

5th ETS CONFERENCE 2016

"Turfgrass – Towards sustainability and perfection for aesthetic, recreational and sports"



Conference program

June 5th 2016

Evening (18-20h), Registration and Poster Placement

June 6th 2016

8:30-9:30h – Registration and Poster Placement

9:30-10:15h – Convener, ETS Board President, Rector of the University of Algarve, Diretor of the Faculty of Sciences and Technology - Welcome speeches

10:15-12:15h – **Turfgrass genetics and breeding**

Chairman: Nektarios Panayiotis

- *Genetic Improvement of Bermudagrass for Turf Quality and Sustainable Traits*, Yanki Wu, Justin Moss, Dennis Martin and Nathan Walker

- ***A non-GM Herbicide Resistant System for Seashore Paspalum Turfgrass***, Paul Raymer, Zhenbang Chen, Douglas Heckart and Wayne Parrott
- ***Introduced brown patch disease resistance in transgenic tall fescue***, Binbin Zhou, Ana Bailey, C. L. Niblett, Hong Luo and Rongda Qu

11:00-11:30h – Coffee break

- ***Associations between ploidy level and genetic diversity of bermudagrass as assessed by iPBS retrotransposon marker***, Cansu SIMSEK, Nedim MUTLU, Songul Sever MUTLU and Osman GULSEN
- ***Breaking the apomictic barrier in Bahiagrass to enhance its aesthetic value***, Esteban Rios, Kevin Kenworthy, Ann Blount, Kenneth Quesenberry, Bryan Unruh, John Erickson, Fredy Altpeter and Patricio Munoz
- ***Genetic, Adaptive, Morphological and Drought Resistance Variabilities in Eastern Mediterranean Bermudagrass Accessions***, Songul Sever Mutlu, Nedim Mutlu, Osman Karaguzel, Robert C. Shearman

12:30-14:00h – *LUNCH*

14:15-14:45h – **Keynote speaker:** José Monteiro (*Turf, mankind and landscape*)

14:45-16:30h – **Turfgrass and landscape**

Chairman: Marco Volterrani

- ***Comparing four bermudagrass and five zoysiagrass cultivars under heavy use at kindergartens***, Yoshiaki Ikemura and Masayoshi Hastukade
- ***Varying Management Practices for the Improvement of Bermudagrass Accessions under Low Light Conditions***, Jeffrey Dunne, W. Casey Reynolds, Consuelo Arellano, Grady L. Miller and Susana R. Milla-Lewis
- ***The potential to increase delivery of multiple ecosystem services of urban grasslands***, Hans Martin Hanslin, Jörgen Wissman and Trygve Aamlid

- ***Turf quality and species succession of Bermudagrass and Kentucky bluegrass mixtures***, Alessandro Menegon, Stefano Macolino, John H. McCalla, Filippo Rimi and Michael D. Richardson
- ***Impact of different management practices on turfgrass quality, botanical composition, colour and growth of urban lawns***, Pavel Knot, Frantisek Hrabe, Stanislav Hejduk, Jiri Skladanka, Michal Kvasnovsky, Lucie Hodulikova and Iva Klusonova
- ***Quality assessment of three warm-season turfgrasses growing on shallow green roof systems with different substrate depths***, Ntoulas N., Nektarios P.A., Kotopoulos G., Ttoulou Th. and Ilia I.
- ***Golf courses as a part of urban lawns: results of interdisciplinary research on different aspects of extensively managed turfgrass areas from Nordic perspective***, Maria Ignatieva, Fredrik Eriksson, Tuula Eriksson, Pernilla Tidåker, Karin Ahrné, Jörgen Wissman, Håkan Marstorp, Christopher Poeplau, Thomas Katterer

16:30-17:00h – Coffee break

17:00-17:30h – **Keynote speaker:** Jason Kruse (*Maximizing turfgrass performance: a look at micronutrients and turf nutrition*)

17:30-18:30h – **Turfgrass for sports**

Chairman: Maria Strandberg

- ***Putting Green Turfgrass Evaluations to Reduce Maintenance Costs and Improve Sustainability***, Kevin Morris and Guang Ling Gao
- ***Economic and technical analysis in construction and maintenance for professional soccer fields***, Alberto Minelli, Alessandro De Luca, Rino Ghelfi, Laura Cevenini, Ilaria Pasini
- ***Using turf colorants and pigments for potential long-term color of dormant warm-season grasses***, Grady Miller and L. B. McCarty
- ***Potential Benefits of Using Pigment-Containing Product on Creeping Bentgrass and Hybrid Bermudagrass putting greens***, A.W. Gore, L.B. McCarty, C.E. Wells and S.B. Martin

18:30-19:00h – **Sponsors Space for short presentations**

Chairman: Maria Strandberg

- MESSINAGRO, Carlos Rodrigues
- SYNGENTA, Marcela Muñoz

20:00-21:30h – *WELCOME COCKTAIL*

June 7th 2016

8:30-9:00h – **Keynote speaker:** Richard Snyder (*Low-cost Urban ET Measurements and Estimates*)

9:15-10:45h – **Water management**

Chairman: Celestina Pedras

- ***Modelling irrigation demand and value of water for golf in Europe***, Jerry Knox, Juan A. Rodriguez-Diaz, Dolores Rey, Javier Calatrava and Andre Daccache
- ***Irrigation Requirements for Perennial Ryegrass (*Lolium perenne* L.) Salinity Management***, Marco Schiavon, A. Miehl, Bernd Leinauer, D.L. Suarez, and J.H. Baird
- ***Irrigation strategies on sand-based creeping bentgrass (*Agrostis stolonifera*) putting greens***, Trygve S. Aamlid, H. Riley, A. Kvalbein, T. Pettersen and J.W. Knox
- ***Assessing evidence on the agronomic and environmental impacts of turfgrass irrigation management***, Carlos Gómez, Jerry W. Knox, Agnar Kvalbein and Trygve S. Aamlid
- ***Improving Water Use Efficiency with Soil Incorporation of Organic Matter***, Clint Waltz and E. Bauske
- ***Soil surfactants and trinexapac-ethyl improve turf quality and rooting characteristics of bermudagrass and seashore paspalum under deficit irrigation***, Matteo Serena, Marco Schiavon and Bernd Leinauer

10:55-11:25h – Coffee break (and poster space)

11:25-11:55h – **Keynote speaker:** Filippo Lulli (*Precision farming practices in sports turf management*)

12:00-12:45h – **Technology advances and turfgrass maintenance (mowing, fertilization, environment, certification)**

Chairman: Carlos Guerrero

- ***Fertilizer Use Restrictions and Organic Lawn Care: Evaluation of Compost Tea, Compost Topdressing and Cultivation on Tall Fescue Color, Quality and Weed Encroachment***, Siqi Chen, Mark J. Carroll and Thomas R. Turner
- ***Effects of nitrogen, phosphorus, mowing height and mycorrhiza inoculation on turf quality and competition against annual bluegrass (*Poa annua*) on pure red fescue (*Festuca rubra*) and mixed fescue / bentgrass (*Agrostis sp.*) golf greens***, Sara Calvache, Tatsiana Espevig, Erik Joner, Tina E. Andersen, Trond Pettersen and Trygve S. Aamlid
- ***Satellite monitoring of turfgrass sod production: image analysis, interpretation and new sod-specific vegetational indices***, Filippo Lulli, C. de Bertoldi, J.M. Lopez, G. Pons and D. Micallef

13:00-14:30h – **LUNCH**

14:45-15:15h – **Keynote speaker:** Tom Hsiang (*Conventional fungicides vs. disease resistance activators*)

15:15-16:45h – **Turfgrass pests (diseases, insects, weeds)**

Chairman: Maria Albertina Gonçalves

- ***Management of Bentgrass Cultivars for Activated Resistance to Microdochium Patch (*Microdochium nivale*) Under Climate Change Conditions***, Sara Stricker, T. Hsiang, and A. Bertrand
- ***A Nordic model for implementing Integrated Pest Management - collaboration between authorities and the turfgrass industry***, Agnar Kvalbein, Arne Tronsmo, Anne Mette Dahl Jensen, Karin Juul Hesselsøe, Trygve S. Aamlid and Maria Strandberg
- ***Post-Application Irrigation Timing and Formulation Affects Azoxystrobin Retention in Hybrid Bermudagrass Clippings***, Matthew Jeffries, Travis Gannon and Fred Yelverton

- ***Influence of Ferrous Sulfate and its Elemental Components on Dollar Spot Suppression***, Erik Ervin, Shelton, C., McCall, D., Reams, N., and Askew, S.
- ***Best Management Practices Effects on Anthracnose Disease of Annual Bluegrass***, James W. Hempfling, Bruce B. Clarke and James A. Murphy
- ***Overseeding of fairways to reduce weed competition***, Anne Mette Dahl Jensen, Oliver Bühler, Agnar Kvalbein and Trygve Aamlid

16:45-17:15h – Coffee break (and poster space)

17:15-18:30h – Turfgrass nutrition and physiology

Chairman: Trygve Aamlid

- ***Bermudagrass Dormancy Avoidance using a Commercial Microbial Concentrate***, Diego Gómez de Barreda, De Luca, V. and Moumni, M.A.
- ***Plant colorants interfere with non-destructive color analysis***, Glen R. Obear, William C. Kreuser and Douglas J. Soldat
- ***The effect of ice encasement and two protective covers on the winter survival of six turf grasses on putting greens***, Wendy M. Waalen, Tatsiana Espevig, Agnar Kvalbein and Trygve S. Aamlid
- ***Influence a Single High Rate Nitrogen Application of Polymer Coated Urea on the Fate of Nitrogen***, Anthony Martin Petrovic and Jeffery Barlow
- ***Carbon sequestration in Central Chile: The Effect of newly established Turfgrass Cover and its Relationship with Photosynthesis***, Alejandra Acuña, Luis Villalobos and Claudio Pastenes

18:30-19:30h – ETS General Assembly

20:30h – GALA DINNER

Poster Presentation

Turfgrass genetics and breeding

- ***Gamma-ray Irradiation Improves turfgrass characteristics of St. Augustinegrass***, Mert ÇAKIR, Songul Sever Mutlu, Haris Djapo
- ***Use of genotype by sequencing to develop a high density SNP-based linkage map in zoysiagrass***, Susana Milla-Lewis, H. McCamy Pruitt, Jeff C. Dunne, Brian M. Schwartz, Aaron J. Patton and Consuelo Arellano

Turfgrass and landscape

- ***Seashore paspalum in the Mediterranean transition zone: phenotypic traits of twelve accessions during and after establishment***, Monica Gaetani, Marco Volterrani, Lisa Caturegli, Simone Magni, Claudio Leto, Salvatore La Bella, Teresa Tuttolomondo, Giuseppe Virga and Nicola Grossi
- ***Golf course management strategies for improving biodiversity in naturalized roughs***, Cristina Pornaro, A. De Luca and S. Macolino
- ***Multifunctionality in urban golf courses - a case study in the Stockholm area***, Maria Strandberg, S. Borgström and E. Andersson
- ***Hard and Red Fescues suit the best for Alley grassing in fruit orchard in dry conditions***, Stanislav Hejduk and Kvasnovský, M.
- ***Heavy metal leaching from adaptive green roof systems sodded with tall fescue***, Maria Kaltsidi, N. Ntoulas, G. Danezis, C. Georgiou and P.A. Nektarios

Turfgrass for sports

- ***Managing Golf Greens: aligning golf green quality with resource inputs***, Stewart Brown
- ***Evaluation of Key Methodology for Digital Image Analysis of Turfgrass Color***, Chenxi Zhang, Garland D. Pinnix, Zheng Zhang, Grady L. Miller and Thomas W. Rufty
- ***Site-specific precision maintenance of sports turfgrass***, David Frade, Silva, J.R., Andrade, R. and Guerrero, C.
- ***Evaluation and Improvement of Golf Course Management Online Classes***, Renata Mundim, Pamela Sherratt, David Gardner and Karl Danneberger
- ***Turfgrass maintenance and management in soccer fields in Slovenia***, Miha Curk, Matej Vidrih, Žiga Laznik and Stanislav Trdan

Water management

- ***Reclaimed water use for turfgrass irrigation***, Lídia Dionísio, Bueno, F., Gonçalves, M.A. and Guerrero, C.
- ***Establishment and Nitrate Leaching of Three Warm-Season Grasses Irrigated with Tailored Water***, Elena Sevostianova, Jennifer Skerker, Matteo Serena, Patrizia Rollo and Bernd Leinauer

Technology advances and turfgrass maintenance (mowing, fertilization, environment, certification)

- ***Can robotic mowing improve the quality of the lawn?***, Nicola Grossi, Marco Fontanelli, Elisa Garramone, Andrea Peruzzi, Michele Raffaelli, Michel Pirchio, Luisa Martelloni; Christian Frascioni, Lisa Caturegli, Monica Gaetani, Simone Magni and Marco Volterrani
- ***Radiation Extinction within a Canopy of hybrid Bermudagrass***, Marco Volterrani, Monica Gaetani, Nicola Grossi, Simone Magni and Lisa Caturegli
- ***Using digital image analysis and a green color chart to determine turfgrass color***, Yoshiaki Ikemura and Masayoshi Hastukade
- ***Assessment the visual turfgrass quality by remote sensing techniques***, Carlos Guerrero, Fernando Martins, Rui Lança, Helena Fernandez, Rita Andrade and Celestina Pedras
- ***Reseeding Interval Following Methiozolin ('PoaCure') Application***, William J. Johnston and Charles T. Golob

Turfgrass pests (diseases, insects, weeds)

- ***An Investigation of Turfgrass as a Possible Route for Pollinator Exposure to Lawn-Applied Imidacloprid***, James D. McCurdy, Jonathan M. Gunn and David W. Held
- ***A multiplex end-point PCR assay for the detection and identification of three species of Ophiosphaerella that cause spring dead spot of bermudagrass***, Juan F. Iturralde-Martinez, Francisco J. Flores, Alma R. Koch, Carla D. Garzon and Nathan R. Walker
- ***Ozone Application for dollar spot incidence reduction in a bentgrass golf green***, Diego Gómez de Barreda and De Luca, V.
- ***Plant-parasitic Nematodes associated to the golf courses in Southern Portugal (Algarve)***, Albertina Gonçalves, Duarte, J., Dionísio, L. and Guerrero, C.
- ***Trichoderma gamsii as a biological control agent of turfgrass diseases***, Luísa Coelho, Dionísio, L., Bueno, F., Reis, M., Duarte, J. and Guerrero, C.

- ***Microbiological products for control of Microdochium nivale on golf greens***, Trygve S. Aamlid and Tatsiana Espevig
- ***Irrigation and soil surfactants affect abamectin distribution in soil***, Travis W. Gannon, Matthew D. Jeffries, and Khalied A. Ahmed
- ***Entomopathogenic fungi for biological control of turfgrass diseases***, Fran Bueno Pallero, Dionísio, L., Guerrero, C. and Neto, L.
- ***An Integrated Nutritional and Chemical Approach to Poa annua Suppression in Creeping Bentgrass Greens***, Erik Ervin, N. Reams, X. Zhang, A. Boyd and S. Askew
- ***Identification of Zoysiagrass Genotypes with Resistance to Large Patch under Controlled Environmental Conditions***, M. Carolina Zuleta, Susan P. Gomez, Consuelo Arellano, Norma Flor, Philip F. Harmon, Kevin E. Kenworthy and Susana R. Milla-Lewis
- ***Observing the impact of fungicide applications on the phyllosphere microbial community***, J.A. Roberts, J.R. Doherty, M. Botti-Marino, D.F. Ritchie and J.P. Kerns

Turfgrass nutrition and physiology

- ***Germination of Tall Fescue Caryopses Exposed for Long Term at Low Temperature***, Antonio Pompeiano, Damiani C. R., Stefanini S., Vernieri P., Volterrani M. and Guglielminetti L.
- ***High-temperature effects on seed germination of fourteen Kentucky bluegrass cultivars***, Maurizio Giolo, Antonella Dalla Montà, Erica Barolo, Fabio Ferrari, Roberta Masin and Stefano Macolino
- ***Estimated net ecosystem exchange (NEE) of turfgrass at different management intensities in a golf course in the province of Verona***, Alberto Minelli, Daniele Zuffa, Laura Cevenini, Matteo Corradini, Ilaria Pasini and Marco Volterrani
- ***Contribution of grass clippings to turfgrass fertilization under four N levels***, Guillaume Grégoire, Catherine Bajzak and Yves Desjardins
- ***Biogeochemical Cycling of Carbon and Nitrogen in Cool-Season Turfgrass Systems***, Quincy D. Law and Aaron J. Patton
- ***Loss on ignition: a rapid and simple method to monitor soil organic matter content under different turfgrass covers grown in Central Chile***, Alejandra Acuña and T. Karl Danneberger
- ***Experimental evaluation of golf courses grasslands as a CO₂ sink***, Sara Muñoz Vallés, Diaz-Barradas MC, Cambrollé J, Guerrero C, Bueno Pallero FA, Dionísio L, Gonçalves MA and Neto L

June 8th 2016

Technical Tour

Herdade dos Salgados Golf -----

08:00h – Technical tour departure (from NAU Salgados Palace)

08:15-10:15h – Herdade dos Salgados Golf Course

Thematic: Irrigation with treated wastewater. Located just close a natural pond the golf course is irrigated, since its construction with treated wastewater.

Water quality standards.

Maintenance program.

Short round tour visiting; irrigation lakes.

Wildlife.

Quinta da Ombria – Golf Course Construction -----

10:30h – Departure to Querença, Loulé – Quinta da Ombria

11:30-13:30h – Visit of “Quinta da Ombria Resort” (landscape and golf course projects).

Thematic: Construction of the “Quinta da Ombria Golf Course”. Project view; landscape; soil mobilization.

Beginning of the golf course construction.

Landscape restoration.

14:00-15:30h – Lunch

Algarelva – (sod farm) -----

16:00-17:30h – Visit to Algarelva

Thematic: Sod farm activity

Planting and maintenance programs.

Turfgrass products.

17:45h – Departure from Algarelva.