Fig. 1: Overall layout of plots at the GTI in Guelph.


Fig. 2: Difference between 8 cm fertilized, no pesticide plot (left) and 4 cm non-fertilized, no pesticide plot (right) at GTI.

management programs: conventional, IPM, alternative and no-pesticide. Within each management program, the plots were subdivided into three superimposed treatments including: fertility (0 kg N/100 m^2 vs. 2.0 kg N/100 m^2), mowing height (4 cm vs. 8cm) and irrigated vs. non-irrigated to demonstrate the effect that these treatments have on turf quality. The amount of irrigation was based on rainfall values. Unlike the previous two years, this year there was little rainfall and the effects of irrigation vs. non-irrigation could be observed.

The trial started at all three locations in late May and continued until mid-November. Visual ratings and mowing were carried out weekly while the application of fertilizers, monitoring of pests, and the application of pest controls were carried out according to each of the four management programs and their superimposed treatments. A summary of the monitoring and insect sampling techniques is provided in Table 1 of the Spring 2005 issue of the STM.

GTI Results

Turf Quality: Overall turf quality was highest in conventional plots, followed by IPM, alternative and no-pesticide plots, respectively. More specifically, the conventional, fertilized 8 cm plot and the IPM fertilized 4 cm plot had the highest overall ratings. In addition, turf quality within each management program was affected by the superimposed effect of fertility and mowing. Fertility improved turf colour, density and showed a drastic reduction in the weed population (see Fig. 2). Lastly, a higher mowing height (8 cm) improved turf density and made a large, observable difference in colour.

Broadleaf Weed: After each broadleaf herbicide application, there was a noticeable reduction in broadleaf weeds throughout the conventional and IPM plots. These results show that continual management through conventional or IPM methods reduce overall weed coverage. As for the alternative plots, the percent weed cover was similar throughout this season. In the no-pesticide plots, the percent weed cover decreased 15.93% in comparison to last year, although the amount of clover did increase.

Crabgrass: Crabgrass was not found in any of the plots of all four management programs. The effect of conventional, IPM and alternative programs on crabgrass control could not be examined.

Turf Insects: Neither hairy chinch bug nor sod webworm was found in any of the plots of all four management programs. Only one grub was found in a no-pesticide plot, which is below the IPM threshold level of grubs, therefore no treatment was necessary.

Brantford Results

Turf Quality: Overall turf quality was highest in the conventional plots, followed by IPM and no-pesticide plots, respectively. The application of fertility and higher mowing height also improved the colour and density of the turf. In all six 8 cm, fertilized plots, it was observed that grass clippings were damaging parts of the turf. This caused some turf to die completely, leaving large bald spots in the plot. Fortunately, by the end of season three, these spots had almost completely recovered, Fig. 3.

Broadleaf Weed: Percent reduction in broadleaf weed cover was barely observable in conventional plots because they had very few broadleaf weeds to start with. In the IPM plots, reduction in broadleaf weed cover has been observed. The no-pesticide plots showed a general reduction in broadleaf weed cover over the season and the percent broadleaf weed cover was much higher in the non-fertilized than the fertilized no-pesticide plots.

Crabgrass: Crabgrass was found in all three management programs but in num-

Fig. 3: Recovering turf areas affected by grass clippings in Brantford.

bers below the IPM threshold level of crabgrass. All IPM plots were spot treated with a herbicide. As a result, this treatment completely cleared the conventional plots of crabgrass and drastically reduced crabgrass amounts in the IPM plots.

Turf Insects: Hairy chinch bug, sod webworm and grubs were found in all three management programs but in numbers below their IPM threshold levels.

London Results

Turf Quality: Overall turf quality was higher in the IPM than the no-pesticide plots. In addition, turf quality within both management programs was affected by the superimposed effect of fertility and mowing. Applying fertilizer and mowing at a higher mowing height improved the colour and increased the density of turf.

Broadleaf Weed: Percent broadleaf weed decreased over the season in the IPM plots and remained relatively the same throughout the season in the no-pesticide plots.

Crabgrass: Crabgrass was found in the plots of both management programs, but in numbers below the IPM threshold level for crabgrass. Hence, all plots that contained crabgrass were spot-treated rather than broadcasted with herbicide.

Turf Insects: Hairy chinch bug, sod webworm and grubs were found in both management programs but in numbers below their IPM threshold levels. No treatment was necessary.

Effect of Fertility on Broadleaf Weed Cover (All Locations)

The application of fertilizer has been observed to improve turf quality by increasing the 'greenness' and density of turf under all four management programs (Fig. 4). In addition, the percent broadleaf weed cover was greatly reduced in fertilized plots as compared to non-fertilized plots. The difference in turf quality between fertilized and non-fertilized in the no-pesticide plots has been drastic. Over the three seasons of the project, it has been observed that broadleaf weeds have decreased in the no-pesticide plots in all three municipalities.

Effects of Irrigation vs. Non-Irrigation

This was the first year that showed differences between the irrigation and non-irrigation plots. Specifically, GTI showed the most drastic results. The non-irrigation plots went completely dormant for a week, see Figure 5. Fortunately, these plots recovered and the drought had no real effect on the amount of pests found.

Overall Pesticide Reduction

The breakdown of the number of pesticide applications among the four lawn care management programs in the three municipalities is illustrated in Table 2 in the Spring 2005 issue of STM. Overall, there was a 50-66.67% reduction in the number of pesticide applications in the IPM plots as compared to conventional plots in Brantford and London. This is the same reduction as last year.

Educational Opportunities

There were different types of communication and educational opportunities available throughout the season. At the Brantford location, a sign illustrating the purpose and method of the project was created and it provided information on the project to members of the public that pass by the park of the Glenhyrst Art Gallery. In London, questions regarding the project were sometimes asked by the users of Watson Park. The results from Year 1 and 2 were reported at the Ontario Turfgrass Symposium and the Landscape Ontario IPM Symposium in 2004 and 2005. Visit www.gti.uoguelph.ca/OPAC to view these reports. Results from the three years will be presented at OTS 2006 and the 2006 LO IPM Symposium.

Conclusions

Turf quality was highest in conventional followed by IPM, alternative and no pesticide programs. Despite the 50-66.67% reduction in the number of pesticides used, the quality of the turf in IPM plots was reduced only slightly. In addition, mowing at a higher height (8 cm) improved the density of turf, while the application of fertilizer improved turf colour and density and reduced broadleaf weed cover in the no-pesticide plots.

Turfgrass insects were not an issue in all three municipalities. They were all present in numbers below the threshold for IPM pest control. Crabgrass infestation was also not a problem. It was only found at Brantford and London in numbers below its IPM threshold level. As for broadleaf weed cover, a couple of trends were observed. The no pesticide plots experienced a decreasing trend of broadleaf weed coverage from Season 2 to Season 3. Also, fertilizer greatly decreased the amount of broadleaf weed infestation. This can prove to be an alternative way to manage weeds without using pesticides.

The cumulative results of the past three years have shown that IPM is a more environmentally friendly and efficient method of managing pests in turfgrass in comparison to conventional methods. It was also found that using fertilizer alone can greatly control broadleaf weeds and may be less costly than using pesticides all together.

Fig. 4: GTI. Difference between the 4 cm non-fertilized (left) and 8 cm fertilized (right).

Fig. 5: GTI. The effects of no irrigation and limited rainfall on the non-irrigation plots.

The next step of this project is to educate members of the community about the advantages of using IPM on their own lawns rather than conventional methods. By spreading the word, we can help protect the environment and have beautiful lawns as well.

For further information regarding this project, please visit the project website: www.gti.uoguelph.ca/OPAC. It contains general information, photos, presentation slides and final reports of the project. ♦

Acknowledgements

This project was funded by the Ontario Pesticides Advisory Committee and coordinated by the Guelph Turfgrass Institute. I would like to acknowledge the following people: Pam Charbonneau, OMAFRA; Doug Mewett, OPAC; Erica Gunn, GTI; Bruce McGauley, City of London; Dennis Wale, City of Brantford; Norm McCollum, GTI; Mark Meloun, City of Brantford; Mark Donahue, City of London.

STA Member Profile

Tanya Steffler • Parks Pest Management Technician • City of Oshawa

1. What is your role with the City of Oshawa?

In the capacity of the Parks Pest Management Technician, I implement the Pest Management Plan (PMP) for the City. The plan involves technical support, analysis, guidance and development of turf maintenance for sports fields and parks within the City of Oshawa. The PMP also includes our public education and outreach program. I direct the grass-cutting contractors and deal with public complaints/enquiries regarding grass or pests.

2. Provide some details about the Pest Management Plan.

The PMP was approved by Council in 2003. It is a five-year plan with a goal to reduce and eliminate the use of pesticides within the City of Oshawa. The intent of the plan is to proactively use Integrated Pest Management (IPM) principles to improve the health of turf on public lands along with public education in lieu of a by-law.

The plan follows IPM principles and includes: soil testing, fertilizing, aerating, overseeding, cutting turf at 3" and using various alternative products like corn gluten, soil additives and vinegar. Trials of various products have been conducted on different sports fields to determine their efficiency.

The plan is a proactive approach and includes an extensive public education and outreach program. In 2005, a comprehensive advertising program was approved by City Council. The program included radio and newspaper ads, posters and a brochure which was mailed to every land owner in the City. The website provides details on the PMP and other information, www.oshawa.ca/mun_res/pest.asp. Newspaper articles will be run in 2006. In 2005, the PMP budget was $450,800.

3. What kind of team do you work with?

Our team includes William Slute, Parks Manager; Leo Stafford, Supervisor Grounds Maintenance; two full-time skilled labourers; and myself. During the summer, the skilled labourers are dedicated to the PMP and in the winter are reassigned to the forestry crew for juvenile tree maintenance. Indirectly, there are four full-time operators cutting parks and the staff that manage the off-site facilities.

4. What are you and your team responsible for?

We manage the PMP turf maintenance program for 124 parks covering about 2,100 acres. Included are 46 soccer fields and 72 ball diamonds.

5. What is the biggest challenge in your job?

Balancing user group expectations with the maintenance of the sports fields. The PMP has greatly increased the amount of maintenance the fields receive and the amount of time the fields need to be closed. Time is critical for the expected results to be achieved.

6. What is the most satisfying part, what makes the job worthwhile for you?

Our plan is working! The Guelph Turfgrass Institute report prepared for the City of Oshawa indicated the soil and turf in most of our sports fields was in poor condition. A maintenance plan was created and implemented. In fact, some parks have shown a 100% improvement. Monthly photos taken of the sports fields shows the results that our hard work has accomplished.

7. What is the biggest misconception about your job?

This position can be perceived as straightforward and simple. However, since it is such a new position, even in Canada, it requires a great deal of work. Consideration of what, where and when products will be used, rates, tests to be done, trials, equipment, user group demands, weather, timing and other aspects.

8. What is your educational/employment background?

I have a B.Sc. in Plant Biology from the University of Guelph and an Environmental Technology Diploma from Fanshawe College.

9. What do you enjoy doing outside of the workplace? Hobbies, favourite past times?
I enjoy being outdoors, so my summer hobbies include hiking, canoeing, fly fishing and identifying plants and birds. When the weather turns colder I quilt, knit and do other crafty projects to keep my hands busy.

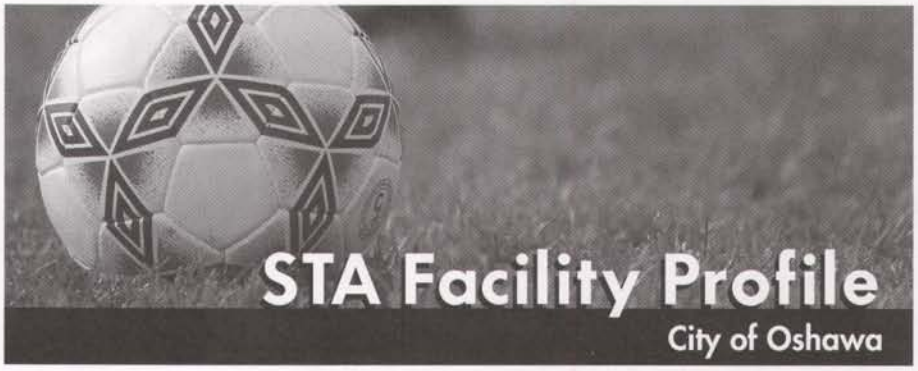
10. What direction(s) would you like to see the industry, as a whole, move towards?
I think the industry should concentrate more on Pest Management Programs, which incorporate both Plant Health Care and Integrated Pest Management, instead of passing pesticide by-laws. Education about pests, alternatives and pesticides is extremely important. Public education is the key and can in itself reduce the amount of chemicals being applied to gardens and lawns. We still want to maintain a healthy and aesthetically attractive community. Unless we as a municipality take the lead by showing and educating the public that a PMP works and that pesticide use can be reduced and eliminated, implementing a by-law will not be successful. To view the website that the City of Oshawa has created for our PMP, please visit www.oshawa.ca/mun_res/pest.asp.

11. What do you consider to be the biggest benefit of being a member of the STA?
The networking is a great asset as this position is so new. The knowledge that is available through all the members is a resource that has made my job easier.

FACILITY PROFILE...

1. Name, location of facility.
The City of Oshawa has 118 athletic fields including 4 sport complexes. These include Lakeview Park, Lakefront West, Civic Auditorium and Alexandra Park.

2. General facility information.
Lakeview Park (8 diamonds lit and irrigated), Lakefront West (5 fields, 3 diamonds), Civic Auditorium (4 fields)



STA Facility Profile
City of Oshawa

and Alexandra Park (1 field, 4 diamonds). Additional fields within other park areas.

3. What types of sports fields are on site?
Soccer, baseball, football and rugby. Ultimate frisbee and lacrosse are also played on some of these sites.

4. How many employees are involved with turf care?
To maintain the 4 sites there is 1 full time staff person and 19 seasonal staff.

5. How many acres of turf are maintained? How many acres of sports turf?
The staff maintains 178 acres which include 63 acres of sports turf.

6. What percentage of this acreage is irrigated?
Eighty percent of the facilities' sports turf is irrigated.

7. What is the primary type of turfgrass? Name of varieties.
The majority of the turf is Kentucky blue grass, however, our overseeding program consists of a mixture of perennial rye and fescue grasses.

8. Is yearly overseeding part of your sports turf maintenance program?
The City has had an overseeding program for many years. After the Guelph Turfgrass Institute (GTI) report was completed, a heavy overseeding program was started in the fall of 2004. Late play prevents overseeding at all locations.

9. How many times do you fertilize?
We granular fertilize at least three times a year if scheduling and weather permits. Liquid fertilizer and other product trials have been applied a few times this year. **>>>>**

Lakeview West in July – not a pretty site! Dramatic improvements were seen by October.

10. Do you aerate? Topdress?
We have a core and slit aerator. We try to aerate every field twice a year and the high profile fields 4 or more times a year. The City used to topdress, but the GTI recommended against it.

11. Has your municipality banned the use of pesticides?
No, the City of Oshawa has not instituted a ban. Instead, we have initiated a 5-year Pest Management Plan. The plan allows the use of pesticides if the pests are over a pre-determined threshold limit.

12. Are community user groups involved or have they been involved in the construction/maintenance of facilities? In what manner?
The Ball Diamond Council is involved and provided input into the original design and construction of Lakefront West. City staff is responsible for all maintenance of the 4 facilities. The Soccer Council meets monthly with city representatives to discuss any issues. We exchange ideas and promote the benefits and values of the Pest Management Plan (see article beginning on the front cover).

13. How many hours per year are the fields permitted? Who permits them? Are the fields ever closed during the season to give them a rest? How much input do you have in the amount and timing of use?
In 2005, the soccer fields were permitted just under 18,500 hours. The Facility Booking Department in Oshawa permits all sports fields. Fields are closed if weather conditions are poor. Spring and fall closures are based on the conditions of the fields and required maintenance. We are currently developing an open/closed policy for the sports fields. The Outdoor Sports and Facility Study (OSFS) identified supply and demand issues particularly for soccer. The OSFS identified the need, when the supply is met, to rest at least 6 fields on a rotating basis. ♦

Winter Driving Survival Kit

It's a good thing to keep a winter survival kit in your vehicle. Having essential supplies can provide some comfort and safety for you and your passengers should you become stranded.

Recommended Items
- Ice scraper/snowbrush
- Shovel
- Sand or other traction aid
- Tow rope or chain
- Booster cables
- Road flares or warning lights
- Gas line antifreeze
- Flashlight and batteries
- First aid kit
- Fire extinguisher
- Small tool kit
- Extra clothing and footwear
- Blanket
- Non-perishable energy foods, e.g. chocolate or granola bars, juice, instant coffee, tea, soup, bottled water
- Candle and a small tin can
- Matches

— Winter Driving - Be Prepared, Be Safe, Ontario Ministry of Transportation, http://www.mto.gov.on.ca/english/safety/winterdrive/winterdrive.htm

PROMOTING SPORTS TURF CAREERS

SPORTS TURF ASSOCIATION SCHOLARSHIP PROGRAM EXPANDING FOR 2006

The Sports Turf Association is a professional association committed to the promotion of safe, natural sports turf through education and professional programs. In order to further this goal, the STA established a Scholarship Program in 1993 and has since awarded 24 scholarships. In the past, we have provided scholarships in two specific programs of study: the University of Guelph's Turf Managers' Short Course and the Ontario Diploma in Horticulture.

To continue to encourage, support and provide leadership to those considering a career in the sports turf industry, the STA has restructured its Scholarship Program, expanding it to include additional programs of study. Beginning in 2006, one scholarship in the amount of $1,000 may be awarded annually.

The Scholarship Program is funded through STA membership fees. The award is intended to assist students with the cost of tuition, books and related expenses.

For those currently furthering their education, we encourage you to apply for the STA Scholarship if you:

- are a Canadian citizen or landed immigrant;
- are currently enrolled in and have completed one full year of education in a post-secondary program in turf management at a recognized college or university in Canada; or, have completed the University of Guelph's Turf Managers' Short Course, or equivalent, in the current year;
- have been employed in the sports turf industry in the current year (including seasonal employment) by a member of the Sports Turf Association;
- have a desire to pursue a career in the sports turf industry.

For those who do not fit the above criteria, please pass along information about this opportunity to applicable employees including students.

Scholarship Policies

- Scholarships are non renewable.
- Candidates will be judged on the basis of the information contained in their Scholarship Application Form and support material.
- Applications must be received by November 1, 2006 for consideration.
- Incomplete applications will not be considered.
- Announcement of the scholarship recipient will be made at the Association's Annual General Meeting.

Scholarship Application Requirements.

Applicants must submit:

- A completed STA Scholarship Application Form;
- An official transcript of their grades for the previous year in the required program of study;
- A letter of recommendation a) from their employer who is a member of the Sports Turf Association; and, b) from their academic advisor;
- A typed essay, 1200-1500 words in length, on a sports turf related topic of their choice.

PREVIOUS SPORTS TURF ASSOCIATION RECIPIENTS...

Turf Managers' Short Course

Lorelie Eckel-Braun (1994)
Tommy Joe Coffey, Jr. (1995)
Gordon Noble (1995)
Stuart Roberts (1996)
Kim Nihls (1996)
Robert Crump (1997)
Derek Jazic (1997)
Perry Davie (1998)
Gordon Bruce (1998)
Howie Kumagai (1999)
Karen Richter (2000)
John D'Ovidio (2001)
John Peek (2002)
Tennessee Propedo (2003)
(No recipient in 2004)
Jeff Fortune (2005)

Ontario Diploma in Horticulture

Kevin McLeod (1997)
Duncan Graham (1998)
Brian Brown (1999)
Robert Gill (2000)
Gerald Rees (2001)
Craig Hinschberger (2002)
Glen Kralka (2003)
Randy McCord (2004)
John Marshall (2005)

Applications will be available online...

SPORTS STA TURF ASSOCIATION

Report From the International Turfgrass Research Conference

PERFORMANCE OF ESTABLISHED COOL-SEASON GRASS SPECIES UNDER SIMULATED TRAFFIC CONDITIONS

Traffic tolerant turfgrass species are required if natural grass surfaces are going to compete with synthetic turf systems. This research was conducted to determine which of six cool season grass species were the most tolerant to wear traffic stress. The species and cultivars evaluated in this study were:

- "Unique" Kentucky bluegrass
- "Catalina" perennial ryegrass
- "Millennium" tall fescue
- "Penncross" creeping bentgrass
- "Cindy" strong creeping red fescue
- "Supra" Supina bluegrass

Overview

The study took place at the University of Iowa Horticulture Research Farm from 2001 to 2003. It was conducted on mature stands of each of the above named species. Overseeding was done by hand, broadcasting seed on five different dates in 2001. This was done to simulate the practice of seeding before games to allow for the cleating-in of seed. In other words, the traffic of the athlete's cleats was used to establish good seed to soil contact and press the seed into the seed bed. No overseeding was done in 2002 or 2003. Traffic stress was applied using a GA-SCW wear simulator with cleated rollers and differential slip action. There were two levels of traffic applied, low and high. Low traffic received two passes with the wear simulator three days a week (Monday, Wednesday and Friday). The high traffic plots received four passes with the wear simulator three days a week. Traffic was applied from April 20 to May 15 and August 20 to October 26, 2001. In 2002, traffic was applied from August 19 to October 28.

Plots were rated for visual quality on a scale of 1-10 with 10 being the best and turfgrass cover was recorded as a percentage from 0-100% on five dates throughout the duration of the experiment. Each plot was also rated for % of original grass species, percent invader species (grass species other than the species that was seeded and weeds) and exposed soil.

Results

Species differences were observed on 4 of the 5 observation dates over the two years of the study. The ranking of the species for their tolerance of wear was the same for both the high and low trafficked plots, however the differences were greater for the high trafficked plots.

The relative ranking of turfgrass traffic tolerance from best to worst was: Kentucky bluegrass = perennial ryegrass > tall fescue = supine bluegrass > creeping

bentgrass > fine fescue. This ranking does not agree with Beard who gave the following relative traffic tolerance rating of: tall fescue > perennial ryegrass = Kentucky bluegrass = fine fescue > creeping bentgrass. Dr. Beard did not rank supine bluegrass in his book.

The percent of plot showing original species vs. invader species vs. bare soil was a good indication of both wear stress tolerance and recuperative potential combined. There were no significant differences between Kentucky bluegrass and perennial ryegrass at the high and low traffic treatments. These two species had greater than 90% of the original species at the end of the study with a very small percentage of weeds and bare soil.

Fine fescue had more exposed soil and invasive species than other species indicating that fine fescue would require continual overseeding to stand up to high or low traffic.

Supina bluegrass at the low and high traffic rate was equal to creeping bentgrass at the low traffic rate. At the high traffic rate, creeping bentgrass had approximately 20% bare soil.

Tall fescue and supine bluegrass performed the same for turfgrass cover, invasive species and exposed soil under high traffic. Supina bluegrass had more exposed soil than tall fescue under low traffic. Tall fescue has good wear tolerance because it has high total cell wall content based on percent area, but it has poor recuperative potential because it is a bunch type grass. Supina bluegrass has good wear tolerance, but its strength is its aggressive recuperative potential after traffic. These two species give the same traffic rating but the response mechanism is different for each species.

Based on this research the best species for wear tolerance are Kentucky bluegrass and perennial ryegrass.

This research paper is published in the *International Turfgrass Society Research Journal*, Volume 10, Part 1, 2005, pp 393-397. ♦

— D.D. Minner and F J. Valverde, Summarized by Pam Charbonneau, OMAFRA

NEW FROM G.C. DUKE

The Verti-Drain 1575 60" Cat. 2 Three Point Hitch Overseeder is the fastest, most versatile and efficient overseeder on the market with its innovative, unequalled disc slitting system which firmly plants the seeds in the ground, providing outstanding seed to soil contact and protection from the elements. Boasting 2.95" spacing, each seed coulter is individually suspended, accurately following terrain contours. The 1575's new seed box utilizes a proven roller design which allows the machine an infinite range of feed rates with all types of seed. With working speeds up to 9 mph, you can re-seed a football field in four directions in less than two hours. For more information, please contact Dick Raycroft, 1184 Plains Rd. E., Burlington, ON L7S 1W6, 1-800-883-0761 (ext. 116), e-mail draycroft@gcduke.com, www.gcduke.com.

STEWARDS OF THE GAME • MANAGING NUTRIENTS

18TH ANNUAL STA FIELD DAY COVERAGE CONTINUED • ARTICLES BY DR. ERIC LYONS & JOHN BLADON

STEWARDS OF THE GAME

Dr. Eric Lyons, Assistant Professor, Turfgrass Science, University of Guelph

Environmental stewardship is one of the most talked about subjects today, especially when the subject of turfgrass management is breached. All turfgrass managers should aim to be good environmental stewards. They should also aim to be something more; they should become stewards of the game.

A steward is defined as: 1) One who manages another's property, finances or other affairs; or 2) one who is in charge of the household affairs of a large estate, club, hotel or resort. Essentially, stewards are people who take care of things for society and future generations. The concept of environmental stewardship is based in making the right management decisions today to provide the best environment for future generations. I challenge each and every sports turf manager and turfgrass manager to not only be a steward of athletic fields and the environment, but also be a steward of the games played on the areas we work so hard to maintain.

Benefits of Sport

Often a disconnect occurs between turfgrass managers and the end users of turfgrass areas. The best way to alleviate this disconnect is to remind ourselves why we play sports and why areas to play sports are important to our society. There are many reasons why we play sports – the most obvious are the beneficial aspects to physical fitness and mental health. The physical fitness of future generations is at risk. With each generation we, and subsequently our children, become more sedentary. The availability and access to large open areas in which to play sports is essential to encourage ourselves and future generations to maintain a level of fitness. In addition, there are the mental benefits of competition and achievement that sports provide. There are also the life lessons that involvement in athletics can bring including team work, commitment and social skills that can only come from working closely with teammates and competing with other competitors. As turfgrass managers, we provide the safe and healthy environments that facilitate all the benefits that sport and athletics bring to our society.

Each day when turfgrass managers set out to do their job, the value they add to society should be in the forefront of their minds. Turfgrass managers do more than just maintain turfgrass athletic fields; they help maintain the physical, mental and social health of society. Never underestimate the importance of athletic fields and the opportunities and benefits having a safe place to play and engage in sport provide our children and those people who are young at heart.