ple, did the applicant show up for work regularly? Was she always on time? Was he hard-working and honest while on the job?

Provide training

Paul Ramina is big on training. He feels that in order for people to do a good job for him, they must know exactly how he wants that job to be done. Whether you or your assistants are doing the training, be sure that it is presented in ways that are easy to understand.

Demonstrate a skill or technique for your people, and explain to them the reason for doing it in a certain Their understanding of the "whys" is important. Watch them while they are performing the task the first few times, and be generous with praise and positive reinforcement. This not only trains your people; it also instills pride in them.

Make sure that your people know the sports that are played at your facility

Paul likes to give his new employees lessons in golf and golf etiquette. Learning about the sport gives them the big picture they need to understand the importance of what they are doing. It also makes them more attentive to, and respectful of, golfers who are using the course. A greater understanding of their part in the overall mission of your facility will instill pride in your crewmembers and will motivate them to do a truly good job.

Show your crew that you respect them

Never forget that your employees are men and women who are working hard for the wages they earn. Like you, they have spouses, children, relatives and friends. They have needs and desires and dreams. Be sure that you treat your crewmembers as equals, and let them know that everything they do is a truly important part of your overall mission. Praise people when they do a good job. Smile at them. Show some interest in them as human beings.

Don't forget the perks

Perks are things that you do for employees that you really don't have to do. They're little extras that make your people feel good, feel special and, most of all, feel glad to be working for you. Many perks cost very little, particularly when you consider the benefits they give you. Paul Ramina provides his crew with muffins and donuts during their breaks. On the last Friday of the month the club puts on a barbecue for the crew at lunchtime. Awards are given to the Employee of the Year. and long-term crewmembers receive 5-, 10-, 15-, 20- and 25-years pins that they wear to work. Slightly more expensive perks include club jackets, uniform laundry service and a Christmas party (complete with door prizes).

Dr. Rovner is a top management consultant in Los Angeles, and the nation's leading authority on hiring and keeping the right people. He may be reached at (818) 340-6963 or by e-mail at BusinessPsych@aol.com.

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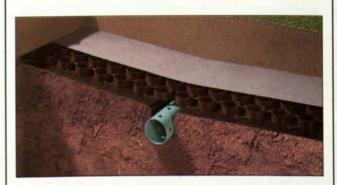
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Managing Turf with Reduced Light

by Dr. R.R. Duncan

arious kinds of shade can affect turfgrass performance. Tree shade is the most widespread problem, affecting both light quality and light quantity (intensity) as well as providing tree root competition for moisture and nutrients. Buildings, beams, mounds and mountains can reduce light quality and quantity, but is normally of shorter duration and this diffuse light is often better quality than tree shade. Low light intensity caused by smog or monsoonal weather patterns, cloudy or foggy events and multiple rainy days provides a third source of light quality and quantity problems, with most of the adverse effects from reduced light intensity.

The primary limiting factors that categorize reduced light intensity, quality or quantity include: A filtering effect (poor light) of the red and blue wavelengths necessary for photosynthesis; and absorption and reflection effects (diffuse or indirect light) which decreases light intensity. Both of these factors limit photosynthesis (poor light duration or quality or both). Many times, all three components are affecting turf performance.

The problem in managing turfgrass with reduced light is that the components of light are constantly changing, both in terms of daily sun movement and climatic changes as well as seasonally with tree leaves dropping in the fall or emerging in the spring. Management decisions are aimed at a moving target and can challenge even the best turf managers.

Light reduction problems in sports fields can occur due to:

* Prolonged cloudy, foggy, rainy or smoggy conditions in open stadiums

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* Open-roofed or partially enclosed stadiums with minimal sunlight

penetration

Stadium configuration that prevents direct sunlight penetration in certain areas of the field or with retractable roof opening/closing that provides programmed, scheduled sunlight penetration to portions of the field

Domed stadiums

* Open fields with partial tree shade or shade from nearby buildings or mountains

Turf response to reduced light

Primary turf and microclimate responses to low light conditions include:

* increased humidity

- prolonged exposure to lower soil and air temperatures
- reduced/restricted air movement
- * longer periods of dew/frost
- * lower respiration
- * lower transpiration
- * increased shoot succulence
- greater etiolated growth (hormonal imbalance)

- * depleted carbohydrate reserves in crown region
- reallocation of carbohydrates from roots to shoots

Secondary microclimate and turf factors adversely affecting turf include:

- 50-60 percent shorter root systems
- * increased disease pressure

algae buildup

gradual thinning of turf density

* soil compaction

* drainage problems

salt buildup from either poor quality water or fertilizers or both

faster injury response

- * slower recovery from injury
- * competition with weeds for nutri-
- reduced hardening to winter temperatures or other stresses
- reduced nutrient demands (i.e. less photosynthesis, less growth)

The morning vs. afternoon shade dilemna

Better turf growth normally occurs with morning sun because of:

- * faster burn-off of dew; reduced disease pressure
- minimal high temperature stress reduced evapotranspiration because of lower temperatures in the morning
- maximum net photosynthesis/ reduced respiration (which minimizes carbohydrate demands during these less stressful environmental conditions)

Increased turf stress problems with morning shade occur because of:

- prolonged moisture on the turf/maximum exposure to disease
- high direct temperature stress in the afternoon, which depletes carbohydrate reserves (high indirect temperature stress)
- * high evapotranspiration during the period of maximum photosynthesis
- * increased respiration during the period of maximum photosynthesis cloudy, reduced light intensity

continued on page 43



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www.industrybooks.com

Sports Fields: A Manual for Design, Construction and Maintenance, by Jim Puhalla, Jeff Krans, and Mike Goatley,

This book covers every important aspect of planning, design, construction and turfgrass maintenance with hundreds of illustrations and step-by-step procedures to help you get the job done right. No other book provides such intricate detail, combined with easy-to understand guidance. Sports Fields is unparalleled in quality, practicality, and scope. In Part 1, you will learn the basics of turfgrass science and culture. Part 2 provides complete instruction on facility design, construction and renovation - for football, soccer, field hockey, lacrosse, and more. Part 3 covers other facilities such as playground surfaces, and volleyball courts. Procedures for equipment use, quality assurance, and safety are covered in Part 4. In Part 5, you will learn about stadium management, sand fields, turf paints, and many more useful topics. 600 pgs. 4084 \$79.95

Turfgrass Maintenance Reduction Handbook - Sports, Lawns and Golf By Doug Brede

A major strength of the book is the wealth of information presented on management strategies, complete with do-it-yourself instructions for site selection, soil preparation, seed rates and planting, turf establishment, and renovation. Time- and cost-saving techniques for effective mowing, thatch control, pest management, water conservation, water management, fertilizer use, stress management, and pest management are presented in a user-friendly manner — complete with helpful checklists, and step-by-step instructions. A vast amount of useful reference material will ensure the success of your maintenance program. No other book covers virtually every aspect of successful turf management. 4188 \$95,00

Maintain It Easy(Keep It Safe),

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provide unique insight and understanding of athletic

The ABC's Grounds Maintenance: Volume 1 Softball Fields,

by Ground Maintenance Services

A videotape training series for softball groundskeepers. Computer graphics and detailed explanations provide unique insight and understanding of athletic field care. These videos also make great teaching tools for new, part-time & temporary field assistants. Features settings of hitting pads; chalking batters box; chalking fair line; sinking multiple pitching; rubbers; sinking multiple bases; breaking up hard clay; surfaces; water removal in clay; areas; edging the running track. VIDEO. 40 minutes. 4067 549.95

The ABC's Grounds Maintenance: Volume II Baseball Feilds,

by Ground Maintenance Services,

A videotope training series for Baseball groundskeepers. Computer graphics and detailed explanations provide unique insight and understanding of athletic field care. These videos also make great teaching tools for new, part-time & temporary field assistants. Features setting/rebuilding; homeplate area; rebuilding pitchers mound; sodding dugout walkways; application of crushed; brick; rounding infield crescent; complete infield; repair of turf; fertilizing & overseeding, patterns; reducing infield lips; removal of dew from grass; water removal in clay areas; edging the running track. VIDEO. 55 Minutes.

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with afternoon showers, after morning shade, resulting in poor light duration and reduced photosynthesis

Management strategies

To offset low light conditions, five basic strategies should be used to maximize turf performance:

* choose the right turf species and

cultivar/blends

fertility program adjustment

aeration, air movement, drainage adjustments

preventative disease control

mowing height adjustment, especially on less shade tolerant grasses

Shade/low light intensity tolerant turfgrasses

Turfgrass shade tolerance mechanisms involve:

* leaf orientation, some with upright leaves, which results in light capture problems with reduced intensity/diffuse light (hard fescues) and other grasses with more prostrate, horizontal growth, which tends to maximize light capture (St. Augustine grass) photosynthetic efficiency: C3 grasses (cool season) tend to be more shade tolerant than C4 grasses (warm season)

Typical shade related disease problems include powdery mildew with season grasses Helmithosporium and gray leaf spot with warm season grasses. Gray leaf spot on perennial ryegrass has become a major problem in recent years.

Relative shade tolerance of cool season grasses:

Excellent: red fescue, orchardgrass, poa supina

Good: fine fescues (dry shade), poa trivalis (moist shade)

Fair: colonial bentgrass, perennial ryegrass, meadow fescue

Poor: Kentucky bluegrass (exception: A-34/Nugget, because of good disease resistance)

Relative shade tolerance of warm season grasses:

Excellent: Panicum laxum (tree shade, low light intensity), Seashore paspalum (low light intensity, poor tree shade tolerance)

Good: St. Augustinegrass, zoysia-

grass (tree shade, low light intensity)

Fair: centipedegrass, bahiagrass, carpetgrass (tree shade, low light intensity)

Poor: buffalograss, bermudagrass (tree shade, low light intensity)

Bullseye bermudagrass has performed quite well in BankOne ballpark

Management adjustmentsfertility

Nitrogen

Excess Nitrogen causes succulence, reduced tolerance to traffic, scalping problems, etiolated growth and salt buildup.

Use slow release or foliar nitrates in prescription format (small

amounts as needed).

* Use organic slow release products (dark in color, will absorb heat

units during the day).

Most important application is during the fall, which promotes recovery from summer stresses and reduces losses from winter

*Spring application increases turf density and vigor.

Phosphorus and potassium

Moderate levels of P and high levels of K are needed to:

* Maintain a functional root sys-

* Provide adequate K, which is the first line of defense against leaf spot disease

Fall applications are extremely

important

Know the salt index of your fertilizer

Keep track of the amount of salt going into your fields, since salts can build up in shaded areas. High salt index fertilizers include (in decreasing order) potassium chloride, ammonium nitrate, sodium nitrate, calcium chloride, urea, potassium nitrate, ammonium sulfate and calcium nitrate.

Check the root system regularly

A short root system would benefit from a cytokinin application (seaweed extract or Roots 1-2-3) to enhance root maintenance. and development Shallow rooting of less than 2 inches can be associated with three to four hours morning shade in cool season Grass grown in severely grasses. shaded areas may have 50 to 60 percent less root volume compared to the same grass grown in full sun.

Additional management adjustments

These could include the following:

* Enhance air movement (fans)

* Aeration to promote water infiltration/percolation and minimize compaction or water logging

Good drainage

* Cap with a sand layer or establish a sand profile zone down to drainage tiles

Grow lights (temporary)

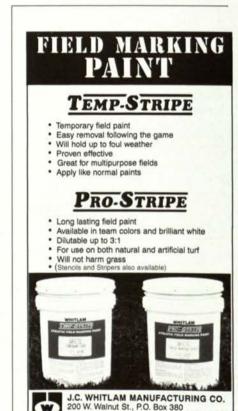
* Raise mowing heights

* Do not mow as often

* Heating coils buried underneath the shaded micropocket problem areas to raise the temperature and hopefully enhance growth of roots and shoots

Conclusions

Proper management does not alleviate the reduced light intensity problem, but can minimize the negative effects that impact turf performance. Micromanage the reduced light problem areas on your field.



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Different ways to skin a cat

by Floyd Perry

At the recent 2001 STMA conference in Tampa, much of the parlor and hallway conversation revolved around communication between groundskeeper and coach, groundskeeper and supervisor and in general, the specific duties surrounding our responsibilities on the job.

Whether we as professional groundskeepers possess a CPR card for safety and liability or advance our job skills through a pest control class for extra CEUs, much of the general population identifies our profession primarily as mowers of turf. That needs to change!

One method I believe progressive groundskeepers can use to demonstrate their individual skills on their property is to create visual interest. As GMS visits various parks, recreation centers or school campuses, I'm very impressed with the types of suggestive and helpful signage used. I honestly believe to change the typical "Guy on the street" attitude toward facility maintenance personnel, our profession needs to create positive images of our facilities that can change and elevate our professional image.

One groundskeeper in Grain Valley High School in Missouri enlisted the help of four interested fathers and created a football playing surface for their 2000 homecoming comparable to an NFL playoff field prepared for television viewing. Their high school has 520 students but one would never know that from seeing their facilities.

The men and women in our groundskeeping industry are some of the most creative, innovative and industrious folks on the payroll and all they need is some quality support and encouragement. At times, an "atta boy," "thank you" or "nice job" goes a long way.

Communication is a two-way street. Take your before-and-after photos, create your reference documentation and more importantly,

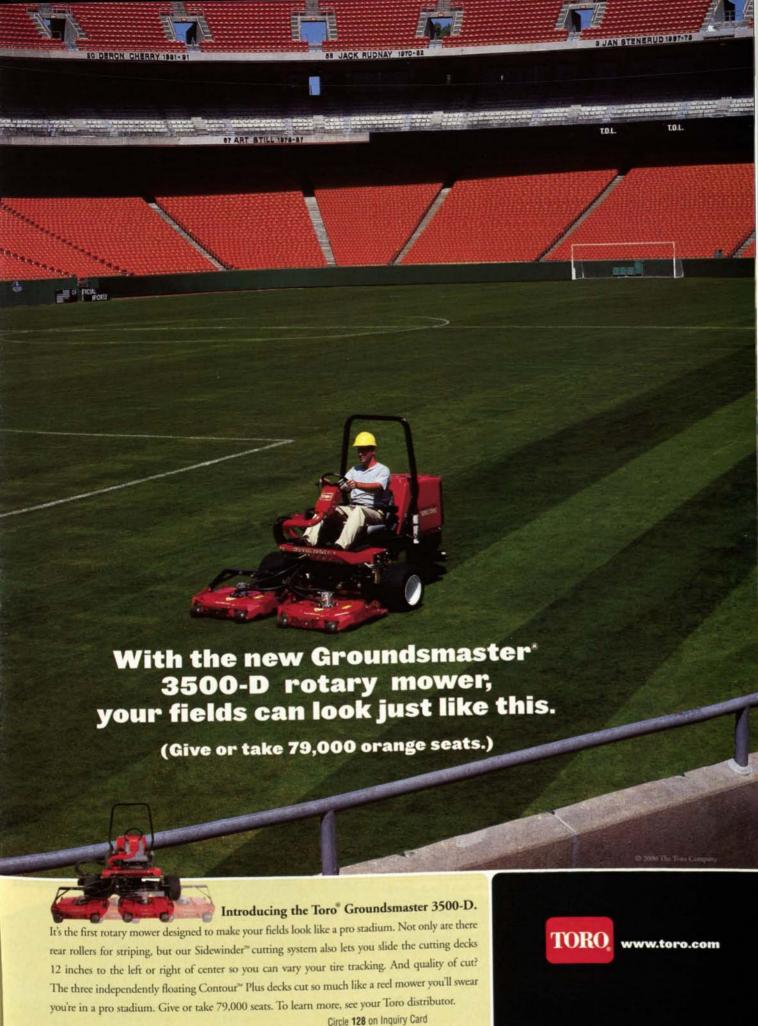




create awareness of your work ethic by presenting a quality image on your property so your efforts will be recognized even when you are of the clock.

I'm currently writing my fourth pictoral guide, "Turf Grows by the Inch and Is Killed by the Foot." If you would like to submit soccer or football photos, please send them to me. It will be your opportunity to show off you skills.

Floyd Perry is author of three books: The Pictorial Guides to Quality Groundskeeping: I—Covering the Bases; II—There Ain't No Rules; and III—Maintain it Easy, Keep It Safe. He has also produced three videos: The ABC's of Grounds Maintenance: Vol. 1, Softball; Vol. 2, Baseball; and Vol. 3, Soccer/Football Field Refurbishment. For more information about Perry's tips, call (800) 227-9381, or e-mail grounds@digital.net.



Chapters in Action

KAFMO's Fifth Annual Athletic Field Conference

by Mike Dickert

he KAFMO/STMA chapter held its 5th Annual Athletic Field Conference on Feb. 9, 2001, at the Holiday Inn in Grantville, Pa. The program included Boyd Montgomery, CFSM, of the Sylvania (Ohio) Recreation Department, presenting "Sports Field Design, Installation, and Maintenance" and "Managing Multipurpose Facilities;" Mike Dickert of Manor Township presenting "How We Do Things;" Dr. Doug Linde of Delaware Valley College presenting "Turf Growth Throughout the Year;" and Jeff Fowler of Penn State University Extension presenting "Is Your Field Safe?"

An annual awards program was initiated as well as a new scholarship program for students majoring in athletic field management.

The first ever Founders Award was given to Don Fowler for his years of dedication to promoting improvement and safety of athletic fields. Don was also instrumental in the formation of the KAFMO chapter. As such, the Founders Award will now be know as the Fowler Founders Award in Don's honor. The Pequea Valley High School Soccer Field, located in Kinzers, Pa., was named the 2000 KAFMO Field of Distinction. The award was presented to sports turf manager James Hagy for his fine work producing a high quality field with limited resources.

The Waddington/Harper Scholarship, named for Penn State professors Dr. Donald Waddington and Dr. Jack Harper, was given to Matt Slingerland, John Fox, and Ryan Radcliffe. The recipients are all Turfgrass Management students interested in athletic field management careers upon graduation. Congratulations to all our award winners.

Recognition was given to several KAFMO members who won national awards at the STMA annual conference in Tampa. Dr. Andrew McNitt was awarded the Dr. Bill Daniel Award for outstanding teaching and research in athletic fields; Mr. Steve LeGros was awarded the STMA Professional Soccer Field of the Year for Hershey Stadium;

continued on page 50



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The Sports Turf Managers Association (STMA) is an organization of professionals representing all segments of the sports turf industry. Our members work to combine the science of growing turfgrasses and the art of maintaining both natural and artificial athletic field materials to produce safe and aesthetically pleasing playing surfaces.

STMA provides members with a variety of benefits, including: educational opportunities; support for sports turf research; facilities tours; a national awards program; certification program; job hotline; website: www.sportsturfmanager.com; access to the STMA National Conference & Exhibition; complimentary subscriptions to Sports Turf Manager and sportsTURF Magazine; and MUCH more!

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Chapter News

continued from page 48

and the College Baseball Field of the Year was presented to Kevin Yeiser, Keith Evans and Steve Sproles of Lebanon Valley College.

Thanks goes to the many vendors who sponsored the event by providing a top quality trade show for the attendees to enjoy during breaks.

Chapter News

Arizona: The Arizona Chapter's Spring Kick Off Meeting will be held on Friday, April 20, from 8:00 a.m. to 2:30 p.m. at the Sun Devil Stadium of Arizona State University in Tempe. The Chapter is planning a Golf Tournament for the last week of May. Contact Chris Calcaterra, City of Peoria, at 623-412-4226 for information on this event. Other upcoming events include: a Karsten Turf Grass Facility Tour, with transportation from Phoenix to Tucson by bus. Dr. Dave Kopec will provide the tour and information about current research projects. Those interested in reserving slots, please contact Bill Murphy. Planned for June is the Summer Flagstaff Conference on Cool Season Grass. It will be hosted by Flagstaff Parks and Recreation. Phillip Garcia is the contact for this event.

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The Arizona Parks and Recreation Annual Conference will be held in Phoenix on Aug. 16. For information on this event, please contact Chris Calcaterra, City of Peoria. For information on the chapter or other upcoming events, contact: Bill Murphy, City of Scottsdale Park, Recreation and Facilities Manager, at e-mail: bmurphy@ci.scottsdale.az.us or phone: 480-312-7954.

Colorado: The CSTMA Board is working on the upcoming calendar of events for 2001. For information on the Colorado Chapter or upcoming activities, log on to the Chapter's Web site: www.CSTMA.org or call the CSTMA Chapter Hotline: 303-346-8954.

Florida: For information on the Florida Chapter or pending activities, contact John Mascaro at 954-341-3115.

Gateway: For information on upcoming events or on the chapter, contact: Mark Jennings at 314-983-5345 or Jim Anthony, Saint Louis University, St. Louis, at: 314-977-2956.

Indiana: The Indiana Chapter will hold its Spring Meeting on April 18 in conjunction with the Parks and Recreation Department of Columbus, Ind. Also planned is an early June Regional Meeting at Bloomington, Ind. For information on the Indiana Chapter or pending activities, contact: Terry Updike, B & B Fertilizer, at 219-356-8424.

Iowa: The Iowa Chapter will be joining the Minnesota Chapter for the annual Chapter Clash on July 13 and 14. More details will be announced soon.

For information on the Iowa Chapter or upcoming activities, contact Lori Westrum at The Turf Office at 515-232-8222 (phone), 515-232-8228 (fax) or e-mail: Lori@iowaturf-grass.org.

Michigan: For information on the chapter or other pending events, contact Rick Jurries, West Ottawa Public Schools, at 616-738-6974 or click on your computer to www.mistma.org to visit the chapter's NEW Web site.

Mid-Atlantic: The MAFMO Chapter has elected their 2001 Board. President is David Navarro; Vice President is Walter McKain; Secretary is Grove Teates; Treasurer is Bob Shumate; Immediate Past President is Tim Moore, CSFM. Board members are: Tim Anderson, Dale Stevens and Al Capitos. For information on the MAFMO Chapter or pending activities, contact the Hotline: 410-290-5652.

Mid-South: For information on the Mid-South Chapter or upcoming events, contact: Robert Bodi at TURF419@aol.com or Jim Calhoun at 901-755-1305.

Midwest: The Midwest Chapter will tackle a volunteer field renovation project for Avon Township Little League on Saturday, April 28, beginning at 8 a.m. The rain date for this project is May 5, with the same starting time.

Other upcoming events include: the Big 10 Regional Workshop in Bloomington, Indiana, on June 5; the