



EUROPEAN TURFGRASS SOCIETY

NEWSLETTER 03/2022

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No time limitation for endowed professorship on sustainable turfgrass management



Source: German Turfgrass Society, DRG and University of Applied Science Osnabrück

Positive performance

For five years, the German Turfgrass Society (DRG) supported an endowed professorship at the Osnabrück University of Applied Sciences for sustainable turfgrass management with financial support from a total of seven sponsors from industry, six associations and two training centers. Not only were the personnel funds for Prof. Dr. Wolfgang Prämassing's position covered, but additional funds for scientific staff and material costs in the testing department were also financed.

Prof. Martin Thieme-Hack, the initiator at the university, and the holder of the position thanked the foundation in detail for this start-up funding on behalf of the university management and the AuL faculty at the last advisory board meeting during the foundation's time period. The university management committees have now decided to continue the professorship. As is customary at the Osnabrück University of Applied Sciences, this will take place until the professor retires due to age. This means that this first phase of establishing turfgrass research at a German university can be successfully concluded.



Fig.1: Old and new advisory board of the endowed professorship, Prof. Dr.W. Prämassing second from right. Photo: DRG

The German Turfgrass Society is very pleased that the continuation of the position is now official. The turf scene, represented by the advisory board members, is very satisfied with the achievements in teaching and research to date and expressly praises what has been achieved. The chairman of the German Turfgrass Society, Dr. Harald Nonn and his predecessor in office, Dr. Klaus G. Müller-Beck speak of a great success for German turfgrass research.

Prof. Dr. W. Prämassing also has a lot to show. In addition to international joint projects in the fields of plant nutrition, integrated pest management and the highly topical subject of climatic turf, almost 20 projects have been carried out in contract research for associations and industry in the last five years. This has resulted in numerous publications that are advancing turf research in Germany and helping the German turf scene to achieve international recognition.



Fig.2a+b: Prof. Dr. Wolfgang Prämassing on the turf trial plots at the Osnabrück University of Applied Sciences (a left) and (2b right) at the awarding 2022 of the DRG Silver Pin of Honor by Chairman Dr. Harald Nonn (left) together with Otto Weilenmann, Switzerland (right). Photos: K.G. Müller-Beck

With the extension of the position, follow-up projects are now possible. Projects in the area of golf fairway grasses, resource conservation especially irrigation water, turfgrass cut quality, climate grasses such as tall fescue, and warm season grasses are being planned. Two doctoral projects are now underway as part of research projects.

Lawn science in teaching

The second important area is teaching. The Chair of Sustainable Turfgrass Management is currently involved in the bachelor's degree program in landscaping with a teaching module that enjoys great popularity and, as an elective module, is one of the most frequently chosen modules. Turfgrass is obviously a significant field of work in landscaping. However, the main focus of teaching is in the Master's program, as the professorship was created primarily to promote research. In the master's program, three modules are offered here in a focus on "Applied Turfgrass Sciences". Here, the groups are much smaller than in the Bachelor's program, but the students usually bring a great interest to participate in research projects in the professional field of turfgrass, so that they can quickly be involved in proposal and contract research.

Editing:

Dr. Klaus Mueller-Beck
Honorary Member DRG

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DRG members participated in the 14th ITRC in Copenhagen.

A brief report on DRG's spring turf seminar

By Müller-Beck, K.G

Inspiring ITS meeting

Some colleagues from Germany had booked the tour to Copenhagen and were not disappointed. The lecturers for "Sustainable Turfgrass Management" at the Osnabrück University of Applied Sciences were also represented by some students. Both the chairman of the German Turfgrass Society e.V., Dr. Harald Nonn and the rapporteur were able to expand the network to numerous new turfgrass researchers.

The entire German delegation at the ITRC in Copenhagen, gathered at the end of the day excursion on Wednesday, for a group photo on the turf experimental area of the DLF breeding station.



Fig. 1: The German delegation was in good spirits at the 14th ITRC in Copenhagen. Here at the conclusion of the Technical Tour on the DLF breeding station trial plots. Photo: K.G. Müller-Beck

Versatile technical excursions

An important part of the conference was the excursion on Wednesday to different projects in the Öresund region (Denmark and Sweden). The organizers had prepared six tour offers, of which five trips were then carried out. Depending on the chosen tour, the participants visited, for example, multifunctional golf courses, historic castle parks, high-quality sports stadiums and sustainably maintained urban green spaces.

The last stop on all tours was a visit to the DLF experimental station in Store Heddinge. After all groups had visited the prepared stations, an exquisite barbecue was waiting for all participants. This very interesting, informative excursion day ended with a convivial networking session.

Information about the tour offer:

<https://itrc2022.org/conference-programme/technical-tours>



Fig.2: Visit of the variety trial in the Scangreen project of NIBIO on the Smörum golf course (Tour 5). Photo: K.G. Mueller-Beck

Young female researchers honored

At international conferences, it is often the case that young scientists in particular present highly topical research results. Thus, a "Student Award" was also offered at the 14th ITRC. The winners of this competition were honored during the ITS General Meeting on Thursday, July 14. The reporter was able to persuade the three winners to take a winning photo and to congratulate them on behalf of the German Turfgrass Society (Figure 3).

Fortunately, recently graduates and students have also made themselves available as speakers at the DRG turf seminars with their topics on turf science.



Fig.3: The winners of the Student Award at the 14th ITRC in Copenhagen: From left, Claudia Ann Rutland, Audrey Simard and Amy L. Wilber. Photo: K.G. Mueller-Beck

The presented papers are published in the "International Turfgrass Society Research Journal" and can be accessed there.

▪ **First Place: Audrey Simard, Penn State University**

[Evaluation of nitrogen fertility and plant growth regulator impacts on annual bluegrass weevil \(*Listronotus maculicollis*\) oviposition and larval survivorship. Audrey Simard, Benjamin D. Czyzewski, Garrett Y. Price, Benjamin A. McGraw](#)

▪ **Second Place: Claudia Ann Rutland, Auburn University**

[Resolving issues related to target-site resistance detection in *Poa annua* alpha-tubulin Claudia Ann Rutland, Eli C. Russell, Nathan D. Hall, Jinesh Patel, J. Scott McElroy](#)

▪ **Third Place: Amy L. Wilber, Mississippi State University**

[Aerial and ground-based assessments of preemergence herbicide effects on St. Augustinegrass grow-in - Wilber - 2022 - International Turfgrass Society Research Journal - Wiley Online Library](#)

Statement and outlook

Turfgrass is an important culture internationally and connects scientists and practitioners in the design and orientation of sports and leisure facilities in terms of sustainable development. ITS is the appropriate platform for international exchange of expertise.

More info at: <http://www.turfsociety.com/>

▪ **Statement Leah A. Brilman, Breeder DLF Pickseed, USA:**

„Crops, with their properties, generally serve to directly feed people. Turfgrasses, on the other hand, have multiple values and properties for the planet and people.“

▪ **Invitation from the new ITS President, Hideaki Tonogi,**

to the 15th ITRC in Japan 2025.

“Please join us and see our accumulated turfgrass culture since 1989.“



Fig. 4: The current ITS President, Hideaki Tonogi, Japan, meets DRG honorary member Klaus Mueller-Beck in Copenhagen. Photo: own

The German Turfgrass Society DRG congratulates the new ITS President and supports all activities for a vital and sustainable turf culture.

Author

Dr. Klaus Mueller-Beck

Honorary Member DRG

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Moving target for leatherjacket control

New research into adapting agronomic practices to entice leatherjackets into a target zone for control suggests potential to enhance results with integrated chemical and nematode controls, reports **Glenn Kirby**, Syngenta EAME Turf Technical Manager.



Trials in the UK by Syngenta and the STRI have shown the effects on leatherjacket populations from different aeration practices at times when the pest larvae are active in the soil profile. That has been shown to have implications for the optimum timing of Acelepryn application to achieve the best possible results.

The value of the research, along with a series of ongoing on-course trials, helps us understand the role of soil moisture conditions in the target control zone in the future.

[Acelepryn is available in the UK](#) under an Emergency Authorisation for leatherjacket control in the autumn, along with new registrations for the product being approved in countries across Europe, including Germany, Spain and Ireland.

Analysis of product movement in golf green profiles after application of Acelepryn has shown that the active ingredient, chlorantraniliprole, is very effectively held in the upper profile – in this trial after four months 59% of the applied product remained in the top 8cms and a large percentage of that remained in the top 4 cms (Fig 1).



Fig 1. Acelepryn soil movement

That is hugely beneficial for the duration of control and minimising risk of environmental loss, however it does mean that the pest has to be in that zone to come into contact with the product. The longer the larvae remain in the treatment area, the better the results we would expect to see.

Also, when using nematodes as an allied treatment to reduce leatherjacket populations, the sooner after nematode application the beneficials come into contact with the pest, and the closer to the surface where the concentration of active nematodes is highest, the greater the success.

Initial studies by STRI have shown the highest level of leatherjacket control was with Acelepryn application when no aeration has taken place during the control period.

Hollow-tine aeration, to punch and leave holes in the surface, resulted in more leatherjackets remaining in the soil profile, while the less intrusive slit tine was somewhere in the middle when assessed for pest numbers and turf surface quality (Fig 2). The highest populations were identified in the hollow-tined plots with no Acelepryn treatment.

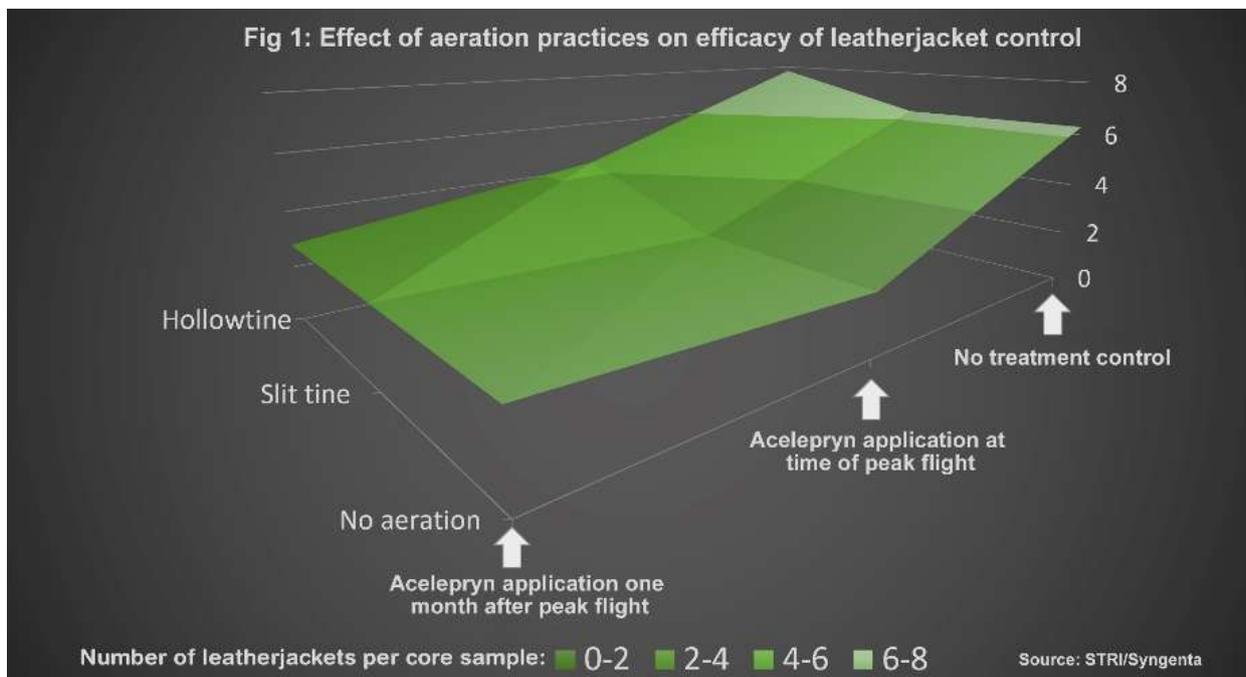


Fig 2. Effect of aeration practices on leatherjacket control vs 2

The work has also shown that intensive hollow-tine aeration practices may provide channels for pest movement and further limit any interaction with controls – either chemical or nematode.



Fig 3. Leatherjackets will use aeration holes to travel up and down through the soil profile

The STRI aeration trial has also confirmed the optimum timing for Acelepryn application should be one month after the peak flight of adult crane fly (daddy long legs) is identified around the course.

Previous research to assess results on over 100 golf course greens showed that those treated with Acelepryn to coincide with peak adult crane fly activity scored an average damage level of 29.3 points per m^2 (ranging from 0 to 190). Those treated a month after peak flight, however, recorded an average damage of 5.7 points per m^2 (range 0 to 22). An affected area of 10 points per m^2 would be deemed manageable.



Taking the results of the trials, the intention for greenkeepers is to use soil moisture manipulation and adapting aeration practices to encourage and hold more of the pests into an area of the soils where controls have been applied.

Fig 4. Leatherjacket damage assessment minor - left - vs severe

Leatherjackets prefer to reside in moist soil during the heat of the day, emerging to the surface to feed on dewy nights. If soils are dry, the grubs can quickly move deeper into the profile, which could place them below the zone of control for any treatments applied. In light, sandy soils, they move very quickly up and down, spending limited time in contact with any control measures put in place.



Fig 5. Leatherjacket feeding damage seriously disrupts surface quality

Prolonging irrigation practices over the treatment period, to hold soil volumetric moisture content at levels of around 25% - 30% at a depth of 10 cm, could prove more conducive to leatherjacket populations and bring them into contact with controls.

The challenge for moisture management could be that optimum leatherjacket control timing, in mid- to late-autumn, is when historically irrigation schedules have typically finished, and soils are being allowed to naturally dry down – in preparation to manage winter rainfall.

Furthermore, the trend toward longer, hotter summers means irrigation schedules are being stretched and the difficult issues of water availability and cost for most courses across Europe.

[Best use practice guidelines for Acelepryn](#) when targeting leatherjackets suggest mowing prior to application onto moist soils, and then to maintain soil moisture levels. Spray water volume should ideally be at 600-1000 l/ha, applied through 08 XC Soil Nozzles to move as much product as possible to the soil surface. Application with a forecast of light rain or heavy dew to wet the leaf surface is also preferable.

Based on trials research, a follow-up application of nematodes one week later, while the soils are still moist, would appear to best bolster the consistency and reliability of the integrated leatherjacket control programme.

Drought-tolerant turf solutions to keep turf green and appealing during summer droughts



Summer droughts may well be here to stay. If the wide areas of brown turf that covered much of Europe during the summer of 2022 are a pointer to the future, now is the time to rethink the way turf managers sow and manage their turf.

So, what can be done to keep sports grounds, gardens, and public spaces looking green during summer droughts? How can turf managers reduce their water use and ease the maintenance demands of future dry summers?

To withstand a summer drought and keep turf green, ProNitro® seed coating, Microclover®, 4turf® and other more drought-tolerant species might be part of the solution.

Add a more resilient layer of green leaves with Microclover®

You may have noticed during this summer of drought that patches of green clover continued to grow within the parched brown turf. Clover has the ability to fix its own nitrogen from the atmosphere, making it highly tolerant to drought and high-stress environments.

Microclover® is a specially bred, dwarf white clover that tolerates frequent mowing, at a low mowing height, and that blends in well with other turf species. With smaller leaves and a low-growing habit, it adds to the dense, uniform appearance of a better-looking turf. In trials conducted by the STRI, Microclover® produced better turf coverage and colour than a pure grass surface did. Adding Microclover® to the mixture creates a turf that needs less water. Its better heat and drought-tolerance makes it less costly to maintain.



Microclover® – the greenest survivor in a drought (France, summer 2022)

Choose 4turf® for deeper, water-seeking roots

Any turf grass intended to survive a drought has to quickly develop long roots and a bigger, stronger root mass. 4turf® is a range of specially developed tetraploid ryegrasses with faster root growth and a strong root mass. Their vigorous rooting habit makes them extremely drought-tolerant during spring droughts (when water is still available deep in the soil) and summer droughts (when water is absent). In a spring drought they reach water deep in the soil; in a summer drought they survive with less added irrigation. And if the drought is so severe that they do fall victim, they recover faster when the rains return.

The current European evaluation system does not acknowledge the value of a deep root mass and generous root architecture. There are no official tests and therefore no rewards for good performance. Nevertheless, we at DLF know that it is essential to pursue the goal of drought-tolerance. For the benefit of drought-stressed turf managers we will continue to bring high-performing varieties to the market.

Give your turf a better start with ProNitro® seed coating

If turf managers can get their grass seeds to germinate sooner, and the seedlings to grow faster, the newly sown turf would be much better prepared for any subsequent drought. ProNitro® is the seed coating that does exactly that. The nitrogen fertiliser in the coating gives germinating seeds and growing seedlings the exact amount of nitrogen they need to thrive. Seeds coated with ProNitro® produce up to 34% more plants and seedlings that grow up to 30% longer roots. The coating creates a faster and more successful establishment, and a turf that's more likely to perform better when a drought hits.

ProNitro® helps even more by making better use of the moisture surrounding the growing seedling. By breaking the surface tension of water, the technology distributes moisture more efficiently and uniformly within the soil. The process is so effective, ProNitro® seedlings need up to 15% less water during establishment. They require less irrigation which cuts maintenance costs during a drought.

Sow drought-tolerant grass species

Not all grass species are the same. Some are more tolerant of droughts. To create a drought-tolerant turf, include some of them in the turf mixture if possible. The most drought-tolerant turf species is probably tall fescue, because of its ability to extract water deep in the soil. An even better choice for improved summer-drought turf quality would be one of our latest generation of tall fescues for example AZZORO and ATBARA.

Hard fescue is another excellent species for turf managers who'd like to grow a fine-leaved turf in a sandy or shallow soil. In summer heat and drought, hard fescue performs much better than all other fine fescues.

If droughts are likely to become more extreme, cool-season grasses could be replaced with warm season species such as Bermuda grass.

Drought-tolerance is better for everyone

Choosing turf that stays greener for longer during a drought is the sustainable choice. Drought-tolerant grasses that continue to thrive throughout the summer help to reduce the urban heat-island effect. They also continue to sequester CO₂ during these dry periods. And since they need little to no irrigation, they help save water.



Barenbrug's new Turfgrass Team

New head of marketing & sales Jan Haalboom

Since July 1, Jan Haalboom is responsible for the marketing & sales department within Barenbrug Holland. In this position he succeeded Christiaan Arends, who has accepted a management position elsewhere after almost 25 years at Barenbrug.

Jan, 35, has been with the company since 2016 and has broad international marketing and sales experience in turf grasses as well as in forage. Until this summer, he was product manager turf grasses. "It is a challenging next step that I am happy to take on," says Haalboom about his new position. Jan has also replaced Christiaan Arends in the Board of the ETP.



New product manager turf Ricardo Bleumer

Since July 1, Ricardo Bleumer is the new product manager turf within Barenbrug Holland. He will be responsible for the turf portfolio in Europe for Barenbrug Holland B.V. In this position he succeeded Jan Haalboom.

Ricardo has been with the company for almost 10 years and has broad international sales and logistics experience in turf grasses. "I will use my experiences in the turf market at all levels in the further development of new solutions for the turf market," says Bleumer in a reaction. "For the coming years we will have great new solutions in the pipeline which will help the turf professionals in finding the best solutions for the local markets and challenges everywhere in Europe."



Barenbrug's Turfgrass Team

The Barenbrug Turfgrass Team, led by Sales Lead Jan van den Boom has welcomed Hannie de Boer, Joris van Oijen and Martin Vrieze. Hannie has worked for Barenbrug for more than 20 years and will now be responsible for sales in the southern countries in Europe. Joris van Oijen is new within Barenbrug Holland and will use his international sales experiences in the Scandinavian and German market. Martin Vrieze joined the Barenbrug Turf Team to support the Dutch and Belgian market with his practical technical turfgrass knowledge and will be responsible for the sales there.

Olaf Bos will remain the technical specialist for turf in Europe in the Turfgrass Team of Barenbrug

Research Trials at Clemson University's 2022 Research and Education Turfgrass Field Day



At a recent August turfgrass field day at Clemson University, the following trials were highlighted: (a) An overview by Dr. Joe Roberts on fungicide programs and turf management tips for upcoming fall and winter diseases. (b) Managing Mini Ring on ultradwarf bermudagrass (UDBG) by Luke Dant including fertility programs using urea-based fertilizers. (c) Latest trends on managing bermudagrass stunt mites by Matt Brown. (d) PRE and POST Poa control options in overseeded and non-overseeded bermudagrass by Bert McCarty who covered several proven management programs. (e) Update on selectively removing off-types from UDBG by Hunter Taylor who displayed the latest work on this project funded by Rounds4Research. (f) Viewed experimental zoysiagrass and bermudagrasses for greens, fairways and lawns. (g) Amazing tolerance by zoysiagrass and St. Augustinegrass using a herbicide safener (metcamifen), from Syngenta, and adding trifloxysulfuron, fluazifop, quinclorac, and/or triclopyr amine. (h) Dr. Bob Cross covered PRE Poa and kyllinga control on UDBG with Samurai (cumyluron), an experimental herbicide being developed by Helena Chemical Comp. (i) Enhanced POST kyllinga control by adding bentazon or sulfentrazone which also helps avoid herbicide resistance. (j) Significantly reducing mowing events, seedheads, plus weed control using the PGR, Plateau, at various rates with and without chelated iron compared to trinexapac-ethyl and Anuew. (k) POST Va. Buttonweed control trial with Trimec Classic, Millennium Ultra, and Escalade providing maximum control for the longest period. (l) Effects and recovery of bermudagrass from Fraise mowing indicated 4 (minimum) or preferably, 6 weeks, are needed for adequate recovery.

June events recovered quickest compared to earlier or later ones in upstate SC. — **Bert McCarty, Clemson University, Clemson, SC.**



Figure Description

At the recent Clemson University turfgrass field day, Mr. Mike Echols, supervisor of athletic fields at Clemson University explained to field day participants how he overcame a recent outbreak of sting nematodes on a American football facility (photo by B. McCarty)



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Deadline for submission of material for 03/2022 edition:
DECEMBER 15th

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



Stefano Macolino
University of Padova, (IT)

ETS President

Stefano Macolino is an Associate Professor at the Department of Agronomy, Food, Natural resources, Animals, and Environment of the University of Padova.

He graduated in Forestry Science in 1996, Faculty of Agriculture at Padova University.

He has carried out research on forage management and turfgrass at the Department of Environmental Agronomy and Crop Production as a Postgraduate Researcher. In 2003, he achieved the Ph.D. in Environmental Agronomy.

He has been teaching actively, including three courses: Turfgrass and Revegetation, Forage Crops, and Botany of Cultivated Plants. Dr. Macolino is currently the president of the Committee for the improvement of teaching at the School of Agriculture and Veterinary Medicine of Padova University.

He conducts researches on the following:

1. Impact of cultural practices on cool and warm-season turfgrasses in transition zones.
2. Forage crop production and management.
3. Production and plant biodiversity of mountain grasslands.

He supervised Ph.D. students and postdoctoral fellows on the made mentioned topics.

Dr. Macolino is the author and co-author of nearly 50 scientific publications in peer-reviewed journals, and numerous publications in conference proceedings, and technical magazines. He is also the author of two books in Italian for undergraduate students.



Marcela Munoz
Bion (SPA)

ETS Board Member

My name is Marcela Munoz, I'm a leading turfgrass specialist qualified as an Agronomist Engineer from The Pontifical Catholic University of Chile and have a Master of Science Degree from The Ohio State University in Turfgrass Management.

I'm an amateur football player that joined this industry moved by my passion for sports, agronomy and science. I had been in the turf industry for more than 17 years and worked at different positions and countries around the world. Some of my latest exciting experiences include working for the STRI as a turf agronomy consultant for the FIFA 2014 Brazil World Cup and providing technical support at the Ryder Cup at Le Golf National in Paris. In my last role as Turf Technical Manager for Syngenta in the EAME region I worked closely with associations such as ITS, FEGGA, GMA, BIGGA, STERF, R&A and other local associations and Federations around the region. I also worked very closely with the Syngenta Turf Research facility at Stein in Switzerland and the International Research Centre at Jealott's Hills in the UK, as well as independent researchers, agronomists, greenkeepers and sports turf managers across Europe, Africa and the Middle East.

I recently join Bion a new an exciting company from the Netherlands, Im now based in Spain and I worked as Turf Business Manager. In this new role im working closely with the end users but also with Bion's partners and internal teams to provide affordable, reliable, and friendly solutions to the turf market. I will also be supporting the marketing, commercialization, product development and the turf business strategies in order for Bion to continue leading the transition to innovative biosolutions.



Claudia de Bertoldi
Turf Europe Srl (ITA)
ETS Secretary and Treasurer

I received my BA in 2003, after an internship at North Carolina State University (USA) and I have completed my M.Sc (*Progettazione e Pianificazione delle Aree Verdi e del Paesaggio*) at University of Pisa (Italy) in 2006. My PhD (*Allelopathic interferences of plants*) was from S. Anna School of Advanced Studies in 2007-2010. I have been working as consultant at Pacini Company (Pisa - IT) for warm season turfgrass production made in Tunisia during 2010-2012. Since 2013 I am employed by Turf Europe srl (Livorno - IT). I am actively engaged in landscaping and realization of gardens and turfgrasses for ornamental and sport use. Management of high-quality sport fields also through precision agriculture. Consultant for turf seeding in difficult zones (dumps and caves). Botanical censuses and visual tree assessment. Participation in R&D projects financed at European level. More than 15 publications, posters and presentations on conferences and meetings on turfgrass.

Marco Schiavon
University of Florida (USA)
ETS Board Member

Ph.D., is an Assistant Professor in the Environmental Horticulture Department, University of Florida at the Fort Lauderdale Research and Education Center. His primary research interests include potable water conservation for irrigating turfgrass areas, salinity management, physiology of turfgrass in response to drought stress. He received a B.S. in Agronomical Sciences in 2005 and a M.S in Agronomy in 2008 both from University of Padua, Italy, and a Ph.D. in Agronomy in 2013 from New Mexico State University. In 2013, he moved to University of California Riverside where he worked as a Postdoctoral Scholar until December 2016, and subsequently as an Assistant Researcher until November 2019. He has published more than 30 refereed journal articles.



Karin Juul Hesselsø
Norwegian Institute of Bioeconomy Research (NOR)
ETS Board Member

M.Sc in Agriculture 1996, Copenhagen University. From 2006-2019 employed at the Greenkeepers College Sandmoseskolen in Denmark as teacher in greenkeeping and landscape gardening.

From June 2019 employed at NIBIO, Landvik. Experience with writing/translation of popular articles and fact sheets on golf course management. In 2018 project leader on an IPM-project on Danish golf courses financed by the Danish Environmental Protection Agency.



Fritz Lord
COMPO Expert (GER)
ETS Board Member

Study of horticultural science at Rhein University Geisenheim, M.sc. in soil science/entomology. Study of Agricultural Science at Humboldt University Berlin; M.Sc. in crop science, plant diseases; Ph.D at Humboldt University Berlin in phytopathology, antagonistic rhizobacteria (PGPR), soil borne pathogens (Fusarium). Since 2008 working for one of Europe`s leading fertilizer manufacturer COMPO Expert in Münster, Germany. Responsible for the segment turf and public green, vegetation-technical consultation, research and development, product management and education. Specialties/ experiences: soil-plant-microorganism interactions, bio stimulants, microbial fertilizer, turf nutrition and maintenance. Various publications regarding turf fertilization and maintenance (e.g. European Journal of Turfgrass Science, New Landscape). Teaching turf seminars for greenkeepers and groundsman in Germany and abroad. ETS member since 2008, board member of the International Turf Grass Society (ITS) since 2014. Further memberships: German Turfgrass Society (DRG), Greenkeeper Association of Germany (GVD) , Austrian Greenkeeper Association (AGA), Förderkreis Landschafts- und Sportplatzbauliche Forschung (FLSF), Forschungsgesellschaft Landschaftsbau e.V. (FLL).



Wolfgang Praemassing

DEULA (GER)
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:

Professor for Sustainable Turfgrass Management at University of Applied Sciences Osnabrueck, 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 Turf expert committee of German Soccer League (DFL).

Member of working group "Water" at German Golf Federation. Member of examination boards of Chamber of Agriculture Nordrhein-Westfalen Golf Course Greenkeeper and Head-Greenkeeper, Greekeeper/Groundsmen Sport Sites, Competence of Pesticide application.

Carlos Guerrero

University of Algarve (POR)
ETS Board Member

Carlos Guerrero is graduated in Horticulture Engineering at the University of Algarve (Portugal). Has a M.Sc. in Soil Fertility and Plant Nutrition at the Agronomy Superior Institute, of the Technical University of Lisbon (Portugal) and a PhD in Environmental Agronomy at the University of Algarve (Portugal).



Assistant Professor at the University of Algarve (Faculty of Sciences and Technology), a former Diretor of the Degree Program in Agronomy (2015-2018) and also a former Director of the Master Program in Management and Maintenance of Golf Courses between 2008-2010.

Teaches Soil Science in Landscape Architecture and Soil Science and Agriculture Machinery in the Agronomy. Is also specialized in groundwater and soil nitrate pollution and has experience on organic and compost uses in agriculture and turfgrass.

Actually, is working on biological control of plant diseases, mainly turfgrass, and also on remote sensing for turfgrass maintenance purposes with unmanned aerial vehicles and multispectral sensors."

