

# SportsField

## MANAGEMENT

Formerly  
SportsTurf magazine

May 2020

Vol. 36 No. 5

The Official Publication of the Sports Turf Managers Association

College Softball Field of the Year **8** | Plant Growth Regulators **22**  
The *SportsField* Management Interview: Stephen Lord, CSFM **26**

## Managing Large School Districts

K-12 sports field managers discuss the challenges they face,  
including adjusting to the "new normal"





# TAHOMA 31<sup>®</sup>

B E R M U D A G R A S S

## Research Results

Ranks #1 In the Following Categories In NTEP & University Testing

Cold Tolerance: Winter Survivability ❄️ Low Water Use ❄️ Exceptional Turf Quality

Early Spring Green-Up ❄️ Shade Tolerance ❄️ Traffic Tolerance

### #1 in Cold Tolerance: Winter Survivability

The winter of 2013 - 2014 swept a polar vortex into the Midwest that created record low temperatures. Dr. Cale Bigelow, a professor of turf science and ecology at Purdue University, located in West Lafayette, Indiana, participated in the NTEP study. In a December 2019 article in Golf Course Management magazine, Dr. Bigelow was quoted as saying only 9 of 42 bermudagrasses tested survived with at least 50% ground cover by spring. Some 14 of the grasses completely died. By the end of the NTEP study, Tahoma 31 was rated by far with the greatest winter survivability in Indiana at only 4% winter kill. Mean scores in two states where winter survivability was measured, Indiana & Kentucky, confirmed Tahoma 31's top status in the three year study period, 2014 - 2017.

CULTIVAR	% WINTER KILL, MEAN SCORES IN & KY, 2014 - 2017
<b>Tahoma 31</b>	<b>14.5</b>
Iron Cutter	48.7
Latitude 36	57.3
TifTuf	88.3

### #1 for Low Water Use

In tests that measured evapotranspiration rates (mm d-1) under non-limiting soil moisture conditions in Oklahoma (Amgain et al., 2018), Tahoma 31 fared best, while TifTuf used the most water. Overall, Tahoma 31 used 18% less water than TifTuf.

CULTIVAR	ET RATE
<b>Tahoma 31</b>	<b>4.06 e</b>
Northbridge	4.29 cde
Tifway 419	4.54 bcd
Latitude 36	4.59 bc
Premier	4.63 b
Celebration	4.77 ab
TifTuf	4.95 a

Reserve your Tahoma 31  
Bermudagrass today!

SOD  
PRODUCTION  
SERVICES

Sod Production Services  
18161 Sandy Point Road, Charles City, VA 23030  
757.345.1120 | [Tahoma31Bermudagrass.com](http://Tahoma31Bermudagrass.com)

Developed by the turfgrass experts at Oklahoma State University





# FIELD RENOVATION SEASON



GKB COMBINATOR



GKB TOPDROP



GKB STONEBURIER

Combinator = Lip Removal  
TopDrop = Precise Amendment Application  
StoneBurier = Exact Blending Depth

Field Renovations = STEC Equipment touches every base!



# Contents

MAY 2020  
VOL.36, NO.5



8

**8**  
**Field of the Year College Softball**  
Patricia Wilson Field,  
Stetson University, DeLand, Fla.

**14**  
**Schools and Grounds**  
K-12 sports field managers discuss  
the challenges they face, including  
adjusting to the “new normal”

**22**  
**Plant Growth Regulators**  
Why Every Sports Field Manager  
Should Consider Using PGRs

**24**  
**PGR Application**

**26**

**Profile**  
The SportsField Management  
Interview: Stephen Lord, CSFM

**30**

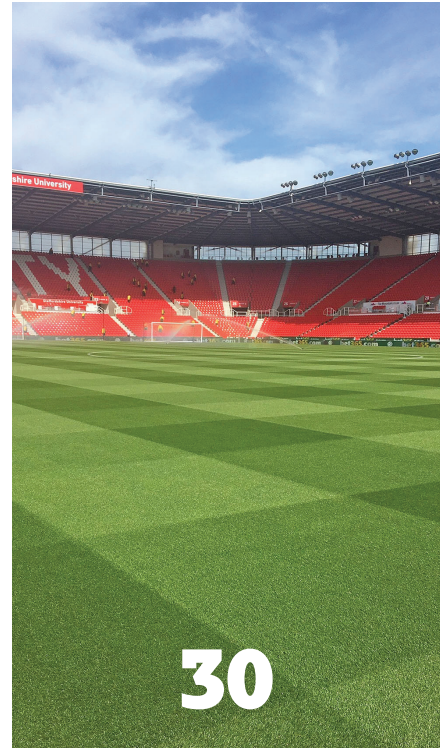
**Industry Insights**  
Field Management Practices in the UK

**32**

**Baseball**  
Red Sox Senior Director of Grounds  
David Mellor on the winning  
combination for proper  
infield maintenance

**36**

**Public Relations**  
Ambition to Produce Fond Memories  
for Years to Come



30



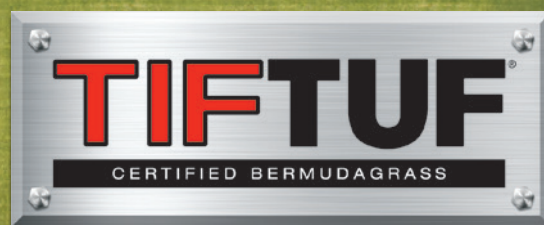
26

## DEPARTMENTS

- 6**  
Editor's Note
- 7**  
STMA President's Message
- 17**  
John Mascaro's Photo Quiz
- 38**  
Innovations
- 40**  
Equipment and Technology Focus
- 44**  
From the Twitterverse
- 46**  
STMA In Action
- 48**  
Marketplace
- 49**  
STMA Chapter Contacts
- 50**  
Q&A

[On the cover: Travelers Rest High School, Travelers Rest, S.C. Photo provided by Shane Windham.]





**TIFTUF**

CERTIFIED BERMUDAGRASS

## UPGRADE TO FIRST CLASS

- ✓ 38% Less Water
- ✓ Earlier Spring Transition
- ✓ Reduced Fertility Requirement
- ✓ Greater Fall Color Retention
- ✓ Increased Wear Tolerance
- ✓ Extremely Rapid Grow-In

[www.TheTurfgrassGroup.com](http://www.TheTurfgrassGroup.com)



# Editor's Note



**John Kmitta**

Associate Publisher/  
Editorial Brand Director  
jkmitta@epgmediallc.com  
763-383-4405

With the ever-evolving nature of the COVID-19 pandemic, its resultant impact is being felt in different ways depending on where you live/work, your state and local governments, and your specific situation. As a result, *SportsField Management* and STMA are working to provide as much up-to-date information and resources to you in as many different formats as possible.

The major component of this joint effort is the STMA "Route to Recovery" guide. This special digital flipbook, launched in late April, provides expert insight and resources to help you deal with limited-to-no access to your fields and the recovery process to help plan for when fields are reopened. In addition to articles about field recovery, the "Route to Recovery" contains an open letter to government leaders from STMA President Jimmy Simpson, CSFM, urging leaders to view sports field management as essential business. This letter, and other content in the "Route to Recovery" guide

can be downloaded directly for your use. The "Route to Recovery" is also filled with links to helpful resources, and will be an ever-evolving resource as additional content and resources become available. Please continue to check back in the coming weeks and months.

In addition to the "Route to Recovery" guide, *SportsField Management* and STMA are working together on a series of video interviews with STMA members about how the pandemic has affected them, how they plan to manage their fields, and advice they have for others.

*SportsField Management* also announced the new *SportsField Management Podcast*. This new audio offering will feature archived STMA Conferene education sessions, as well as original interviews with industry insiders. It's available on the go through SoundCloud, iTunes and Stitcher.

Visit <https://sportsfieldmanagementonline.com/podcast/>, and be sure to check back for more educational content and industry interviews, coming soon. **SFM**

## SportsField MANAGEMENT

Formerly *SportsTurf* magazine

### EPG Media & Specialty Information

10405 6th Ave. N., Ste 210  
Plymouth, MN 55441

The Official Publication Of The Sports Turf Managers Association

### SALES REPRESENTATIVES

**Peggy Tupper** | Senior Account Manager  
Phone: (763) 383-4429 | [ptupper@epgmediallc.com](mailto:ptupper@epgmediallc.com)  
**Dave Clayton** | Senior Account Manager  
Phone: (763) 383-4471 | [dclayton@epgmediallc.com](mailto:dclayton@epgmediallc.com)

### EDITORIAL

**Group Publisher** | David Voll  
**Associate Publisher/Editorial Brand Director** | John Kmitta  
**Technical Editor** | Adam Thoms, Ph.D.  
**Art Director** | Phil Tippin  
**Media Coordinator** | Kelsey Larson

### SUBSCRIPTION SERVICES

Phone: (763) 383-4492 | [customerservice@epgmediallc.com](mailto:customerservice@epgmediallc.com)

### REPRINTS

Marcia Brewer | Wright's Media  
[mbrewer@wrightsmedia.com](mailto:mbrewer@wrightsmedia.com) | (877) 652-5295

### DIRECT MAIL LIST SALES

Kris Grauer | NPS Media Group  
[kgrauer@npsmediagroup.com](mailto:kgrauer@npsmediagroup.com) | (203) 822-7933

**Publisher's Notice:** We Assume No Responsibility For The Validity Of Claims In Connection With Items Appearing In *SportsField Management*.

*SportsField Management* (ISSN PENDING) (USPS 000-292) (Reg. U.S. Pat. & T.M. Off.) is published monthly by EPG Media & Specialty Information at PO Box 96, Port Jervis, NY 12271.

**Postmaster:** Send address changes to *SportsField Management*, PO Box 2123, Skokie, IL 60076-7823. For subscription information and requests, call Subscription Services at (763) 383-4492. Subscription rates: 1 year, \$40 US & Poss.; 2 years, \$65 US & Poss.; 1 year, \$65 Canada/Foreign Surface, 1 year, \$130 Airmail. All subscriptions are payable in advance in US funds.

Send payments to *SportsField Management*, PO Box 2123, Skokie, IL 60076-7823. Phone: (847) 763-9565. Fax: (847) 763-9569. Single copies or back issues, \$8 each US/Canada; \$12 Foreign. Periodicals postage paid at Port Jervis, NY and additional mailing offices. COPYRIGHT 2020, *SportsField Management*. Material may not be reproduced or photocopied in any form without the written permission of the publisher.

EPG/MEDIA &  
SPECIALTY INFORMATION



**Connectiv**

The Business Information  
Association, a division of STIA



# President's Message

## SportsTurf MANAGERS ASSOCIATION

**President:**

Jimmy Simpson, CSFM

**Immediate Past President:**

Jody Gill, CSFM

**President-Elect:**

Nick McKenna, CSFM

**Secretary-Treasurer:**

James Bergdoll, CSFM

**Vice-President Commercial:**

Jeremy Bohonko

**Professional Facilities:**

Stephen Lord, CSFM

**Academic:**

Adam Thoms, Ph.D.

**Higher Education:**

Clark Cox, CSFM

**Parks & Recreation:**

Brad Thedens, CSFM

**Schools K-12:** Jeremy Driscoll**Commercial:** Turner Revels**At-Large Elected:**

Scott Thompson, CSFM

**At-Large Appointed:**

Joshua Koss, CSFM

**STMA OFFICE**

805 New Hampshire, Suite E

Lawrence, KS 66044

Phone: 800-323-3875

Fax: 800-366-0391

Email: STMAinfo@STMA.org

www.STMA.org

**STMA EDITORIAL COMMITTEE**

**Chair:** Stephen Lord, CSFM

**Technical Editor:** Adam Thoms, Ph.D.

Rebecca Auchter, CSFM; TJ Brewer, CSFM;

Tyler Carr; Joe Churchill; Jim Cornelius,

CSFM; Eric Harshman; Steven Hughes;

Daniel Jennings; David Schwandt; Scott

Stevens, CSFM; and Chase Straw

The constantly shifting sands of the COVID-19 crisis have magnified the many challenges everyone is currently facing. We are in a humanitarian crisis with significant loss of life, and as important as our sports fields are, the safety and well-being of our members is a priority. We will bring our fields back, stronger and healthier than ever.

I would be remiss for not taking the time to thank all first responders, doctors and healthcare providers and their families for all they've given and sacrificed during this fight against COVID-19. Many industries have banded together to provide a cohesive response to this crisis, and I know our industry will follow suit.

As shelter-in-place orders expand across the country, one constant is green industry and maintenance personnel being deemed "essential service workers" with relation to public health. I would like to express my gratitude to those who have recognized our industry as essential, and allowed some level of maintenance to take place in many areas of the country. Being deemed essential is important, as it confirms that leaders within individual communities see the value of our work and the services we provide.

As this country shifts from crisis management to recovery, outdoor facilities will be top of mind for everyone. Our web page (<https://www.stma.org/institute>) is stocked with



**Jimmy Simpson, CSFM**

STMA President

[Jimmy.Simpson@townofcary.org](mailto:Jimmy.Simpson@townofcary.org)

information that can help. People will be eager to recreate, get outside and, in turn, put a large amount of stress on athletic surfaces nationwide. By performing some level of maintenance, fields will be ready for the influx of activity much more quickly than if we were unable to maintain the fields.

As you and your teams navigate these times of uncertainty, remember that it is important to document your work, both in writing and with pictures. Documentation allows you to provide status updates to leadership teams regarding team activities while adhering to proper social distancing practices. In many cases, our leaders have trusted us, and it is our duty to act responsibly while doing everything possible to protect the safety of those who use our surfaces.

As the recovery begins, the STMA is poised to help you with appropriate educational resources. Please reach out to the association, the board of directors or me personally if there is anything we can do to help you during this time. **STMA**

Sincerely,

Jimmy Simpson, CSFM





## PATRICIA WILSON FIELD STETSON UNIVERSITY, DELAND, FLA.

Patricia Wilson Field took on the usual wear and tear this past STMA Field of the Year cycle, as well as a few unique challenges that we came across. Since the field's conception in 2002, we have not had any renovations to the turf. Through proper cultural practices, we have been able to maintain our original playing surface. We continuously strive to keep the field and all surrounding facilities looking immaculate for our student-athletes and fans who enter the stadium.

This past year, we put in brand new netting behind home plate and above the dugouts. Safety is our top priority here and we wanted to ensure that our players and guests are safe and have newly updated items that improve the look of Patricia Wilson Field. We hosted more than 75 games at our field from the fall 2018 season through the spring 2019 season.

With our limited staff members, our student-athletes do an excellent job of lending a hand on practice and game days. They assist with the maintenance of the facility, which includes bullpens, raking the warning track and all red rock areas and dugout cleanup. With their help, we are able to spend more time working on the turf and the infield, as well as the surrounding turf areas.

---

The Field of the Year Awards program is made possible by the support of sponsors Carolina Green Corp., Precision Laboratories, and World Class Athletic Services.





The Stetson Softball team hired a new assistant this year, which added a teaching opportunity to train her on all of the ins and outs of field management. We taught her to drag the infield, get the field prepared for game day, as well as other everyday field prep and maintenance to the field and surrounding areas.

Our biggest upgrade this year is the addition of a new video board to highlight Patricia Wilson Field. The video board will be located in left-center field, and is a great addition to our facility, giving the players and fans the ultimate experience when coming to play at Stetson. Patricia Wilson Field is the epitome of what you want your university field to look like. From each blade of grass to every speck of dirt, nothing is overlooked or ignored in making this field look and feel the way it does.

— Steve Barnard, field technician



## FIELD OF THE YEAR COLLEGE SOFTBALL



**Category of submission:** College Softball

**Field manager:** Steve Barnard

**Title:** Field Technician

**Education:** Associates Degree

**Experience:** Former foreman (for 25 years) for the City of DeLand's Sperling Sports Complex (one full size baseball field, three adult softball fields, three soccer/football fields, and practice area — 22 acres of bermuda turf); Eighth year at Stetson Softball (Patricia Wilson Field).

**Full-time staff:** Frank Griffin, Franklin Drury and Shellie Robinson

**Original construction:** 2002

**Turfgrass:** Tifway 419 bermudagrass

**Rootzone:** Sand

**Overseed:** We overseed in late November or early December after an application of pre-emergent. We use typically 600 pounds of Clubhouse BT perennial ryegrass blend on our entire complex.

**Previous Field of the Year Win:** 2017



**SportsField Management (SFM):** Congratulations again on the win. What are you most proud of with this win, and/or what do you think stands out most about the winning field?

**Barnard:** Anytime the STMA selects your field as an award winner is great honor. I'm most proud of the field being all original, natural grass from inception to now. The overall commitment to safety of the playing surface, hitting pavilion, bullpens and spectator areas are some of the most defining features of Patricia Wilson Field.

**SFM:** Patricia Wilson Field won STMA Field of the Year in 2017. What sets this win apart from the previous win?

**Barnard:** While I prefer to stick with what has worked in previous years, some minor changes are always needed to stay up to date. Additionally, I had the pleasure of attending the award ceremony/banquet with head coach Frank Griffin, unlike the years prior.

**SFM:** What are the biggest challenges you face?

**Barnard:** As the only field technician at Patricia Wilson Field, performing the needs of the field and areas around it is quite the challenge. We play a large portion of our schedule at home. Being able to perform the needs of our natural grass applications and clay maintenance requires a seven-day-a-week commitment.

**SFM:** What advice do you have for other sports field managers?

**Barnard:** I suggest getting organized — don't try to wing it. Keep your users informed of the processes and direction you're going to help them understand the importance of what you do for them.

**SFM:** What attracted you to a career in sports field management?

**Barnard:** My summer job back in high school was at the local parks and recreation department. As a former baseball player, I always appreciated playing on nice fields and the upkeep it takes to keep them that way.

**SFM:** Who would you say are your mentors in the industry, and/or what is the best piece of advice you have received?

**Barnard:** Larry Nordman and Gary Morgan have been great mentors to me. Larry introduced me to the basic principles of natural grass management in my beginning stages. He then trusted me to manage a large facility and grow as a manager along the way. He would always tell me, "Don't look at it as a problem, but an opportunity to fix." Gary is a longtime vendor who I

have had the pleasure to work with for more than 30 years. He's always been there for me to bounce thoughts off of, and be an extra set of trusted eyes willing to help.

**SFM:** What is the greatest pleasure you derive from your job?

**Barnard:** You've got to love game day or you're probably in the wrong business. When the grass and clay are just the way you want them, it provides the perfect canvas for the players to paint their picture on. However, I enjoy helping fellow sports field managers solve issues, or introducing them to new thoughts and techniques with the same passion.

**SFM:** How has your career benefited from being a member of STMA?

**Barnard:** The STMA provides a great resource center of information. The awards program has justified my abilities, and created additional opportunities to enhance further career paths.





## Judge's Comments

I believe Patricia Wilson Field, Stetson University, was chosen as the winner of College Softball FOY for a few reasons — predominantly staff centered. First, a staff that adheres to tried and true cultural practices with limited man-hours found a way. The inclusion of this university's athletes and coaches in their field preparation is great. It shows respect for the sports field manager's knowledge and ability to train coaches and athletes in the field. They found a way to put in the people-hours needed in an unconventional manner. This field's PCI scores, given how work is completed on the field, is excellent. With all aspects of this field considered and additions for player and spectator safety and comfort, this field truly won Field of the Year.

— Anthony Smerk, facilities manager at Beaver Creek Soccer Association



## MONTHLY MAINTENANCE AND FERTILITY PROGRAMS

### JANUARY

Turf Fuel Element 6 1/2 gal. twice a month per acre  
3 lbs. Turf Fuel 6-0-0 minor pack monthly  
Vanquish wetting agent 3 oz. per 1,000 monthly

### FEBRUARY

15-0-15 plus .67% Ronstar 1 lb. N per 1,000  
Turf Fuel Element 6 1/2 gal. twice a month per acre  
3 lbs. Turf Fuel 6-0-0 minor pack monthly  
Vanquish wetting agent 3 oz. per 1,000 monthly

### MARCH

Turf Fuel Element 6 1/2 gal. twice a month per acre  
3 lbs. Turf Fuel 6-0-0 minor pack monthly  
Vanquish wetting agent 3 oz. per 1,000 monthly  
21-7-14 = 1 lb. N per 1,000

### APRIL

24-2-11 50% XCU 1 lb. N per 1,000  
Turf Fuel Element 6 1/2 gal. twice a month per acre

3 lbs. Turf Fuel 6-0-0 minor pack monthly  
Vanquish wetting agent 3 oz. per 1,000 monthly  
Top Choice 2 lbs. per 1,000

### MAY

Tranxit herbicide 1 1/2 oz. per acre  
Turf Fuel Element 6 1/2 gal. twice a month per acre  
3 lbs. Turf Fuel 6-0-0 minor pack monthly  
Vanquish wetting agent 3 oz. per 1,000 monthly  
21-0-0 twice a month, 1 lb. N per 1,000  
6 inch by 1/2 inch core and Harvest 2x2 spacing  
Turf Fuel Quick Green 6 oz. per 1,000  
21-7-14 1 lb. N per 1,000

### JUNE

Verticut and topdress  
21-7-14 1 lb. N per 1,000  
Turf Fuel Element 6 1/2 gal. twice a month per acre  
3 lbs. Turf Fuel 6-0-0 minor pack monthly  
Vanquish wetting agent 3 oz. per 1,000 monthly  
Turf Fuel Quick Green 6 oz. per 1,000



## JULY

15-0-15 plus .67% Ronstar 1 lb. N per 1,000  
Turf Fuel Element 6 1/2 gal. twice a month per acre  
3 lbs. Turf Fuel 6-0-0 minor pack monthly  
Vanquish wetting agent 3 oz. per 1,000 monthly

## AUGUST

Turf Fuel 6 1/2 gal. twice a month per acre  
3 lbs. Turf Fuel 6-0-0 minor pack monthly  
Vanquish wetting agent 3 oz. per 1,000 monthly  
21-7-14 1 lb. N per 1,000

## SEPTEMBER

24-2-11 50% XCU 1 lb. N per 1,000  
Turf Fuel Element 6 1/2 gal. twice a month per acre  
3 lbs. Turf Fuel 6-0-0 minor pack monthly  
Vanquish wetting agent 3 oz. per 1,000 monthly

## OCTOBER

Turf Fuel Element 6 1/2 gal. twice a month per acre  
3 lbs. Turf Fuel 6-0-0 minor pack monthly

Vanquish wetting agent 3 oz. per 1,000 monthly  
0-0-22 / 1 lb. K per 1,000

## NOVEMBER

Turf Fuel Element 6 1/2 gal. twice a month per acre  
3 lbs. Turf Fuel 6-0-0 minor pack monthly  
Vanquish wetting agent 3 oz. per 1,000 monthly  
Tranxit herbicide 1 1/2 oz. per acre (10 to 14 days before overseed)  
Air 2g2 injection before overseed  
Scalp down and versa vac before overseed  
Overseed 15 lbs. per 1,000 Blue Tag perennial rye

## DECEMBER

18-24-11 25% XCU 1 lb. per 1,000  
Turf Fuel Element 6 1/2 gal. twice a month per acre  
3 lbs. Turf Fuel 6-0-0 minor pack monthly  
Vanquish wetting agent 3 oz. per 1,000 monthly

SFM

# GPS Line Painting Control



*iPad Interface*



*Auto-steer*



*Perfect Lines*

*Fits to your existing vehicle!*



**traqnology**  
showing the way

**Frost** Inc

800-621-7910  
info@frostserv.com  
www.frostserv.com



# Managing Large School Districts

K-12 sports field managers discuss the challenges they face, including adjusting to the "new normal"

*By John Kmitta*

Managing a large K-12 school district — and a high number of athletic fields, facilities and grounds over a wide geographic area — presents plenty of challenges and considerations under "normal" circumstances. In a 2020 that, of course, has been anything but normal, sports field managers are facing a whole new set of challenges and are rapidly adjusting to the circumstances.



*JL Mann High School,  
Greenville, S.C.  
Photo provided by  
Shane Windham.*





*Bobby Gruhn Field at City Park, Gainesville, Ga. Photo provided by David M. Presnell.*



*Greenville High, Greenville, S.C. Photo provided by Shane Windham.*



*Greer High School, Greer, S.C. Photo provided by Shane Windham.*



## THE “TYPICAL” DAY AND “TYPICAL” CHALLENGES

Although, even during a “typical” year, there is probably no such thing as a “typical” day, there are some common challenges shared by K-12 sports field managers.

David M. Presnell, athletic fields manager, Gainesville City Schools (Ga.), said that, under normal circumstances, his usual challenges are like those of most other sports field managers.

“We have a large number of fields to manage with a set number of staff and budget,” said Presnell. “The demand for usage and the increasing demand for non-sporting usage is a challenge.”

Again, under normal circumstances, Presnell said that his typical day would vary greatly depending on the season.

“Most of our schedule is dictated by athletic schedules,” said Presnell. “I try and take a long-range and consistent approach. While most people only see a field on game day, the bulk of the work takes place months before. We believe in doing things right the first time and staying on a consistent yearly turf management schedule.”

Jody Gill, grounds coordinator for the Blue Valley School District (Kan.), and immediate past president of the Sports Turf Managers Association, is responsible for 105 sports fields (six of which are synthetic), including stadium fields, high school practice fields, middle school football fields, elementary soccer and multipurpose fields.

“The concerns are the typical concerns, and that is a combination of overuse due to high demand and reduced inputs,” said Gill. “We are all facing budgetary issues, so no one can have everything they want. It’s challenging, and we have to get very creative.”

Gill added that there is lot more crossover than there used to be with regard to the tasks his crews perform. Crews that typically mow the lawn areas around buildings will in some cases also mow some sports fields. And crews that typically mow sports fields will mow some lawn areas near high schools or sports complexes.

Shane Windham, coordinator of athletic fields and grounds, Greenville County Schools (S.C.), and his crews manage 130 total fields (across 20 middle and 14 high schools) and will be gaining six more next year with the addition of a new high school.

Windham’s biggest challenges are usually related to logistics, with 34 different sites spread over 800 square miles, and typically 34 different schedules (home, away, varsity, JV, C-team, D-Team, practices and games).

“Under our grounds umbrella is all the asphalt, sidewalk, block and concrete work; all storm drainage, retention ponds, underground piping; all decals and signage for the school district; fencing; 230 acres of irrigation; a sewer treatment plant; tennis courts; running tracks; hazardous tree removal; heavy equipment work; maintenance and construction contracts; main-



*Ivey Watson Field, Gainesville, Ga. Photo provided by David M. Presnell.*

taining school grounds; ADA compliance issues; all the playgrounds at 58 elementary schools; and many other administrative tasks,” he said.

Windham added that managing those logistics would not be possible without good people.

“Luckily, I have a lot of guys that have ‘bought in,’ and care about their jobs and the impression they make,” said Windham. “Without them, there’s no way I’d make it. I have a good foreman who has a ton of experience, and handles a lot of the non-routine jobs and keeps everyone on task. I just step in when out-of-the-ordinary problems come up, which is usually a once-a-day thing with all that we have.”

Windham said his team constantly works on keeping a system in place to stay up on everything and not let the small stuff slip through the cracks. “Our work order system along with Google Docs, help tremendously,” he added.



## JOHN MASCARO'S PHOTO QUIZ

### CAN YOU IDENTIFY THIS TURFGRASS PROBLEM?

**PROBLEM:**

Discolored end zone area

**TURFGRASS AREA:**

High school football stadium field

**LOCATION:**

Cleburne, Texas

**TURFGRASS VARIETY:**

Tifway 419 bermudagrass

*Answer on page 33*

*John Mascaro is president of Turf-Tec International*



### *fds9200* Dethatcher - A Single Piece of Equipment All Sports - All Field Types - Multiple Uses



*Natural Turf*

**Loaded With Features and a Three Year Warranty:**

- ✓ Precision Tine Height Control - Light Tickle to Aggressive
- ✓ Multiple Speciality Attachments: DragMat - Broom - Magnet
- ✓ Towing - Fits on Low Horsepower Tractors to Quads
- ✓ 256 Spring Loaded High Strength Steel Tines
- ✓ Soft Touch Turf Tires for Natural Turf, Synthetic Turf and Sand
- ✓ Four Independent Float Sections for Uneven Surfaces



*Synthetic Turf*

**Preferred All-Purpose Turf Tool Of:**

Baltimore Ravens - Green Bay Packers - Buffalo Bills  
Cincinnati Reds - Cleveland Browns  
City of Las Vegas - City of Houston - University of Washington  
Vanderbilt University - University of Texas - Purdue University  
FIFA World Cup Soccer - Horse-Racing Tracks  
Equestrian Centers and Golf Courses Worldwide



*Dirt & Sand Fields*



[www.woodbayturftech.com](http://www.woodbayturftech.com)  
800-661-4942



In terms of managing schedules and tasks, Blue Valley School District has a specific person assigned to each of its high school facilities and that person has multiple sites for which they are responsible.

"We ask them to stay on top of things and keep us informed of any issues," said Gill. "They have regular routes that they follow. They are what we call high school stadium sports groundskeepers and they handle the grounds and facilities portion."

Blue Valley School District also has a couple certified chemical applicators that have complete control of the equipment and materials for application of fertilizer and pest-control materials.

"We have to deal with more seasonal labor than we used to in order to reduce costs," said Gill. "There are some additional training issues that go with that, and not always a high level of stability. There is more turnover with seasonal and temporary employees, so that creates issues."

But usage is the biggest challenge — not only in stadium facilities, but also at elementary multipurpose fields, Gill reiterated. "The kids might be on them for recess all day long and then the community is on them all evening and weekend," said Gill. "None of them are fenced, so controlling access is impossible. But they still have to be maintained."

### SYNTHETIC TURF

Another challenge some K-12 sports field managers face is pressure to remove natural turfgrass fields and replace them with synthetic turf playing surfaces.

"We are fortunate that we have some pretty savvy taxpayers around here who do not necessarily agree with financing synthetic turf over a long period of time," said Gill. "When you include the cost of a synthetic turf field in a bond project for example, you might be repaying bonds over a 10- to 30-year period."

According to Gill, most sports field managers could argue that they don't spend nearly as much on natural grass fields as some would lead others to believe. "When you consider the cost of a synthetic turf field is, give or

## THE NEXT GENERATION OF HIGH QUALITY BERMUDAGRASS

If you liked Pennington® Princess®77 Bermudagrass Seed, you will love Pennington® Arden 15 Certified Hybrid Bermudagrass Seed:

- Excellent turf quality
- Significant cold tolerance (great for transition zones)
- Early spring green-up
- Fine leaf texture



*Dr. Arden Baltensperger*

Revered turf-grass researcher and scientist Dr. Arden Baltensperger bred this cultivar to deliver a quality stand at a reasonable price—all backed by research and confirmed with NTEP data.



**PENNINGTON**  
**ARDEN**  
**15**  
CERTIFIED HYBRID BERMUDAGRASS

[pennington.com](http://pennington.com)

Pennington is a trusted manufacturer and distributor of grass seed since 1945

Pennington, Pennington with design, and Princess are registered trademarks of Pennington Seed, Inc. ©2018 Pennington Seed, Inc. PT72



# Meet your new workforce.



## Overseeders

Get your fields in shape faster with the **TriWave®** series of overseeders featuring patented floating heads and fully adjustable depth controls for superior germination regardless of conditions.

## Topdressers

Choose from the most comprehensive line of spinner and drop-style topdressers available. **WideSpin™** and **Mete-R-Matic®** models handle a variety of mixtures, are easy to load, simple to operate and super efficient.



## Debris Blowers

The **Torrent™2** takes debris cleanup to a whole new level. It's the fastest, most productive blower available with unprecedented power, precision and control to get your job done.



Schedule your demo today at [www.turfco.com](http://www.turfco.com) or call 800.679.8201





take, \$1 million, it doesn't make a whole lot of sense in many cases," Gill added. "There are some exceptions. If you've got a football stadium that gets a huge amount of use, a synthetic turf field might make more sense. But people have to look at their own situations and decide if it makes sense or not."

In the case of Blue Valley School District, with more than 100 fields, the cost per acre for maintaining natural grass is quite low, Gill added.

"So that is another thing people need to factor in as well," he said. "They also need to recognize that there is maintenance associated with synthetic turf surfaces that you can't ignore. It takes skill and knowledge to extend the life of those fields. It has to be managed, maintained and make sure you are GMAX testing and controlling the softness of that field over

time to extend its life for the benefit of the taxpayers and the users."

Windham said he is fortunate that his area has a long growing season for bermudagrass.

"With some overseeding, along with a strong maintenance program to have the fields in great shape during football season carrying it into the spring, our fields hold up pretty well," he said.

He added that safety issues would be the only reason to possibly entertain a synthetic field due to the amount of usage.

"We also try to communicate to the athletic directors about moving things around, watching the amount of practice on the game fields, and trying to limit outside activities like PE classes going out on the game (football/lacrosse/soccer) field," he said.

"First, for our school district, even though it is huge, the upfront cost for synthetic turf at 14 high schools is more than enough to make anyone nervous," said Windham. "Second, I make sure they understand that synthetic turf is not maintenance free. Third, I let them know that, in a perfect world, they may get 15 years out of a field, but more likely 10 or 12. Then you are looking at another round of high-priced synthetic going in again. With what we spend on maintenance of the fields, it just doesn't add up."

Windham added that he is glad to say that he doesn't have any synthetic turf fields.

"My advice would be to be educated on both surfaces and try and have a seat at the discussion table," said Presnell. "Both surfaces have their place. The key is to approach the discussion as a professional. It all depends on the situation. You have to educate the decision makers on the falsehood of artificial turf lasting forever and you don't have to do anything to it. A lot of districts change because they do not have the resources or staff to properly maintain natural surfaces. This is why turf professionals are so important."

### THE "NEW NORMAL"

Of course, with school closures and shelter-in-place orders, sports field managers have had to adjust the way they approach their duties and the way they plan for the coming days, weeks and months.

As of right now, it is business as usual for Windham and his crews, even though their schools are closed.

"We are able to put one employee per vehicle, and for most of what we do, our employees are definitely distanced from each other," said Windham. "Plus, we are outside and probably better off than most who are forced inside or are in shared spaces. There is a system in place for

**Make your sideline look as good as the end zone.**



### Unmatched Sideline Turf Protection

#### FieldSaver® Features:

- Durable-stands up to cleated football shoes
- Breathable-allows water and air passage
- Grommets at 3' intervals on all sides for stake down

For price quotes, sizes, fabric specs and samples, visit  
**www.CoverSports.com**  
 sales@coversports.com • 800-445-6680

We make covers for all athletic surfaces:  
 Rain Covers, Growth Covers, Stadium Padding





letting us know if an employee may have been exposed to the coronavirus. Those are handled on a case-by-case basis, which have been few, and all negative so far.”

Windham added that planning has taken place for if they get shut down completely.

“Of course, plans do change, but we are looking at possibly dividing up the crew into one-day-a-week shifts, on-call lists, seeing if there are other “essential” tasks they can be a part of, whatever can be done to help get them time and a paycheck without putting them in harm’s way,” said Windham. “Unfortunately, our field maintenance may suffer a little due to cutting back on some of the daily maintenance, mowing specifically, but it will not be let go to the point of it causing a major issue. This soon will pass, and we will have to be ready.”

“The uncertainty of the situation is what’s so hard,” said Presnell.

Said Gill, “We are fortunate that we have been deemed essential, so my crew is back to work. We are making every effort to avoid contact. When guys come to the shop, they go straight to their assigned truck, load their equipment, and go. We are not meeting, we are not going into the building. If they have to use the restroom, they have instructions on how to go about that in order to keep the buildings clean. The health and safety of our staff is number one.”

Gill added that they are also focused on providing only the basic maintenance.

“We are doing weed control in landscape beds, but we not pruning landscapes, we are not trimming trees,” he said. “We are not doing extra mowings like we normally would do on higher-end athletic fields. And we are doing it without our seasonal staff. It is only our full-time staff, and some of our custodial staff members are assisting us as well.”

He added that they continue to whittle down the amount of

mowing needed by choosing acreage that they can let go.

“If it is a fescue area that is in pretty good shape, we can let it grow taller and not worry about mowing it right now,” said Gill. “We can come back this fall and use a brush hog to knock it down and reseed those areas. Obviously, these are not front lawn areas and these are not athletic fields. But anything we can do to reduce the amount of time our staff has to spend at work is what we are really focused on right now.

“But our concern was that if we do nothing our expense to recover from that would be huge. So we found the ability to strike that balance between safety and effectiveness and continue to maintain properties minimally,” he added.

According to Gill, the challenges sports field managers have

dealt with in the past — how to maximize the staff and the equipment that they, and how to be more efficient and more effective — are the same challenges they have now, just compounded.

“It amazes me how creative the people in our industry are, and how creative sports field managers are in dealing with these issues,” he said. “We are all just ready and willing to share information, and that is going to be really critical over the next few months as we recover from all of this.” **SFM**

*John Kmitta is associate publisher/editorial brand director of SportsField Management.*

**Editor’s Note:** The interviews for this article were conducted in late March and early April, 2020.



*Influence*

YOUR INFIELD WITH

**In-Flow™**

**INFIELD SKIN MAINTENANCE**

- ✓ Optimize playing conditions
- ✓ Maintain moisture levels
- ✓ Improve soil profile

**PRECISION**  
LABORATORIES

Results. Expect it.

1.800.323.6280 | [www.precisionlab.com](http://www.precisionlab.com) |    

# Why Every Sports Field Manager Should Consider Using PGRs

By Ben Polimer

In this uncertain world, sports field managers need to be prepared for anything. We try to do this all the time, but now a new concept has come into play for many of us. Leaving our places of employment and staying home, and letting Mother Nature dictate rather than us.

I am a part of a group text chat that includes field managers from professional sports, municipalities (like myself) and vendors. We discuss many things, both turfgrass related and not, but the use of plant growth regulators (PGRs) came up. All facets of our industry should look to use these products. We need to think of PGRs as a tool in our toolbox.

Fields and facilities are not on TV at this time, so having turfgrass that's "off color" or not its best quality is ok! We should not push our fields with extra fertilizer, especially with reduced staffing. I would suggest trying Prohexadione calcium (Anuew) because it does not have a "rebound" effect.

PGRs have been used on turfgrass for many years but only in the last 10-plus years have taken off in the sports field industry. This is mostly due to the price (trinexapac-ethyl [TE] patent ended only a few years ago, making off-patent product affordable). A gallon jug is inexpensive and will go a long way. I also think the fear of using these products has come down with the increased use.



Photos provided by Ben Polimer

PGRs are classified in two categories: Type I and Type II. Type I are foliar adsorbed — for example, Mefluidide (Embark). Type II are broken into two classes: Class A and Class B. Class A are foliar adsorbed and gibberellic acid is inhibited late in the process. Examples are trinexapac-ethyl (Primo) and Prohexadione calcium (Anuew). Class B products are root absorbed, and gibberellic acid is inhibited early in the process. Examples are Paclobutrazol (Trimmit) and Flurprimidol (Cutless). Most of my experiences are with Class A products, and I think sports field managers who are unfamiliar with

the use of PGRs should use Class A products to start.

PGRs are great products, but they are never a substitute for good agronomics. PGRs should never be applied when turfgrass is stressed. Do not apply them to dormant turfgrass.

Using growing Degree Days (GDD) for PGR usage is a great way to predict timing for reapplication. For more information on using GDD, I recommend the University of Nebraska-Lincoln's "Scheduling Plant Growth Regulator Applications" at <http://turf.unl.edu/highlighted-research#regulator>.

The benefits using PGRs in your program are different for every field



manager and every facility, but benefits can include:

- Reduce clippings
- Enhance color, texture and density
- Extend life of painted lines
- Prevent tissue elongation
- Increase sod strength and divot resistance
- Better fall color and spring green up
- Wear tolerance and recuperative potential (rebound)
- Improved drought and heat stress tolerance
- Improved shade tolerance
- Increased root length and mass

(Source: Pamela Sherratt and Dr. John Street, *SportsTurf* magazine, February 2013.)

Most of my PGR usage has been with TE and on cool-season grasses (mainly on Kentucky bluegrass/ryegrass/*Poa annua* mix sports fields. I usually apply TE with a “cocktail” of other products such as insecticides, wetting agents and herbicides. When applying TE, expect a 50-percent growth reduction in three to five days after application. Discoloration will happen! It will dissipate, and then in subsequent applications the turfgrass is used to the application and will, in turn, be darker.

If you use growth covers, flooring, or other types of coverings on turfgrass, you can use TE to “pre-condition” the turfgrass. Reduce the growth while under the cover and time the “rebound” when the covering comes up.

A PSU study concluded that a sand-based rootzone can have reduced divot size by 10 to 20 percent. In a native soil field, the divot size can be reduced by 10 percent.



TE applications early in the spring and late in the fall can help with better spring green up and better fall color. I have done applications late in the summer, it seems to hold color longer on those cool nights of the fall. With my application restrictions in Massachusetts, I have not done a fall application.

Using the “rebound” effect, the regrowth of the turfgrass plant coming out of suppression, can be the field manager’s best friend. My fields are not used in the summer, and we apply PGRs in summer to

reduce mowing. I time the last application to help “grow out” damage from fall soccer.

PGRs can also be used to extend the life of paint lines. I recommend halving the rate of the label of TE and mixing it with your bulk paint. Paint with PGR can be used every three to four weeks and will help keep lines. It can reduce the need for restringing during off-play periods.

Other advantages with using PGRs include reduced turfgrass decline from both tree and stadium shade. This makes sense when reducing vertical growth. There have been mixed findings on increased root length and mass on cool-season turfgrass (Sherratt and Street). Bermudagrass has shown an increased root length and mass.

Maybe using a PGR will help you and your facility through this uncertain time. Many facilities are facing layoffs, reduced workforce, and staggered shifts. If you have the ability to use a PGR, this might be the time to try it. **SFM**

*Ben Polimer is fields and grounds coordinator, Town of Weston, Mass., and is president of the New England Sports Turf Managers Association.*

**Editor’s Note:** Ben Polimer has spoken on the topic of PGRs at the Sports Turf Managers Association Conference, and has written on the topic. The content seen here is Polimer’s update of his 2017 article on the topic of PGRs.



Hear more from Ben Polimer as we share an excerpt from his STMA Conference education presentation on the topic of plant growth regulators on the new *SportsField Management Podcast* page: <https://sportsfieldmanagementonline.com/podcast/>



# PGR Application

For additional insight into plant growth regulator (PGR) application on sports fields, *SportsField Management* reached out to some of the leading manufacturers of PGRs for turfgrass.

"I think PGRs are a very effective tool to help manage labor shortages," said Mark Brotherton, portfolio leader at SePRO Corporation, manufacturer of Edgeless Concentrate. "They can provide clipping suppression for three to six weeks and eliminate one to two mowings per week while under growth regulation."

Brotherton added that field managers have also had success mixing PGRs with their field paint, which can aid in stretching out application intervals, saving both labor and paint.

"Additionally, managers can make banded applications to edged turfgrass areas," said Brotherton. "These applications are generally a higher PGR dose and offer extended length of growth regulation compared to a broadcast application."

According to Syngenta, the company's Primo Maxx can be applied up to two times the listed rate for extended growth suppression, when temporary discoloration and turf quality are not a concern.

"For enhanced regulation, Trimmit PGR can be used at maximum rates or mixed with Primo Maxx," said Dean Mosdell, Ph.D., technical services manager, Syngenta. "Avoid use on dwarf-type bermudagrass, *Poa annua* (unless injury can be tolerated), and overseeded bermudagrass until after transition."

According to Aaron Hathaway, technical services manager at Nufarm Americas Inc. (manufacturer of Anuew), PGRs can reduce growth enough to reduce clippings, but research has shown that any one PGR

isn't enough to slow growth enough to really skip regular mowing.

"The only way to reduce growth enough to reduce the amount of mowing necessary is to mix two PGRs together at high labeled rates," said Hathaway. "This may be something sports field managers may utilize in lowest maintenance areas where they simply can't spend a lot of time mowing."

Rick Fletcher, Nufarm technical services manager, turf and ornamentals, added that, based upon historical research at Virginia Tech and University of Nebraska, Anuew can provide 40- to 60-percent growth reductions for a expected period of 320-plus GDD accumulation. Given the cooler, wetter spring in many locations, this can relate to effects for 2 to 4 weeks in many of the cool-season turf areas. With regard to use rates, for typical sports turfgrasses and mowing heights, 6 to 12 oz/A should be very acceptable.

Hathaway looked at combined PGR applications in cool-season mixes (mostly Kentucky bluegrass), turf type tall fescue, and fine fescue turf stands mowed at 3-3.5 inches. Treatments investigated were:

1. Primo (32 fl oz/A) + Proxy (5 fl oz/M)
2. Primo (32 fl oz/A) + Anuew (16 oz/A)
3. Primo (32 fl oz/A) + Trimmit (16 fl oz/A)

"In spring of 2018, I applied these treatments on May 17 and was able to stop mowing most plots for about 25 to 30 days," said Hathaway. "I made these treatments in 2017 also during the fall growth flush and was able to get about 40 days of no mowing."

According to Hathaway, some things to remember include:

- "All of my growth reduction was front loaded — by this I mean

the growth was drastically reduced during the first 20 to 40 days — then all hell broke loose. After this period, I was bailing hay. Another application would be warranted if you desire to keep growth regulated."

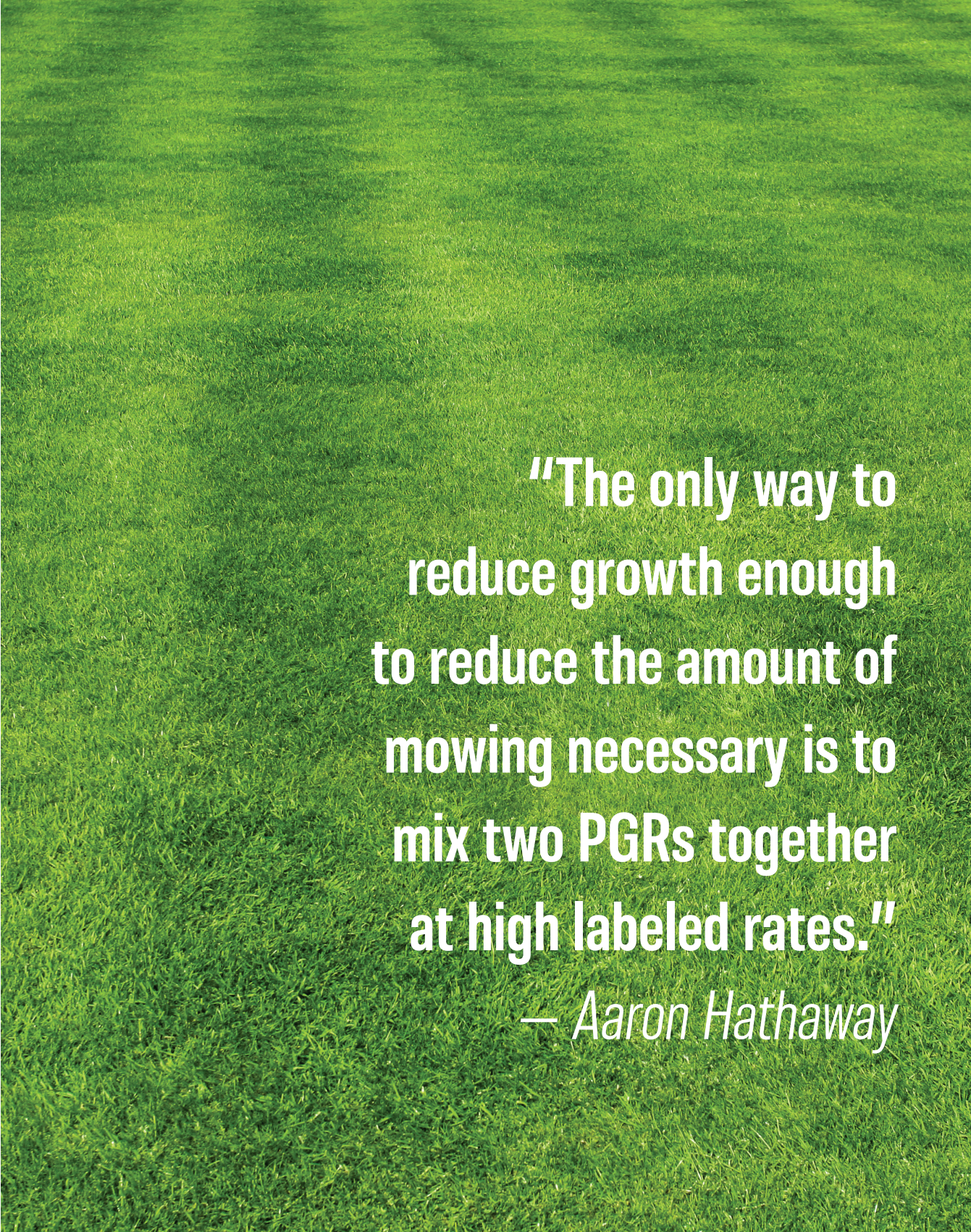
■ Research has shown that the longevity or length of growth regulation is driven mostly by air temperature. "This year, if temps increase relatively quickly, one application at these rates won't last as long into the spring. When I made the fall app in 2017 my growth regulation lasted longer because the temps were decreasing instead of increasing."

■ High rates of two PGRs really shut the plants down. "Whatever condition they are in when you make the application is the condition they will stay in for a while until growth resumes," said Hathaway. "Further, if a disease affects the stand, these plants will not be equipped to grow out of any symptoms or any injury that occurs from anything until the regulation stops and growth resumes."

■ Added Hathaway, "If you are mowing your sports fields low (maybe 1 inch) they will have more growth potential than lawn height turf in which I made these applications, which means the growth regulation may be less. It may be warranted to raise the mowing height of some of the fields and/or surrounds to reduce the growth potential. Don't increase the height too much or it will be difficult to lower them back down when sports resume and the fields are used again. It seems many could increase height by about 0.5 – 1 inch perhaps." **SFM**

**Editor's Note:** For Mosdell's webinar, "PGR 101," visit <http://www.greencastonline.com/video> and scroll to the fourth row of webinars.





**"The only way to  
reduce growth enough  
to reduce the amount of  
mowing necessary is to  
mix two PGRs together  
at high labeled rates."**

*— Aaron Hathaway*



# The SportsField Management Interview: Stephen Lord

This month in “The SportsField Management Interview,” we meet Stephen Lord, CSFM, head groundskeeper, Great American Ball Park (Cincinnati Reds). Lord also serves the STMA Board of Directors as Professional Facilities Director. He is a 2008 graduate of Michigan State University with bachelor’s degrees in both turfgrass management and general management. Before he joined the Reds, Lord spent the previous six seasons as assistant director of MLB grounds with the Texas Rangers. While in Texas, in 2010 and 2011 Lord was part of the club’s first ever trips to the World Series. In January 2015, Lord obtained his recognition as a Certified Sports Field Manager (CSFM) from the STMA. In December 2015, Lord and crew were awarded the Ohio SportsTurf Managers Field of the Year Award for that season.

**SportsField Management (SFM):** What attracted you to the sports field management industry?

**Lord:** I played high school golf and baseball — not particularly well at either — but loved both sports. Obviously, I noticed major differences in watching pro sports on TV versus the baseball field I played on in high school. Growing up in northern Michigan, my father was a national forest ranger, so I spent most of my childhood outside. I’ve always been a bit of a science nerd (I say this positively); so, when the time came to head to college I knew one thing — I was going to Michigan State University. When I researched majors that included work outdoors, the Turfgrass Management program at State caught my eye over and over again. To think I could golf and get paid to take care of the course intrigued me. From there it was only a matter of time before I figured out that sports field management was another side of the industry — one that appealed to me even more. I spent the summer of 2005 as an intern at AAA Round Rock (Texas), and have been hooked ever since.



Stephen Lord, CSFM

**SFM:** What would you say are the biggest accomplishments of your career and/or what are you most proud to have achieved?

**Lord:** From the standpoint of my career, I list obtaining my CSFM as one of my greatest accomplishments. Adding professionalism to our side of the industry has always been an important goal of mine, so this was a major step for me personally. At the same time, becoming a mentor to future industry leaders has been something I have preached to my staffs for a decade. I have operated a hands-on internship program since 2010, and am happy to give time to any and all of my former/current in-

terns whenever needed. Our ability to mold future leaders during our careers will be what ensures the future success of this industry. I hold this standard for myself, as well as my managers at my facility. It is a total group effort to ensure that all interns are given the opportunities for daily hands-on learning, while also making ourselves available to discuss the agronomics and their individual development before they enter the workforce.

On the field, I am honored to have had back-to-back opportunities (2010 and 2011) to host the World Series twice in Texas and to have hosted the All-Star Game in 2015 (in Cincinnati).

**SFM:** What are the biggest challenges you have faced in your career, and what advice do you have for other sports field managers when it comes to facing similar challenges?

**Lord:** To me, bridging the gap between what has been sold for on-field special events (non-baseball) and what can be delivered has been a major challenge. Obviously, every facility over the past 20 years has come to the realization that they need other non-core events to improve the financials of their organization. My job as the groundskeeper has become, “How can we make all of these non-traditional events successful, while maintaining the integrity of our surface for our core competency?” This can certainly be challenging, as our sales staff obviously does not have an







agronomic background. My advice to anybody struggling with this would be the following:

1. You cannot control every factor on your playing surface all of the time. Things will not always be perfect, but your ingenuity and flexibility will be key to your success during these imperfect situations.
2. Communication is paramount. Learning to explain concerns or limitations of your surface in concise, non-technical terms will give you the best weapon for developing understanding of expectations versus reality.
3. Use your network. Our membership is often our greatest strength with this organization. Find ways to get in touch with those locally and nationally to ask questions and learn more on different tactics that were deployed in similar situations.

**SFM:** Who are your mentors, and what is the best advice you received during your career?

**Lord:** Dennis Klein (Texas Rangers), Tom Burns (formerly of the Texas Rangers), and Harry Helsel (Advanced Turf Solutions). None have provided any specific advice that has impacted me all at once, but I respect all three for the time,



effort and interest in my career they have all provided. True mentorship extends beyond the cliché one liners. It is the time that a true mentor takes to pick up the phone every time you call — to talk about anything with you, career or otherwise. Developing a true care for that person beyond the professional setting down to the personal level is what resonates most with me. Those are the people that give you the day-to-day utmost support. They are the people who will call you out when you over step, but also the ones who will help you talk through all angles of tough situations. I thank all of them for their support every chance I get.

**SFM:** What are your passions and interests outside of work?

**Lord:** I love spending time with my wife Katie, my son Breslin (6), and my daughter Sophie (2 months). We love to spend time with our extended family with trips back home to Michigan when we get the chance. I am an avid cook at home and spend tons of time trying different recipes out on my family. Follow me @TurfSpartanLord on Twitter for our (at times daily) #FoodiesOfTurf arguments — “A hotdog is NOT a sandwich.”

# Fertigation

## Save \$10,000 on any Field

Recover Damaged Areas

Model 1000



Turf Feeding Systems

Sports Fertilization by Turf Feeding Systems

Scan for Video



Call us @ 832-321-3311

www.TurfFeeding.com



Turf Feeding Systems



Scan for Website





especially, we need every member to be active within their community to educate end users of the benefits of safe, playable surfaces. If you are able to get involved at the chapter or national level, that is great as well. We need to take advantage of the platforms afforded to us (small or large) to champion the importance of our industry and its tie to the well-being of its participants.

**SFM:** What is your vision or hope for both STMA and the sports field management industry overall during the next five to 10 years?

**Lord:** At the core of this, I see our development of individual professionalism to be the greatest driving force that we as a membership must succeed in producing. We need a membership of educated, hardworking professionals who cannot just manage our facilities on the day-to-day, but can also lead at the community level and make effectual change to public policy before we become victim to under representation. Our membership should understand that this will take work, but will be required to keep each of us in the important conversations locally as we aim to shape the future of this industry nationally. **SFM**

**SFM:** You serve the STMA Board of Directors as Professional Facilities Director. What is the best part about being so closely involved with STMA?

**Lord:** Serving on the board has given me great insight as to the time and energy that is spent developing our organization and steering its future. The board truly has the best interest of all of our membership in mind when we develop all opportunities for organizational and professional growth. Service with the board has also given me a new level of understanding of just how much work our small staff in Lawrence, Kansas is tasked with each year. They are a small group who carries this whole organization on its back daily. Kudos to Kim and her whole staff!

**SFM:** What advice do you have for other sports field managers with regard to being active in the industry – either through their local chapter or through national STMA?

**Lord:** The activity of each member in this industry will become paramount in the years ahead. At the local level

**MOST VALUABLE PLAYER**  
*For games that matter.*

**Ready-to-use Paint Tote System**  
saves time, money, space,  
and reduces waste.

*We make the games look better.*  
WorldClassPaints.com | 1.800.748.9649



# Field Management Practices in the UK

**Editor's Note:** These materials were provided by Campey Turf Care Systems.

In the worlds of field maintenance and sport, some things are different, and others are the same. The ultimate aim is to produce the best field possible and win games, but the methods of achieving both can vary. Whether it's preparing the gridiron at the University of Florida's fearsome home, "The Swamp," or readying the turf for another cold and windy night at Stoke City Football Club's bet365 stadium in England, the goals always remain the same — produce the best and win.

Working to those aims at Stoke City FC is Head Groundsman Andy Jackson. Jackson started his career at the current English Championship football club 25 years ago, and has seen the landscape of turf technology change dramatically during that time. Jackson recently shared the field maintenance practices he implements on his own pitches and how they compare and vary from what field managers do in the U.S.

"Some of the renovation techniques in the UK have come a long way in the last 10 years, with constant development," he said. "For instance, when a field was renovated 10 years ago, it was done using a Koro Field Top Maker, and the difference in quality from a standard renovation was massive. But there was still the issue of the field being out of action for seven to eight weeks, which for most stadiums or practice fields these days wouldn't be acceptable due to the revenue income and preseason training schedules we have now. But now, we can achieve as little as a three- to four-week downtime with the new technologies at our disposal. The fields are renovated more precisely, and quicker using the Campey Universe Rotor or Terraplane Rotor."

Jackson added, "The seed has also developed further, and soil amendments have played a key part in the process, with the core of the products coming from the U.S. market. I'd estimate around 30 percent of the maintenance products I use come from North America.



"The Field grow lighting systems in Europe have also helped to take pitches to a new level, and now alongside artificial carpets and stitching have been a very significant development. We have all the technology now to produce a natural pitch instead of artificial because — for those with the budgets — shade and a general lack of natural light is no longer an issue in a stadium environment.

According to Jackson, many accepted European field management practices are difficult to adapt in North America, due to differences in the length of playing seasons between Europe and the U.S. This is because there isn't a suitable period available to the field manager to implement these often-disruptive renovation/maintenance practices in the growing season due to the game schedules.

"Another issue is the many regional, and geographical challenges that can severely restrict the suitability of successful European practices," he added. "The distance



between the furthest apart English Premier League clubs is approximately 350 miles, and in that short distance, we notice a regional climatic difference. In MLS, the distance is closer to 3,500 miles so often only the games played in the stadium is a comparison from one venue to another. I think sharing practices with other groundsmen from similar climates would result in better maintenance methods going forward."

Jackson's organic maintenance is done using products almost entirely from the U.S. market. His view is that they are among the best researched available and ties in with his belief that the education of turfgrass professionals in the U.S. is ahead of what is offered in Europe. A part of that education process is meeting other field managers and discussing their methods, what has worked and what hasn't.

According to Jackson, it is through face-to-face interaction at events such as the STMA Conference that ideas can be shared and learned from. One area this is especially important is multi-use stadium where European field managers have used hybrid pitches and grow lights to help facilitate renovations.

"The grounds teams that work in these multi-use stadiums do a terrific job in maintaining the pitches, but most of these stadiums now have hybrid pitches and grow lights," he said. "Stadium growing lights give the manager the security to undertake a full renovation each season because if Mother Nature is not helpful, the lighting technology can assist and help ensure a successful renovation. These two technologies have helped venues like Wembley Stadium complete winter renovations because that's the only time free in their schedule.

"Sports like American football can be brutal to the surface and even more so to the grass plant. Clubs like Tottenham Hotspur have taken greater steps by developing a stadium with two pitches. This means when they host NFL games, their hybrid pitch slides underneath the stand and an artificial one slides into the stadium. This development has taken multi-use to another level in England."

Jackson added, "I think this is the way forward for big city stadiums as revenue is required and often the driving factor for the business model. But a key factor to all of this is groundsman understanding the business needs and the business understanding the groundsman and agronomical needs. The groundsmen also need the tools to carry out the job and provide the desired pitch/field quality. It's a very fine line between under usage and over usage. So, working relationships between event coordinators and the grounds team are key to successful pitch and event management plan."

Although some aspects of the job differ between the U.S. and UK, some areas are no different, including work-life balance, common challenges, and always wanting to achieve the best.

"I think it's the same for all grounds managers across the world, because we want to achieve the best," said Jackson. "But I can only speak for myself when I say I think you have to live and breathe the job. You need passion and the plans A, B and C in your head at all times, because, at the end of the day, we are dealing with hundreds of players beating our grass up daily in sometimes very challenging circumstances.

"The biggest challenge I have is not knowing the weather in one month's time! In all honesty, every day brings a different challenge — weather, training schedules, staff allocation, disease pressure," he said. "This is what makes us enjoy the job as a challenge. I'm very lucky in having a fantastic team behind me who work incredibly hard. I also have the backup from key companies in the industry, which will always be at the end of the phone to help me with a solution to a problem. A big assist for me are the friends and fellow field managers that share their knowledge, coming up with new ideas. I don't think we'd be where we are now without that."

Jackson added, "Be brave, don't be afraid to try new ways in improving your field. Then believe in your decisions and share practices with fellow sports field managers. Sharing knowledge is the key to our industry." **SFM**

Designed by turf care experts  
for turf care experts



Campey Uni-Scratch



Campey Line Marker



Campey UniRake



Campey Speedresser

**CAMPEY**  
www.campeyturfcare.com

[CampeyTurfCare](#)
[Campey](#)
[CampeyMachinery](#)
[CampeyTurfCare](#)



# Infield Chemistry

## Red Sox Senior Director of Grounds David Mellor on the winning combination for proper infield maintenance

The infielders on a baseball team need to work like a well-oiled machine. Executing a shift, turning a double play, or adapting to all kinds of unique situations. In grounds maintenance for an infield, the virtues of chemistry and adaptability hold the same value. The groundskeeper and crew need to constantly adjust their strategy for maintenance, mainly due to the uncertainty of weather conditions, but also because of schedules and the local climate. And the need for good chemistry is twofold: the infield mix needs to be a precise blend to optimize performance, and the crew has to work in tandem to make for the best infield possible.

David Mellor, senior director of grounds for the Boston Red Sox at Fenway Park, has been in the industry for 36 years. He now holds a dream role for his favorite team and one of the most legendary sports fields in the world. Each game at Fenway is a memorable experience for every fan and player, and the lights don't shine any brighter than on the infield. Mellor and his crew take that responsibility seriously, and he shared with us some insights on how he keeps his infield in Major League condition.

### TREAT EACH DAY AS UNIQUE

There's a saying in baseball that goes, "Every time you go to a baseball game, you see something you've never seen before." In the world of sports field maintenance, adapting to new and



*David Mellor, senior director of grounds, Boston Red Sox*

unforeseen situations is an important piece of the puzzle.

"The first thing we look at each day is weather," said Mellor. "The temperature, the sun, the wind, the dew point, cloud cover, temperature, and not just how it is now but how it's going to change throughout the day. All these factors impact daily infield maintenance."

Mellor also referenced that, in his decades of experience, the technology of weather apps and forecasts has come a long way. The specifics of the day's weather help set the stage for the watering strategy throughout the day. The first water of the day is the most

important, and the timing can change dramatically depending on the weather, he added.

### HONE YOUR MIX

Mellor explained that it takes a lot of research and mixing to get the infield just right.

"Technology has made big advancements with infield mixes," he said. "Engineered infield mixes have helped change the game, allowing groundskeepers from parks and rec, Little League and Major League fields to provide better safety and playability."

Ultimately, what you want is a field that acts like a cork board. Mellor uses the phrase "cleat in, cleat out" to describe how cleats should go in and out without any clumping from too soft, silty or sandy soil. Investing in a soil test, an engineered infield mix, and laser leveling the infield skin with proper grade are investments in your field, and benefit your overall program. All work in tandem to provide safety and playability and reduce rainouts.

### LEARN YOUR FIELD

According to Mellor, most of all, it's important to get to know your field and figure out what works on your particular field.

"If you are inheriting a field, it's important to learn the characteristics of the skin mix," he said. "Learn how it holds water, how it drains and how

**Editor's Note:** These materials were provided by BOB-CAT Mowers and RYAN turf renovation equipment. David Mellor appears in this article on their behalf.



# JOHN MASCARO'S PHOTO QUIZ

## ANSWER

From page 17

This discolored end zone area on this high school football stadium field was caused by a stencil, as you may have guessed. This is one of these "me too" photos, because if you are in this business long enough, this will eventually happen to you. This field is mainly used during football season for high school home games. The field was being prepared for a homecoming game in the late summer on a very hot Texas day when the damage occurred. A stencil was placed on the field, and, after the letters were outlined, the stencil was allowed to remain on the field for a little too long, causing direct high-temperature injury. The damage did not cause any real issues for the homecoming game, as the letters were painted gold and the area around the letters was painted black — essentially covering the brown turf. Since the damage occurred in the late summer when bermudagrass is actively growing, the area recovered on its own with a little fertilizer and some water.

Photo submitted by Matt Tobin from Pioneer Athletics. Story submitted by Kurt R. Benson, director of maintenance at Cleburne Independent School District in Cleburne, Texas.

*John Mascaro is president of Turf-Tec International*



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](mailto:john@turf-tec.com). If your photograph is selected, you will receive full credit. All photos submitted will become property of SportsField Management and the Sports Turf Managers Association.



### Your Athletes Don't Strive To Be "Just Good Enough"

### Neither Should Your Field Conditioning



**imants**  
Imants KORO FTM



**Vredo**  
Compact Seeder



**see  
GROW**  
Innovative Solutions in Grass Care  
Mobile Grow Systems





it dries out.” How it holds moisture is key, because the field needs to have good moisture in it to perform at its best, and not just at the surface. “You want to water it deep into the skin, not just at the surface, so it’s consistent throughout,” said Mellor.

He also recommends investing in a soil test to see what your field is made of and how to treat it. Use the soil test to find out the percentages of sand, silt, clay and breakout of all five types of sand (course, very course, medium, fine and very fine), as well as silt-to-clay ratio (SCR). You want the majority of the sand particles to be in the medium range. He uses the example of marbles in a jar. If all the sand particles (marbles) are very coarse, it’s going to be beachy and unstable; and if they’re all very fine it’s going to lock up tight and be hard. Whereas, if the majority are in the medium range, it’s going to

help provide stability. Your soil test information will be helpful to learn about the skin mix you have and how to amend your mix to get it to perform better.

Beyond the skin mix, the rest of your equipment should be versatile, and requires trial and error to deliver the desired result depending on weather, moisture, and topdressing conditioner. Mellor and his coworkers use an adjustable 1-inch hose nozzle that helps with flexibility of water flow, Turface infield conditioner, coco mats, metal drags, a bunker rake, brooms, scrapers and rakes, different weight nail drags, battery-powered hand and backpack blowers to blow material out of edges, and even a 500-pound split drum push roller to achieve different tasks. “In the end, you need to find what works for your staff and your field,” he said.

## GET TO KNOW AND SUPPORT YOUR STAFF

Speaking of staff, invest in your staff and treat them well, said Mellor. If you have a team that works on your field, the field performance is only as good as the people who maintain it.

“You need to have equipment and people that you can count on,” he said. “So many people take so much pride in their fields, across all leagues and fields. They care so much, and I take my hat off to them. I send a big thank you to everyone for all of the extra efforts, time and attention caring for your fields, keeping them safe and playable. The work you do lets people create memories on the fields.”

It’s a big responsibility to curate an infield, and a lot goes into it, but it’s worth it to provide the best field possible, from the Little Leagues to the bright lights of the big leagues. **SFM**

A graphic for the SportsField Management Podcast. It features a green rectangular background with the text "SportsField" in large white letters and "MANAGEMENT" in smaller white letters below it. Below the green background is a white rectangular background with the word "Podcast" in green letters.

**SportsField**  
MANAGEMENT

Podcast

The new **SportsField Management Podcast** will be bringing you content from STMA Conference education sessions, roundtable discussions and presentations, as well as original interviews with industry insiders.

For more information, visit <https://sportsfieldmanagementonline.com/podcast/>





## TURF NUTRITION TOOL

The Turf Nutrition Tool (TNT) is a web-based platform that allows turf managers to create custom sports field nutrition programs and model the nitrogen release of many of our most popular granular and foliar products.

GET STARTED AT **TURFNUTRITIONTOOL.COM**



TurfNutritionTool.com | AndersonsPlantNutrient.com | @AndersonsTurf

©2020 The Andersons, Inc. All rights reserved. The Andersons logo and TNT are registered trademarks of The Andersons, Inc.



# Ambition to Produce Fond Memories for Years to Come

Andrew Miller, head of the Turf Grass Management program at Brentsville High School in Nokesville, Va., quotes one of his turfgrass professors at least daily. Dr. Mike Goatley told his students at Virginia Tech University, “You are much more than just managers of turfgrass. Every day, you create lasting memories. Whether it’s at a high school or at a professional venue, the experience of spectators and players at your facility will go on forever.”

Miller orchestrates a high school program that has grown from 73 students to more than 200 in the blink of an eye. He admits that, at times, it’s difficult to comprehend the program’s overwhelming prosperity since its 2016 inception. Miller has also had his fair share of accomplishments of late, stockpiling multiple Sports Turf Managers Association (STMA) awards, including the Mowing Patterns Contest and Stars & Stripes in 2019.

“The (STMA) awards validate what we do to the public’s eye and acclaims the significance of our passion,” said Miller. “I’ve seen it firsthand in my community in Northern Virginia. It shows everyone that this is a profession that is truly creative and out there for pursuit.”

Entering annual contests and earning certifications offered by the STMA is one way for sports field managers around the globe to obtain the deserved acclaim for their work within their organization and the community — but not the only way. STMA partners with Buffalo Agency to highlight the sports field management profession and its members, and elevate the perception of sports field professionals in the eyes of their employers.

## Public Relations & Social Media Update

### Field of the Year Awards

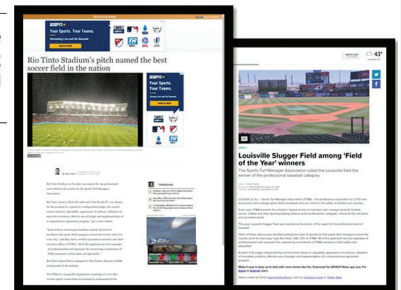
The industry’s highest honors to members who manage baseball, football, soccer, softball and other sporting playing surfaces at the professional, collegiate, schools (K-12), and parks and recreation level.

**19** Media Placements

**190,000** Social Impressions

31st Annual Conference & Exhibition January 13-16, 2020 West Palm Beach, Florida

### PR Success Stories



### WHY IS PR IMPORTANT?

Plain and simple, public relations is the professional maintenance of a favorable public image. Its cornerstone is the ability to compellingly communicate your story. As “directors of first impressions,” you are the unsung heroes of any organization, ensuring a consistent, safe playing surface remains visually appealing.

Cultural practices of your employers and aggressive scheduling to maximize facility usage often prevent your voices from being heard. Effective communication tactics coupled with sound policy measures serve as the prescription to increase your recognition within your organization and turn your employers into your biggest advocates.

### GROWING THE BRAND

Over the past seven years, Buffalo has collaborated closely with the STMA team in Lawrence, Kan., as well as individual members around the world to secure stories in both consumer and trade publications. Through this collaboration, the aim is to increase

recognition of sports field managers in consumer outlets and educate employers on the complexity, technical knowledge and expertise needed to manage playing surfaces. The goal is increased media attention for sports field managers at all levels, but your input is required.

### BETTER, TOGETHER

Seen in any successful team, each player has a specific role during a game. Countless field managers have been highlighted on specific storylines around events, anniversaries and more. Buffalo takes grassroots initiatives and elevates the conversation regionally and nationally. Most recently, they helped promote several STMA members regarding STMA’s Environmental Certification, Bowman Field’s renovation and preparations for the Super Bowl, to name a few. Placements include Tony Leonard (Philadelphia Eagles), Travis Hogan (Kansas City Chiefs) John Cogdill (Pleasant View Sports Complex) and Murray Cook (BrightView Sports Turf).



## MEDIA CONSUMPTION AND MEMBER ENGAGEMENT

What used to be TV, newspapers and magazines is now a full band of communications vehicles with which all businesses (and individuals) need to concern themselves. Digital coverage has now superseded the importance of print. Video is also increasing in influence (video content is 63 percent more likely to be seen than print articles will be read).

Familiarize yourself and remain active on social media platforms. This is an opportunity to expand your personal brand, foster connections with followers, and provide personalized dialogue while staying current and relevant within the industry and influencing the younger generation that is less apt to consume traditional media.

In addition to placing STMA members "in the news," Buffalo also

manages STMA's social media channels. @FieldExperts has reached members, influencers and strategic media networks. From professional sports leagues, teams, NCAA conferences and schools, the messages used to move the needle with editorial outreach shifts seamlessly to the digital social platforms.

With a wide variety of activation tactics in social, members are encouraged to join the conversation. From #DayInTheLife Twitter takeovers to the always popular Stars and Stripes, the community will continue to #grow as STMA's constituents continue to engage.

## SO, WHAT'S NEXT?

Speaking with media does not come easily to everyone. Some prefer to steer away from this completely. STMA is committed to helping each individual succeed.

A critical mass has generated substantial traditional media attention and social media engagement. To continue elevating the perception of the sports field management industry, there's been a focus on internal professional development. Through education, awareness programs and industry development, STMA and Buffalo work collectively to provide relevant resources and networking opportunities to members, educating non-industry professionals on the importance of natural grass playing surfaces and increasing overall STMA membership numbers. **SFM**

Article provided by Buffalo Agency. Be sure to connect with all @FieldExperts social media accounts and contact Tomás Silvani at TSilvani@Buffalo.Agency to share any exciting news.

## Perfect Infields Ball Field Finisher



### Quick Attach to Various Vehicles



John Deere... TS, TX, TG, XUV, HPX

Kubota

Kubota..... RTV X900 / X1100

POLARIS

Polaris..... Ranger

Club Car

Club Car..... Carry All II, 272

HONDA

Honda..... Pioneer 500 / 700

can-am

Can Am..... Defender

800.228.1003 x134

sales@broyhill.com • www.broyhill.com



**Broyhill**  
when only perfection will do

# SIDEKICK®

OFFICIAL EQUIPMENT  
& PARTNER OF

*Rose Bowl*  
AMERICA'S STADIUM

STADIUM TESTED.  
STADIUM TRUSTED.



For the fastest field restoration,  
visit our website today.

[www.SideKickUSA.com](http://www.SideKickUSA.com)





### GROUNDWOW FULL-COLOR AUTONOMOUS GROUND PRINTER

Launched in October 2019, GroundWOW was developed with a founding mission to make printing on ground as easy as printing on paper. GroundWOW Special FX can print any logo, any color, any size, on any surface. Deployable in less than 10 minutes, autonomous vehicle technology, artificial intelligence, and an end-to-end Cloud SAAS (Software As A Service) platform combine to create ground-printed images as accurate as a blade of grass.

“GroundWOW customers will be the first in the World to have the power of full color autonomous AI printing at their disposal for sports sponsorship and advertising applications, delivering compelling executions, unlocking revenue, and activating dormant or underutilized ground real estate,” said Tony Rhoades, GroundWOW founder, chairman and CEO.

In December 2019, The Jockey Club, a world-leading horseracing organization, engaged GroundWOW to bring its technology to The Festival presented by Magners, at its fabled Cheltenham racecourse. The commission was for a large-scale (25m x 20m) Magners Irish Cider logo in the middle of the historical racecourse.

“We stand with our friends and colleagues in sport in these unprecedented times and, like many of them, the GroundWOW team is busy working in isolation such that we are ready to pick up again where we left off when the current coronavirus crisis is behind us,” said Rhoades. “In a business sense at least, many of those most affected by the current situation are major players in our primary target sector of stadium owner-operators. But sport will return, and, when it does, it might be more important to us all than ever before.”

“The fundamental motivation behind GroundWOW is to enable any sports club, no matter sector or scale, to turn under-utilized ground within (or around) their stadium into revenue-generating real estate,” Rhoades added.

For more information, visit [www.groundwow.com](http://www.groundwow.com).



### TORO MYTURF PRO

Toro myTurf Pro is a completely revamped web-based asset management system for turf maintenance. The system is based on four key principles — connect, manage, maintain and simplify.

The myTurf Pro system leverages more than 10 years of experience in industry-leading fleet management and takes it to the next level, enabling optimized asset management for equipment, attachments, irrigation and other assets. This powerful, easy-to-use application helps superintendents and equipment professionals manage the many day-to-day complexities of the job. It also provides the field management team with the tools to be more efficient and streamline maintenance programs.

For superintendents and equipment managers alike, myTurf Pro seamlessly connects and manages assets, regardless of brand. The “at a glance” dashboard keeps management informed of maintenance requirements and operational status. Detailed historical maintenance records provide valuable information on total cost of ownership and asset performance, while demonstrating operational excellence. Additionally, the system allows technicians to automate processes with proactive maintenance notifications, and an equipment connectivity tool, Toro wireless hour meters, to automatically track operating hours. It also offers quick access to service documentation, manages maintenance assignments and tracks completed tasks within the myTurf Pro system.

New features of myTurf Pro include fuel tracking and managing maintenance down to individual cutting units, while upgrading features like 24/7 online parts ordering. Unique to myTurf Pro, the system can now make parts order recommendations based on the user’s current inventory and maintenance needs.





### LASTEC WZ1000 COMMERCIAL ZERO-TURN MOWER

Featuring a 120-inch cutting width, five 25-inch flex decks, and zero-turn maneuverability, the Lastec WZ1000 commercial zero-turn mower cuts with the accuracy of five small push mowers at the speed and production of a zero-turn wide-area mower. Built in the USA, the WZ1000 provides up to 8.73 acres/hour coverage to fit the wide-area production needs of commercial landscapers, lawn care professionals, sports fields, and golf courses. The WZ1000 includes five independently flexing decks with up to 24 degrees of total up/down motion for superior cut quality in even the most challenging contours and valleys. As the world's biggest zero-turn mower, the WZ1000 features quick-lift electric decks for easy transport or storage and tool-free deck height adjustment for quick on-site height changes. In addition, Lastec's patented belt-driven decks require minimal maintenance and provide unmatched fuel efficiency compared to hydraulically driven rotary mowers that often cost 50 percent more to own and operate.



### KUBOTA ENTERS STAND-ON TRACK LOADER MARKET WITH NEW SCL1000

Kubota Tractor Corporation is entering the stand-on track loader market with its SCL1000. The new stand-on track loader features wide tracks, narrow body and a Rated Operating Capacity (ROC) of 1,000 pounds. The introduction further diversifies Kubota's construction offerings and signals continued commitment and innovation within the compact equipment market.

The SCL1000 features a 9.8-inch track that comes standard on the overall narrow, 36-inch machine. The integrated track design is engineered for durability with the undercarriage welded to the mainframe of the body. The grease track tension design includes sealed oil bath rollers for less maintenance and greater durability. The wide track design, with a rating of 4.0 psi, is low impact and minimizes damage to grass and landscaping.

Kubota's SCL1000 boasts a 24.8-horsepower turbo-charged Kubota diesel engine with quiet operation, high-altitude performance and no diesel particulate filter requirement. A hydraulic pump directly connected to the engine reduces maintenance. The loader arms reach high and far with a hinge pin height of 84.7 inches and a reach of 25.9 inches at a 45-degree dump angle. The SCL1000 has a best-in-class travel speed of 5.1 miles per hour.

Kubota's SCL1000 is engineered with cushioned loader boom cylinders and an adjustable platform suspension system that increase operator comfort for maximum productivity. The loader comes standard with a keyless start with passcode protection, 12-volt charging port and a 4.3-inch LCD color dash monitor that provides easy-to-read consolidated machine monitoring.

The new SCL1000 will be available at select authorized Kubota dealers in the second half of 2020.



# Mowers



## ALTOZ XP HD

The Altoz 2020 XP HD offers three engine options — all V-twin cylinder, carbureted versions of the Kawasaki FX — the 852cc with 27 hp. (XP 540 HD), 921cc with 31 hp. (XP 610/660 HD) and the 35 hp., 999cc in the XP 720 HD. Pros looking for increased fuel efficiency can turn to the XP 610 HDi with Kohler's Command Pro engine boasting 824cc, 33 hp. and electronic fuel injection.

XP engine performance is matched to highly efficient commercial Hydro-Gear hydrostatic transmissions. The ZT-4400 can drive all XP models to a max forward speed of 11 mph, and has responsive operator control.

Easy on/off accessibility to the operator's platform is provided by an incorporated deck step with foot traction plate. Available in four cutting widths — 54-inch (540 HD), 61-inch (610 HD/HDi), 66-inch (660 HD) and 72-in (720 HD). Rotational deck height adjustment changes cutting height in 1/4-inch increments ranging from 1.5- to 5-inches with the easy turn of a dial.



## BOB-CAT PREDATOR-PRO 7000 ZERO-TURN MOWER

The Bob-Cat Predator-Pro 7000 commercial zero-turn mower boasts transport speeds up to 19 mph. It also features 26-inch Zero-T drive tires and a Kawasaki FX1000V engine, designed to provide major muscle and commercial-grade strength. Bob-Cat also redesigned the operator controls, angling them toward the operator seat for ease of use and to eliminate operator fatigue. The handles also now feature an almond-shaped ergonomic grip and a single-bolt height adjustment to make them more comfortable for each individual user. The high-back seat sports improved ergonomics with weight and comfort adjustments for those long mowing days.

## CUB CADET PRO X SERIES

The Cub Cadet PRO X Series mowers are the first stand-on mowers in Cub Cadet's professional lineup. A fully fabricated 10-gauge deck shell with 7-gauge top and bottom reinforcements gives the PRO X Series a strong backbone.



And with a maintenance-free design, the spindles, bearings, hubs, casters, rims, linkages, levers and other pivot points do not need greasing. A large, fully adjustable suspension platform allows the operator to adjust tension in a matter of seconds without a tool. The suspension system was designed and tested against competitive units to provide best-in-class impact absorption, allowing the operator to glide comfortably through rough terrain. A fully adjustable hip pad with ample side supports offers comfort and stability when mowing uneven terrain.



## EXMARK 96-INCH LAZER Z X-SERIES

Exmark's 96-inch Lazer Z X-Series model is capable of cutting up to nine acres per hour. The rear-discharge



UltraCut flex wing cutting deck features a full-floating 48-inch center deck with two 24-inch wing decks, for a total of 96-inches of cut width. Both wing decks can flex up to 20-degrees up and 15-degrees down, which minimizes scalping and increases productivity in undulating terrain. A hydraulic deck lift offers the ability to raise or lower the wing decks to ease loading and minimize trailering space. As a result, the 96-inch Lazer Z X-Series fits on trailers capable of handling a 72-inch zero-turn mower.

Exmark designed the UltraCut flex wing deck to use four matching blades, which eases service and delivers the company's signature cut quality in a wide range of mowing conditions. The deck is also equipped with a factory-installed mulch kit. A durable air-cooled Kohler EFI commercial engine powers the 96-inch Lazer Z X-Series.



#### **FERRIS ISX2200 AND ISX3300**

The ForeFront Suspension System on Ferris ISX2200 and ISX3300 mowers utilizes four upper and lower control rods and mower-specific shocks to ensure the front caster bearing remains vertical through the range of travel. The result is a smoother ride and a more precise cut. The ISX2200 and ISX3300 also offer customer-driven features such as:

- Angled rear bumper that protects the engine and provides easy service access while achieving additional ground clearance for moving over curbs and trailers.
- Ergonomic premium high-back suspension seat that provides added comfort for a productive and comfortable workday.
- Next generation foldable ROPS.

The ISX2200 is powered by a 28-hp. Vanguard 810 engine and has a 52- or 61-inch two-belt iCD cutting system for enhanced performance and reliability; select units feature the patented and proven Vanguard Oil Guard System. The ISX3300 runs on a 37-hp. Vanguard Big Block EFI with Oil Guard System.



#### **GRASSHOPPER 300G SERIES ZERO-TURN MIDMOUNT MOWERS**

The Model 337G5 zero-turn MidMount mower is one of four 300G Series mowers offered by The Grasshopper Company. Powered by a 993cc Vanguard V-twin EFI engine, the 337G5 is equipped with Hydro-Gear ZT transmissions that deliver smooth response. These heavy-duty transmissions feature 1-3/8-inch axles for handling side loads. Available with either 61- or 72-inch DuraMax cutting decks, the 337G5 makes quick work of large acreage

areas. The premier suspension seat on the 337G5 adjusts to the operator's weight and size. Covered in a breathable Cordora fabric, the seat adjusts fore and aft and includes adjustable armrests and backrests with customizable lumbar support.



#### **GREENWORKS COMMERCIAL LITHIUM Z ZERO-TURN RIDE-ON MOWER**

Greenworks Commercial Lithium Z zero-turn ride-on mower features the following:

- 82-volt battery system
- 13.8 kw Lithium-ion battery
- Up to 4.5 hours of working time
- 60-inch steel deck
- (3) 1.5 kw brushless blade motors
- Blade speed 2,800 – 3,200 rpm
- (2) 1.7 kw brushless drive motors
- Single lever height adjustment from 1-1/2-inches to 6-inches
- LCD display, push button start, LED headlights, 2-year frame warranty, 3-year battery and motor warranty

#### **HUSQVARNA Z400X SERIES**

The Husqvarna Z400X Series is built to deliver a long, productive product life and provide extreme comfort, high ground speeds and superior traction for exceptional mowing efficiency. The two models in this new series – Z454X and Z460X –include comfortable,





user-focused ergonomic controls for improved ease-of-use and efficiency and features optimized weight balance that holds hills and maintains traction, boosting productivity. The New Parker HTE Series transmission delivers more power and smoother performance. Features such as an integrated parking brake, an easy-to-fold ROPS and easy-to-view deck height adjustment increase operator comfort.



### **HUSTLER TURF SUPER 88**

Hustler Turf Equipment's Super 88 features the cut quality of a 54-inch deck and productivity of an 88-inch cut, allowing operators to mow faster and with a smaller crew. It also comes equipped with either a Vanguard 36-hp. carbureted engine or a Vanguard 37-hp. EFI engine. And consistent across the Super 88, Super 104 and the Super Z Hyperdrive is the addition of a Vanguard EFI with oil guard.



### **JOHN DEERE Z955R ZTRAK**

John Deere's Z955R ZTrak zero-turn mower, with a 60-inch side-discharge deck, is powered by a 29-hp. EFI engine. The increased horsepower allows the Z955R to quickly tackle common activities, such as material collection, mowing in thick turf conditions and mulching, while the EFI engine increases overall fuel economy.

Other features on the Z955R model include two seat choices with the comfort-boosting ComfortGlide suspension. With ComfortGlide, the seat can travel up to two inches fore and aft, absorbing bumps for a significant enhancement to ride comfort. The fully adjustable seat option features lumbar support, control dial for easy adjustment and seat latch for seat lifting.

### **KUBOTA Z700 EFI COMMERCIAL ZERO-TURN MOWERS**

Kubota's Z700 Series is powered by Kohler Command Pro engines and Kawasaki's industry-proven FX and FX EFI engines, engineered to ensure superior results. Each model features a durable eight-gauge steel 48-, 54- or 60-inch deck, six inches deep, allowing for outstanding stability and an efficient, high-quality cut. The Z700 Series offers unmatched ergonomics with a wide operator station, a premium adjustable



suspension seat for comfort and reduced fatigue during long jobs. The Z700 Series is engineered to create outstanding results and the EFI models offer exceptional performance in challenging conditions.



### **LASTEC WZ400 FLEX DECK COMMERCIAL ZERO-TURN MOWER**

Lastec introduced the WZ400 flex deck commercial zero-turn mower. Built in the USA and starting at \$11,900, the WZ400 offers several gas and diesel engine options.

Featuring a 61- or 73-inch cutting width, three 21- or 25-inch flex decks, and zero-turn maneuverability, the Lastec WZ400 commercial zero-turn mower cuts with the accuracy of three small push mowers at the speed and production of a commercial-grade zero-turn mower. The WZ400 includes three independently flexing decks with up to 12 degrees of total up/down motion for superior cut quality.





### MEAN GREEN MOWERS COMMERCIAL ELECTRIC EVO-74

The Evo is the flagship commercial electric mower of the new Evolution series by Mean Green Mowers. With up to 8 hours of continuous mowing time, an expansive 74-inch deck, speeds up to 13 mph, 20-degree slope capability, and horsepower comparable to a 37-hp. diesel mower, the EVO is sure to please any large-area mowing operators. Designed with maximum power in mind, Mean Green has combined time-tested planetary gearing and the latest electric hub motor technology resulting in its Impulse Drive System (IDS). The patent-pending deck lift system, SmartDeck, can be operated with the push of a button or foot pedal with Mean Green's latest Interactive Touch Screen Display. With the ease of use and constant awareness of the deck height, the SmartDeck makes jobs effortless with customizable user settings.

### TORO GROUNDSMASTER OUT-FRONT ROTARY MOWERS

Toro's new Groundsmaster 3200/3300 mowers are designed to be durable and tackle tough jobs all year round, increasing productivity and offering an enhanced operator experience.

The Groundsmaster 3200/3300 mowers feature 24.7- and 37.4-hp. Tier 4 / Stage 5 Yanmar diesel engines. Combined with an advanced pump



and motor drivetrain, the overall performance and durability of the machine is maximized. In addition, Toro's cutting decks feature a 7-gauge steel deck shell with side bumpers, rugged cast iron spindles with dual-tapered roller bearings, thick .25-inch heat-treated blades, and a front bullnose bumper to provide maximum protection. The cutting decks also easily tip up into a service position for quick routine maintenance.

The Groundsmaster 3200/3300 mowers offer 60- and 72-inch side-discharge, rear-discharge and flail cutting decks — along with fast ground speeds up to 15 mph for moving between job sites efficiently.



### WALKER B271

This higher horsepower version of the Walker Model B adds a Kohler 26.5-hp. EFI engine, and includes a redesigned unitized chassis and front body. The new clamshell body makes drivetrain component access easier, and the Ogura electric clutch with Soft Start adds convenience and durability for the

operator. An oversized Donaldson 5-inch air filter is fitted with a turbine-style pre-cleaner and restriction gauge to reduce maintenance intervals while providing a robust filtration system. A new rear axle design improves rough-condition handling, coupled with Walker's Comfort Seat and optional 20-inch drive tires, make the B271 a comfortable machine that is powerful, efficient, and ready for larger decks and difficult conditions.



### WRIGHT MMZ MID-MOUNT, ZERO-TUNING RADIUS MOWER

Wright Manufacturing's MMZ mid-mount, zero-turning radius commercial mower is compact, lightweight, and is available with powerful engine options and a choice of 52- or 61-inch deck width. The engine in the MMZ is nearly three inches lower than most mid-mounts. The hydro drive pulley is mounted on the bottom of the engine drive shaft, which allows the hydro pumps to be mounted six inches lower than most mid-mounts. The result is a significantly lower center of gravity. The rear wheel motors can be moved fore and aft through three different settings. This keeps the proper weight balance with collection systems. The cutting speed is 13 mph with the powerful Kawasaki FX850 engine, and the 13.5-gallon fuel tank improves productivity even more.



The following are some industry Tweets from the past month:



**@johnledwidge**

We took the decision to carry out a full renovation over the weekend at the KP, in the current climate we've had to change our mindset as this may be our only window. Always keeping a safe distance! 6 week countdown is on but who knows may be longer! Sweepstake on germination?

**MARCH 23**



**@caseyBPMartin**

Out working on the fields today. At softball. RTF in the outfield is looking great thanks to @ATSSportsTurf @bwinka @BarenbrugUSA thought the sky gave me a good backdrop. @SBUSoftball18 @daltonkelley13

**APRIL 2**



**@CREEDY95**

Opening Day at home. #mlb #MLBOpeningDay #missbaseball #coorsfield #rockies #comebacksoon #StayHealthy

**MARCH 26**



**@AaronFink4**

During these uncertain times it's important to take a step back and appreciate. Thankful for my assistant, Keith Fandel! We've put a lot of hard work into this place keeping it ready for baseball. Give a shoutout to your staff. We've got a long way to go but these views always help.

**APRIL 2**





**@dwishon14**

Sure wish we were playing on it today!

**APRIL 3**



**@Dave\_Turfix**

Latest trim at le Parc

**APRIL 4**



**@PUSportsTurfGuy**

Finally had a chance to pull cores at RossAde 2day as ryegrass checks out! I gotta admit, this is the 1st time on the aerifier for an entire field in A LONG time. I really miss our @PUSportsTurf students & @lanezink who normally do this! I'd rather stick to teaching & training

**APRIL 5**



**@BaseballWSColts**

Fresh cut. Definitely harder than it looks. Didn't turn out how I planned but I've got some adjustments to it currently brewing.

**APRIL 5**



# STMA Recognizes 10- and 35-year Members

Thank you to all of our members who support STMA through annual membership. We appreciate your support and continued commitment to your professional association. In this issue we are recognizing the service milestones of our 10-year and our 35-year members. Please help us in congratulating these members.

## 35-YEAR MEMBERS

George Rokosh, Glen Ellyn, Ill.

John Souter, Braco, Perthshire, UK

George Trivett, CSFM, Lenoir, N.C.

Randy Stoneberg, Adlai Stevenson High School, Lincolnshire, Ill.

## 10-YEAR MEMBERS

Doug Vescio, Vescio Sports Fields, Inc., Lexington, Ky.

Andrew Rock, Chatham County Park and Recreation, Savannah, Ga.

Bryan Spencer, City of Oconomowoc Parks, Oconomowoc, Wis.

Desmond Stephens, University of Oklahoma, Norman, Okla.

Jeff Langner, Profile Products, LLC/Turface, Buffalo Grove, Ill.

Ben Baumer, Chicago Bears Football Club, Lake Forest, Ill.

Lee Clinton, CSFM, Clover School District, Clover, S.C.

Will Rogers, CSFM, Rogers Lawn Care and Landscaping, LLC, York, S.C.

Sean Ireby, Kwik Goal, Quakertown, Pa.

Glenn Smith, Rockford Park District / Sportscore 1&2, Loves Park, Ill.

Theodore Gutman, Jr., Ballpark of the Palm Beaches, West Palm Beach, Fla.

Ian Christie, CSFM, Duke University, Durham, N.C.

Fred Ekberg, Meczyhealth Sportscore Complexes, Loves Park, Ill.

Jose Moreno, Landon School Bethesda, Md.

LeRoy Butler, Greenone Industries, Inc., Parker, Colo.

Jeff Sheehan, CSFM, Georgia Tech University, Decatur, Ga.

Bill Connell, Buffalo Bills, Orchard Park, N.Y.

Kevin Miller, St Mark's School, Southboro, Mass.

Anne Baliva, Sports Turf Canada, Guelph Canada

Jonathan Dail, Orange County Parks and Recreation, Efland, N.C.

Ralph Mendez, City of Surprise, Surprise, Ariz.

Anthony Frontzak, City of Surprise, Surprise, Ariz.

Phil Hancock, Starfire Sports/Seattle Sounders FC, Tukwila, Wash.

Jason Wigington, CSFM, Wigington Enterprises, Inc., Easley, S.C.

Barry Hill, Homewood Parks & Rec, Homewood, Ala.

Eric Owens, Homewood Parks & Rec, Homewood, Ala.

James Goebel, Landscapes Unlimited, LLC, Lincoln, Neb.

David Kuczynski, Somerset County Park Commission, Northbranch, N.J.

Patrick Francisco, Smith River Sports Complex, Axton, Va.

Chris Hohnstrater, CSFM, St Louis, Mo.

Dan McClelland, The Principia School, St. Louis, Mo.

Clayton Hubbs, Stabilizer Solutions, Inc., Phoenix, Ariz.

Cory Wilder, Palm Beach Gardens, Palm Beach Gardens, Fla.



Michael Dellinger, Charleston, S.C.

Cole Dudley, Denver Broncos Football Club,  
Englewood, Colo.

Erik Anderson, GUS LLC, Alpharetta, Ga.

Christi Clay, CSFM, JEFFCO Athletics – NAAC,  
Golden, Colo.

Travis Hohlbein, Hamilton County at Paul Brown  
Stadium, Cincinnati, Ohio

Zach Ricketts, Oakland Athletics, Oakland, Calif.

Andy Ommen, McLean County PONY Baseball,  
Bloomington, Ill.

Steven Vonderheide, Purdue University, West  
Lafayette, Ind.

Zach Smith, Council Bluffs Recreation Complex, Council  
Bluffs, Iowa.

Dennis Piluri, Great Western Sales & Distribution, LLC,  
Scottsdale, Ariz.

Elvin Ulmer, CSFM, City of Laurel, Laurel, Miss.

Andrew Wilhelm, Denver, Colo.

Mark Harris, Sandhill Turf, Inc., Candor, N.C.

David Schwandt, Sr., Greater Libertyville Soccer  
Association, Libertyville, Ill.

Chrissie Segars, Ph.D., Texas Agrilife Extension Service,  
Dallas, Texas

Derald Bell, Bryan ISD, Bryan, Texas

Zach Willard, Auburn University Athletics,  
Auburn, Ala.

David Kimel, Collins Perley Sports & Fitness Ctr., Saint  
Albans, Vt.

Bruce Dees, Bruce Dees & Associates, Tacoma, Wash.

Jake Hannes, Waconia Public Schools 150110,  
Waconia, Minn.

Drew Yoder, Pennsylvania State University, University  
Park, Pa.

Joe Guerra, Turf Star, Vista, Calif.

Brian Pierce, City of Grapevine, Grapevine, Texas

John Beck, Beck's Sports Turf Specialists, Norway, Mich.

Andrew Maguire, Wake Forest University Athletics,  
Winston Salem, N.C.

Ellen Davis, Waupaca Sand & Solutions, Waupaca, Wis.

John Sulinski, The LandTek Group, Inc., Amityville, N.Y.

Brent Weber, Brightview Landscape Development,  
Parker, Colo.

Terry Noriega, Drainage Solutions, Inc., Greenwood, Ind.

Brian Carey, CSFM, SSC Services for Education, College  
Station, Texas

Brandon Thrower, ETSU, Johnson City, Tenn.

Geoffrey Rinehart, University of Maryland, College  
Park, Md.

Jeff Hughes, City of Airdrie, Airdrie, Alberta, Canada

Nick Roe, Columbus Crew SC, Columbus, Ohio

Terry Brown, City of Hastings - Parks & Rec Dept.,  
Hastings, Neb.

TJ Derrick, Columbia, Tenn.

Timothy Quigley, Naperville Park District, Naperville, Ill.





**SUBSCRIBE TODAY!**

**Sportsfield**  
MANAGEMENT

[sportsfieldmanagementonline.com/subscribe](https://sportsfieldmanagementonline.com/subscribe)



**SUBSCRIBE TODAY!**

**sportsfieldmanagementonline.com/subscribe**

Online | Print | Mobile | E-Newsletter | Facebook | Twitter

**SportsField**  
MANAGEMENT

## STMA Affiliated Chapters Contact Information

**Sports Turf Managers Association of Arizona:** [www.azstma.org](http://www.azstma.org)

**Colorado Sports Turf Managers Association:** [www.cstma.org](http://www.cstma.org)

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

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

**Florida #3 Chapter (Central):**  
407-518-2347, Dale Croft,  
[dale.croft@ocps.net](mailto:dale.croft@ocps.net)

**Gateway Chapter Sports Turf Managers Association:**  
[www.gatewaystma.org](http://www.gatewaystma.org)

**Georgia Sports Turf Managers Association:** [www.gstma.org](http://www.gstma.org)

**Greater L.A. Basin Chapter of the Sports Turf Managers Association:**  
[www.stmalabasin.com](http://www.stmalabasin.com)

**Illinois Chapter STMA:** [www.ILSTMA.org](http://www.ILSTMA.org)

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

**Indiana:** Contact Clayton Dame,  
[Claytondame@hotmail.com](mailto:Claytondame@hotmail.com) or  
Brian Bornino, [bornino@purdue.edu](mailto:bornino@purdue.edu)  
or Contact Joey Stevenson,  
[jstevenson@indyindians.com](mailto:jstevenson@indyindians.com)

**Iowa Sports Turf Managers Association:**  
[www.iowaturfgrass.org](http://www.iowaturfgrass.org)

**Keystone Athletic Field Managers Org. (KAFMO/STMA):** [www.kafmo.org](http://www.kafmo.org)

**Mid-Atlantic STMA:** [www.mastma.org](http://www.mastma.org)

**Michigan Sports Turf Managers Association (MiSTMA):** [www.mistma.org](http://www.mistma.org)

**Minnesota Park and Sports Turf Managers Association:** [www.mpstma.org](http://www.mpstma.org)

**MO-KAN Sports Turf Managers Association:** [www.mokanstma.com](http://www.mokanstma.com)

**New England STMA (NESTMA):**  
[www.nestma.org](http://www.nestma.org)

**Sports Field Managers Association of New Jersey:** [www.sfmanj.org](http://www.sfmanj.org)

**North Carolina Chapter of STMA:**  
[www.ncsportsturf.org](http://www.ncsportsturf.org)

**Northern California STMA:**  
[www.norcalstma.org](http://www.norcalstma.org)

**Ohio Sports Turf Managers Association (OSTMA):** [www.ostma.org](http://www.ostma.org)

**Oklahoma Chapter STMA:**  
405-744-5729; Contact:  
Dr. Justin Moss [okstma@gmail.com](mailto:okstma@gmail.com)

**Oregon STMA Chapter:**  
[www.oregonsportsturfmanagers.org](http://www.oregonsportsturfmanagers.org)  
[oregonstma@gmail.com](mailto:oregonstma@gmail.com)

**Ozarks STMA:** [www.ozarksstma.org](http://www.ozarksstma.org)

**Pacific Northwest Sports Turf Managers Association:** [www.pnwstma.org](http://www.pnwstma.org)

**Southern California Chapter:**  
[www.socalstma.com](http://www.socalstma.com)

**South Carolina Chapter of STMA:**  
[www.scstma.org](http://www.scstma.org)

**Tennessee Valley Sports Turf Managers Association (TVSTMA):** [www.tvstma.com](http://www.tvstma.com)

**Texas Sports Turf Managers Association:**  
[www.txstma.org](http://www.txstma.org)

**Virginia Sports Turf Managers Association:**  
[www.vstma.org](http://www.vstma.org)

**Wisconsin Sports Turf Managers Association:** [www.wstma.org](http://www.wstma.org)

### Chapter Sponsors

**Hunter®**



**JOHN DEERE**



## Q&A WITH DR. GRADY MILLER

**Q: A stay-at-home order due to the COVID-19 pandemic is preventing me from maintaining our school's athletic fields. I'm an employee of the school system and was sent home. With very little advance notice, I was not able to get my bermudagrass fields ready for "no maintenance." With no idea of when I can return, I do not know what to expect when I do return. What are your thoughts on how these fields will look without any maintenance for months?**

**A:** In terms of field care, unlike damage from high winds and excessive water, this pandemic resulted in a rapid shutdown with no allowance for a timely return to work. I know the situation is a bit different for everyone. Even within the same county or school district, the ability to work on a field may be different.

For example, our state's pandemic response differentially influenced how different groups can do the same job. If fields were under a maintenance contract from an outside vendor, then the vendor could continue maintaining fields as an essential service unless the property owners restricted access. At the same time, I do not know of any secondary schools that would allow school employees to come onto school property to maintain fields. In a hybrid example, our university research facility had to file an exception request to allow one designated employee onsite to minimally maintain our turfgrass — infrequent mowing, disease prevention, irrigation checks — for two half-days a week. That is about five percent of the man-hours we normally have working in midsummer.

As for your question, you do not know how long it will be until you can return and begin the most basic maintenance tasks. Obviously the longer the fields are abandoned, the higher the chance they will be in poor shape when you return. The good news is that you probably already have your pre-emergence weed control in place. At your location, you probably have also applied the first spring fertilizer application. Both these will be to your advantage. But without mowing, the

bermudagrass is going to continue growing vertically and laterally. So the field is going to take on the look of a pasture, and your baseball and softball fields will see increased encroachment into the clay skinned areas.

In years past, I have worked with several schools that have abandoned fields over the summer due to budgetary reasons. Most bermudagrass fields that are abandoned for a few months during the growing season can be returned back to at least moderate condition in a few weeks due to the toughness and resiliency of the grass. Start by scalping the turfgrass to a reasonable height with a rotary mower. With warm temperatures, bermudagrass responds very quickly to fertilizer and water. The bermudagrass is also very tolerant to a wide range of pesticides, allowing a manager to aggressively control most weeds without fear of killing the bermudagrass. Edging and dragging clay can be effective at removing the runners, and a non-selective herbicide can be useful if the encroachment has been widespread.

The better the shape of the field when you left it, the better shape it is likely to be in when you return. If adequate time or resources are not available for necessary renovation before use, some may decide to scalp down the canopy and overseed the bermudagrass with ryegrass. That can get one through fall and/or spring use until more extensive renovations are made in 2021.

The leadership at the national STMA organization and state chapters have been publishing written information and hosting webinars to help sports field managers deal with the many situations and stresses this pandemic has caused. Be sure to visit [www.stma.org](http://www.stma.org) and your state's chapter resources for more recovery information. **SFM**



**Grady Miller, Ph.D.**

Professor and Extension Turf Specialist  
North Carolina State University

### Questions?

Send them to Grady Miller at North Carolina State University, Box 7620, Raleigh, NC 27695-7620, or e-mail [grady\\_miller@ncsu.edu](mailto:grady_miller@ncsu.edu). Or, send your question to Pamela Sherratt at 202 Kottman Hall, 2001 Coffey Road, Columbus, OH 43210 or [sherratt.1@osu.edu](mailto:sherratt.1@osu.edu)

# 3-TIME SPORTS FIELD MANAGER OF THE YEAR. 6 SEASONS OF STEPPING UP TO THE PLATE. 1 TURF TEAM THAT WILL NOT BE STOPPED.

Congratulations to Charlotte Knights' Sport Turf Manager Matt Parrott, and his entire turf team, for bringing home the Sports Turf Managers Association in partnership with the MiLB, Triple-A Sports Field Manager of the Year Award three years running. Playing consistently at that level takes work. So they always leave everything on the field, with an assist from John Deere Mobile Service and Support.

See for yourself at [JohnDeere.com/Sportsturf](https://www.johndeere.com/sportsturf)



**JOHN DEERE**



---

# Often Imitated, Never Duplicated.

---

RTF,<sup>®</sup> Barenbrug's groundbreaking Rhizomatous Tall Fescue will provide your recreational areas and sports fields with the foundation they need. With improved *disease resistant* Tall fescue varieties such as Thor,<sup>™</sup> and BarRobusto<sup>™</sup> a TWCA<sup>®</sup> certified *drought tolerant* variety, you can be certain this grass will preform year-in and year-out. Don't settle for second-best, RTF<sup>®</sup> will ensure your field is fit for play.

Let us help you plant your legacy. See how at [barusa.com](http://barusa.com)



 **BARENBRUG<sup>®</sup>**





# SportsField

## MANAGEMENT

Formerly  
SportsTurf magazine

**SPECIAL EDITION**

The Official Publication of the Sports Turf Managers Association

An Open Letter to Government Leaders **2** | Q&A with Dr. Grady Miller **3**  
Field Recovery **4** | Resources **9**

## Route to Recovery

# Healing Through Sports





8805 New Hampshire Ste E. | Lawrence, KS 66044 | P: 785-843-2549 or 800-323-3875 | F: 785-843-2977 | [www.STMA.org](http://www.STMA.org)

#### An Open Letter to Government Leaders:

Thank you for your leadership as you strive to protect your citizens during these challenging times. On behalf of the more than 2,700 members of the Sports Turf Managers Association (STMA), we also thank you for recognizing their importance to your communities by designating them essential personnel.

Please continue to do so and allow them to manage the living biosystems that are sports fields, parks, trails, landscape and other open areas. Our members manage professional sports stadiums, municipal parks and sports facilities, K-12 school fields, and collegiate sports fields — recreational and at the division level. Managed turfgrass provides many benefits to communities. It plays an important role in cooling the environment, filtering pollutants and sequestering carbon, to highlight a few.

Social distancing is inherent within our profession. Our members work outdoors, and their tasks do not place them in close proximity to other workers, thus reducing risk. They have reorganized their schedules and that of their crews so that even when on breaks they are not together in one place. Wearing masks and other protective clothing is not new to our members. These professionals follow strict standards and wear personal protective equipment while executing some of their duties, such as applying plant protectants.

Without continued minimal maintenance sports fields will take longer to bring back to safe, playable surfaces. In some cases, without care, a field may require total renovation with further economic impact to your community. The unplanned cost of rebuilding a field and the time that it takes could be avoided by allowing sports field managers to continue maintenance.

STMA supports your efforts and hopes that you will continue to designate field managers as essential. The work they do now lays the groundwork for the best possible recovery for the fields in your community and will result in the safest surfaces when the athletes can return to play.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Jimmy Simpson".

STMA Board of Directors  
Jimmy Simpson, CSFM, President

**Mission:** STMA advances professionalism in sports field management and safety through education programs, awareness, and industry development.

## Q&A WITH DR. GRADY MILLER

**Q: A stay-at-home order due to the COVID-19 pandemic is preventing me from maintaining our school's athletic fields. I'm an employee of the school system and was sent home. With very little advance notice, I was not able to get my bermudagrass fields ready for "no maintenance." With no idea of when I can return, I do not know what to expect when I do return. What are your thoughts on how these fields will look without any maintenance for months?**

**A:** In terms of field care, unlike damage from high winds and excessive water, this pandemic resulted in a rapid shutdown with no allowance for a timely return to work. I know the situation is a bit different for everyone. Even within the same county or school district, the ability to work on a field may be different.

For example, our state's pandemic response differentially influenced how different groups can do the same job. If fields were under a maintenance contract from an outside vendor, then the vendor could continue maintaining fields as an essential service unless the property owners restricted access. At the same time, I do not know of any secondary schools that would allow school employees to come onto school property to maintain fields. In a hybrid example, our university research facility had to file an exception request to allow one designated employee onsite to minimally maintain our turfgrass — infrequent mowing, disease prevention, irrigation checks — for two half-days a week. That is about five percent of the man-hours we normally have working in midsummer.

As for your question, you do not know how long it will be until you can return and begin the most basic maintenance tasks. Obviously the longer the fields are abandoned, the higher the chance they will be in poor shape when you return. The good news is that you probably already have your pre-emergence weed control in place. At your location, you probably have also applied the first spring fertilizer application. Both these will be to your advantage. But without mowing, the

bermudagrass is going to continue growing vertically and laterally. So the field is going to take on the look of a pasture, and your baseball and softball fields will see increased encroachment into the clay skinned areas.

In years past, I have worked with several schools that have abandoned fields over the summer due to budgetary reasons. Most bermudagrass fields that are abandoned for a few months during the growing season can be returned back to at least moderate condition in a few weeks due to the toughness and resiliency of the grass. Start by scalping the turfgrass to a reasonable height with a rotary mower. With warm temperatures, bermudagrass responds very quickly to fertilizer and water. The bermudagrass is also very tolerant to a wide range of pesticides, allowing a manager to aggressively control most weeds without fear of killing the bermudagrass. Edging and dragging clay can be effective at removing the runners, and a non-selective herbicide can be useful if the encroachment has been widespread.

The better the shape of the field when you left it, the better shape it is likely to be in when you return. If adequate time or resources are not available for necessary renovation before use, some may decide to scalp down the canopy and overseed the bermudagrass with ryegrass. That can get one through fall and/or spring use until more extensive renovations are made in 2021.

The leadership at the national STMA organization and state chapters have been publishing written information and hosting webinars to help sports field managers deal with the many situations and stresses this pandemic has caused. Be sure to visit [www.stma.org](http://www.stma.org) and your state's chapter resources for more recovery information. **SFM**



### **Grady Miller, Ph.D.**

Professor and Extension Turf Specialist  
North Carolina State University

### **Questions?**

Send them to Grady Miller at North Carolina State University, Box 7620, Raleigh, NC 27695-7620, or e-mail [grady\\_miller@ncsu.edu](mailto:grady_miller@ncsu.edu)  
Or, send your question to Pamela Sherratt at 202 Kottman Hall, 2001 Coffey Road, Columbus, OH 43210 or [sherratt.1@osu.edu](mailto:sherratt.1@osu.edu)



# Field Management after COVID-19

By Adam Thoms, Ph.D., Nick Christians, Ph.D., and Grady Miller, Ph.D.

Perhaps you are among the many athletic field managers that have been told to lock the gates to your facilities and not report into work until the COVID-19 situation improves. Although we don't fully know how long we will be away from facilities, we are hopeful this will provide some tips to help you manage your facility and get it back to a safe and high-performing athletic field. No matter if you are managing a synthetic or natural playing field, you should start by conducting a visual tour of all of your fields. You don't know who has been on them, and what they may have left behind on the fields that could cause a safety hazard. You can use the STMA Playing Conditions Index as a great guide to help you note potential safety hazards that need to be addressed.

The time it takes for your athletic field recovery after COVID-19 will depend on several factors, but the two most pressing would be:

1. Maintenance practices that were allowed or performed (if any) during the period of social distancing.
2. The level of growth on the athletic field — a field that was dormant or just emerging from dormancy should not need as long of recovery time as those that were actively growing

All athletic traffic should be withheld while the fields are recovering to prevent excessive stress and wear on the field.

## MOWING

Mowing is important to turfgrass because it maintains top growth within specified limits, controls undesirable vegetation intolerant to mowing, sustains turfgrasses, and produces a functional athletic surface for sports fields. Returning a field to a reasonable height of cut will need



*Photo provided by Ben Polimer, fields and grounds coordinator, Town of Weston, Mass.*

to be one of the first tasks to accomplish in the route to recovery. Mowing frequency depends on mowing height, turfgrass growth, level of maintenance, weather conditions and climatic conditions. Shorter grass needs to be mowed more often. If the turfgrass cannot be maintained on a normal schedule, then it is suggested that the height of cut be raised. This can reduce the need for frequent mowing. An added benefit to a higher height of cut in the short term may be an increased rooting depth. The use of plant growth regulators (PGRs) to limit shoot growth can be another tool to reduce mowing frequency.

## Height of cut

Optimal mowing height depends on the type of grass, use and the time of year. A standard rule in the industry for moderately to intensively maintained turfgrass is to never remove more than 1/3 of the grass blade in a single mowing. Removing more than this results in physiological stress and possible heat or cold injury. If the athletic field was not mowed and excessive growth occurred during

the COVID-19 outbreak, the field should slowly be brought back down to the normal height of cut if there is adequate time. This may take several weeks or months depending on growth levels. Removal of more than 1/3 of the grass blade could result in thinning of the athletic field with spots that are void of turfgrass. If growing a cool-season turfgrass under cooler weather, height of cut may be lowered sooner than if the weather conditions are hotter. It would be just the opposite if growing warm-season turfgrasses. If growing bermudagrass and it has not been mowed since early spring, the total biomass may be removed at once to allow the plant to regrow from stolons and rhizomes. While this will shock the plant, bermudagrass is extremely resilient if there is adequate soil moisture and nutrition.

### FERTILITY

Turfgrass fertilization is one of the most important cultural practices needed to maintain a healthy, dense stand of turfgrass. The practice is especially important given the amount of traffic and intensity of use of many sports fields. You will find a wide range of publications, presentations, and podcasts regarding principles in sports field fertilization programming developed by STMA. In many cases, a field taken out of maintenance for several weeks to months may require fertilization practices that more resemble a grow-in program than routine fertilization practices. A field manager should assess the field condition under the recent level of management and make that determination. It should be noted that nitrogen fertilization is a primary driver of shoot growth given adequate soil moisture and sunlight.

#### Fertilizer programs — cool-season turfgrass

With active growth occurring in the spring and fall, the best time to fertilize cool-season turfgrasses with nitrogen (N) is from March to June and September to December, with the specific dates obviously varying based on geographic location. When grass is actively growing is the ideal time to optimize the turfgrass response to a fertilizer application, particularly of a nitrogen source. How much do you apply? The soil test results will tell you how much fertilizer to apply for nutrients other than N, and while many soil test reports will not contain soil N levels, they will provide a recommendation for how much N to apply and when to treat. As a rule of thumb, most state extension recommendations suggest readily available N (water soluble) should be in the range of 0.7 to 1 lb. N per 1,000 square feet per active growing month. If the turfgrass has not received any N applications during the active growing season and maintenance is being resumed after a lengthy period of time, then some N fertilizer is likely warranted. However, avoid the use of quick-release N sources, as these will increase growth rates during periods that mowing frequency may be limited. Depending on the time of year and the current weather conditions, a

field manager may want to start with applications of 0.25 to 0.5 lb. N per 1,000 square feet to promote recovery. If it is late summer/early fall, then additional amounts may be beneficial to produce more roots, rhizomes and stored food (carbohydrates). Fertilization promotes recovery from drought and heat-related injury sustained during the summer months. It may also help to overcome mowing shock after bringing the height of cut down following reduced or intermittent mowing during the summer. Fertilization in the late fall (October – December) is advantageous because most nutrients are used for root growth. There is not much vertical growth. Late fall fertilization can also be beneficial to early spring green up. One thing to consider that is very important from an environmental perspective: DO NOT apply fertilizer to frozen soils. These nutrients will likely end up in a nearby water source by way of surface movement across frozen soils.

**Avoid the use of quick-release N sources, as these will increase growth rates during periods that mowing frequency may be limited.**

#### Fertilizer programs — warm-season turfgrass

With active growth occurring throughout the summer, the best time to fertilize warm-season turfgrasses is from May to September. Since this period of time may coincide with reduced maintenance due to COVID-19, some compensatory fertilizer applications may be necessary when full maintenance programs can be resumed. This may be especially important if the turfgrass has not been fertilized or mowed for weeks or months at a time. Once regular mowing resumes, additional fertilization can help the plant recover from the new mowing stress and the need to regenerate root, rhizome, stolon and stem tissue. If minimal maintenance is/was allowed during these months, it would be advantageous to put out moderate rates on N fertilizer using slow-release forms. Since N promotes shoot growth, it may be important to apply more moderate rates than normal so as to reduce mowing needs. Rates used may be dependent on fertilizer N-release rates. Nitrogen applications in the fall on heavily trafficked fields have been shown to enhance turfgrass recovery and increase stored food reserves until a killing frost occurs. An ideal way to fertilize in the fall is to apply lighter, more frequent N levels.



# Route to Recovery

## CORE PRACTICES

Walk your facility to assess the site.

Identify and prioritize tasks.

Design a timeline for returning fields to safe play - you know your fields the best!

Communicate your field recovery timeline with your stakeholders.

## Primary Cultural Practices

### **Mowing height**

Follow the 1/3 rule to return to desired height of cut. Mowing frequency will probably increase, and it may take a few weeks to achieve appropriate height.

## Secondary Cultural Practices

### **Field repair**

Seed or sod worn or problem (low) areas.

### **Plant Growth Regulators**

Apply as needed to reduce vertical growth and encourage lateral growth.

## Fine-Tuning Tasks

### **Aesthetic mowing**

### **Other practices**

Edging, level valve boxes, attention to auxiliary areas, etc.



The longer you have been away, the more time it will take to return fields to safe play.



### **Irrigation**

Fields may need more irrigation during this stressful recovery period.

### **Fertilization**

Follow soil test recommendations. Use controlled release nitrogen sources if possible.

### **Weed, Insect, and Disease Management**

Consider pest population tolerances. Make changes to control populations based on your Integrated Pest Management (IPM) program and time away from the field.

### **Cultivation**

Use caution adding stress to an already stressed turfgrass field. Pull cores if the field is ready and you have time for recovery prior to play.

### Overseeded Warm-Season Fields

If a warm-season field is in very poor shape in the fall due to limited summer maintenance or other factors, overseeding a warm-season field with a cool-season grass may provide a desirable playing surface in late fall, winter and spring. But a warm-season grass field that goes into the winter in poor shape (even under overseed), almost always comes out in the spring in poor shape. So plan on field renovations next year if a weak field is overseeded this fall. Perennial ryegrass is an excellent cool-season grass for overseeding, as it can be effectively removed with transition herbicides. Other cool-season grasses are not as effectively removed with these herbicides. If spring transition of the cool-season grasses was delayed due to maintenance issues, avoid slower or older herbicides such as Kerb (pronamide) or Manor (metsulfuron), as these will take longer to remove the perennial ryegrass than newer transition herbicides such as Revolver (foramsulfuron), Katana (flazasulfuron) or Monument (trifloxysulfuron-sodium). Bermudagrass needs 100 days without competition to provide the highest quality warm-season playing surface.

### Tips to get the most out of your fertilizer

- Soil test to determine the nutrient and lime needs of the plants.
- Depending on the turfgrass species, apply nitrogen in the amounts needed to maintain actively growing turfgrass relative to the amount of maintenance that can be provided.
- Apply nitrogen in multiple applications at lighter rates throughout the growing season if possible.
- If applications will be made infrequently, consider using slow-release (water insoluble) fertilizer.

### IRRIGATION

Turfgrass plants need water to survive. Irrigation is often used to supplement rainfall, especially in drier climates. Under reduced or minimum maintenance, irrigation is likely to be needed less than when turfgrass is maintained at low mowing heights and high fertility. The deeper rooting due to higher heights of cut will provide a greater reservoir from which to draw groundwater. But in some cases, turfgrass may still benefit from irrigation to reduce excessive drought stress. Soil texture, compaction issues, rootzone depth and infiltration capacity all influence the frequency of irrigation events and the amount of water that is applied. If your turfgrass cannot be routinely monitored, it may be beneficial to establish irrigation runtimes based on historical evapotranspiration data for the area. These can often be accessed from state climate offices or extension services.

Turfgrass may need more frequent irrigation during the recovery period. This will help with stress as the turfgrass is being brought back down to the proper height

of cut. Similarly, if some spots on the field need seed, you may need to supply water from irrigation in frequent small amounts while the seed germinates. Limiting foot traffic on soils with higher soil moisture levels will be crucial to keep excessive wear from taking place on wet soils.

### CULTIVATION

Soil cultivation can be a great tool for turfgrass management; however, if the plant is already under stress, this can lead to additional stress on the plant. Field use should be limited after cultivation practices to allow the field to recover. If the field is going to be used quickly into the recovery process, cultivation may not be the best idea. Similarly, if a sports season was canceled, take advantage of the extra field downtime and schedule an extra cultivation practice if adequate finances, labor and equipment are available.

Two minimally disruptive cultivation methods that will allow some gas exchange into the rootzone, but are not as stressful to the plant as core cultivation are as follows:

**Spiking** — Pointed blades attached to a horizontal shaft rotate above the soil surface. Spiking creates very little surface disruption but will stimulate shoot and root growth to improve plant recovery from wear and stress. Spiking should not be substituted for traditional core aeration.

**Slicing** — V-shaped knives mounted on disks attached to a slowly rotating steel shaft create deeper and longer perforations in the turfgrass compared to spiking. Slicing can be beneficial in promoting recovery of turfgrass when core aeration would be too stressful to plants. Slicing should not be substituted for traditional core aeration.

### TURFGRASS WEEDS

Weeds are described as plants growing where they are not wanted. They can disrupt the appearance and safety of maintained turfgrass surfaces. In addition, they compete with desired turfgrasses for space, water, nutrients and light. Turfgrass weeds may be grasses, grass-like plants (rushes and sedges), or broadleaf plants with annual, biennial and/or perennial life cycles.

Weeds are classified as summer annuals, winter annuals, biennials and perennials. Annuals complete their life cycles in one season by flowering, maturing seed and dying. Summer annuals germinate from late March through July, depending on the location. They flower in the summer and die in the fall. Summer annuals are best controlled with an application of a preemergence herbicide; however, you may have missed the opportunity to apply these herbicides due to maintenance restrictions. Depending on your location in the U.S., this delay could be just a week or two, in which case you could use a preemergence herbicide with some post-emergence activity on summer annual weeds. Two examples are Echelon (sulfentrazone +



prodiamine) and Dimension (dithiopyr), or you will want to consider applying a post-emergence product later in the spring. Most preemergence herbicides are effective for 12 to 16 weeks, so if you plan to overseed or add additional turfgrass seed, keep in mind the timing of the preemergence herbicide application. Winter annuals germinate in the fall and early winter, and usually die with warm weather in the spring or summer; however, they may continue to grow into early summer in cool seasons. Due to the cancellation of spring sports, do not worry about these weeds this year if you are limited on finances or time, as they will naturally die out before use resumes. Biennial weeds have a two-year life cycle. They create vegetative structures (leaves, stems and roots) during the first year, and reproductive structures (flowers and seeds) the second. Perennials live more than two years and may produce seed each season. Many herbicides are labeled for control

## Accurate diagnosis of disease is a critical first step in their management.

of biennial and perennial weeds in natural grass athletic fields. Find the best product for the weeds present at your facility. Make sure to read and follow the label for control of these weeds, especially if there are temperature restrictions on the label.

### TURFGRASS DISEASES

While turfgrass diseases may be a significant issue at your location during times of low maintenance, other cultural practices will probably be more important to address than disease incidence. Accurate diagnosis of disease is a critical first step in their management. It is suggested that you utilize local diagnostics and recommendations if diseases are thought to be a limiting factor in turfgrass recovery.

### TURFGRASS INSECTS

Several insects and mites feed on natural grass, but not all of them cause economic or aesthetic damage. Many are harmless, some are beneficial, and some are pests. Only a few cause significant damage and need immediate control. Keep in mind that insects are only one of many potential causes for thin or brown grass. The presence of a few pest insects does not mean that you have a problem. Most turfgrass areas have a few insect pests, but the

level of infestation is far below the density of pests needed to cause visible turfgrass injury. Correct identification of the problem can save money and prevent unnecessary pesticide applications.

### SYNTHETIC TURF

If your surfaces are synthetic, you may want to consider sweeping the fibers to stand them back up and collect any debris that may have ended up on the field. Once fibers are no longer upright, they are much harder to manage, and often the life of the field is shortened. If the field was used heavily while you were away, you may want to consider having it tested for surface hardness to see if you need to have a deeper decompaction effort carried out. Even if your field did not have any use while you were kept away, wind can blow in organic matter. It would be a good idea to sweep the field to remove any organic matter that may impede drainage.

### INFIELD SKINS

Baseball and softball infields will also need attention once you are allowed to return to the facilities. Do a visual observation for any larger rocks or stones that may have ended up on the field while you were away, as well as low spots that may hold water. If the conditions were dry while you were away, you will want to scarify the surface and try to work water down into the infield to rebuild the moisture. Regardless of moisture, check the edges of the infield for the formation of any lips or buildup of material. Removing these lips or buildup will limit bad hops from the ball.

This may seem like an insurmountable effort in front of you, but once regular maintenance resumes many of these practices will quickly fall into a routine. Communicate with end users regularly about the importance to get the field maintenance under control before resuming use. Using a field prematurely will cause excessive wear and damage, resulting in an unsafe playing surface. Also don't forget to reach out to your fellow STMA members for advice on various questions that may pop up, as they are probably working through the same issues as you. **SFM**

*Adam Thoms, Ph.D., is assistant professor specializing in commercial turfgrass management, Iowa State University, Department of Horticulture, Ames, Iowa.*

*Nick Christians, Ph.D., is University professor of turfgrass management, Iowa State University, Department of Horticulture, Ames, Iowa.*

*Grady Miller, Ph.D., is professor and extension turf specialist, North Carolina State University.*

# RESOURCES

## COVID-19 RESOURCES

**Centers for Disease Control and Prevention** – Keep up to date with the latest on coronavirus

**Johns Hopkins Coronavirus Resource Center** – Keep up to date with the latest on coronavirus

**United State Department of Labor** – Coronavirus resources

**Occupational Health and Safety Administration** – Responding to coronavirus in the workplace

**EPA Coronavirus Resources**

**USA.gov** – Unemployment help

**US Department of the Treasury** – CARES Act

**CARES Act 2020** – How it impacts individuals

**Consumer Financial Protection Bureau** – Protect yourself financially during coronavirus

**These tips** can help you deal with anxiety, depression and isolation.

## STMA COMMERCIAL PARTNERS VIRTUAL LEARNING LAB

**Toro** – The Water Zone Podcast

**Beacon Athletics** – GroundskeeperU

**Beacon Athletics** – Ballfield Dimension Guide

**Aquatrols** – Hazard Communication

**ProField Consulting** – En Espanol

**RainBird** – Knowledge Center

**Pioneer Athletics** – Education Center

**Ewing Irrigation** – Education Webinars

**FieldTurf** – Webinar – FieldTurf Genius (this is a product-specific webinar)

**Hunter Industries** – Hunter University  
All courses and webinars can be taken/ viewed for free by creating a free **Hunter ID** that will also give users access to free tools like My List, Hunter Runtime Calculator, and much more.

- **Product Technician** = 5 CEU's
- **Hydrawise Specialist** = 1 CEU
- **ACC & Two-wire Specialist** = 3.5 CEU's
- **I-CORE/DUAL Specialist** = 2.5 CEU's
- **Irrigation Design Specialist** (Imperial or Metric) = 4 CEU's

## ADDITIONAL RESOURCES

For additional resources and information on the Route to Recovery, visit the STMA **Institute of SportsField Management** page.

Also, be sure to check out *SportsField Management* magazine, the *SportsFieldManagementOnline.com* website, and the *SportsField Management Insider* e-newsletter.