new jersey turfgrass association
clippings
Green & World
njta
FALL 2004 | VOL. 56

Field Days 2004

...large crowds & the tours were great!

...it just doesn't get any better!

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Green World

Fall 2004 Vol. 56

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President's Message

By Marie Pompei, NJTA President

Marie Pompei
NJTA President

It's fall, my personal favorite time of year and change is in the air…

I hope you are all planning on attending the **New Jersey Turfgrass & Landscape Expo 2004 at the Taj Mahal Casino Resort in Atlantic City, December 7-9.** You will have the chance to hear the latest updates on Velocity herbicide research, Round-up Ready Bentgrasses and impending issues that affect the landscape and sports turf industries. Our **featured speaker for the General Session is Paul Caligiuri, U.S. National Soccer Hall of Fame honoree and soccer coach of Cal Poly Pomona, California who will speak on Team Effort – The Coach, The Player, The Field.**

Like golf? Like music? Well, you'll have to see **"Golf: The Musical" during the USGA seminar on Tuesday.** We also have an exciting new format for the trade show floor on Wednesday, which will feature a **Mardi Gras theme with great free food and entertainment.**

Bring all your employees. **Have your company meeting while attending Expo.** It's a great venue for gaining an educated staff and developing company goals and strategies for the coming year. Contact Dick Caton for room arrangements if this perks your interest.

This year's Expo will be dedicated to Dr. Richard G. Caton, retiring NJTA Executive Director. Dick has devoted his time and talents since 1993 to the NJTA, managing our events and developing important lasting relationships within the turfgrass industry. The NJTA has certainly grown within Dick's tenure and we are all extremely grateful to him for that. With that I would also like to acknowledge **Bea Devine, our retiring Executive Secretary who has ably served the NJTA in her capacity for over 20 years!** We hope you can attend to wish Bea and Dr. Caton a long healthy and happy retirement.

A great big WELCOME is also in order for NJTA's incoming Executive Director, Michelle Rickard! After 14 months of the search process, the NJTA board of directors in September voted unanimously on the hiring of Ms. Rickard. Michelle brings with her a wealth of talent and ideas on how NJTA can increase member benefits and efficiently run the association business. We are very excited about the possibilities for the future of NJTA and wish Michelle the best of luck in her new position!

Last but not least, this is my farewell president's message as my second term as NJTA President will end in December at our Expo. It was a great experience and I enjoyed having the opportunity to give back to the industry that has given so much to me.

Best wishes to all and I hope to see you in AC!

Sincerely yours,
Marie Pompei ■

NJTA Announces New Executive Director Hire

As you all probably know, Dr. Richard Caton, NJTA's Executive Director for the past twelve years is retiring as of December 31.

In preparation for this event, a search committee consisting of five NJTA board members was organized in the summer of 2003 to advertise and screen for Dick's replacement. This group faced a challenging task that encompassed many hours of investigation, introspection and planning. After receiving thirty-five responses to trade ads, the search effort was narrowed down to six well qualified candidates each of whom interviewed with the committee this past summer.

With much discussion, the committee settled on one person, Ms. Michelle Rickard, who was to be their number one candidate for NJTA's new spokesperson. On September 2, when put to the NJTA board of directors as a vote, Michelle was unanimously elected as the new Executive Director. Michelle will be working with Dr. Caton and Bea Devine, retiring NJTA Executive Secretary, in the next few months in order to make the transition to her new position.

Raised in Colorado, Michelle Rickard comes to us from the insurance industry where she was most recently the Member Services Manager responsible for maintaining positive association and member relations for a not-for-profit association in Trenton, New Jersey. Michelle was responsible for membership development and association activities such as organizing the Independent Insurance Agent Junior Classic (IIAJC), a national junior golf tournament.

New NJTA Executive Director Michelle Rickard is welcomed by Dr. Richard Caton

A strong computer background is another strength that Michelle will bring to the NJTA with experience in website development, desktop publishing and office management.

Let's all wish Michelle a bright future as the second Executive Director in the history of the New Jersey Turfgrass Association. Michelle is looking forward to meeting all of you at this year's Turfgrass Expo at the Taj Mahal, December 7–9.

The following phone numbers may be used until December 31, 2004: North Jersey Office 732-821-7134, South Jersey Office 856-853-5973. To contact the new executive director, please call 215-757-6582. ■

In Memoriam… Diane Shirlene Leon

The New Jersey Turfgrass Association and the entire green industry has lost a beloved friend and dedicated worker for the sod growers in New Jersey.

Diane Shirlene Leon, 48, passed away on September 27, 2004 at her home in the Pittstown section of Franklin Township. Born in Flemington on September 4, 1956, she had lived in the Pittstown section of Franklin Township for 27 years and previously she lived in Kingwood Township.

She was the manager of the Leon Sod Farm in Pittstown. Diane was a graduate of Delaware Valley High School Class of 1974. She was a member of the New Jersey Turf Grass Association and member and past president of the New Jersey Sod Growers Association.

Diane enjoyed quilting and photography. She also loved horseback riding. She taught twirling through the 4-H of Hunterdon County for many years.

Surviving are her daughters, Jamie and her husband, Rudy Wadle, of Franklin Township and Christine Berger of Franklin Township; two grandchildren, Rudy Wadle and Logan Wadle; and her parents, Samuel and Irene Leon of the Pittstown section of Franklin Township. ■

On The International Front

Recently NJTA Foundation President, Steve Chirip visited Ireland along with 28 others including hosts from Milliken Chemical. The trip covered Southern Ireland with the town of Killarney acting as base. From Killarney, trips to Waterville, Lahinch, Old Head and Tralee, where it is said in Tralee that its course was created by God and designed by Arnold Palmer! ■

NTEP Hires Dr. Jeff Krans To Improve Data Collection & Trial Maintenance Techniques

The National Turfgrass Evaluation Program (NETP) is extremely pleased to announce that effective July 1, 2004, Dr. Jeff Krans, retired professor of turfgrass science, Mississippi State University, has been hired by NTEP on a part-time basis. Dr. Krans will be conducting site visits to university trial sites on behalf of NTEP, using an 'NTEP Trial Audit' format to review, evaluate and discuss NTEP trials with researchers at the various trial locations across the U.S. Dr. Krans will visit approximately ten sites per year to work with researchers in addressing any problems they may have, discussing evaluation techniques and trail management issues. Dr. Krans' extensive experience with both cool-season and warm-season species makes him an excellent person to advise researchers working with NTEP trials. The hiring of Dr. Krans is part of a broader strategy by NTEP to improve its trial management, data collection, statistical analysis procedures and data presentation. Other aspects of the strategy include the investigation of automated technology for increased accuracy and cost-effectiveness in data collection, consideration of new statistical analysis procedures, better cultivar disease and insect tolerance information and presentation of state and regional data via the NTEP website (www.ntep.org) and NTEP CD. These issues and needs were some of those raised by attendees of the 'NTEP Listening Session' held in February 2004 in San Diego. ■

2,4-D Nears Approval, But The Vultures Still Keep Circling!

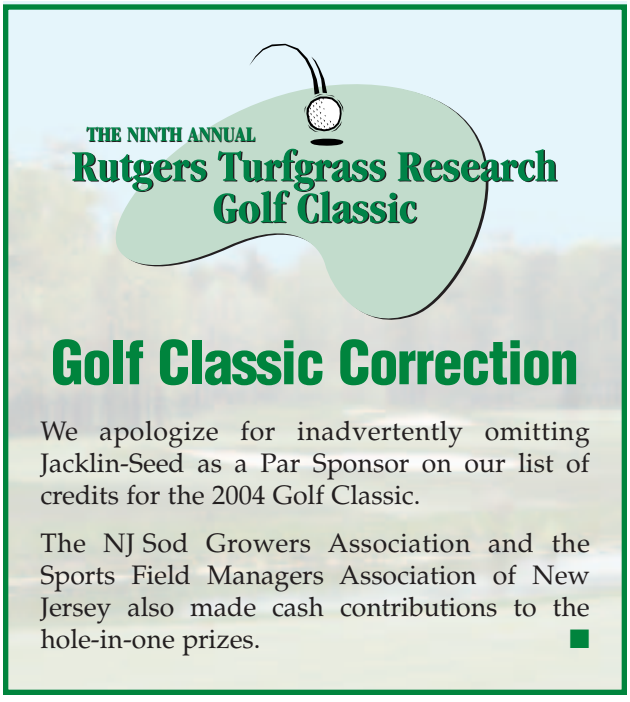
Reprinted From Industry Task Force II • www.24d.org

You may be aware that the herbicide 2,4-D is entering the final stages of EPA's reregistration process. EPA has concluded its review of more than 300 new research studies and their conclusions have been posted on their website for public comment.

Although we are generally satisfied with EPA's conclusions, we are concerned about attacks being made against the herbicide by activists groups during the public comment period.

As you are aware, 2,4-D offers economical, wide spectrum weed control. It is mixed with many other herbicides, both to increase the spectrum of weed control and to prevent the possibility weed resistance associated with some of the newer herbicides. After more than 55 years of extensive use, the U.S. Department of Agriculture reports (NAPIAP Report No. 1-PA-96), *"No scientifically documented human health risks, either acute or chronic, exist from the approved uses of the phenoxy herbicides (2,4-D)."*

That same report concludes that should 2,4-D be no longer available, the cost to users and consumers would total some $1.7 billion annually. With over 100 label uses, few crop protection products offer the same broad range of benefits. ■



Golf Classic Correction

We apologize for inadvertently omitting Jacklin-Seed as a Par Sponsor on our list of credits for the 2004 Golf Classic.

The NJ Sod Growers Association and the Sports Field Managers Association of New Jersey also made cash contributions to the hole-in-one prizes. ■

Big Time Merger Becomes A Reality! Members Of PLCAA & ALCA Have Voted – "YES, LET'S MERGE"

Reprinted From ProSource, September-October 2004

The Professional Lawn Care Association of America (PLCAA) and the Associated Landscape Contractors of America (ALCA) have been partners and leaders in the Green Industry Expo for the last 14 years. More recently, PLCAA's depth of experience and its legacy in the legislative and regulatory arena became the catalyst to join the governmental affairs efforts of the two associations and led to the hiring of a single lobbying firm in Washington, D.C. These business agreements, the commonality of relationships, and memberships that offered similar services were the foundation for a natural progression toward the exploration of additional opportunities between these two industry pace setters.

PLCAA's most recent Strategic Plan acknowledged that associations would mirror what many other businesses in other industries have seen with consolidations and mergers. Once the idea of an alignment with another Green Industry association became viable, ALCA was the natural partner. Strategically, operationally, and with vision, the time was right for the unfolding of this event. Exploratory discussions led to a series of formal summits that began 15 months ago. The agendas were purposeful and engaging and started with an exploration of synergies that a merger of PLCAA and ALCA could produce.

Those who have experienced mergers have an appreciation for this process. The unique feature was that it was not simply two sole proprietors striking a deal, but joint committees representing the respective memberships of both associations. This committee, with equal representation from the boards of directors and executive committees from both PLCAA and ALCA, continually focused on what would be best for the new associating and the Green Industry.

Those discussion points and the never-changing goal of developing a consensus required several meetings in different cities because the outcome would be a groundbreaking event. Each association enlisted the services of their own outside consultant to apply a special talent of balance, focus, and direction. The process required interim reports to the respective association boards to allow for their own private discussions and for the boards to vote regarding key milestone negotiating positions. Additionally, many hours of conference calls were conducted to engineer the final merger agreement, the new Articles of Incorporation, governance, and bylaws that were ultimately sent for membership vote.

Good luck PLCAA and ALCA! ■

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7 IRON PROFESSIONAL MOWING

Turfgrass Producers International Announces Midwinter Conference In Cancun, Mexico

Turfgrass Producers International (TPI) has announced that their 2005 Midwinter Conference will be held February 2-4 at the Hilton Cancun Beach Resort in Cancun, Mexico.

The three-day event is open to everyone in the green industry and is sure to provide attendees with numerous opportunities to gain valuable information through in-depth seminars, interactive panel discussions and TPI's popular Roundtable Forum. Educational sessions conducted by renown research scientists and other industry experts promise greater insight into many current topics and critical issues of interest. In addition, attendees will have an opportunity to view exhibits featuring the latest in new equipment and parts, chemicals, seeds and support services from more than 70 of the industry's leading manufacturers and suppliers.

Several pre-conference tours are scheduled that include visiting historical archaeological sites, botanical gardens, a captivating sea aquarium, a colorful and unique butterfly pavilion and the opportunity to visit a newly developing turf farm right outside of Cancun.

In keeping with the TPI 2005 Midwinter Conference theme, "Business with Pleasure," the event is in a paradise-like setting that's ideal for meeting with new vendors, talking with current suppliers and keeping abreast of industry-related information that is sure to heighten bottom-line profitability and enhance overall business operations.

For additional information about attending the TPI 2005 Midwinter Conference, contact TPI at 800-405-8873 or 847-705-9898, or visit ATPI's website at www.TurfGrassSod.org ■

2002 Ag Census Shows Strong Growth For $1 Billion (?) Sod Industry

New Jersey's Green Industry Economic Study is nearing final publication, but in the meantime, here are some interesting economic comments on the Sod Producer's Industry and some comments on the value of the turfgrass industry in the United States.

What's the real value of turfgrass sod production in the U.S.?

"We'll never really know," says Turfgrass Producers International (TPI) Executive Director Doug Fender. "What the Census of Agriculture for 2002 did show," he noted, "was that since the 1997 census the number of sod farms went up 13.6% to 2,124 and acres harvested went up 25% to over 386,500 acres. Regrettably, they can't report 2002 sales because of the way they asked their questions. However, by multiplying the 2002 acres times the 1997 sales figures, we arrive at what we think is a conservative total of $1,001,250,000... breaking the billion-dollar business barrier for the first time."

When queried by TPI, National Agricultural Statistic Service (NASS) officials said they were mandated by Congress to reduce the number of questions in the survey form, so they chose to combine the sales of all landscape materials into a single answer. The result is that the sales of nursery stock is mixed with corns, bulbs, tubers, shrubs, sod, etc. Now, there is no way to determine the sales figures for any single component. Fender said, "It's a lot like trying to unmake soup and create a tomato... it can't be done, and we're terribly disappointed because this was a historical report the industry relied on heavily."

Absent accurate sales figures, the sod industry showed considerable growth in most parts of the U.S.; however, there was decline in both farms and acres in some places.

Florida, Texas and Alabama lead the states in farms and acreage, as they did in the 1997 census with very strong growth. New York, South Dakota and New Mexico lead the decline in number of farms, with New Mexico, Iowa and Nevada leading the decline in acres harvested.

"Turfgrass sod production is a very tricky business," said Fender. "Just because there's a housing boom and general construction is very strong it doesn't mean sod's a business everyone should try to get into. I'm sure there are a lot of happy producers in Florida, Texas and Alabama and some real sad ones in New York, Dakota, New Mexico, Iowa and Nevada. Sod production can be very expensive

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SFMANJ's Third Annual Field Day – A Success!

Reprinted From Update SFMANJ, September - October 2004

On August 17, the sun shined, the engines hummed and the show was on.

The third annual SFMANJ Field Day was held at Community Park in Plainsboro, with thirty-four exhibitors. The day's program included a trade show area, barbeque lunch, equipment demonstrations and education sessions.

Equipment demonstrations ranged from infield soil grooming to all phases of lawn maintenance and renovations. A "hands on" demonstration period gave attendees a chance to rev the engines and kick the tires for themselves. The demonstrations culminated with a backhoe contest.

Ric Stephens, Washington Township Parks & Rec took home the prize.

Thanks goes to NJ Turfgrass Association, NJ Recreation and Parks Association, NJ Landscape Contractors Association and the Irrigation Association of New Jersey for their support.

Special appreciation goes to Jeff Cramer and his staff at Plainsboro Township for their generous help and cooperation.

So plan ahead for August 2005, when the Fourth Annual Field Day will be coming your way! ■

Please be advised of the availability of the Plant & Pest Advisory...

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http://www.rce.rutgers.edu/pubs/plantandpestadvisory

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For Office Use

The Debate Goes On!

Turfgrass Producers International Schedules Meeting With EPA To Discuss Hazards Of Artificial Turf

Potential environmental, health and safety risks of artificial turf components was the focus of a meeting between the United States Environmental Protection Agency (Office of Prevention, Pesticides and Toxic Substances) and Turfgrass Producers International (TPI).

TPI presented its concerns to the EPA in a document entitled, "Serious Questions About The New-Generation Turf That Require Answers." The document was developed by a special Task Force appointed by the TPI Board of Directors to investigate artificial turf. The document presented concerns regarding the short- and long-term health, safety and environmental risks to students, families and professional athletes who utilize fields where the new-generation of artificial turf could be installed.

Several of the specific concerns listed in the "Serious Questions" document include:

- Artificial turf infill includes silica sand and ground tire rubber (containing the heavy metal cadmium) – what are the consequences of human exposure to silica dust and cadmium particles? Has the EPA or OSHA established maximum exposure levels to these materials? What toxic gases would be released into the atmosphere in the event of an artificial turf fire?
- Artificial turf eventually will have to be replaced – will environmentally safe disposal of large quantities of silica sand and ground rubber be possible when replacement becomes necessary? What will be the overall environment impact of an area where artificial turf is used to replace natural grass? (Natural grass reduces temperatures, traps and bio-degrades airborne pollutants, filters rainwater and facilititates the recharge of groundwater and aquifers).
- Field sanitation, including removal of bodily fluids (spittle, blood, sweat, vomit, urine) and animal and/or bird droppings, all present unique problems – are antiseptic cleansers being widely used, and do they properly sanitize these fields?
- Temperature of artificial fields have been documented upwards of 86 degrees F hotter than natural grass fields under identical conditions. How long can players be safely exposed to these temperatures? ■

Serious Questions About The New-Generation Artificial Turf That Require Answers

In order to make fiscally and environmentally sound decisions regarding the potential purchase and installation of artificial turf in their communities, decision makers must consider all short- and long-term issues and concerns.

Artificial turf is being widely promoted as a cost-efficient, environmentally- and user-friendly product that can replace natural grass on sports fields and home lawn cares. Unfortunately a large number of unsubstantiated claims are being made by promoters of the new-generation artificial products (particularly those that incorporate ground rubber as part of their base). Claims made by many artificial promoters include some or all of the following:

1. Artificial surfaces have a life expectancy of 8 to 10 years.
2. Initial purchase and installation costs are quickly offset by the absence of on going, maintenance costs.
3. Safety of the artificial playing surface is un-matched by natural turfgrass.

Significant questions about the validity of these claims deserve answers.

Of equal or greater concern are questions that typically will not arise during the normal artificial turf sales presentation process, in particular issues related to the health and safety of our children and serious threats to our environment.

These Issues Require Answers.

In a world where we all want the best for our children and where professional or even high school level coaches want the best for their athletes, we search for solutions that on the surface may seem the perfect answer. As experience has proven time and gain, "If it seems too good to be true, it probably is," is an adage worthy of contemplation when consideration is being given to constructing an artificial turf area. While "fraud" is a highly charged word, some claims made by

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Rutgers Turfgrass Research Field Days 2004

Dr. Buckley holds court in front of his soil lab at the Geiger Center.

The highlight of the summer schedule was the Rutgers Turfgrass Research Field Days featuring the Lawn & Landscape Section, July 28 at Adelphia Farm and the Golf & Fine Turf Section, July 29 at Hort Farm II - Ryders Lane.

Dr. Murphy reviewing his research at Golf & Fine Turf Section.

We're told our field days are the best anywhere – and they are!

Whose "Jack" is this anyway?!?

THE STATE UNIVERSITY OF NEW JERSEY
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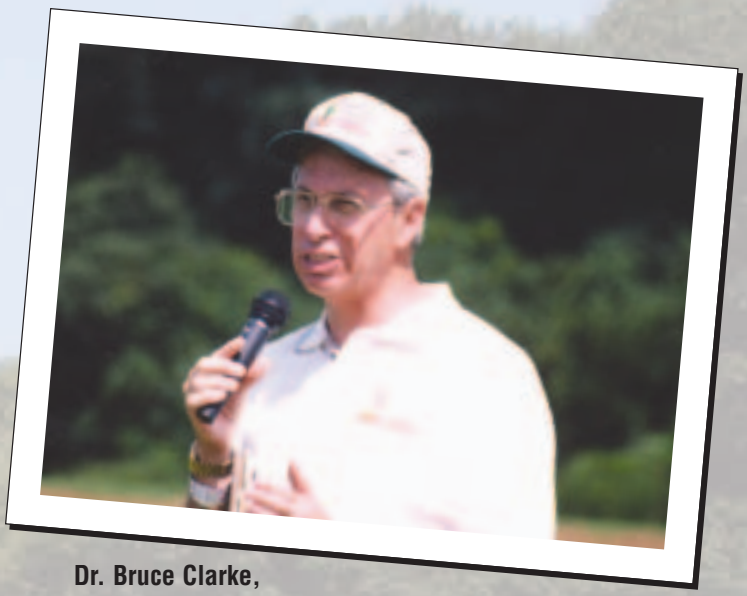
Steve Stys and Syd Dickison
taking care of the cold beverage cart.



Dr. Bruce Clarke,
Director of the Center for Turfgrass Science
addresses the field day attendees.

Chartered bus arrives with the folks from Long Island,
New York who have been making annual visits
to the Golf and Fine Turf Section.

Large groups as shown here were present on all the topics.

Time out for lunch!

$1 (?) Billion Sod Industry - *continued from page 9*

to start-up and the market can be very fickle, it's certainly not a business for the faint-of heart!"

The Census of Agriculture is conducted approximately every five years, most recently by the U.S. Department of Agriculture's NASS. Previously it was conducted by the U.S. Department of Commerce's Bureau of the Census. As a Congressionally mandated census, all farms are required to complete the survey, giving it a high level of credibility. ■

New-Generation Artificial Turf - *continued from page 11*

some artificial turf companies may fall within the legal definition of that term, while other claims may only be deceptive, over-statements, misstatements or misunderstandings.

The issues raised by the following questions are intended to assist in the decision-making process by focusing on real and serious areas of concern.

Insist on answers to these concerns.

Health Concerns

Health and safety are two major principles that guide many of the decisions individuals, parents, athletes and coaches as well as appointed and elected officials must make on a daily basis. When decisions impact children or the environment, ignorance is no excuse, neither is falling under the guile of an agenda- or commission-driven salesperson.

Ground tire rubber is used in some artificial fields as an impact-softening base. The toxic content (including heavy metals) of tires prohibits their disposal in landfills or through ocean dumping. Yet, this toxic material is being allowed (in large quantities) where children and professional athletes come into direct contact with it.

1. Should the presence of potentially toxic ground rubber on a sports field or home lawn be a concern to decision-makers, athletes, coaches, spectators and parents?
2. For those firms who make claims of using shredded athletic shoes, what percentage of this type of rubber is being used (if any), versus ground tire rubber?
3. What is the heavy-metal and/or toxic material analysis of the ground rubber?
4. What are the short- and long-term health effects for athletes and spectators to the inhalation of the ground rubber dust?
5. What are the health concerns related to the ingestion of ground rubber particles that takes place from sliding face-first on the surface or dropping and re-inserting a particle-covered mouth-piece onto the field?

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Continued Funding For A United States Department Of Agriculture Turfgrass Scientist Position & Funding For The First Installment On The National Turfgrass Research Initiative

Reprinted From PLCAA Issue Briefing, July 2004

Background: Our society is becoming increasingly more urbanized. Currently, turfgrasses impact more than 90% of all people in the U.S. on a daily basis – from home lawns, business landscapes, roadsides and parks to recreational turf. As more and more cropland is converted to housing, office parks, shopping centers, etc., the acreage of turfgrass is increasing exponentially. However, with the increased urbanization comes a greater demand on resources, such as potable water. Also, with the general public experiencing a heightened awareness of the environment and its protection, use of inputs such as fertilizer, pesticides and water on turfgrass areas is coming under greater scrutiny. In some jurisdictions, use of these inputs will either be banned or severely restricted for turfgrass use. In addition, the urbanization of America is leading to an overuse of current recreational facilities such as parks, athletic fields and golf courses. New facilities are being considered or constructed, many on abandoned sites such as landfills, industrial wastelands, gravel pits or mine points. Turfgrasses in these areas will play an important role in reclamation vegetation, recreational turf or both.

Justification: The USDA needs to initiate an maintain ongoing research on turfgrass development and improvement for the following reasons:

1. The value of the turfgrass industry in the U.S. is $40 billion annually. There are an estimated 50,000,000 acres of turfgrass in the U.S. Turfgrass is the number one or two agricultural crop in value and acreage in many states (i.e., MD, PA, FL, NJ, NC).
2. As our society becomes more and more organized, the acreage of turfgrass will increase significantly. Consequently, state and local municipalities will require the utilization of other water sources (i.e., effluent, reclaimed, etc.), the reduction of pesticide use and the elimination of nutrient runoff. However, demand on recreational facilities will increase while these facilities, for safety reasons, will still be required to provide safe, attractive athletic fields, parks and grounds. ■

Temperatures on artificial fields have been documented to be upwards of 86.5 degrees (F) hotter than natural grass fields under identical conditions. For example, at one location, when the natural grass surface temperature was 93.5 degrees (F), the measured artificial field temperature was 180 degrees (F).

1. What length of time can players of different ages (particularly the very young and/or very old) be safely exposed to this heat level?
2. If watering artificial turf reduces the field temperature, what is the length of time the temperature is reduced, and by how many degrees?
3. Does the requirement to have a field-watering system negate some of the projected cost-savings of artificial grass?
4. Although artificial fields are sold on a basis of being able to utilize the field 7 days a week, 24 hours a day, what outdoor temperature levels will cause the field to be closed because of potential health concerns to participants? Similarly, what lesser temperatures will cause participants to be so uncomfortable as to not enjoy playing on the surface?

Field sanitation that includes removal of bodily fluids (spittle, blood, sweat, vomit, urine), and/or bird or animal droppings may present a unique problem for artificial fields.

1. Will the use of antiseptic cleaners properly sanitize the area?
   a. How frequently must the field be sanitized?
2. Will the use of these sanitizing cleaners invalidate the surface's product warranty?
3. Do the sanitizing cleansers or the scrubbing process damage the artificial fibers and lessen the projected life expectancy of the product?
4. How much time, equipment and manpower must be budgeted to ensure a reasonably sanitary playing surface?

Abrasive surfaces can result in difficult-to-heal injuries, particularly in the presence of bacterial or viral pathogens.

1. What standards of abrasiveness have been established for artificial products?
2. Are parents, coaches and sports medical personnel trained to recognize the potential seriousness of abrasive wounds caused by artificial surfaces and prepared to treat them properly?

Field hardness (either too hard or too soft a surface) can result in serious chronic or immediate athletic injury.

1. What standards of artificial turf installation and maintenance have been developed to ensure field-wide, season-long uniformity and consistency, particularly when different field uses (i.e., soccer, football, marching bands, concerts, etc.) are allowed or encouraged?
2. What is the correlation between the potential for increased on-field players' speed and the incidence of serious injuries?
3. If additional ground tire rubber or silica sand is periodically added to the field are potential health and environmental concerns about the toxicity of this material also renewed?

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Athlete health and career-longevity can be seriously jeopardized by exposure to extreme temperatures. Overly hard or overly soft surfaces, greater speed at point of impact (with the field or other players) and staphylococcus (staph) infections caused by arasitic bacterium present on the playing surface.

1. What specific sports injury studies have been conducted to document the safety or artificial sports surfaces?
2. What specialized equipment, particularly footwear and padding, is recommended or required to address sports injury concerns that occur frequently on artificial fields?
3. Has the health-care profession developed hydration guidelines for athletes at different ages, performing on hot artificial fields to reduce or avoid serious or even life threatening dehydration situations?
4. What field maintenance practices are recommended or required to address the abnormally high presence of staphylococcus bacterium that can develop on an artificial surface?

Environmental Concerns

Ground rubber, silica sand and artificial turf particulates are present on the playing field and in the surrounding spectator stands. Pesticides and cleansing products may be routinely applied to the surface, with unknown consequences to the environment.

1. What levels of these materials is a health concern? Has the EPA established maximum exposure levels to these materials? Has OSHA established exposure limits for workers in tire shredding operations?
2. Because of the presence of ground rubber, silica sand and various man-made or plastic components in and on artificial surfaces, will environmentally safe disposal of a large amount of this material be possible when replacement of the field becomes necessary?
3. What gases would be released into the atmosphere in the event of a fire on the artificial surface?
4. How would an artificial turf fire be fought so as to extinguish the fire as quickly as possible, minimize danger to the fire fighters and/or reduce the release of toxic fumes into the atmosphere?
5. What scientific testing has been completed to document that run-off or leachate from an artificial area is not polluting surface or groundwater?
6. What impact does an artificial surface have on the area's capacity to recharge groundwater or an aquifer?
7. What products are available to safely control weeds, algae or other conditions that develop an artificial surfaces, particularly when large amounts of water are applied in an effort to reduce the surface's heat build-up? Herbicides, fungicides or algaecides are not now labeled by the USEPA for application on artificial surfaces because of fears of runoff and contamination, similar to applying pesticides to a driveway or other hard surface.
8. Given the fact that artificial turf surfaces absorb radiant heat (sunlight) and are therefore hotter than the surrounding area, how serious of a heat-island effect can be expected after installation of such a field?
9. What will be the overall environmental impacts to an area when artificial turf is used to replace natural grass? (Natural grass reduces temperatures, traps and bio-degrades airborne pollutants, filters rainwater and facilitates the recharge of groundwater and aquifers. Artificial turf performs none of these environmental benefits and may cause damage, as noted above).

Cost Concerns

The initial purchase price of an artificial surface (sports field or home lawn) is many times greater than a natural grass area; however, promoters of the artificial products maintain that tremendous costs savings will be forthcoming because of reduced maintenance costs, as well as the product's warranty.

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Because many of the artificial products are relatively new and not tested over time and use, no- or low-cost maintenance requirement claims that are consistently made by promoters of artificial surfaces may prove to be highly exaggerated.

1. Will the artificial turf manufacturing and installation company provide a warranty specifying the expected life of the product?
2. Given the fact that several artificial turf manufacturing companies have gone bankrupt, will the selling firm provide a warranty bond for the life of the product, ensuring that the buyer has some legitimate recourse in the event of failure?
3. What is the longest period of time the artificial field being specified has been in use (at a level of use at least as great as the area being considered)?
4. What conditions or maintenance practices will void the field's warranty?
5. Does a single warranty cover all aspects of the artificial field's soil-base preparation, base materials, artificial turf materials, top-dressing, irrigation system, etc., or will there be separate warranties and warranty voiding conditions for each element... some of which could contravene each other?
6. What is the minimum and maximum financial investment in specialized capital equipment that must be purchased to maintain the artificial field at a level that will provide maximum playing conditions and maintain the warranty?
7. What level of manpower (ground crew) is required to maintain an artificial field, compared to a natural grass field? Has any crew size or man-hour requirements been reduced with the installation of an artificial turf area?
8. What level of technical training is supplied, recommended or required for the ground crew in order to properly maintain the area and the warranty conditions?
9. What are the warranty required or recommended processes to address each of the following repair or replacement requirements of the artificial surface:

   a. Damage caused by cigarette burns? Burns to larger areas?

   b. Discoloration of areas caused by wear pattern differences?

   c. Replacement of areas caused by wear or other physical or weather-related damage? ■

➤ *Perennial Ryegrass Varieties For New Jersey Sports Fields*

➤ *Dr. Bruce Clarke's Recent Trip To China*

njta Green World

applied turfgrass research, from Rutgers the State University, and the New Jersey Turfgrass Association

Perennial Ryegrass Varieties For New Jersey Sports Fields

By James A. Murphy, Associate Extension Specialist in Turfgrass Management and Bradley S. Park, Sports Turf Education & Research Coordinator

The use of turf-type perennial ryegrass *(Lolium perenne* L.) in the United States began in the mid-1960's when 'NK-100' was released for commercial sale. The subsequent releases of 'Manhattan' in 1967 and 'Pennfine' in 1970 initiated the tremendous growth in the development and utilization of improved turf-type perennial ryegrass varieties. Perennial ryegrass is popular for use in sports turf because of its tolerant surface. Present varieties have been developed with increased stress tolerance, improved resistance to many pests, cleaner mowing, a lower (more decumbent) growth habit and reduced mowing requirement, darker green color, more uniform texture, and higher shoot density. The variety 'Linn' should be avoided because the very poor mowing quality, low shoot density, poor disease resistance, and lack of traffic tolerance of this grass will result in unsatisfactory turf for sports fields. Although data on traffic tolerance is not available for 'Nui', this variety has very poor mowing and aesthetic quality; thus it is not recommended.

Many new varieties of perennial ryegrass containing endophytes *(Neotyphodium* spp.), symbiotic fungi that improve tolerance to some insects and other stresses. The use of endophytes by turfgrass breeders represents the most effective and successful biological control of pests developed to date for turfgrass management. Foliar feeding damage from insects including billbugs, sod webworms, and chinch bugs is dramatically reduced by endophytes in perennial ryegrass. The benefits of endophytes in perennial ryegrass may not always be obvious, but can be dramatic.

Endophytes are transmitted in the seed of perennial ryegrass. The viability of the endophyte in the seed is dramatically reduced by storage. Seed that is more than one year old or stored under hot humid conditions for many months will have substantially reduced endophyte viability. Thus, perennial ryegrass seed should be used promptly or stored under cool dry conditions.

Although improvements in summer performance and pest resistance have been made, further improvements are needed to realize the full potential of perennial ryegrass, particularly for regions with hot, humid summers. Cold hardiness and the ability to tolerate long periods of cover from ice sheets are other weaknesses of perennial ryegrass that can be important during the very occasional severe winters in New Jersey. For this reason, Kentucky bluegrasses are often mixed with perennial ryegrass, since Kentucky bluegrass has excellent cold hardiness.

Purchasing Seed

The purchase of certified seed from wholesale or retail outlets is strongly suggested. Certified seed is grown in fields inspected by a state certifying agency for genetic purity, and also must meet standards established for germination and freedom from weeds and other crop seeds. Knowing the variety of seed in the container is important because it allows the buyer to select improved varieties that will produce higher quality turf under traffic with greater persistence and less inputs. Conversely, use of poorly adapted varieties can result in extensive turf failure, which increases the likelihood of renovating the turf. Seed that does not identify varieties or is described as variety-not-stated (VNS) presents a great risk to the buyer because the turf quality of the seed is unknown. The seed in a container labeled as 'VNS' could produce turf quality ranging from extremely poor to good.

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Use and Management of Perennial Ryegrass

The rapid establishment of perennial ryegrass turf from seed has made this turfgrass a very popular choice of new seedings and overseedings to rejuvenate high-trafficked sports fields. Seedlings will emerge from warm moist soil within 3 to 5 days after seeding. Perennial ryegrass will mature rapidly forming a reasonably wear resistant turf within weeks; greater traffic tolerance will be evident on older more mature stands of perennial ryegrass. Year-round overseeding with perennial ryegrass is a common strategy among sports field managers to maintain turfgrass cover on fields plagued with constant use. Seeding and overseeding rates range from 4 to 8 pounds of seed per 1000 square feet (175 to 350 pounds per acre) for perennial ryegrass.

Perennial ryegrass grows vigorously as seedling turf and during cool moist weather. This vigorous growth is enhance by good soil fertility and proper fertilization. As a result, perennial ryegrass is highly competitive in mixtures with other turfgrass species, and mixtures with other turfgrasses often result in turf dominated by perennial ryegrass. If a balanced mixture with other turfgrasses is desired in a turf, the amount of perennial ryegrass seed by weight in a seed mixture needs to be limited. Excessive amounts of perennial ryegrass in a seed mixture will result in a turf almost exclusively dominated by perennial ryegrass. Thus, the quantity of perennial ryegrass seed in mixtures with other cool-season turfgrasses should be limited if a balanced mixture of turfgrass species is desired. Mixtures with Kentucky bluegrass should be 20% or less, by weight, perennial ryegrass. Tall fescue seed mixed with as little as 5% perennial ryegrass can result in a turf that is 90% or greater perennial ryegrass.

Perennial ryegrass is adapted to well-drained moderately fertile soil of slight acidity (optimum pH of 6.5 to 6.7). Perennial ryegrass will not persist in wet or shaded sites. Persistence of perennial ryegrass grown on poor quality soils will be better when mowed at 2½ inches or higher. Mowing heights as low as ¾ inch can be achieved on sports fields with proper fertilizing and irrigation; insect and disease control may also be needed at lower cutting heights. Management practices must be optimized for turf persistence at low mowing heights. Mowing perennial ryegrass at 2 to 2½ inches is commonly done on moderately managed sports fields.

Perennial ryegrass will form seedheads (become reproductive) during late May and June. Seedhead formation will cause the turf to become stemmy at this time. To restore the green leafiness of a perennial ryegrass turf, apply a light application of nitrogen fertilizer in late May or early June (e.g., ½ pound of nitrogen per 1000 square feet of turf area). Avoid over-fertilizing the turf at this time (late May through June) because excessive growth will deplete the turf's capacity to withstand severe high temperature and drought stresses that can occur in July and August. Use of slowly available nitrogen at this time will also minimize the risk of excess nitrogen in summer. Use fertilizer containing 80% or more of slowly available or water insoluble nitrogen (WIN) to reduce the risks of excess nitrogen.

Annual nitrogen fertilization rates will vary between 1½ and 4 pounds of nitrogen per 1000 square feet of turf area, depending on the fertility of the soil and desired turf quality. Higher annual nitrogen rates should be utilized for rapid establishment of turf or highly trafficked sports fields where recovery of worn turf is necessary. Older turf where soil fertility has been improved will generally require lower rates of nitrogen fertilization. Applying the majority of nitrogen fertilizer in late summer and early fall will improve density and health of the turf better than spring application of fertilizer. For more information on fertilization of sports fields, see Rutgers Cooperative Extension publication FS 105, *Maintaining Athletic Fields* <www.rce.rutgers.edu/pubs/pdfs/fs105.pdf>

The root system of perennial ryegrass turf typically becomes shallow during the high temperatures of July and August. Under this condition, perennial ryegrass can suffer extensive damage from white grubs. Frequently, the predation of white grubs by crows, raccoons, skunks, and other animals can devastate perennial ryegrass turfs infested with white grubs. Thus, the potential for severe turf failure of perennial ryegrass during the hot dry summer months is greater than other cool-season turfgrasses. More information on white grubs can be found in Rutgers Cooperative Extension publications at *www.rce.rutgers.edu/pubs* or your county Extension office.

Irrigation will be necessary to maintain green vigorous growth of perennial ryegrass during the hot humid months of July and August. Because of the limited root system in summer, perennial ryegrass grown on shallow or poor quality soils is less likely to survive severe drought stress. Perennial ryegrass turfs grown under good soil conditions can survive drought-induced dormancy for many weeks if traffic, insects, or disease are not damaging the turf.

Research conducted at Rutgers University in 2002 and 2003 demonstrated that commercially available perennial ryegrass varieties show varying levels of traffic tolerance (Table 1). Traffic, consisting of compaction and wear, was applied to two separate perennial ryegrass trials in 2002 and 2003. These varieties were part of the 1999 National Turfgass Evaluation Program perennial ryegrass test. Varieties with traffic tolerance characterized as "Good" were top performers under traffic in both 2002 and 2003. The performance of "Moderately Good" and "Fair" varieties was less consistent than the top group (Good). Perennial ryegrass varieties ranked as Good, Moderately Good, and Fair traffic tolerance are listed in Table 1.

Table 1 – continued on page 21

TABLE 1: TRAFFIC TOLERANCE OF PERENNIAL RYEGRASS VARIETIES RECOMMENDED FOR NEW JERSEY SPORTS FIELDS

Note: This listing does not take all perennial ryegrass varieties into consideration, only those varieties in the 1999 NTEP trial which exhibited fair to good performance under traffic are listed.

GOOD TOLERANCE			
Prowler	Citation Fore*	Divine	Manhattan 4*
SR 4350	Steller*	Sierra*	Esteem*
Courage	SR 4220*	Pacesetter*	
MODERATELY GOOD TOLERANCE			
SR 4500*	IQ	Pleasure XL	Inspire*
Secretariat	Jet*	Premier	Catalina II
Elfkin	Churchill	Gallery*	Ascend
Sol	Exacta*	Paragon	Line Drive
ProTyme	Brightstar II*	Mach 1*	Racer II
Grand Slam 2L96*	Kokomo*	Gator 3*	Radiant
Pentium*			
FAIR TOLERANCE			
Phantom	Renaissance	Majesty	Paradigm
Monterey II	Buccaneer	Summerset*	
Premier II	Affirmed	Skyhawk	

* These varieties produced high turfgrass quality (dark green color, fine leaf texture, and high density) in the absence of traffic. Avoid the variety 'Linn'. The extremely poor mowing quality, low shoot density, light green color, poor disease resistance, and lack of traffic tolerance of 'Linn' will result in unsatisfactory turf. ■

Dr. Bruce Clarke's Recent Trip To China

Dr. Bruce Clarke, Rutgers Professor in Turfgrass Pathology and Director of the Rutgers Center for Turfgrass Science, visited China from October 13 – 18, 2004. He visited the future site of the 2008 Beijing Olympics. A recent proposal submitted by Rutgers faculty Steven Handel, Bill Meyer, Jim Murphy, Jason Grabosky, and Bruce Clarke to vegetate the Olympic Park was selected by the Olympic Committee as the winning proposal out of 31 international proposals. Work on the Olympic Village should commence in 2005. Dr. Clarke also presented three research talks at Beijing Forestry University and a keynote address at the Sixth Bi-Annual Chinese Turfgrass Conference in Chengdu, China. Discussions between Dr. Clarke and Dr. Zhoalong Wang (Director of the Turfgrass Program at Shanghai University and a recent post-doctoral candidate of Rutgers Professor Dr. Bingru Huang) ensued to forge a partnership between the two institutions to enhance undergraduate education in Turfgrass Science. A future exchange of students and faculty was discussed. ■

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December 1	Introduction To Plant Identification IPI: Deciduous
December 8	Introduction To Plant Identification IPI: Conifers & Evergreens
December 9	Hazardous Tree ID
December 15	Basics of Turfgrass Management

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Fiddler's Elbow Country Club

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Contact: Dr. Dick Caton, 856-853-5973
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2005

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