EUROPEAN TURFGRASS SOCIETY

NEWSLETTER 3/2015

Via Quintarello, 12/A – 36050 Quinto Vicentino (VI) – ITALY
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IN THIS JULY 2015 NUMBER:

ETS Field Days: Sustainability and Grass

Denmark, 7-8th October 2015.

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.

Visit http://ign.ku.dk/grass for more info

REGISTRATIONS ARE OPEN !
Click below for online registration:
www.etouches.com/ets2015

Department of Geosciences
and Natural Resource Management

DAY 1 – SEMINAR DAY – October 7

8.00: Bus will depart from Hotel Marienlyst - Helsingør

8.30: Coffee

9.00: Welcome – education and focus on sustainability. Anders Bülow or Susanne Ogstrup, University of Copenhagen, Denmark

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

9.30: Maintaining a sustainable golf course. Stefan Nielson, Course manager at Vallda golf course, Sweden

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

10.30: Fertilization in practise. Thomas Pihl, Course manager at Furesø golf course, Denmark

10.45: Coffee

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

11.45: Results from Scandinavian projects on deficit irrigation. Trygve Aamlid, Bioforsk, Norway

12.00: Quality on sports fields without the use of pesticides – how is this possible? Asbjørn Nyholt, Denmark

12.30: Breeding grass for sustainable use and maintenance. Arthur Wolleswinkel, Barenbrug

13.00: Lunch

14.00: 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

14.30: Grass on roofs – examples from Scandinavia. Kamilla Aggerlund, University of Copenhagen, Denmark

15.30: Coffee

16.00: Panel discussion with all the speakers

DAY 2 – FIELD TRIP DAY – October 8

8.30: Departure from Hotel Marienlyst

9.30: Visit at Frederiksborg Castle garden, Hillerød Maintenance quality descriptions for the different lawn types in the historical garden of Frederiksborg Castle Establishment and maintenance challenges of grass without pesticides Host, John Nørgaard, Castle Gardener

11.30: Lunch bags can be picked up at the bus. For 1 hour you can go around in the park and enjoy your lunch.

12.30: Departure from Frederiksborg castle.

13.30: Visit at Furesø golf course, Birkerød Sustainable golf course maintenance The First Danish course that was awarded with the Environmental price. Host, Thomas Pihl, Course manager

15.30: Departure from Furesø golf course

16.30: Arrival at Hotel Marienlyst, Helsingør – end of the Field days.

Looking forward to seeing you in Denmark!

Turfgrass Science at Polytechnic University of Valencia (Spain)

by **Prof. Diego Gómez de Barreda, Javier Bellón and Verónica De Luca**, UPV

The Polytechnic University of Valencia (Universitat Politècnica de València (UPV)) is, for the fourth consecutive year, among the 100 best young universities in the world, according to the prestigious "THE 100 Under 50" ranking, which is prepared annually by the British magazine *Times Higher Education* (THE). This classification, which evaluates the most important institutions of higher-level education, which are less than 50 years old, provides an overview of present and future, since it takes into account the great potential of emerging universities.

One of the leading Technical Schools at the UPV is the School of Agricultural Engineering and Environment, which ranks #1 in Spain and #33 in the world on Agricultural Science in the last 5 years, according to the Microsoft Academic Search Ranking. In this school many research-teaching programs are offered including Turfgrass Science.

Turfgrass Science programs in the Spanish University System are hardly available. May be the UPV is the only Spanish University offering permanently both, teaching and research programs.

1. Turfgrass research lines at UPV are:

- New turfgrass varieties adaptation testing: VCU (Value of Cultivation and Use) trials are conducted for GEVES (it is a French Group for the Study and Control of Varieties and Seeds, a Public Interest Group associated with INRA, the French Ministry of Agriculture and GNIS) and for a local seed company (Semillas Dalmau). In addition, performance of perennial ryegrass varieties is tested every year for early autumn overseeding on bermudagrass.

- Turfgrass Weed Science: Currently, allelopathic effects of natural extracts from several vegetal species (*Artemisia absinthium*, *Eucalyptus camaldulensis*, *Eriochepalus africanus* and *Santolina chamaecyparissus*) for *Poa annua* control are under study.

- Use of water (salinity and water scarcity): Several experiments on turfgrass (*Lolium perenne*) tolerance to salinity are conducted testing different levels of salinity of irrigation water. Irrigation efficiency in golf course greens is also determined by calculating Irrigation Uniformity Coefficients.

- Bioestimulants in Turfgrass: Test of different types of biostimulants: plant resistance inductors, biological inoculants (*Azotobacter vinelandii*, *Bacillus sp. Trichoderma sp.*, Mycorrhiza concentrate, *Pseudomonas fluorescens*), seaweed extracts (*Ascophyllum nodosum*), root enhancers (polysaccharides combined with amino acids and micronutrients). Additional tests of biological inoculants to reduce the dormancy period of bermudagrass are conducted as well

2. Turfgrass Science teaching offer at UPV is scarce. It is included in a more general topic "Landscape and Gardening" in which Turfgrass Science is only taught during 2 weeks focusing on turfgrass species differentiation, adaptation and general management practices.

Acknowledgment: Authors would like to thank J. Manuel Iserte (golf course greenkeeper) as most of the research work is done at the Royal Golf Course of Manises (Valencia, Spain).

A special communication to ETS Members

by **Maria Strandberg**, ETS Vice-President and STERF Director.

Dear all,

in the online folder **"Societal Benefits of Golf - Inspiration and ideas for local partnership"** (http://www.sterf.org/sv/library/handbooks/societal-benefits-of-golf) we describe the *Sigtuna Project - A Landscape for All* and present our experiences of local partnership. It is our hope that this folder will inspire others to take initiatives, create partnerships and thus demonstrate the societal benefits of golf. Despite differences in conditions, we believe that this case study can inspire others to take their own initiatives for partnerships, which in turn will help to strengthen the role of golf in society.

The initiative for the *Sigtuna Project – a Landscape for all* was taken in spring 2012 by Sigtuna Golf Club, the Sigtuna branch of the Swedish Association for Nature Conservation and STERF, in close collaboration with Sigtuna local authority. Inspiration was taken from the STERF project 'Multifunctional golf courses – an underused resource' and the European Landscape Convention. Some important key words in the project are 'holistic approach' 'involvement' 'inspiration' and 'accessibility'.
Please let us know if you have any questions or comments related to the folder or the case study. STERF's ambition is also to arrange a seminar or workshop related to the issue "Societal benefits of golf" sometime this coming autumn or winter.

Please forward the folder to colleagues and friends that might be interested in the folder and the case study. Also feel free to inform about or publish the folder on your web-site or in your newsletter.

Best regards,
Maria Strandberg

STERF (Scandinavian Turfgrass and Environment Research Foundation) is a research foundation that supports existing and future R&D efforts and delivers 'ready-to-use research results' that benefit the golf sector. STERF is currently regarded as one of Europe's most important centers for research on the construction and upkeep of golf courses. STERF was set up in 2006 by the golf federations in Sweden, Denmark, Norway, Finland, Iceland and the Nordic Greenkeepers' Associations. More information about STERF can be found at ***www.sterf.org***

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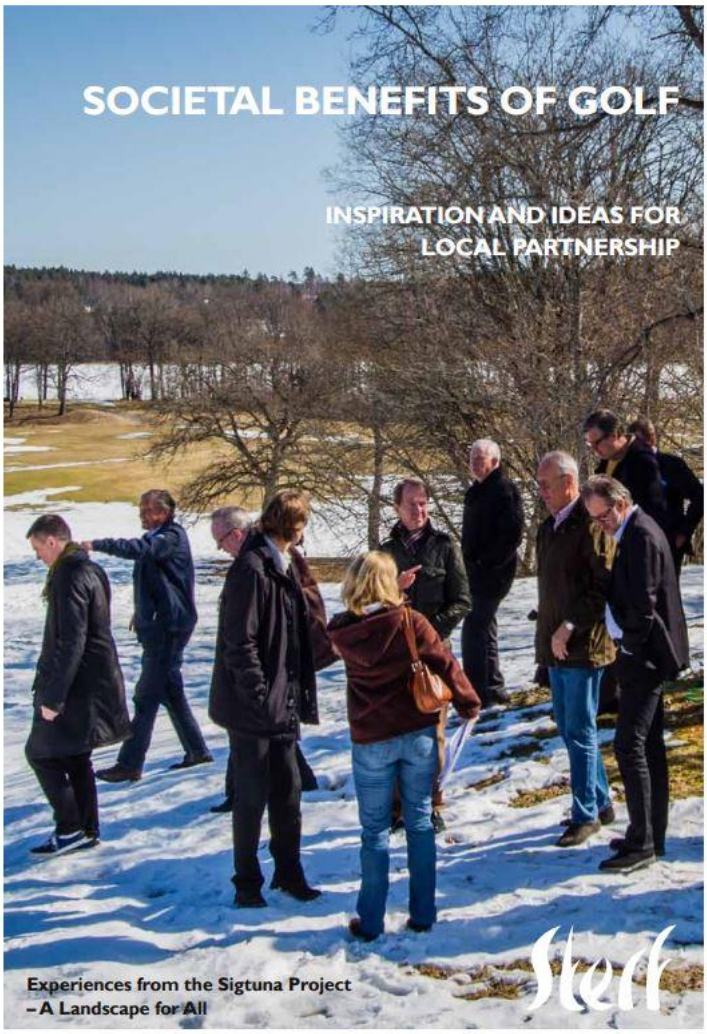


A Change in the Executive Board at the Deutsche Rasengesellschaft (DRG)

The general assembly of the German Turfgrass Society has elected on May 5, 2015 unanimously Dr. Harald Nonn, director of R & D at EUROGREEN, to the new chairman of the DRG. This early election was necessary because the previously acting chairman, Dr. Klaus Müller-Beck, had asked the chairmanship available for personal reasons. Like his predecessor Dr. Harald Nonn is associated to the lawn and its multiple uses closely and passionately since his doctorate at the Friedrich-Wilhelms-University in Bonn in 1988. As vice chairman in the executive board for many years he had the chance to get to know the tasks and challenges of the DRG very well.

For new vice chairman Dr. Wolfgang Prämaßing, DEULA Rheinland, was elected unanimously, too. Dr. Prämaßing has been closely associated to the DRG for many years. Due to his efforts in the education of greenkeeper and groundskeeper he enjoys a high reputation in the turf market.

As a first act the new DRG chairman, Dr. Harald Nonn, presented the outgoing predecessor for his more than 30-years exemplary commitment and his contribution to the development of the DRG the instrument of honorary membership in conjunction with the Golden Badge of Honor.

GeoEye-1 satellite versus ground-based multispectral data for estimating nitrogen status of turfgrasses

by **Lisa Caturegli Ph.D,** Department of Agriculture, Food and Environment, University of Pisa

Satellite remote sensing of leaf nitrogen (N) content is an interesting technique for agricultural crops for both economic and environmental reasons since it allows the monitoring of fertilization, and hence can potentially reduce N application to real plant needs. The study focused on creating a nitrogen content gradient on 3 warm-season turfgrasses (*Cynodon dactylon* x *transvaalensis* 'Patriot', *Paspalum vaginatum* 'Salam', *Zoysia matrella* 'Zeon') and 2 cool-season (*Festuca arundinacea* 'Grande', *Lolium perenne* 'Regal 5'). The linear gradient of applied N ranged from 0 to 342 kg ha^{-1} of N for the warm-season and from 0 to 190 kg ha^{-1} of N for the cool-season turfgrasses. Proximity and remote-sensed reflectance measurements were acquired and used to determine Normalized Difference Vegetation Index (NDVI).

Aim of the trial

a) to compare the spectral reflectance of five different turfgrasses acquired via satellite imagery and by two ground-based instruments commonly used on turfgrasses for research or management purposes;
b) to test the sensitivity of the three data acquisition sources in detecting induced nitrogen variations on the different turfgrass surfaces .

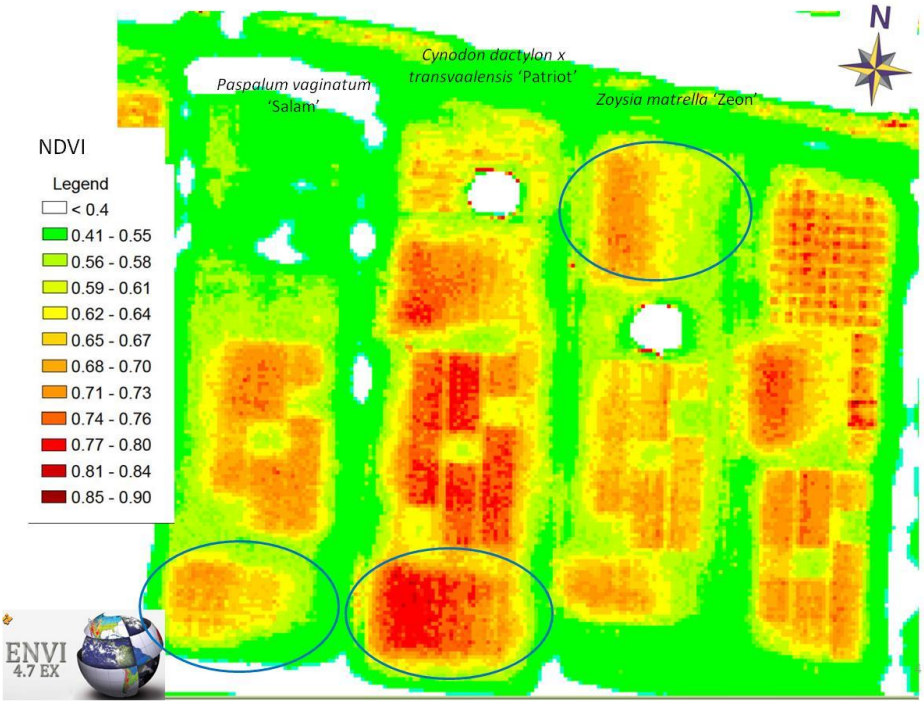
In particular, the correlation between the three different reading methods of NDVI, nitrogen applied on turf and clippings nitrogen content were studied in order to verify if:

i) GeoEye-1 satellite imagery could be useful as a diagnostic tool to identify the different N status of a turfgrass;

ii) NDVI satellite data is suitably correlated with data obtained from the ground-based sensors.

Materials and methods

Species: 2 Warmseason: *Cynodon dactylon x transvaalensis* 'Patriot'; *Zoysia matrella* 'Zeon'; *Paspalum vaginatum* 'Salam'; 2 Coolseason: *Festuca arundinacea*; *Lolium perenne.*



Nitrogen treatment with Ammonium sulphate (21%), realized with Scotts AccuPro 2000 rotary centrifugal spreader, realizing a gradient of fertilization on the surface (starting from a control not fertilized and progressing up to the greatest N rate). For warmseason species 20 application rates were carried out from 0 to 342 kg ha^{-1} of N (increases of 18 kg ha^{-1} of N every 1 m). For coolseason species 20 application rates were carried out from 0 to 190 kg ha^{-1} of N (increases of 10 kg ha^{-1} of N every 1 m). Weekly mowing: 3 cm (reel mower clipping removed). Irrigation was applied as needed to avoid wilt.

On September 4 and 5, 2013, 11 proximity and remote sensed readings were acquired, from the unfertilized control to the greatest nitrogen rate.

Ground-based measurements

Ground-based measurements of spectral reflectance were carried out with a spectroradiometer and with a handheld crop sensor. The spectroradiometer was a LICOR 1800 (LI-COR Inc., Lincoln, NE, USA) with a fiber optic wire and LICOR 1800-06 telescope.

The surface monitored corresponded at ground level to approximately 2000 cm^2 (diameter Ø = 50 cm). Reflectance readings were carried out in the 390-1100 nm region at 5 nm intervals. The reflectance at NIR was centered at 850 nm and the reflectance centered at red 670 nm and then NDVI was calculated.

The Trimble's GreenSeeker Handheld Crop Sensor, Model HSC-100 (Trimble Navigation Unlimited, Sunnyvale, CA) was held at a height of approximately 110 cm from the ground, thus monitoring a surface of about 2000 cm^2 (Ø = 50 cm). The GreenSeeker has an active light source that makes readings

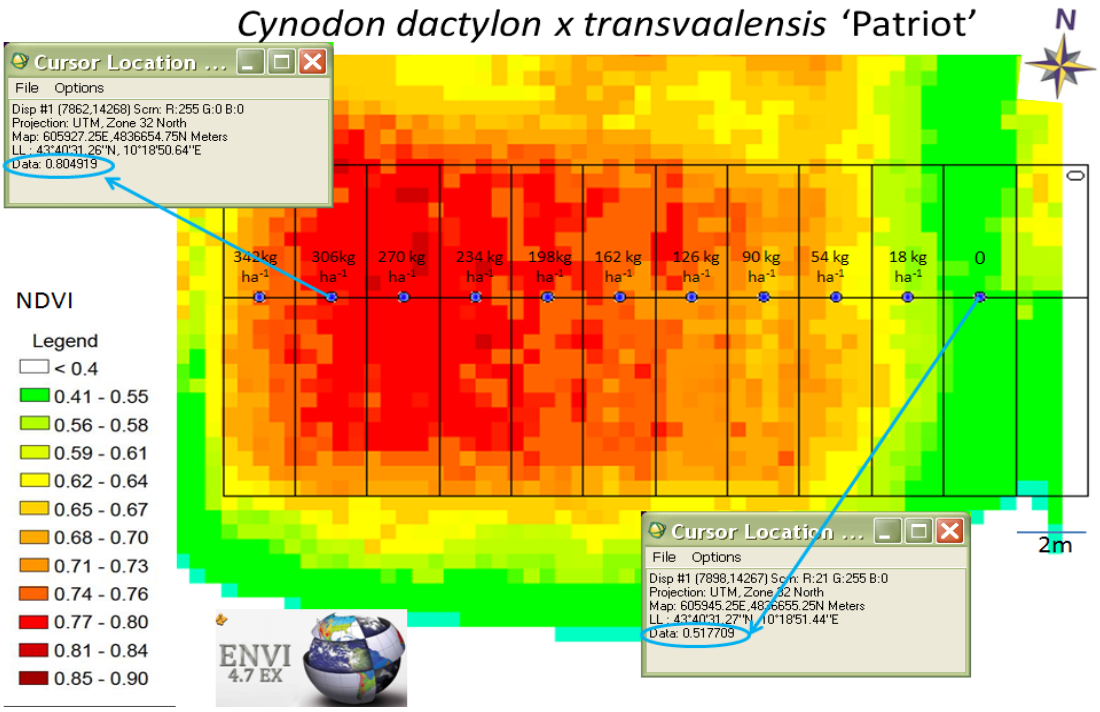
unaffected by sunlight. Reflectance is measured in the near infrared region of the spectrum centered at 780 nm and in the red region centered at 660 nm. The output of the Trimble's GreenSeeker is directly provided as NDVI value.

Satellite measurements

Satellite measurements of spectral reflectance data were acquired by GeoEye-1 satellite. The passage of the satellite took place on September 5, 2013, and the image was acquired at 10:14 h. GMT (12:14 a.m. local time). The acquired image covered an area of about 100 km^2, which included all the trial plots. GeoEye-1 panchromatic image was geo-referenced using identifiable buffer zones of 1 x 1 m outside the borders of each species linear N gradient in order to well identify the points where the ground-based measurements were taken.

Results

Our results proved that proximity-sensed NDVI is e highly correlated with data acquired from satellite imagery. The correlation coefficients between data from the satellite and the other sensors ranged from 0.90 to 0.99 for the warm-season and from 0.83 to 0.97 for the cool-season species. 'Patriot' had a clippings N content ranging from 1.20 % to 4.1 %, thus emerging as the most reactive species to N fertilization. As such, GeoEye-1 satellite can adequately assess the N status of different turfgrass species and its spatial variability within a field depending on the N rates applied.



Conclusions

The results of the study verify that GeoEye-1 satellite multispectral data can adequately assess the N status of different turfgrass species and its spatial variability within the field. On surfaces uniformly managed to reduce the environmental variability, GeoEye-1 satellite NDVI values could be particularly useful in the administration of the turfgrass fertilization. Given the level of correlations, remote sensing might be a useful tool to extrapolate handheld measurements spatially into a turfgrass.

References

(1) Caturegli, L., Lulli, F., Foschi, L., Guglielminetti, L., Bonari, E., & Volterrani, M. (2014). Monitoring turfgrass species and cultivars by spectral reflectance. European Journal of Horticultural Science, 79(3), 97–107.

(2) Caturegli, L., Lulli F., Foschi L., Guglielminetti L., Bonari E. & Volterrani, M. (2015) Turfgrass spectral reflectance: simulating satellite monitoring of spectral signatures of main C_3 and C_4 species. Precision Agriculture, 16, 297-310.

(3) Caturegli, L., Grossi N., Saltari M., Gaetani M., Magni S., Nikolopoulou A.E., Bonari E. & Volterrani M. (2015). Spectral reflectance of tall fescue (*Festuca arundinacea* schreb.) under different irrigation and nitrogen conditions. Agriculture and Agricultural Science Procedia, 4, 59-67.

(4) Caturegli, L., Casucci M., Lulli F., Grossi N., Gaetani M., Magni S., Bonari E. & Volterrani M. (2015). GeoEye-1 satellite versus ground-based multispectral data for estimating nitrogen status of turfgrasses. International Journal of Remote Sensing 36, 8, 2238-2251.

"NEWS FROM ACROSS THE POND(s)"

Village Green hits Europe

by **Alberto Rizzi**, Village Green Turf

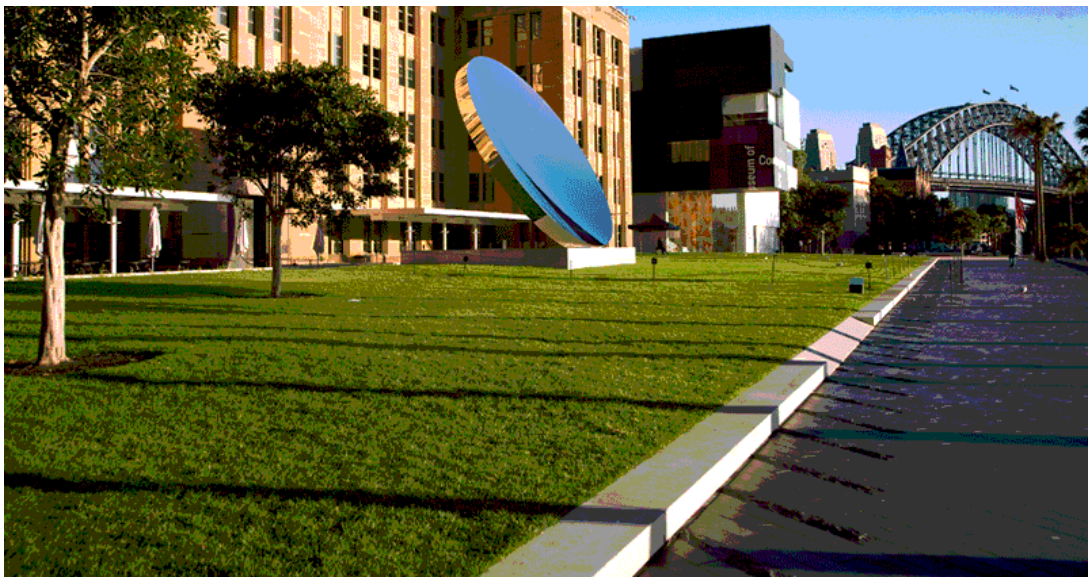
It might be autumn in Australia, but as spring settles in across the northern hemisphere, a new warm season turf variety is being introduced to southern Europe.

Village Green® was recently developed in Australia to meet a growing demand for a turf that would look good, provided tough year-round cover and do this with less water, fertilisers and chemicals. It's a genetically stable strain of seedless Kikuyu, that thrives in Australia's Mediterranean climate. Since its Australian release five years ago, this turf has been remarkably well received. Clearly the next step is to introduce Village Green to similar climates in Europe – hence its launch, first in Italy.

Gary Mckenzie from Future Turf Australia is the man behind Village Green. "In Europe there is Bermuda, Zoysia but not a lot of Kikuyu. We could see that parts of Europe are in the process of changing over from cool to warm season grasses, something we've done in Australia. We know how Village Green performs and believe there is a solid European market waiting for this turf."

In late April, guests at the field day launch held near Taranto, were given the turf's background and attributes by Gary McKenzie. The local perspective – details of the Italian performance trials and management characteristics – were covered by Alberto Rizzi, Turf consultant and Village Green's European Coordinator. Two Italian growers, the Strada brothers (based near Taranto) and Filippo la Franca (in Grosseto), explained not only how they'd come to chose to grow Village Green, but also how they see the potential market in Italy. There was a gathering for lunch (of course) followed by the all important opportunity to inspect the plots.

There is interest to use Village Green on golf course fairways, sports fields, public green spaces, parks and private homes. For more information, contact Alberto Rizzi: alberto@villagegreenturf.com.au or visit www.villagegreeneurope.com



Assistant Professor sought at Iowa State University

Summary of Duties and Responsibilities
The Department of Horticulture at Iowa State University invites applications for a 12-month, tenure-track faculty position at the rank of Assistant Professor.

The position of Assistant Professor in Horticulture specializing in Commercial Turfgrass Management with an emphasis in Extension and Outreach, has responsibilities of 70% extension and outreach, 20% research, and 10% teaching. The successful candidate will be expected to develop and teach a course in sports turf management and a course in turfgrass/landscape irrigation to be taught in alternating fall semesters. The candidate also will develop an externally funded research program that demonstrates intellectual leadership and scholarship in commercial turfgrass science, management, and production. The incumbent is expected to interact with turfgrass managers and other industry professionals, providing science-based information and diagnostic assistance. Finally, the successful candidate will be responsible for advising and mentoring undergraduate and graduate students and actively participating in service to the department, college, and university.

Required Education and Experience
Ph.D. in Horticulture or related discipline; professional experience in turfgrass science and experience in communicating with professional horticultural audiences.

Preferred Education and Experience
Classroom/laboratory teaching experience in the areas of turfgrass science, management, and production, and demonstrated experience and skill in communicating with students and professional horticultural audiences.

Department/Program & College Description
For more information about Iowa State University, The College of Agriculture and Life Sciences, the Department of Horticulture, and the State of Iowa, please visit: http://www.hort.iastate.edu

About Iowa State University and the Ames Community
Iowa State University is classified as a Carnegie Foundation Doctoral/Research University-Extensive, a member of the Association of American Universities (AAU), and ranked by *U.S. News and World Report* as one of the top public universities in the nation. Over 34,000 students are enrolled, and served by over 6,100 faculty and staff (see www.iastate.edu). Ames, Iowa is a progressive community of 60,000, located approximately 30 minutes north of Des Moines, and recently voted second best most livable small city in the nation (see www.amescvb.com).
Iowa State University is an equal opportunity employer committed to excellence through diversity and strongly encourages applications from all qualified applicants, including women, underrepresented minorities, and veterans. ISU is responsive to the needs of dual career couples, is dedicated to work-life balance through an array of policies, and is an NSF ADVANCE institution.

All faculty members are expected to exhibit and convey good citizenship within the program, the department, college, and university activities and collegial interactions, and maintain the highest standards of integrity and ethical behavior.

Additional Information
The guaranteed consideration date for this position is 09/30/2015. However, applications may continue to be submitted until the position is filled.

To Apply Please visit http://www.iastatejobs.com:80/postings/11916 for application instructions.

Department Contact: Dr. Jeff Iles, Professor and Chair; 515-294-3718; iles@iastate.edu

Viadana gets Village Green

by **Gary McKenzie**, Future Turf PTY Ltd.

Barely four months ago, Village Green Premium Kikuyu was launched in Italy and already it has scored its first big gig. Just installed at Viadana, home to one of Italy's A series rugby teams, the newly turfed pitch will soon host training six days a week and on Sundays, roughly the same number of matches. Yes - this will be a brutal and public display of how Australia's best turf behaves in southern European conditions.

According to Future Turf's European representative, Alberto Rizzi, the installation was run like a military campaign, with understandably keen interest from everyone involved. "The soil had been well prepared in the previous days by the construction and grounds team: treated with weed control, rotary hoed, leveled and rolled. Everything and everyone was prepared when the refrigerated truck arrived at 5pm from the grower – following an overnight trip from their turf facility which is roughly eleven hours south.

"That week it had been very hot (up to 38-40°C) and for that reason we decided to work over-night to keep the turf cool and moist as when you install runners, as we did, standard practice is to prevent the stolons drying out. We did this even though we know how well Village Green behaves – it's great, almost unique, because its runners are full of reserves, making it more resistant to stress (in this

case the heat and no water over many hours)."

Despite the buffer of working with such a forgiving turf, everyone worked hard to finish the job before sunrise the next day. The entire pitch was planted out using an American Sprigger which automatically takes runners off the supplied rolled turf, setting into the soil surface. The pitch was then fertilized, rolled and heavily watered.

It may sound simple, but like most projects, it kept everyone on their toes. "The main challenge centred on the machinery which was unfamiliar. Achieving the right set-up was key but thanks to the expert mechanics on the job that night, everything worked well. There was also a moment where a little rain caused some concern (laying turf in the wet poses problems) but the rain passed."

In the week that followed, due to extreme temperatures, the pitch was irrigated all day with runs of 10 min each section.
Once the stolons settled in, the pitch was lightly top-dressed with sand to smooth off the surface. The expert care will continue over the next two months and in September all will be oversown in readiness for play in October. This is when the players will put Village Green through its paces and a great number of interested parties will monitor its performance.

"Village Green has surprised a few people in the local turf industry. They haven't seen a turf with such strong rolls. It's why Viadana chose Village Green: they wanted a monster turf, something that would be very resistant to the traffic. Something tough. People are also impressed with how good looking it is - its fine leaf and intense green colour. It's probably changed the local perception of common Kikuyu being ugly-looking and almost a weed."

In the long term, Alberto predicts that Village Green will gather its admirers as it has done in its country of origin, Australia. Future Turf's Australian face, Gary McKenzie echoes this explaining that Southern Europe has a similar climate to southern Australia with warm to hot dry summers and cool wet winters. "Like us, they're also facing a drying climate and rising temperatures, and this has forced them to look at alternatives to cool season grasses. We believe Village Green is a great choice for this part of the world – they need a more winter active alternative to Bermuda and Zoysia."

*For more about Village Green Premium Kikuyu, contact Future Turf's Alberto Rizzi alberto@villagegreeneurope.com or Gary MacKenzie at gmack@bigpond.net.au

Conversions to warm season in the Mediterranean by Erbavoglio Hi Turf®

by **Massimiliano del Viva**, Erbavoglio Hi Turf, Italy.

Over the last 5 years a new technique to establish warmseason turf, called Erbavoglio Hi Turf® (www.hiturfsolution.net) is spreading in Italy.
The technique use young warm season plants as propagation material, planted in the soil using mechanical planters. The propagation material to establish the turf are plants, not plugs. In the greenhouse, warm season plants can be produced by seeds, germinated in honeycomb trays, or by single stolon node, cut and made root in the trays. Erbavoglio is commonly used to convert cool season turf into bermudagrass ones, the water and nutrient storage given by the peat substrate allow to convert on no tilled soils without interfering with the ground planarity or shape.

Ten golf courses (in Italy there are less than 300 courses), among which the one managed by the Italian Golf federation Green Section *"Golf Nazionale",* have been converted with Erbavoglio, about 110 hectares of turf, and two *Serie A* (first division) stadiums such as *"Sant' Elia"* and *"Is Arenas"*, have been converted with Erbavoglio. Erbavoglio has been used on polo fields as well, due to the reliability on no tilled soil at Polo Club Roma, Villa a Sesta Polo Club and Polo Club Haras de Gassin (France).

BEFORE:
Roundup weeding, followed by planting bermudagrass plants in rows.

AFTER:
Sant'Elia Cagliari Stadium, 90 days after planting.

AGENDA OF TURFGRASS EVENTS

What	When	Where	Info
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 **etsoffice@turfgrasssociety.eu** with all relevant details.

Edited by Claudia de Bertoldi PhD, etsoffice@turfgrasssociety.eu

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 co-convener 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.

For further information visit:
www.aua.gr/nektarios

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:
www.landlab.net

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:
http://sterf.golf.se

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: www.bioforsk.no

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: www.deula.de

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: http://is.mendelu.cz/lide/clovek.pl?id=3042

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: www.turfeurope.eu

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)

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- ☐ PRIVATE € 153,00
- ☐ STUDENT € 51,00

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- ☐ with turnover < 5.000.000€: 510 € - 3 individual memberships included with
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