

## **EUROPEAN TURFGRASS SOCIETY**

## NEWSLETTER 2/2015

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### ETS Field Days: Sustainability and Grass

Denmark, 7-8<sup>th</sup> October 2015. Visit <u>http://ign.ku.dk/grass</u>

Organized and hosted by the University of Copenhagen -Department of Geosciences and Natural Resource Management. Co-organized by the Scandinavian Turfgrass and Research Foundation – STERF.

#### Day 1. Seminar day – October 7

A seminar day at the University of Copenhagen, campus Nødebo. Different presentations and a panel discussion related to sustainability and turfgrass. See seminar program on next page.

#### Day 2. Excursions – October 8

Excursion to Frederiksborg castle garden (discussion of maintenance descriptions of turf types) and to Furesø golf course, the first course that received the Danish Golf Unions Environmental price in 2013.

#### Registration

Registration will be available as of January 2015.

#### Accomodation

Accomodation will be in Helsingør at Hotel Marienlyst - booking for the Conference will be available soon.



Department of Geosciences and Natural Resource Management



#### Looking forward to seeing you in Denmark!

### ETS Field Days: Sustainability and Grass

Denmark, 7-8<sup>th</sup> October 2015 - Visit <u>http://ign.ku.dk/grass</u>

### DAY 1 - SEMINAR DAY - October 7

Moderator: Bruno Hedlund, STERF

Sustainable turfgrass management – a Nordic and international research and industrial perspective Maria Strandberg and Bruno Hedlund, STERF

*Maintaining a sustainable golf course* Stefan Nielson, Course manager at Vallda golf course, Sweden

**Optimal plant nutrition from the green grass' point of view** Agnar Kvalbein, Bioforsk, Norway

*Fertilization in practise* Thomas Pihl, Course manager at Furesø golf course, Denmark

**Engineering better irrigation in turf – research progress and management challenges** Jerry Knox, Cranfield University, UK







**Results from Scandinavian projects on deficit irrigation** Trygve Aamlid, Bioforsk, Norway

**Quality on sports fields (football pitches) without the use of pesticides – how is this possible?** Asbjørn Nyholt, Denmark

Maintenance quality descriptions of grass in the Nordic countries – do they contribute to the overall sustainable management? Thomas Randrup, the Swedish Agricultural University (SLU), Alnap, Sweden

**Grass on roofs – examples from Scandinavia** Kamilla Aggerlund, University of Copenhagen, Denmark

A few more presentations will be added shortly.

The day will end with a Panel discussion with all the speakers.



### New Master's Degree at Myerscough College

Myerscough College are introducing a new **Master's degree (MA) in Sustainable Golf Course Management** for those employed in the golf course management sector. By the time you are reading this the course should be validated for an intake to start the course in September 2015. We believe this is the first course of its kind in the world and is aimed at those working in golf course management who wish to develop their skills still further beyond a BSc or BA degree. This new Masters course, which will be taught ONLINE, is an innovative course which encompasses a multidisciplinary approach to contemporary golf course management. The course aims to develop students' critical and analytical thinking to enable implementation of effective and efficient management practices. The MA will encourage debate and critical evaluation



within an environment that develops holistic understanding of international issues. We are keen to reach international students who wish to study at this level and have structured the course content to reflect global sustainability and management issues.

If you want to know more please have a look on our website (<u>www.myerscough.ac.uk</u>) or email me at Myerscough (sbrown@myerscough.ac.uk). We are taking applications already for this 3 year online course.

**Stewart Brown** (here on the 1<sup>st</sup> fairway at Myerscough) is employed as Senior Lecturer in Sportsturf Agronomy at Myerscough College. He has over 20 years' experience teaching at HE level and is Course tutor for the new MA Sustainable Golf Course Management degree. If you wish to know more about the MA or Myerscough's other HE provision please contact our admissions office or email Stewart on <u>sbrown@myerscough.ac.uk</u>



### **Update from the Amenity Forum**

#### Conference

On October 15<sup>th</sup> the Forum is holding its annual conference and exhibition. This is now a very much must attend event in the amenity horticulture calendar with high quality speakers on topical issues. It is being held in Leicester and further information and the programme is available at <u>www.amenityforum.co.uk</u> The conference is entitled 'Better Together'. The delegate rate is £50 and booking information is available at <u>conference@amenityforum.net</u>



#### Research

A five year research programme funded by Government has just completed. The project was entitled 'Development of zero and minimal herbicide regimes for controlling weeds and determining their emissions. Whilst the work focussed on hard surfaces, it has application for sports turf and best practice guidance is one of the outcomes. The Amenity Forum will now work closely with the Chemicals Regulation Directorate and produce individual guidance notes relevant to the various sectors of amenity. Work has also commenced on producing a template for integrated control planning for weed control.

#### **Green keepers**

A project is shortly to be launched developing specific guidance for green keepers on all aspects of weed, pest and disease control. Further information will be available shortly.

#### National Sprayer Operator of the Year

The Forum has launched National Sprayer Operator of the year awards open to all in the sector and including categories directly relevant to sports turf. The awards are sponsored by Syngenta and Everris and winners will also gain free membership of the newly launched CPD scheme in amenity operated by BASIS Registration. The winners will be announced at the Forum conference on October 15<sup>th</sup>

#### **Updating Events**

The Forum has run free updating events in all parts of the UK over the last three months. These have proved extremely successful in taking out messages of policy change and best practice across.

### **STERF yearbook 2014**

by Maria Strandberg, STERF Director

STERF (Scandinavian Turfgrass and Environment Research Foundation) is the Nordic golf federations' joint research body. STERF supplies new knowledge that is essential for modern golf course and turfgrass management, knowledge that is of practical benefit and ready for use, for example directly on golf courses and on managed turfgrass areas or in dialogue with the authorities and the public and in a credible environmental protection work. STERF is currently regarded as one of Europe's most important centres for research onthe construction and upkeep of golf courses and managed turfgrass areas. STERF has decided to prioritise R&D within the following important internationally thematic areas: Integrated pest



management, Multifunctional golf facilities and ecosystem services, Sustainable water management and Winter stress management.

STERF yearbook 2014 will give you an idea of STERF's ongoing activities and projects. In 2014 STERF had 22 ongoing projects related to the four thematic areas, all of them presented in the yearbook. Other important STERF activities 2014 were: the international seminar on Turfgrass winter survival arranged in Gjovik Norway, the Nordic seminar about multifunctional golf facilities held in Copenhagen, the workshop about multifunctional golf facilities arranged in Beijing, the DTRF and STERF seminar about sustaining golf's playing quality held in Zandvoort, eight new R&D projects were started, three new handbooks were published about Primo Maxx, fungicide leaching and societal benefits of golf and STERF is proud to present several activities within the Industrial scientific partner programme.

Please let us know if you have any questions or comments related to the yearbook. Your feedback on STERF's ongoing projects and activities would be very valuable for us. Ideas of potential new programmes and projects would also be interesting and inspiring.

The yearbook can be found on the ETS website (<u>http://www.turfgrasssociety.eu/home/articles</u>) and on <u>www.sterf.org</u>. Questions and comments related to the yearbook can be sent to <u>maria.strandberg@golf.se</u> More information about STERF can be found at <u>www.sterf.org</u>



### **Uncovering the Benefits of Turfgrass as a Ground Cover**



When it comes to the benefits of turfgrass most people don't give it much thought. If the average homeowner does give it any thought, it's usually limited to their front lawn, their backyard, maybe the neighbourhood park, or perhaps that sports field at the local high school. The truth is, most people focus more on the

cosmetic appearance of their lawns than ponder the question - why is turfgrass such a great ground cover?

The environmental benefits of turfgrass seldom come up in the conversation and I suspect a good number of people would be hard pressed if they were asked the question, "What has your lawn done for you lately?"

Truth be known, turfgrass which includes lawns, playing fields, golf courses, parks and many other outdoor areas provides tremendous environmental benefits that are seldom considered.

In fact, turfgrass is among the foremost protectors of the environment, providing many functional, recreational aesthetic benefits. That was the conclusion of a scientific study "The Role of Turfgrasses in Environmental Protection and Their Benefits to Humans" published in the Journal of Environmental Quality by two prominent turf experts, Dr. James B. Beard and Dr. Robert L. Green. They emphasized that "the complexity and comprehensiveness of the environmental benefits of turfgrass that improve our quality of life are just now being quantitatively documented through research."

The environmental benefits of turfgrass scientifically documented in the article include:

- Soil erosion control and dust stabilization
- Groundwater recharge and surface water quality
- Organic chemical decomposition
- Soil improvement and restoration
- Heat dissipation-temperature moderation
- Noise abatement and glare reduction
- Decrease of noxious pests, reduced allergy-related pollens and human disease exposure
- Security for vital installations and lower fire hazard

The researchers also reported that scientific support for recreational and aesthetic benefits included improved mental health, social harmony and improved productivity.

Addressing concerns about turf water use, the researchers reported that "there is no valid scientific basis for water conservation strategies or legislation requiring extensive use of trees and shrubs in lieu of turfgrasses. The main cause for



excessive landscape water use in most situations is the human factor."

Turfgrass controls soil erosion and stabilizes dust by trapping and holding particles in place. It also recharges groundwater and improves surface water quality by filtering runoff. In addition, it dissipates heat through its natural cooling process, reducing temperatures in turf area by as much as five to seven degrees as compared to hard-surface areas.

Turfgrass controls air pollution by taking carbon dioxide and other pollutants from the atmosphere and returning oxygen. Just a small 25-foot by 25-foot plot of lawn traps enough carbon dioxide from the atmosphere to return oxygen to an entire family of four to breathe!

So, in the event you're ever asked the question, "What has your lawn done for you lately?" You might respond – more than you could ever imagine!

For more benefits of turfgrass go to: <u>https://www.landcarenetwork.org/legislative/**Research**Summary.pdf</u>

### **Primo MAXX on Golf Courses: The Nordic Experience.**

by Trygve S. Aamlid, Bioforsk Turfgrass Research Group, Norway

In 2011 and 2013, the plant growth regulator Primo MAXX was approved for use on golf courses in Sweden and Finland, respectively. The registrations were based on trials carried out by independent research institutes in Norway and Finland. The use of a plant growth regulator was a new experience to Nordic greenkeepers as no such product had earlier been approved for turf. In 2014, the Scandinavian Turfgrass and Environment Research Foundation (STERF) published a handbook summarizing several years of research and two years of practical experiences on the use of Primo MAXX on Nordic golf courses. The handbook can be downloaded from STERF's new website <u>www.sterf.org</u>. This article highlights some of the key findings in our research.

#### Primo MAXX inhibits leaf elongation in long days

The mode of action of trinexapac-ethyl, the active component in Primo MAXX, is by inhibiting plant synthesis of gibberellic acid, a hormone stimulating leaf elongation. Since it is well documented that that the high growth rates of grasses during long summer days is mediated by this plant hormone, it can be argued that the need for Primo MAXX is higher in the Nordic countries than in countries further south. This was recently confirmed in one of our greenhouse experiments where the growth rate of American cultivars of creeping bentgrass increased by 22 % as the daylength was prolonged from 15 to 20 hours (Fig. 1). In this experiment, the light intensity was adjusted to give the same amount of energy in all treatments, so the difference was a true photoperiodic effect.



**Fig. 1.** Long photoperiods enhance leaf elongation. In this growth chamber experiment with creeping bentgrass maintained at fairway mowing height, the plot to the left had been exposed to 15 h and the pot to the right to 20 h photoperiod. The total irradiance was the same for both pots. Photo: Trygve S. Aamlid.

**Fig. 2.** At northern latitudes, the low sun angles in autumn result in much longer shades than during mid-summer. Photo: Agnar Kvalbein.



Located at approximately 60°N, the Nordic capitals Helsinki, Stockholm and Oslo experience about 20 h of daylight in midsummer. However, in autumn, the inclination of the sun is much lower in the Nordic countries than at lower latitudes, and this results in long shades from trees surrounding greens and tees on golf courses (Fig. 2). Shade from trees has implications for both light quality and light quantity and this is an important reason for inadequate hardening and poor winter survival.

#### Primo MAXX can improve turfgrass winter survival

Two of our trials on a Finnish golf courses showed significantly less infection of pink snow mold (*Microdcohium nivale*) in spring after regular application of Primo MAXX during the previous summer (Fig. 3, Aamlid et al. 2009). The effect was not strong enough to eliminate the need for fungicide applications in autumn, but it may perhaps reduce the number of applications by one or two. Spring observations on an annual bluegrass (*Poa annua*) green at Bioforsk's Turfgrass Research Center in Southern Norway showed 23 % *Microdochium nivale* on unsprayed control plots, 14 % on plots treated regularly with Primo Maxx in the previous year and 1 % after two applications of fungicides before winter (Aamlid et al. 2012).



**Fig. 3.** Effect of increasing monthly application rates of Primo MAXX in 2007 on snow mold infection and turf quality in spring 2008. Results from a fairway trial in Finland with a predominant turf cover of Kentucky bluegrass.

# Application rates and intervals

From an environmental point of view, it's a good thing that Primo MAXX is broken down relatively fast in plant tissue. However, the low persistency of the product also means that turf managers have to

repeat their applications and regular intervals, and our experience is that the optimal interval between applications is shorter in the Nordic countries than at lower latitudes. Dr. Doug Soldat of the University of Wisconsin recommended North-American superintendents to make one application of Primo MAXX for every 200 day degree units (e.g. 10 days with a mean diurnal temperature of 20 °C; Kreuser & Soldat 2012) and this may well be correct even in southernmost most part of Scandinavia during warm periods in late summer. However, in central and northern areas with almost continuous light and a mean temperature for May and June not higher than 10-12 °C, 150 day degree units seems more appropriate to produce a consistent reduction in clipping yields.

#### Light and frequent

In our research on turfgrass management, we usually find that 'light and frequent' is better than 'heavy and infrequent'. Without going into detail, this applies to topdressing ('dusting' is good), fertilizer applications ('spoonfeeding' is good) and irrigation (light and frequent deficit irrigation saves water and is good to the turf). The same principle also applies to plant growth regulators; e.g. on fairways with a turf cover of Kentucky bluegrass, annual bluegrass and red fescue, we have found that Primo MAXX at a rate of 1.0 I/ha every two weeks is both safer and gives a more consistent growth retardation than 2.0 I/ha every four weeks.

Of particular importance is to avoid too high rate at the first seasonal application as this is likely to cause yellowing or other phototoxic effects. When starting to apply Primo MAXX, the grass plant has to adjust to a new physiological balance where more of its resources are used for tillering and carbohydrate storage, and less for leaf elongation.

#### Different response in various turfgrass species

All cool-season turfgrasses respond to Primo MAXX, but the greatest potential for reduction in clipping yields is probably found in the bluegrasses; Kentucky bluegrass on tees, fairways and semiroughs and annual bluegrass on greens, tees and fairways. Creeping bentgrass greens also show an improvement in in playing quality and consistency throughout the day, but few of the Scandinavian courses with a wall-to-wall cover of red fescue have started to use Primo MAXX.

The least sensitive species to Primo MAXX is perennial ryegrass which requires higher rates than any of the other cool-season turfgrasses. Perennial ryegrass is usually not recommended on Scandinavian golf courses except in urgent need for repair, but those that have included this species in seed mixtures for fairway or semirough may well experience that the ryegrass tufts stand out as small 'islands' after treatment Primo Maxx (Fig. 4). If applications rates are too high, it is also a common observation that broadleaved weeds such as dandelions or plantains becomes more visible after use of the growth regulator.



**Fig. 4.** Kentucky bluegrass on this semirough in the foreground was strongly retarded by Primo, and this caused perennial ryegrass tufts to appear like small 'islands'. Photo: Tatsiana Espevig.

#### **Recommended rates and benefits**

There are no exact figures, but a fair guess is that approximately one third of the golf courses in Sweden and Finland have started using Primo Maxx on their greens. The corresponding figure for fairways is much lower, probably around 5 %. Less use on fairway is due to the costs of applying the product on larger areas, but on the other hand, the highest potential for reductions in clipping costs and energy use also exists on fairways.

With the recommend rate of 1.0-1.2 l/ha every two to three weeks, our research shows that most golf courses will be able to cut the mowing budget by one third, and playing characteristics such as ball lie are also be improved (Fig. 5). On greens, the recommended rate of 0.2-0.4 l/ha every one to two weeks will usually not allow greenkeepers to skip a high number of clippings, but the major advantage seems to be a fairly consistent improvement in playing quality.



**Fig. 5.** Apart from the reductions in mowing requirement, one of the potential benefits of *Primo Maxx on fairways in a better ball lie. Photo: Trygve S. Aamlid.* 

#### References

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experimental year, July 2011 – May 2012. Bioforsk Report 7(77): 1-30. (3) Kreuser, B. & Soldat, D. 2012: Precise PGR applications on greens. Golf Course Management, Aug. 2012. pp. 80-88.



### "NEWS FROM ACROSS THE POND"

### NASA Set to Get the Dirt on Soil Moisture

Orbiting observatory will produce global maps of soil moisture worldwide.

by Jim Novak, Turfgrass Producers International

Imagine what it would mean if scientists could literally measure the amount of moisture in the top 2 inches (5 cm) of soil worldwide not from the ground, but from space; if they could provide early warning systems of anticipated droughts long before they would happen; or if they could better forecast weather patterns and trends with enhanced accuracy.

This came to pass near the end of January when NASA launched an orbiting observatory in a polar orbit around the Earth that will, believe it or not, measure the amount of water



in the top layer of soil everywhere on the planet's surface. The satellite called SMAP, which stands for Soil Moisture Active and Passive, will help to measure and understand how freshwater cycles over the Earth's land surfaces in the form of soil moisture. The mission will produce the most accurate, highest-resolution global maps ever obtained from space of the moisture present in the top layer of Earth's soils. It also will detect and map whether the ground is frozen or thawed. This data will be used to enhance scientists' understanding of the processes that link Earth's water, energy and carbon cycles.

"With data from SMAP, scientists and decision makers around the world will be better equipped to understand how Earth works as a system and how soil moisture impacts a myriad of human activities, from floods and drought to weather and crop yield forecasts," said Christine Bonniksen, SMAP program executive with the Science Mission Directorate's Earth Science Division at NASA Headquarters in Washington. "SMAP's global soil moisture measurements will provide a new capability to improve our understanding of Earth's climate."

SMAP is designed to measure soil moisture over a three-year period, every 2-3 days. This permits changes, around the world, to be observed over time scales ranging from major storms to repeated measurements of changes over the seasons. NASA reports that soil moisture information is key to understanding the flows of water and heat energy between the surface and atmosphere that impact weather and climate. NASA also suggests we know little about soil moisture variability at either regional or global scales. Frequent and reliable soil moisture measurements from SMAP will help improve the predictive capability of weather and climate models. The amount of water available to evaporate from the land surfaces can be used by meteorologists to improve their forecasts of local and regional weather over spans of days to weeks. Forecasting the weather requires continuously observing the state of the atmosphere and including the level of moisture of the soil and water sources on the ground. A detailed description can be found in the <u>SMAP Handbook (PDF, 4.1 MB)</u>

How important is it to better understand the consequences of weather? Consider this— nearly 90% of the emergencies declared by the U.S. Federal Emergency Management Agency and approximately 70% of air traffic delays are caused by weather at a cost of billions of dollars per year. The 2012 drought in the Midwest alone led to harvest failures costing an estimated \$30 billion. Source NASA

As featured in the TPI E-Newsletter Jan/Feb 2015

### **TPI Conference & Field Day is scored high by Attendees**

by **Jim Novak**, Turfgrass Producers International



Turfgrass Producers International's 2015 International Education Conference & Field Day in San Diego, California – February 16-19 at the Omni La Costa Resort & Spa exceeded even the highest of expectations of those in attendance.

The favorable response was attributed to a diversified two-day educational program, an outstanding Field Day at A-G Sod Farm in nearby Neuvo (CA) and numerous social and networking opportunities. Over 500 turfgrass producers representing some 112 turfgrass farms from across the globe, including Australia, Brazil, Canada, England, Finland, Italy, New Zealand, Norway,

Russia, Scotland, South Africa and USA were on hand for the event. In addition, over 80 exhibitors showcased their products and services.

What made the conference especially rewarding were the diversified educational sessions. For turfgrass producers interested in natural grass vs. artificial turf sports fields, Dr. John Sorochan from the University of Tennessee offered a comparison of the two. For attendees who wanted to hear success stories regarding what it takes to convert an artificial sports field to natural grass, Brad Veibell of JB Instant Lawn and Steve Bush of Bush Sports Turf shared their personal experiences. And for those in attendance who wanted some insight into the housing market and the overall economy, Robert Denk, Assistant VP Forecasting and Analysis for the National Association of Home Builders provided a look at what 2015 might have to offer.





Dr. Monique Leclerc provided an update on recent carbon sequestration research being conducted at the University of Georgia and funded by The Lawn Institute; Dr. James Baird, University of California - Riverside, addressed ways in which to save turfgrass while conserving water, and there were numerous concurrent breakout sessions covering assorted topics such as "Closing The Sale", "Hiring, Training and Managing Seasonal Workers" and "The Real Cost of Sod at Retail".

TPI members Hank Kerfoot of Modern Turf in Rembert, South Carolina and Hugh Dampney of Dampney's Eco Turf, Parley Court Farm in Christchurch, England provided insightful overviews of their respected business. John, Betty and Joel Addink of A-G Sod Farms, Inc.

served as Field Day hosts and the weather couldn't have been more accommodating. Equipment demonstrations and on-site exhibits provided attendees with an opportunity to see equipment first hand, engage with manufacturers, suppliers, service providers and fellow turfgrass producers. One member stated, "Had a great time and I appreciate the effort in connecting the vendors with the growers...it was great as always!" A new TPI member commented, "Enjoyed my first-ever TPI Conference! We should encourage families to attend." First time attendee, Alexy Andreev of Russkie Gazony, Saint-Petersburg, Russia wrote, "Thank you for a memorable Conference. We did appreciate participating in it and much enjoyed it. We hope to continue our fruitful and mutually beneficial relationship!"

Fundraising activities such as a Memorial Golf Tournament, Wine Pull and an exciting Tricycle Race were also part of the activities and helped to raise over \$17,000 to support research and education through The Lawn Institute.

To see a video of the 2015 International Education Conference & Field Day visit the following link: <u>https://www.facebook.com/video.php?v=10200367130137982&l=33462973053332838</u>

## JOBS, JOBS, JOBS



## New Turfgrass position at Osnabrück University

The University of Applied Sciences, Osnabrück, Faculty of Agricultural Sciences and Landscape Architecture is looking to recruit, as from 01.07.2015 and subject to the appropriation of funding from the Federal Ministry of Economics and Technology, a member of the:

Scientific Staff (M.Sc. / Dipl.-Ing.) for the research project "Development of a highly resilient sports turf construction type system using natural fibre armouring of the root zone layer", funded by "Central Innovation Program Middle Class (ZIM)".

The project deals with the development of a highly resilient construction system for natural turfgrass sports facilities. This design is characterized by a greatly improved durability of the turfgrass surface affected by an innovative and environmentally-friendly armouring of the root zone layer.

Within the framework of an independently implemented project, the position includes the following **tasks**:

- Responsible development of a specially adapted natural fibre to increase the resilience of the sports turfgrass
- Autonomous conceptual design, development and implementable planning of a research area in accordance
- with international standards
- Responsible implementation and monitoring of experiments
- Confident leadership of the project group
- Preparation and publication of research results in the form of scientific articles, reports and presentations.

#### The **requirements** include:

- Completion of an academic university degree in agronomy, horticulture, landscape construction, landscape
- architecture or similar
- Knowledge and experience in turfgrass research and sports field construction
- High degree of flexibility as well as good team and communication skills
- Fluency in written and spoken English
- Ability to perform detailed academic research.

The position is temporary until 31.12.2017 and set at 90% of normal working hours. The salary is based on salary group 13 of the TV-L tariff agreement.

We look forward to welcoming a motivated person who would like to support us in the continuous



development of our university. Exciting work, active students and dedicated colleagues are waiting for you!

#### You may also be interested to know:

The University of Applied Sciences, Osnabrück promotes women within the legal possibilities and advocates gender equality and human diversity. Our university promotes the reconciliation of family and work, among other things, through very flexible working time models. Severely disabled applicants will be preferentially treated.

Applications with the appropriate documents (when sending by e-mail only as one file in a PDF format) are to be sent with the reference number **AuL 18** by May 18 2015 to:

President of the University of Applied Sciences, Osnabrück PO Box 1940 49009 Osnabrück personalmanagement@hs-osnabrueck.de www.hs-osnabrueck.de

### Assistant/Associate Professor in Turfgrass Stress Physiology at University of Georgia

**Position** – This is a 12-month tenure track faculty position with a 90% research and 10% teaching appointment in the Department of Crop and Soil Sciences, College of Agricultural and Environmental Sciences at The University of Georgia. The position will be based at The University of Georgia Griffin Campus and expected to work with allied research programs at Griffin, Athens, and Tifton campuses.

**Duties and Responsibilities:** This position will be responsible for developing a research program in turf grass stress physiology



focused on utilization of advanced analytical and molecular techniques. The successful candidate will develop a program to characterize plant responses to abiotic and/or biotic stresses such as drought, heat, cold, salt, soil-related factors, weeds, insects, or diseases. Fundamental understanding of the physiological and metabolic plant responses to stress will be used to advance scientific knowledge and to assist in development of improved cultivars and/or strategies to improve cultivar performance. The successful candidate will be expected to develop an independent research program and to collaborate with colleagues working in plant breeding and genetics, turf management, and crop and weed physiology. The successful candidate will be expected to secure grant funds to support research efforts and to publish manuscripts in peer-reviewed journals. Teaching duties include training graduate students and teaching a course in an appropriate area of expertise.

**Basic Qualifications:** A Ph.D. in the plant sciences with training in physiology, biochemistry and molecular biology. Experience in plant stress physiology and the utilization of laboratory techniques commonly used in plant proteomic and metabolomic studies is desirable. Candidates should have demonstrated skills in verbal and written communication, interpersonal relationships, and the ability to work effectively with students and colleagues.

**Salary:** Commensurate with qualifications and experience

**Application:** Electronically send application package to: Paul Raymer at <u>praymer@uga.edu</u>. Applicants must submit the following documentation: a letter of application, curriculum vita, transcripts, and four professional reference letters.

To assure full consideration, applications must be received by July 15, 2015. Anticipated start date is January 1, 2016. The University of Georgia is an Equal Opportunity/Affirmative Action employer. All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, national origin, disability, gender identity, sexual orientation or protected veteran status. Effective January 1, 2008, the Board of Regents has enacted a "background check" policy for new hires in the system as a condition of employment.

This policy can be found at: <u>http://policies.uga.edu/FA/nodes/view/1124/Background-investigations</u>. Upon offer of employment, candidate must complete the "Consent for a Background Investigation" form.

### Virginia Tech Sports Turf Assistantship Opening for 2015

**Sports Turf Graduate Research Assistantship.** M.S. student preferred, Ph.D. student will be considered. This GRA is primarily funded by the Virginia Tech Athletic Department. The student will be required to function as a Second Assistant, helping the Head Sports Turf Manager maintain all of the Athletic Department's sports fields and surrounding landscapes. The student will also be required to conduct applied sports turf research towards fulfilling all the requirements for a graduate degree within the Crop and Soil Environmental Sciences Department.



This position is available beginning as early as July 2015.

The position comes with a monthly stipend that begins at approximately \$1718/month + tuition. Interested students should contact Dr. Erik Ervin (<u>Ervin@vt.edu</u>; 540-231-5208) or Dr. Mike Goatley (<u>Goatley@vt.edu</u>; 540-231-2951).

### AGENDA OF TURFGRASS EVENTS



What	When	Where	Info
Demopark + Demogolf	21-23 Jun	Eisenach (DE)	http://demopark.de
TPI 2015 Live Show and Tell	9-11 Jul	Portland (OR-US)	http://www.turfgrasssod.org
Flormart	9-11 Sep	Padova (IT)	http://www.flormart.it
ETS Field Days	7-8 Oct	Copenhagen (DK)	http://ign.ku.dk/grass
ETP Farm Tour	12-13 Oct	Newark (UK)	http://www.turfgrassproducers.eu
SALTEX	4-5 Nov	Birmingham (UK)	http://www.iog-saltex.com
Agritechnica	10-14 Nov	Hannover (DE)	http://www.agritechnica.com
Paysalia	1-3 Dec	Lyon (FR)	http://www.paysalia.com

If you know of a turfgrass-related event which should be included in the Agenda of Turfgrass Events, please contact the ETS Newsletter Editor at <a href="mailto:etsoffice@turfgrasssociety.eu">etsoffice@turfgrasssociety.eu</a> with all relevant details.



© European Turfgrass Society 2015 Edited by Claudia de Bertoldi PhD, <u>etsoffice@turfgrasssociety.eu</u> Deadline for submission of material for 03/2015 edition: June 15 2015



### The EUROPEAN TURFGRASS SOCIETY



The objectives of the ETS include the spread of innovative applications and encouragement of a holistic view of turf, particularly with respect to its influence on urban and environmental quality. This approach is significant as the founding members are representatives of a large industry that has global importance. We aim to:

a) Provide a forum for scientists, consultants, companies and practitioners to discuss technical issues related to the provision of turf surfaces.

b) Spread innovative applications for the benefit of the turfgrass industry, national and local government, and the European public. Encourage a systems-based approach to the study of turfgrass through multi-disciplinary groups working at different levels.

c) ETS considers turfgrass knowledge in the broadest sense, including its use in sport and leisure, its role in improving urban quality and its importance in the mitigation of environmental effects such as soil erosion.

d) Develop a strong ethos to promote sustainable, low input systems and solutions based on the conscious use of non-renewable resources.

### Current ETS Board of Directors



**Panayiotis Nektarios** Athens Agricultural University *ETS President* 

Dr. P.A. Nektarios has received his Ph.D. from Cornell University with an expertise on turfgrass management and its environmental impact. His vast

experience on turfgrass science and culture is substantiated by more than 100 publications in impact factor journals, international and national conferences, university notes and daily press. He was the organizer/convener of the 1st and the coconvener of the 3rd International Conference on Turfgrass Management and Science for Sport Fields, under the auspices of International Society for Horticultural Science (ISHS) and the Editor of the corresponding Acta Horticulturae.

Since 2005 he is a Board Member of the International Turfgrass Society (ITS) and the Chairman of the Turfgrass Management Working Group of ISHS. He has served as co-editor and reviewer in several International and National Conferences focusing on turfgrass science and management. His expertise in turfgrasses has been commuted to younger student and scientists through teaching and experimentation at an undergraduate and postgraduate level at the Agricultural University of Athens.

He has been the coordinator and member of twenty granted research programs and a reviewer of more than thirty scientific journals and conference publications.

#### Adriano Altissimo Landlab Studio Associato



ETS Board Member

Agronomist at LandLab Studio Associato, Vicenza, Italy. Since 1990 he focuses his scientific attention on turfs, working for private companies and taking

part in research projects in partnership with academic institutions such as the Universities of Padua, Italian Institute for Vineyard, the Plant Nutrition centre of Rome, Agronomy departments of the Universities of California, North Carolina, Kassel.

His research fields spread from organic and mineral fertilizers, and are now oriented towards low impact agriculture, by means of turfgrass test, mixtures evaluation under various conditions, technical support to sod producers.

Member of ASA - American Society of Agronomists and ISHS - International Society of Horticoltural Science, his approach to agronomy is meant to share, research, grow up with people of different ages and with different professional experiences, with the aim of working for stable, simple, efficient and low impact systems, paying particular attention to renovation and preservation of natural resources.

For further information visit: <u>www.landlab.net</u>

For further information visit: <u>www.aua.gr/nektarios</u>



#### **Maria Strandberg**

STERF - Scandinavian Turfgrass and Environmental Research Foundation ETS Board Member

Maria Strandberg is Director of STERF, which is a leading International centre of expertise

in sustainable golf course management. As a part of her job, Maria also has positions in Golf

Environmental Organisation (GEO) Advisory Council and GEO Technical Commission, and on the International Turfgrass Society board.

Maria has a background a lecturer and director of studies at the Swedish University of Agricultural Sciences. Maria has more ten years of experience in working with scientific issues regarding all aspects of high quality, and environmental and economic sustainability of managed turfgrass areas and golf facilities.

In 2008 Maria received an award from the King of Sweden for her national and international work on integrating golf and environment and in 2011 she received the Golf Environment Organization Environmental Award for her significant contribution to sustainable golf.

For more information please visit: <u>http://sterf.golf.se</u>



Scott McElroy Auburn University ETS Board Member

Scott McElroy is an Associate Professor in the Department of Agronomy and Soils at Auburn University. He received his BA in Communication with an emphasis

in Chemistry from Auburn University, his MS from the Auburn University in Agronomy and Soils and his PhD from the NC State University in Crop Science with a minor in Plant Ecology. Dr. McElroy was previously employed as an Assistant Professor and Extension Specialist in Turfgrass and Weed Science at the University of Tennessee in Knoxville, Tennessee. His primary research area at Auburn is on new and improved methods for improved weed management in turfgrass systems, from golf course putting greens to turfgrass sod production to home lawns. Dr. McElroy holds a joint appointment with the Agricultural Experiment Station and the College of Agriculture. He also serves as a reviewer for the Weed Science Society of America Journal, Weed Technology, and the Agronomy and Crop Science Societies of America Journals, Agronomy Journal and Crop Science, and is a member of the American Chemical Society and American Association for the Advancement of Science. Dr. McElroy teaches two classes, Principles of Weed Science (AGRN 3120) and Applied Weed Science Technology (AGRN 5200/6200). Dr. McElroy is currently developing a third class, Sports Turf Management, for both undergraduate and graduate students.

For more information visit: http://www.ag.auburn.edu/agrn/faculty/McElroy/



**Trygve S. Aamlid** Bioforsk ETS Board Member

M.Sc in Crop Science 1986.

Ph.D. in Plant Physiology / Seed production 1990.

Sabbaticals at Oregon State University (1991) and at PennState University (2005/06). Since 1990 employed by The Norwegian Institute for Agricultural and Environmental Research (Bioforsk) with Bioforsk Øst Landvik as working place. Qualified as professor 1999.

Since 2002 leader of Bioforsk's research group for turfgrass and seed production. Experience from numerous projects in turfgrass physiology, seed physiology, seed production, plant breeding, variety testing and ecological restoration / revegetation. About 60 papers in peer-reviewed international journals and conference reports. More than 400 popular articles.

Lecturer at the Agricultural University of Sweden, Norwegian University of Life Science and several meetings and courses held by the national golf unions and greenkeepers' associations in the Nordic countries. Supervisor for Ph.D. students Lars Havstad, Ingunn Vågen and Tanja Espevig. Since 2006 scientific representative and vice chairman and on the Board of Scandinavian Turfgrass and Research Foundation, since 2009 on the Board of directors of the International Turfgrass Society and since 2012 on the Board of European Turfgrass Society.

For more information visit: <u>www.bioforsk.no</u>



#### **Wolfgang Praemassing** DEULA *ETS Board Member*

Study of Agricultural Biology (University Diploma) at University of Hohenheim, 1991 Doctoral Dissertation (PhD) Promotion with Prof.

Dr. H. Franken, University of Bonn, subject: Soil physical Effects of Aeration on Turfgrass Soils, 2008.

#### **Occupation and activities:**

Agronomist and lecturer in Greenkeeper Education and Training for golf and sport sites at DEULA Rheinland GmbH, Education Center, Kempen. Member of editorial staff of "European Journal of Turfgrass Science". Member of expert committee of German Soccer League (DFL). Member of working group "Turf" at German Soccer Federation" (DFB). Member of working group "Water" at German Golf Federation. Member of board of directors "International Turfgrass Society" (ITS). Member of examination boards of Chamber of Agriculture Nordrhein-Westfalen Golf Course Greenkeeper and Head-Greenkeeper, Greekeeper/Groundsmen Sport Sites, Competence of Pesticide application.

For more information visit: <u>www.deula.de</u>

Arthur Wolleswinkel Barenbrug ETS Board Member

Arthur has been active in the international turf grass industry for over 16 years now. At the moment he is an International Product manager at Barenbrug

since 2006. He is responsible for setting up innovative product development projects and the technical support of the European sales teams, distributors and end users of Barenbrug seeds for sports, landscaping and golf. Before starting to work at the Royal Barenbrug Group Arthur worked as an agronomist and soil and water consultant at Grontmij Nederland where he was in charge of several projects focused on developing and maintaining areas for sports and golf. He also worked for the Institute of Sports Accommodations of the Dutch Olympic committee being involved in the national variety testing system for the Netherlands. He studied Land-Water management and Agronomy at the Wageningen University from 1991 to 1996. Arthur is a so-called turf grass "freak" and likes to be outside to bring turfgrass solutions to end users on sports pitches and golf courses. For ETS he would like to contribute to reducing the gap between science and practice. In other words: make scientific knowledge understandable for the end user!

For more information visit: www.barenbrug.nl



#### Stanislav Hejduk

BRNO Mendel University ETS Board Member

Graduated and Ph.D. defended at Mendel University in Brno. Currently working as an Associate Professor at Department of Animal Nutrition and Grassland Science of Mendel University.

First contact with Turfgrass management was during lectures of Professor Fratisek Bures in 1995. His background is grassland management and Forage production. He has been

a board member of ETS since its foundation in 2007. Main area of interests in turf: soils, water x plant relationships, turfgrass strips in fruit orchards and in vineyards, plant stress, grass seeds multiplying. He co-operates in the area of education with the Czech Greenkeeper's Association.

For more information visit: <u>http://is.mendelu.cz/lide/clovek.pl?id=3042</u>



#### Filippo Lulli

Turf Europe ETS Secretary and Treasurer

I am a University of Pisa graduate and PhD in Crop Science. I have been a member of the Centre for Research on Turfgrass for Environment and Sports since 2003. In 2009 I founded Turf Europe, a University of Pisa Spinoff company dedicated to turfgrass consultancy, teaching and R&D. I have been a member of ETS since its foundation and have always tried to be active and involved in all ETS events. I have written over 30

scientific articles on turfgrass and my main research areas are sports turf establishment and management and warm-season turfgrass species characteristics and physiology.

For more information visit: <u>www.turfeurope.eu</u>



## EUROPEAN TURFGRASS SOCIETY

## ETS 2015-2016 CAMPAIGN Two year membership

**REGISTRATION FORM** (print, fill-in, scan and send by e-mail to: etsoffice@turfgrasssociety.eu)

	FEES:	
	PRIVATE € 153,00	
	STUDENT € 51,00	
(	COMPANY:	
	with turnover < 500.000 $\in$ :340 $\in$ - 2 individual membership included	
	with turnover < 5.000.000 $\in$ : 510 $\in$ - 3 individual memberships included with	
	turnover < 25.000.000 $\in$ : 680 $\in$ - 4 individual memberships included with	
	turnover > 25.000.000€: 1020 € - 5 individual memberships included	
	public organizations and istitution: 340 $\in$ - 2 individual memberships included	
	Additional individual memberships (companies, institutions, associations): 50 $\in$	

#### Payment details:

Banca Popolare di Vicenza - ABI: 05728 - CAB 60870 - C/C 139570536378 -CIN Z IBAN CODE: **IT79 Z057 2860 8701 3957 0536 378** - BIC-code **BPVIIT21139** 

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*First name
*Family Name
*Date of birth (dd/mm/yyyy)
*Birthplace (city, state, nation)
*Codice Fiscale (only for Italian people)
*Password (8 characters) : Choose the password
*E-mail
*language
*Membership
*Address
*City
*Zip
State
*Country
*First Telephone
Member 2 info
*Family Name
*Date of birth (dd/mm/vvvv)
*Birthplace (city, state, nation)
*Codice Fiscale (only for Italian people)
*Password (8 characters) : Choose the password
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For additional members print and fill-in this page again and add to the form.