base, only the existing soils that remained after the turf removal. The entire area was then covered with our permeable, 6-ounce spun polypro geo textile which not only blocks new organics from growing but more importantly acts as a panel stabilizer, helping to distribute the panel load evenly, creating stability underfoot. The entire base prep work and drain system installation took about 10 hours with a three-man crew

PANEL INSTALLATION

The next morning our crew of seven installed the panel base. Starting at second base and working evenly toward first base and third base, the panels were installed symmetrically to ensure the area remained perfectly square. Expansion joints engineered into each molded panel allow for a smooth base profile regardless of temperature swings.

A 1-inch expansion gap was left between the panels and clay base paths in which the turf would be wrapped over the panel's edge, secured and buried. The areas around the bases and mound were measured, marked and trimmed using a jigsaw. The majority of this crew had never even seen our UltraBase panel system before, yet in 3 hours the entire 6,700-square foot area was installed, trimmed and ready for turf.

The new base was measured and marked and the crew went to work



The goal was simple: allow the team to practice on the same Astroturf Game Day Turf 3D system that was being installed at the team's permanent home in St. Petersburg.

rolling the large rolls of turf into place across the base structure. In less than 3 hours the team had the turf positioned, trimmed and ready for seam glue. Our molded (patent pending) turf barb system reduces any unwanted turf movement during installation and play. These tiny barbs stop filled or non-filled turf during play but allow for natural expansion and contraction of the turf and panels. The turf was carefully seamed, rolled and allowed to dry.

After drying overnight, the next step was to secure the turf to the top edge of the panel system between first and second base. The turf grain was running in this direction so this was the starting point. Stainless steel staples shot directly into the panels secure the turf without the need for a nailer board installation. The panels act as a nailer board, base structure, drainage system and shock pad all in one.

The process of filling the turf was accomplished by moving across the field from first and second to the third base line with a SandMatic machine; a total of 6 pounds of rubber and sand per square foot was deposited. The final step was to staple the entire perimeter of the turf into the panel's top surface and edge. The turf is only secured around the perimeter of the panel mass and around the pitching mound; the weight of the infill and the molded turf barbs keep the turf in place. Lastly, the base paths were groomed, backfilling the small gap in which the turf was tucked, in essence burying the rolled turf edge and creating a finished look.

A true testimonial to the system is that immediately after a 2-inch rain fall, the field was completely drained and the only area at the facility that was playable. Rick Nafe, vice president of operations for Tropicana Field, said, "The field installation was completed extremely fast with no mess to our facility. This field feels great underfoot, and the ball bounces and rolls just like real grass, what more could you want from a synthetic turf field. We love it!"

Dave Barlow is president of Creative Sport Concepts, Inc., St. Petersburg, FL www.ultrabasesystems.com.



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