

AUSTRALIAN

www.agcsa.com.au

Turfgrass



VOLUME 10.6 NOV-DEC 2008

MANAGEMENT JOURNAL

2008 Australian PGA Championship Hyatt Regency Coolum

**Congressional
confessional**

Behind the scenes at
Tiger's AT&T National

Profile

AGCSA President Allan Devlin

Research

Anthracnose BMPs

Poa annua and
warm-season
trials

Pictorial

2008 World Amateur Teams Championships



the new I-35

we are about to make history...again

Hunter®
The Irrigation Innovators

8 The Parade West, Kent Town, South Australia
Tel: 08-8363-3599 Fax: 08-8363-3687
www.HunterIndustries.com
Call today for your Free Hunter Products Catalogue
1-800-811-370



HR PRODUCTS
National Free Call: 1800 HUNTER
Toll Free Fax: 1800 651 680



Tel: 1300 856 368 Fax: 1300 856 369
www.nelsonirrigation.com.au
info@nelsonirrigation.com.au

Authorised Hunter Distributors:

WINNER OF 16 AWARDS AT THE TOCA INTERNATIONAL COMMUNICATORS CONTEST 2005 - 2008

I wish to apply for:
One year's subscription to Australian Turfgrass Management
(Six editions per year)

PLEASE TICK BOX

ONE COPY PER EDITION	\$55.00	<input type="checkbox"/>
O/S ONE COPY PER EDITION	\$76.20	<input type="checkbox"/>
TWO COPIES PER EDITION	\$86.00	<input type="checkbox"/>
THREE COPIES PER EDITION	\$130.00	<input type="checkbox"/>



Prices include GST.

ORDERS CAN BE MADE SECURELY ONLINE THROUGH www.agcsa.com.au

Name:

Company:

Postal Address:

Town/Suburb: State: Postcode:

I enclose cheque for (amount):

Please charge my credit card: ☐ MasterCard ☐ Visa

Card Number: Expiry Date: ____/____

Cardholder Name:

Address: Signature:

☐ Please send me more information about becoming an AGCSA member

Forward to: **Australian Turfgrass Management**
Suite 1, Monash Corporate Centre
752 Blackburn Road
Clayton, VIC 3168
FAX: (03) 9548 8622

**Australian Turfgrass Management
Published by:**

Australian Golf Course
Superintendents' Association

ABN 96 053 205 888

Production:

Editor:

Brett Robinson Ph: (03) 9548 8600
brett@agcsa.com.au

Art Direction & Design:

Jo Corne Ph: (03) 9548 8600
jo@agcsa.com.au

Advertising:

Melissa Wallace Ph: (03) 9548 8600
melissa@agcsa.com.au

AGCSA

Suite 1, Monash Corporate Centre
752 Blackburn Road, Clayton, VIC 3168
P: (03) 9548 8600
F: (03) 9548 8622
E: info@agcsa.com.au
W: www.agcsa.com.au



President: Allan Devlin
Directors: John Odell
Pat Pauli
Bryce Strachan

General Managers

Scott Petersen (Business Development,
Communications and Membership)
scott@agcsa.com.au

John Neylan (AGCSATech, Education and
Environmental Initiative)
john@agcsa.com.au

Membership

Pip Dudley
info@agcsa.com.au

Accounts

Philip Horsburgh
philip@agcsa.com.au

Events Manager

Simone Staples
simone@agcsa.com.au

AGCSATech

Andrew Peart and John Geary
andrew@agcsa.com.au
jgeary@agcsa.com.au

HR & Best Practice Manager

Daryl Sellar
daryl@agcsa.com.au

Executive Assistant

Melissa Wallace
melissa@agcsa.com.au

Printed By

Impact Printing
69-79 Fallon Street
Brunswick, VIC 3056

Proudly supported by

Copyright © 2008

The AGCSA believes that material sourced and produced for Australian Turfgrass Management is accurate, but gives no warranty in relation thereto, and disclaims liability for all claims against the AGCSA, its subsidiary companies, its employees, agents or any other person which may arise from any person acting on the materials contained within. No portion, in whole or part, may be reproduced without the written permission of the AGCSA.



Know-how for Horticulture™



COVER:
Hyatt Regency
Coolum: Looking
across to the par 3
11th green at Hyatt
Regency Coolum
on Queensland's
Sunshine Coast.
The course
plays host to the
Australian PGA
Championship from
4-7 December.

Photo:
Brett Robinson



Time for a Coolum change

6

For the past six years Hyatt Regency Coolum has become synonymous with the country's longest running professional golf tournament, the Australian PGA Championship. Preparing to host its seventh consecutive tournament, ATM catches up with recently appointed superintendent Darryl Edwards and finds that some significant changes are afoot at the Sunshine Coast course.

The Royal returns

14

With the recent news that the Australian Open is set to remain in NSW until 2015, Royal Sydney Golf Club is gearing up to host this year's event in mid-December. ATM checks in with superintendent John Odell and discovers there have been more changes off course than on it since the last Open in 2006.

Congressional confessional

16

Congressional Country Club near Washington, DC is a world away from Bowral Golf Club in the southern highlands of NSW. Both, however, have a special place in the heart of Justin Bradbury who left Australia in early 2007 to take up a unique opportunity at one of the US's top 100 courses. Here he gives ATM a unique insight into turf management operations at Congressional which is venue for The AT&T National hosted by Tiger Woods.



From Westside to Stateside

22

Pebble Beach stands as one of the world's iconic golf courses and for young Western Australian greenkeeper Adam Strachan, taking up an internship through the Ohio State Program gave him the chance to help maintain the hallowed turf of the Monterey gem.

Pictorial: 2008 World Amateur Teams Championships

28

The Grange Golf Club, together with Royal Adelaide Golf Club, played host to 126 men's and women's teams for the recent 2008 World Amateur Teams Championships. ATM dropped into The Grange during the women's Espirito Santo Trophy to snap the maintenance crew going through their paces.

A life on the links

30

At the 2008 AGCSA AGM, Secret Harbour Golf Links superintendent Allan Devlin was elected president of the national association. ATM profiles the Scottish-born turf manager, who actually started in the industry as a golf professional, and asks what he hopes to achieve during his tenure.

OPINION

Turf renovations

42

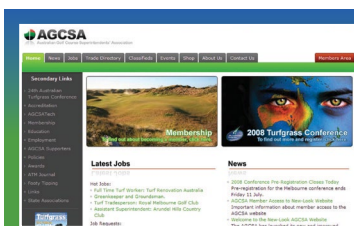
With spring renovations recently completed, The Pulse asks how superintendents have refined their renovation practices over time and how they balance the fine line between optimising turf health and minimising player disruption.

RESEARCH

Best management practices for combating anthracnose

44

A comprehensive five-year, multi-site research project being undertaken by US researchers is aiming to produce a series of best management practices for combating anthracnose in annual bluegrass turf.



**HAVE YOU SEEN THE
'NEW LOOK' AGCSA WEBSITE?**
www.agcsa.com.au

WATER MANAGEMENT

Longyard locks in watertight future 52

Since arriving at Longyard Golf Course nearly two years ago, superintendent Ben Norton-Smith has started down a proactive path of major improvements to the club's water management practices.

Shortland Waters shores up future 54

Changing past management approaches has realised significant potable water savings for Shortland Waters Golf Club superintendent Craig Molloy.

ENVIRONMENTAL MANAGEMENT

Coffs Harbour cleans up 56

Superintendent Justin Sheehan looks at some of the measures taken to ensure sound environmental management practices at the NSW club.

IN EVERY EDITION

Foreword Thinking	4
AGCSA Member Benefits	5
AGCSATech Update	36
Turf Technicians	58
20 Questions – Peter Svenne	60
News	62
On the Move	63
Around the Trade	64
Book Shop	66
State Reports	68

Contributors to Australian Turfgrass Management Volume 10.6 (November-December 2008)

Andy Blacker (SAGCSA); Justin Bradbury (Congressional CC); Bruce Clarke (Rutgers University); Jo Anne Crouch (Rutgers University); Allan Devlin (Secret Harbour Golf Links); Darryl Edwards (Hyatt Regency Cooloom); Tony Fogarty (Catalina CC); Michael Freeman (VGCSA); Tom Hsiang (University of Guelph); John Inguagiatto (Rutgers University); Steven Jacobsen (Carnarvon GC); Richard James (The Grange GC); Stephen Lewis (TGCSA); Graeme Logan (STA NSW); Peter Loneragan (GCSAQ); Craig Molloy (Shortland Waters GC); James Murphy (Rutgers University); John Neylan (AGCSA); Ben Norton-Smith (Longyard GC); John Odell (Royal Sydney GC); Stephen Pellatt (Blackwood GC); Scott Petersen (AGCSA); Trevor Ridge (Sawtell GC); Frank Rossi (Cornell University); Rick Schiller (www.golfshots.com); Justin Sheehan (Coffs Harbour GC); Luke Spertalis (VTETA); Adam Strachan; Rob Sundblom (TGAA VIC); Peter Svenne (Eastlake GC); Lane Tredway (North Carolina State University); Brock Weston (TGAA ACT); Darren Wilson (GCSAWA); Frank Wong (University of California); Craig Wright (NSWGCSCA).

A calling

It's funny how we end up in our chosen vocation. Take my folks for instance. Dad grew up working in his father's furniture factory before becoming a cabinetmaker and builder. Mum, on the other hand, had to leave the small country town she was born and raised in and funded her way through university to realise her ambition of being a medical technologist.

For me, I always thought becoming an airline pilot would be pretty cool, but that dream literally came crashing to earth after discovering that science and maths were pre-requisites. Given that my titanic battles with algebra and failure to grasp even the most basic tenets of physics weren't exactly promising signs, I consigned the idea to the bin and in doing so potentially saved thousands of lives.

I must admit I did briefly entertain the thought of going into greenkeeping at one stage during my teens. Most of my summers growing up in New Zealand were spent at the family beach house and I learnt to play golf on the then nine-hole links of Omaha Beach (about an hour north of Auckland). Back then the course was maintained by one chap who always had a smile on his face and seemed pretty content. Aside from giving him a customary wave and a "How's it going" on the odd occasion when we crossed paths, either while I was playing or out scouring the course for golf balls, I never enquired further.

Not surprisingly, though, a career as a writer was always going to be my caper. I was a prolific scribbler growing up and I would devote hours to writing stories, illustrating covers and stapling them all together. I think I made about 50 such 'books', with my pièce de résistance titled *The Adventures of King Carrot* (please don't ask me why the protagonist was a carrot – I've moved on). My calling to journalism was sealed ultimately after spending three weeks' work experience at one of New Zealand's premier magazines, *Metro*, in my final year at high school. I was fortunate to get three small items published, all with bylines as well, which was the duck's guts as far as I was concerned. I was hooked and over 15 years later I'm still scribbling, albeit on a keyboard now, and love it.

For two golf course superintendents who we profile in this edition of ATM, their turf management careers came about via different yet somewhat related means. Both harboured dreams of being golf professionals, one making it briefly onto the big stage, while the other was so discouraged at an early age that he chucked it in. Both, however, found their calling in turf management and now into their 50s both gents couldn't be more satisfied with the careers they have etched out for themselves. The gentlemen I refer to are recently elected AGCSA president Allan Devlin (Secret Harbour Golf Links) and Hyatt Regency Cooloom superintendent Darryl Edwards, who as you will discover share a love for the turf management profession and would do it all over again if they had the opportunity.

Elsewhere in this edition John Neylan provides a comprehensive update on the warm-season variety trials being conducted at seven sites around the country, while Justin Bradbury, former superintendent at Bowral Golf Club, takes us through turf management operations at his new home – Congressional Country Club in the US.

As this is the last edition of 2008 I would like to take this opportunity to thank everyone who has contributed, commented and continued to support ATM over the past 12 months. From myself and all the team that help put this publication together – art director Jo Corne, sales assistant Melissa Wallace, proof reader Pip Dudley and AGCSA general manager Scott Petersen – thank you and we look forward to doing it all again in 2009. Good luck for the summer ahead.



Brett Robinson
Brett Robinson
Editor

Globe



*Best wishes
for the festive season
and the coming year*

JOHN NEYLAN AND SCOTT PETERSEN, AGCSA JOINT GENERAL MANAGERS

Significant changes mark year of progress

Already we are coming to the close of 2008 and it seems as though the years are on fast forward. We can look back on 2008 as being one of the most significant in the history of the AGCSA with a number of new initiatives cementing the AGCSA as the peak turf industry body.

To start with we held one of the biggest turf conferences and trade exhibitions ever in Melbourne which set new standards of education. It was also a year of change and sadly we had to farewell popular president Jeff Gambin. On a positive note, however, we have started a new chapter under the very capable leadership of new president Allan Devlin (superintendent Secret Harbour Golf Club) who we profile in this edition.

On the publications front, this 'magazine' became a 'journal' to reflect the quality of the publication. ATM has continued to gain recognition at both national and international level, taking out eight more TOCA awards earlier in the year. The AGCSA website received a facelift and a heap of new features to assist members, while The Cut email newsletter also continues to be a valuable resource for the industry and is also currently being overhauled.

One of the more significant changes that has taken place this year was the re-launch of the AGCSA Accreditation Programme. The AGCSA took advice from its counterparts in the US and Canada, as well as ideas from the Board and members, to come up with an accreditation system that works in our current environment.



A whole plethora of activities, including state and national workshops and trade days, mentoring and study tours now count towards AGCSA accreditation status. We also added more value to membership by including two free national workshops.

As an outcome of our strategic planning process earlier in the year, we also identified the need for the AGCSA to nurture and develop the next generation of turf managers. To do so the AGCSA implemented free membership to any turf management apprentice, an offer that has proved remarkably successful to date with nearly 130 taking up the opportunity.

It is fantastic that the AGCSA is now in a position to support the next generation and even more pleasing that they are recognising the value of being a part of the association. It will hopefully mean that they are supported throughout their whole career rather than just once they have reached the top of the tree.

2008 has also seen the AGCSA develop a closer working relationship with the trade. With the presence of Sam Hole (Syngenta) and Robert Rein (Toro) as trade representatives at AGCSA Board meetings, the trade has added significant value to discussions and direction of the AGCSA.

We are nearly 12 months on from the initial invitation and although both parties are

still finding their feet on how the relationship will ultimately work, it has been a great step forward for the AGCSA.

The trade is an extremely important part of our industry and their contribution to our association, even through challenging climatic and economic times, is significant, and a testament to the quality of companies and the people they employ. It is no wonder there has been a number of superintendents who have made the smooth transition to a trade rep position and the slogan certainly rings true that once you're in the turf industry, you're happy to be in it for life.

Finally, one of the issues raised at the Melbourne AGM was the concept of sharing member contact details. While the AGCSA has taken a conservative approach towards this issue due to current privacy laws, it is clear that not only is the AGCSA membership a collection of professionals, but also a network of friends.

In light of this the AGCSA will be asking members if they wish to volunteer their contact details for a directory which other members can access. The upside to this information being available to members is that you can call on fellow members for advice or share turf management knowledge, or prior to going on holidays you can look up other members and let them know you will be in the area to catch up.

Have a great summer and the team at the AGCSA looks forward to providing more initiatives and benefits for members in the coming year. 🌱



The leaders in sports field drainage & sports field construction using the latest machinery & technology.

Staff with over 60 years combined golf course and sports field drainage, sports field construction & horticultural experience. Choose the specialists – 100% of our projects are either the drainage or construction of sports grass surfaces.

Our Services include:

- Slit drainage • Laser controlled trenching • Sand grooving • Turf wicket construction to international level
- Sports field design & construction • Bowling green construction • GPS guided and two-way laser controlled grading

Proven methods. Proven results.

65 Hume Street, Crows Nest NSW 2065 | Phone: (02) 8117 8100 Fax: (02) 8117 8101 | Email: info@turfdrain.com.au www.turfdrain.com.au



AGCSA WATER INITIATIVE STRENGTHENED BY NEW APPOINTMENT



John Geary

The AGCSA Water Initiative has received a major boost with the appointment of John Geary as the AGCSA's newest member of staff. Geary (pictured) has been brought on board as part of the AGCSATech department to develop the association's online water management tool.

The web portal, which is projected to go fully live by the end of 2008 and will be free of charge for all AGCSA members, will direct users to relevant information such as water restrictions across Australia, the availability of water grants and how to obtain them, and new technology updates such as sewer mining and desalination plants. "The most important thing is that we've got to make sure it is easy to navigate, with links to everything that superintendents need for effective water management planning," says Geary.

The AGCSA's Environmental Initiative is also set to benefit from Geary's appointment. E-par, currently being used by nearly 160 golf courses in Australia, will be one component of a second database of relevant resource information that he will put together. He will also be aiming to foster links with environmental groups and promote the environmental image of golf courses and golf course maintenance practices along the way.

See 'On the move' (page 62) for more information on John's turf industry background. John can be contacted on email jgeary@agcsa.com.au or phone (03) 9548 8600.

MEMBERSHIP REMINDER

The AGCSA and NSW, Queensland, Tasmania, South Australia and Western Australia state superintendent associations are looking to finalise all outstanding membership payments for the 2008-09 membership period. Your Australian Turfgrass Management subscription is just one of many valuable benefits that will lapse if your membership is not renewed promptly.

If you have not received your membership card or certificate it is likely that your payment has not been received. Please email or call AGCSA membership manager Pip Dudley on info@agcsa.com.au or (03) 9548 8600 to update your records.



AUSTRALIAN GOLF COURSE SUPERINTENDENTS' ASSOCIATION

MEMBERSHIP APPLICATION FORM

Helping superintendents and their staff to achieve the best possible playing surfaces and adjacent environment within the limitations of the available resources

Surname: First Name:

Preferred Mailing Address:

City/Suburb: State: Postcode:

Position:

Club/Organisation:

Club Postal Address:

City/Suburb: State: Postcode:

Phone: Work: Home:

Mobile: Fax:

Email:

Member Category:

State Membership:

PAYMENT

☐ Please send me a tax invoice

☐ Please charge this purchase to my credit card account \$

☐ Bankcard ☐ MasterCard ☐ Visa

Card Number: Expiry Date: ____/____

Cardholder Name:

Signature:

Send completed application form and payment to:

Suite 1, Monash Corporate Centre, 752 Blackburn Rd, Clayton, 3168, Vic

Phone: 03 9548 8600 Fax: 03 9548 8622 Email: info@agcsa.com.au

AGCSA MEMBERSHIP CATEGORY

GOLF MEMBERSHIP

Golf Course Superintendent.....	\$339
International Golf Course Superintendent.....	\$195
Assistant Golf Course Superintendent.....	\$292
Foreman/Ground Staff.....	\$145
Golf Course Maintenance Company.....	\$339
Consultant.....	\$339

ASSOCIATE MEMBERSHIP

Sports Turf Manager.....	\$292
Trade Member.....	\$292
Retired Member.....	\$ 99
Ground Staff – Non Golf.....	\$145

STATE MEMBERSHIP

NSW - New South Wales Golf Course Superintendents Association	\$88
QLD - Golf Course Superintendents Association of Queensland	\$88
SA - South Australian Golf Course Superintendents Association	\$75
TAS - Tasmania Golf Course Superintendents Association	\$60
WA - Golf Course Superintendents Association of Western Australia.....	\$110
VIC - Victorian Golf Course Superintendents Association	Please call 9645 4394

THE NEXT GENERATION (STUDENT MEMBERSHIP)

Turf industry apprentices.....	FREE
--------------------------------	------

Discount packages now available for superintendents and their staff. Send a list of names and positions to: info@agcsa.com.au for a quote



Time for a Coolum

Recognised as the country's oldest professional golf tournament, the Australian PGA Championship returns to Hyatt Regency Coolum from 4-7 December. The Sunshine Coast course is now home to superintendent Darryl Edwards who having recently turned the big 50 can look back on a turf management career that has taken him to many exotic locations around the globe. In this edition's cover story, ATM editor Brett Robinson drops by a few months out from the 2008 tournament to look at preparations and discovers that the course is undergoing some dramatic changes.

Darryl Edwards stretches back in his chair and with a wry grin recounts how he was "guided" into a career as a turf manager.

Excelling at a number of sports right through his school years, the young Sydneysider decided upon finishing school at the age of 16 that he would pursue a dream of becoming a golf professional.

Possessing a bomb-like drive and plenty of raw talent, Edwards thought he had the right stuff to make it in the competitive world of the pros, but a few unwanted words of wisdom from a former playing partner of 14-time US PGA Tour winner Bruce Crampton soon extinguished any hopes of that eventuating.

Claiming to be an astute judge of character, the gent explained bluntly to the young Edwards that to cut it in the world of professional golf he

would need a huge amount of dedication and quite simply reckoned Edwards didn't have it in him.

He believed that Edwards would turn out to be the sort of pro that after shooting a round of 66 would head straight to the bar and celebrate, rather than head to the range to turn that into a 65. To add insult to injury, Edwards' ability with the putter was also called into question (Edwards reckons he is still shaky with the money stick today and puts it down to psychological damage).

With such wonderful words of encouragement ringing in his ears, it was no surprise the youngster entertained thoughts of plonking the chap in the face then and there. Undeterred, however, Edwards resolved that if he couldn't play with the big boys then he was going to prepare courses for them.

Edwards soon told his parents about his change of heart and one day asked for the phone book. After trawling through the pages Edwards came up with a list of 12 Sydney golf clubs and duly set about ringing each superintendent to see if there was a job on the groundstaff. He even called legendary Pennant Hills Golf Club super Vince Church. Edwards admits it was a long shot as he lived on the other side of town and would needed to have left home the night before in order to make the 5.30am start!

Edwards' persistence paid off, however, and he eventually managed to secure an interview at New Brighton Golf Club in Sydney's south west. Getting the nod from the then superintendent, as soon as he finished school he started at the golf course the very next day.

Hyatt Regency Coolum on Queensland's Sunshine Coast has been venue for the Australian PGA Championships for the past six years and will host the 2008 tournament at the start of December

change

BY BRETT ROBINSON

That was in the 1970s. Now over three decades later, Edwards can look back on a turf management career that has seen him work at golf courses the length of Australia's east coast as well as stints working in Southeast Asia. Despite experiencing the good and the bad, he steadfastly admits that he wouldn't have had it any other way, and that if he had his time over again would do things exactly the same.

HOME AT HYATT

Home now for Edwards is Hyatt Regency Coolum on Queensland's Sunshine Coast, which for the past six years has been the venue for the country's longest running professional tournament – the Australian PGA Championships. Arriving at the club mid-way through 2007 in a consultancy capacity after long-serving superintendent Bob Schmidt was



Arriving at the club mid-way through 2007 in a consultancy capacity, Darryl Edwards was officially appointed as Hyatt Regency Coolum superintendent in June 2008

forced away on medical leave, Edwards was officially appointed as superintendent in June 2008.

Edwards' path to his current position has taken many twists and turns along the way and his CV contains an impressive array of roles and facilities. After getting his break at New Brighton, where he gained his formal qualifications through the Ryde School of Horticulture, Edwards spent a brief period with Colin Campbell Chemicals before branching out with his own landscaping business.

In 1985 he popped up as assistant superintendent at Castle Hill Country Club where he helped prepare the course for the 1985 and 1986 PGA Championships (won by Norman and Harwood). After two years there he applied for the superintendent job at Surfers Paradise Golf Club and from there a love affair with warm-season grasses began.

During his five year tenure Edwards rebuilt 14 greens, converting them from Queensland blue to 328, which not only gave him a solid grounding in construction and grow-in but also maintaining wall-to-wall warm-season grasses. Following there he moved north to Mackay where he was construction superintendent at Laguna Quays and ended up staying on for six years as maintenance superintendent during which time the course played host to a couple of Skins tournaments.

It was while at Laguna Quays that Edwards was contacted by a colleague who at the time was working in Asia. Forwarding his CV, Edwards was quickly offered work and headed to a superintendent posting in Panang, Malaysia. Edwards then went on to become a senior coordinator for Watchman Golf which took him further into the Southeast Asia region and even Egypt overseeing construction jobs the company had on its books.

Through contacts in that role Edwards was approached to take the grow-in job at Blue

Canyon Country Club in Phuket, Thailand. Originally there for 12 months, Edwards departed six years later as general manager of the entire resort.

"It was a great time," recalls Edwards. "We had two courses operating, and I spent 12 months as director of golf and had 180-odd staff for two golf courses. I then stepped up to look after the course and the golf operations which turned it into about 700 staff, including 300 odd caddies. I then finished with a couple of years as general manager. I got on well with the owners and they trusted me with those roles. It was a tremendous time."

Leaving Blue Canyon in 2002, Edwards headed back to the Gold Coast and took up the superintendent job at Sanctuary Cove. During his time there he went through the initial stages of the redesign of the Palms Course with Ross Watson before being headhunted by Heritage Golf to project manage the Natadola development in Fiji.

With that project experiencing a number of delays, Edwards got wind that Hyatt Regency Coolum was looking for a stand in/consulting superintendent up to the 2007 PGA while Schmidt was away. Edwards stepped into the void and after successfully getting the course up for the tournament was brought on board full time in June. Around the same time new assistant superintendent Brendan Graham started and together they now manage an experienced staff of 10.

FINETUNING OPERATIONS

As with any management transition, Edwards has brought his own flavour of turf management philosophy to Coolum. Although very much a devotee of the KISS method – keep it simple stupid – Edwards has altered fertiliser practices slightly, introduced some new mowing patterns and set about achieving a more consistent intermediate rough around the



In the lead up to this year's tournament Edwards will be applying Primo to the Greenlees Park fairways

course. Edwards has also tweaked renovation practices on the 328 greens and Greenlees Park fairways, tees and roughs, choosing to be less aggressive and more frequent.

Spring renovations started in the first week of September with Edwards solid tining the greens at 2" spacings to a depth of 5". Leaving them open for a week to get some air into the profile, he then went back out with a double verticut (-1) followed by a dusting. Every two weeks following that Edwards was verticutting in two directions and dusting, a practice which will continue until three weeks out from the tournament to knock out any grain.

Tees, fairways, intermediate rough and surrounds were triple verticut at -2, while the rough was shaved down from 75mm to 30mm to even out growth. Although not as aggressive

as he could have been, Edwards has been very happy with the response, in particular the rough which has bounced back beautifully. Edwards also applied a granular feed to give the turf a boost after renovations and in the lead up to the tournament will apply fortnightly foliar feeds.

The main renovation to greens will be carried out in February with the surfaces hollow tined (5/8" tines), backfilled with sand and amendments applied depending on what results are forthcoming from soil testing.

Edwards has also looked at disease management strategies, which as any Queensland-based superintendent will attest are always high on the operational agenda due to the heat and humidity. Although not a big preventative sprayer, Edwards has embarked

on a monthly fungicide programme to keep the likes of ERI and other nasties honest, using it more as a safety net.

Edwards prefers to be more reactionary rather than tip chemicals into the ground, a philosophy which in no small part is influenced by the course's location. Being within a five iron of the Pacific Ocean, and with extensive waterways and environmentally sensitive areas which make up the property, the last thing Edwards wants to receive is a knock on the door from the local authorities.

Another change Edwards has introduced in the lead-up to this year's tournament is the use of Primo on fairways. While the greens have received applications of the plant growth regulator with good results, the Coolum fairways have yet to experience the Primo touch. Edwards was planning to go out at 350ml/ha at 2-3 week intervals in the lead up to the tournament and combine that with a feed.

"In this part of the world you've got to be mindful of some wet weather leading up to the event, so the use of Primo on fairways will primarily be a management tool for that," says Edwards. "Last year we were blessed with good weather, but if we were to get some rain – and we can get a couple hundred millimetres in two or three days – the couch just grows behind you."

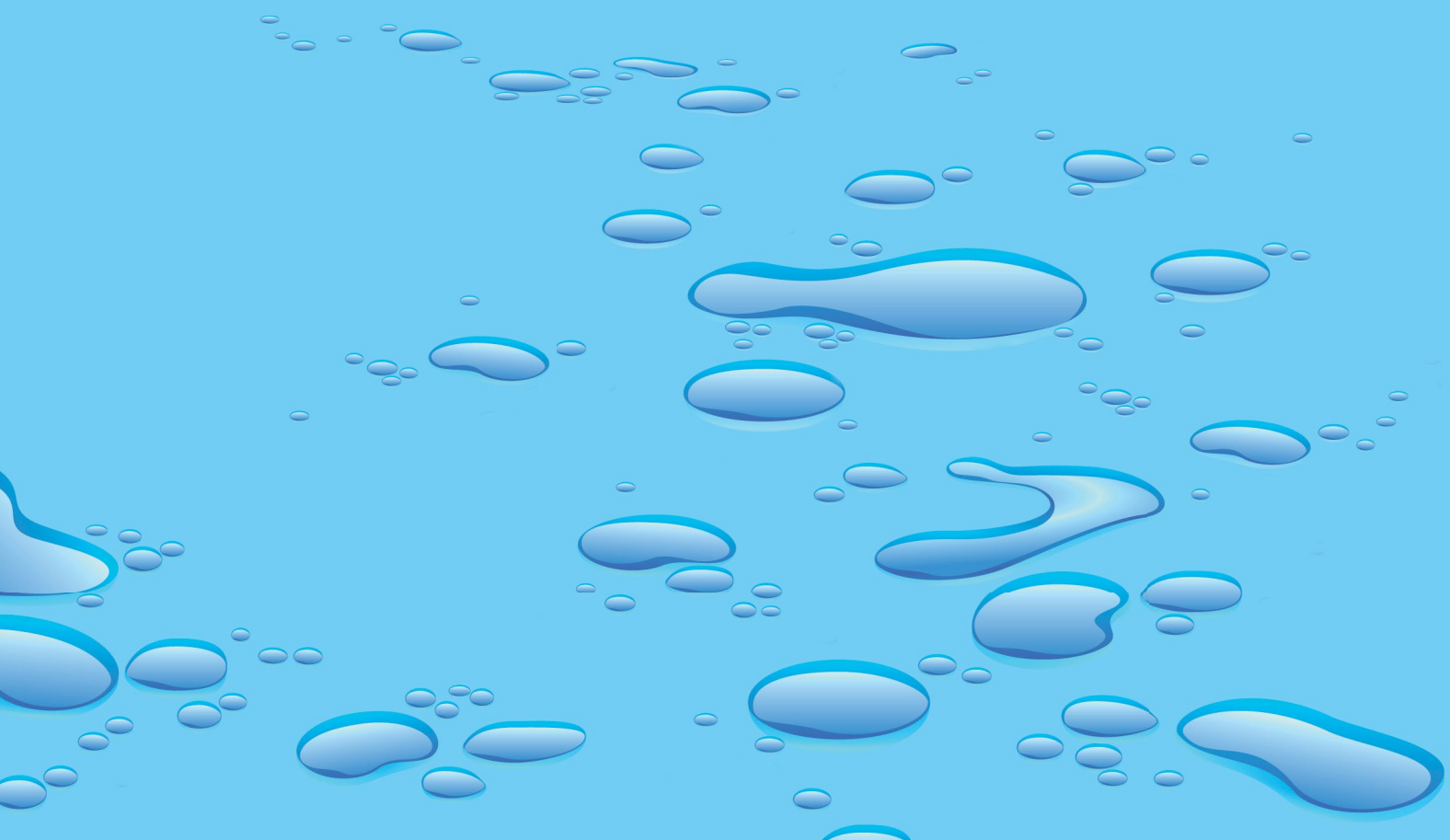
"Secondly, Greenlees Park is an old turfgrass variety now and needs a bit of modernisation and Primo is one of those tools where you can tighten up lies. While we get very good lies here already, I'm interested to see what I can achieve with it because I do believe it can provide a far better surface."



Hyatt Regency Coolum's iconic par 4 16th with Mt Coolum looming large in the background

An easier way to deliver

a trusted solution against Kikuyu & Poa



syngenta[®]

WINDS OF CHANGE

The 2008 tournament marks the seventh occasion that Hyatt Regency Coolum has hosted the PGA Championship. This year's tournament has drawn the likes of world number 10 Geoff Ogilvy and world number 11 Adam Scott who will contest the biggest prize purse in the tournament's history - \$1.5 million. Peter Lonard, who has collected no less than three PGA titles at Coolum, returns as the defending champion.

The PGA has become a perennial favourite of the big three Australian tournaments, with the relaxed atmosphere of the Sunshine Coast agreeing not only with spectators but the players also. Edwards loved the vibe and atmosphere of last year's tournament, which attracted over 47,000 punters through the gates, and is hoping that when Coolum's contract to host the tournament expires after 2009 the agreement will be extended.

Regardless of whether the PGA Championship remains on the Sunshine Coast, Coolum's original layout is about to undergo a major facelift. Five new opening holes are currently being constructed and were nearly ready to be grassed as this edition was going



Spring renovations started in the first week of September with Edwards solid tining the 328 greens at 2" spacings to a depth of 5"

to print. Unfortunately the project is running behind schedule, thanks to the extremely wet start to the year which saw Coolum record over 1600mm from January to June, and it remains to be seen whether they will be ready in time for next year's tournament.

The redevelopment has come about after property owners Lend Lease decided to develop the coastal track of land that currently houses holes 4, 5, 6, 7 and 8. That area of land will be turned into a residential development along with new Hyatt Beach Club facilities. To

HYATT REGENCY COOLUM PGA CUTTING HEIGHTS

Rough: 80mm-100mm

Intermediate rough: 25mm

Fairways: 10mm

Tees: 8mm

Greens: 3mm (greens are normally 3mm year round. Last year the greens were stimping 10.5-11 feet)

LIVING THE LIFE OF AN EX-PAT SUPERINTENDENT

One of the great advantages of being in the turf management game is the opportunity it can present to work overseas. For many years now Australian superintendents and greenkeepers have been lured offshore to exotic locations in Southeast Asia, the Middle East and, more recently, China and even Mauritius.

For Darryl Edwards, superintendent at Hyatt Regency Coolum, his turf management skills took him on an eight year journey to various parts of Malaysia, Indonesia, Thailand, and even Fiji, so he is well placed to offer a few words of wisdom to those looking at the possibility of broadening their career further afield.

"The pull of Asia is certainly still there," says Edwards. "There are some quality products up in Asia and the facilities are incredible. I was up there when golf course development was taking off and some of the guys there were earning ridiculous amounts of money. Back then it was all happening in Malaysia, Singapore and Indonesia, which was a lot closer to home, and it was us Aussies versus the guys from the US.

"Nowadays there are still some great opportunities. China is obviously the big focus for golf development at the moment along with places like Korea and Vietnam.

Australia is blessed to have a very high quality field of superintendents and depending on the individual you can really have a quality time."

As any ex-pat superintendent will attest, if patience isn't one of your endearing qualities to start with then it soon will be. Edwards recalls many instances where he would just shake his head in exasperation, but soon learnt that by going with the flow meant much less stress.

"For guys in Australia it's second nature – you tell someone to go and mow the 5th green and he does it. I remember my very first job in Malaysia I had to stop one guy from cutting greens in a circular pattern. He was working from the outside of the green into the middle – the hole was like a bullseye.

"I explained carefully that I wanted him to mow across the green in straight lines. He seemed to be listening intently and gave me the best smile in the whole world and said 'Yes Mr Darryl, yes Mr Darryl'. Everything seemed fine and he finished that green as I had instructed, but a few minutes later on the next green he's back doing circle work.

"Perhaps more than anything though I learnt a lot of respect for people who haven't had as much opportunity as I have. Some

of the guys working for me were being paid the equivalent of \$2 a day. But they are quality people, especially the Thais, and if you did the right thing by them they would do anything for you. You learn to give a little more and what you get back in return really can surprise you."

So from all his experiences, what sage piece of advice can Edwards impart to prospective ex-pats?

"Don't believe everything you're told, and I mean everything," laughs Edwards. "A lot of people will tell you a lot of stuff and some of it you have to take with a pinch of salt. It depends on which country you are in. Form your own opinions and trust your instincts.

"But most importantly enjoy it. It is different, completely different, but I wouldn't have missed it for the world. For instance, you don't go down to the corner store at smoko and buy a bottle of chocolate milk and a pie and go back to read the paper. Some of the things that have been put in front of me were mind-boggling. Before going to Asia I couldn't even have pepper on the table and here I was being given grasshoppers, frogs and ants to eat. I'm like 'you're kidding, you expect me to eat that!' And then there are the chillies; watch out for them!"

An easier way to deliver

a trusted solution against Kikuyu & Poa

Just add water



*Product is not yet registered. An application is currently lodged with the APVMA.

©Registered trademark of a Syngenta Group Company ABN 33 002 933 717. For further information on products please contact the Syngenta Technical Advice Line: Freecall 1800 067 108 or visit our web site at www.greencast.com.au
Syngenta Crop Protection Pty Limited, Level 1, 2-4 Lyonpark Road Macquarie Park NSW 2113. AD08/327

syngenta[®]



As part of a major redevelopment by owners Lend Lease, five existing front nine holes, including the 7th pictured here, will be bulldozed to make way for a new residential development

compensate wiping out those holes, five new holes are being constructed to the north of the clubhouse. The current opening hole, which for obvious reasons can't be touched due to the tournament, will become the new sixth hole and will be transformed from a relatively straightforward 360m par four into a heavily bunkered par 3.

The new holes, which work their way around a central pocket of environmentally protected rainforest, have been drawn up by the course's original architect Robert Trent Jones II whose brief was to blend the new holes seamlessly into the remaining original holes. As well as attaining his services, the new holes have also had the expert touch of the original shaper who contoured the course back when it was first constructed.

Turf surfaces on the new holes will mirror those on rest of the course and 328 turf taken from a chipping green, which has been down since day one, will be used to grass the new greens in a bid to achieve uniformity.

"Walking around the holes and seeing them take shape you can see a likeness already," says Edwards. "Yes it will be different for the first few years but given some time it will look as though they have been here since day one."

"The new fourth looks the pick of the holes at this stage. It's a slightly downhill short par four, heavily bunkered around the landing zone and short of the green. It's not long but anyone that takes a driver may run into a bit of trouble. If they find the bunker off the tee it isn't an easy shot into the green which is offset on an angle and protected by some deep bunkers.

"It will be sad to lose holes 4-8. Because they are located closer to the coastline, they have a distinct links feel about them and

add a very different dimension to the overall character of the course. It will also be a shame to lose the fifth which is a great par four.

"But in saying that I don't think anything will be lost. Some of the new holes will require a lot more strategy and golf management from a player's point of view. A lot of people say that the front nine at Cooloom is where you go out and score, but I think this new opening stretch will require a bit more planning and will tie in nicely with the rest of the course."



To compensate for the eventual loss of holes 4-8, five new holes are currently under construction, while the existing 1st hole will be turned into a par 3

"No inflated marketing & handlers fees"

New water saver options!

- Wetting agents • Penetrants • Water retention aids
- Moisture mapping

etp etpturf.com.au
Endeavour Turf Products Pty Ltd

MELBOURNE 0419 527 209
SYDNEY 0439 019 050

email: sales@etpturf.com.au





QUIETLY GOING ABOUT ITS BUSINESS.



The new Carryall 252 electric utility vehicle with exclusive IQ Plus System.

- 48 volt electrical system - 500 amp solid state controller
- Independent front suspension - Aluminium I-Beam chassis
- 4 wheel drum brakes - 500lb bed load capacity
- 16.3cm ground clearance - 24-28kph speed range
- 3.3m turning radius - 4 year battery warranty



1800 680 088
www.clubcar.com.au

1300 790 890
www.davidgolf.com.au





The Royal returns

By Brett Robinson

Royal Sydney Golf Club will host its 13th Australian Open in December

For the 13th time in its proud history, Royal Sydney Golf Club will entertain the big names of Australian golf when it hosts the 2008 Australian Open from 11-14 December. It will be the 13th occasion the national tournament has stopped by Rose Bay and for superintendent John Odell it marks the fifth Open of a career which has spanned over two decades at the club.

It has been just two years since the course last hosted the Open. The 2006 tournament provided the first real test for the course after it underwent extensive remodelling at the hands of architect Ross Watson in 2002 and 2003. The players enjoyed the challenge the new greens provided, while for Odell's crew the tournament tested their mettle after dire weather conditions wrecked havoc a day out from the opening round.

CHANGES ON AND OFF COURSE

Since that tournament Odell and his staff have made some very minor adjustments to the course. Targeted more towards the club golfer than the tournament professional, the changes have included remodelling of certain bunkers, while some greens have been softened to allow for more pin placements (notably the front of the 4th and 6th greens).

While the course will present pretty much as it did for the Open in 2006, perhaps the biggest change to Royal Sydney's turf management operations comes in the shed. Odell's philosophy of promoting from within has certainly been put to the test in recent times with no less than three of his senior staff moving on in the past 18 months.

Shortly after the 2006 Open Odell lost the services of highly experienced assistant

The 2008 Australian Open heads back to Royal Sydney in mid-December and as ATM discovers there have been more changes off the course than on it since the last Open in 2006.

Greg Puckeridge, who left to take up the construction superintendent position at the new Ernie Els-designed Four Seasons Golf Club in Mauritius. If that wasn't enough, Odell recently lost fellow assistants Rod Springall and Bevan Pulley.

Cameron Stuart, who was Odell's assistant in charge of the club's lawn tennis, bowls and croquet facilities, took over Puckeridge's role and at the time of ATM going to print Odell was trialling a couple of his staff in the other vacant assistant positions.

"Cameron has settled in well," comments Odell. "The assistant role at a course like Royal Sydney is very multi-dimensional with a number of facets requiring acute attention to detail. Staff management is very important, as is working in with me and my style of management and the standards I expect. It is certainly a challenging role and those who have worked with me over the years would probably agree, but at the end of the day when things go well and you see the fruits of your labour it is a very rewarding position.

"We have a lot of good staff come through who have gone on to bigger and better things,

but we always have staff training and ready to move up. I think that is one of the reasons why staff are attracted to Royal Sydney as they see it as a place where they can be exposed to a wide variety of sports turf on which to hone their skills. It holds us in good stead to have people training and upskilling all the time, whether it be through TAFE, distance education or university.

"For the staff it's important that they see there is a chance for promotion, that if they work hard they will be rewarded. I think it can be very counterproductive when someone higher up moves on that staff who have spent four or five years training at the facility are overlooked in favour of someone outside the team being brought in."

SITTING PRETTY

Being a tournament year, Odell completed major spring renovations on the first day of September (normally renovations wouldn't take place until after the club championships in November). This year staff quadruple-scarified the fairways, shaving them right back before coring them and rubbing the cores back in.

The greens were also given a touch up with the Hydroject and some spiking followed by a fairly heavy topdress. pH levels on both fairways and greens were also adjusted slightly as they were a little on the low side and at the time of going to print Odell had just completed renovations to greens surrounds and tees and was looking forward to some warmer ground temperatures to bring the course back to life.

"Agronomically we are sitting well," says Odell. "It's now just a matter of nurturing the surfaces and making sure the contours are developed for the tournament. The course

has come out of winter in perhaps the best condition it has been for some years. We really hit the wintergrass and flat weeds hard to ensure the surfaces were as clean as possible heading into winter.

"With the G2 greens, we have probably reduced our nitrogen applications quite a bit in the last year or two, more in an effort to naturally take out *Poa* which is such a difficult weed to control here. We have found the old Claude Crockford way of keeping nitrogen to an absolute minimum has been quite successful. I think the greens will be slightly smoother and potentially a bit quicker than the last Open, but we can adjust that in the lead up."

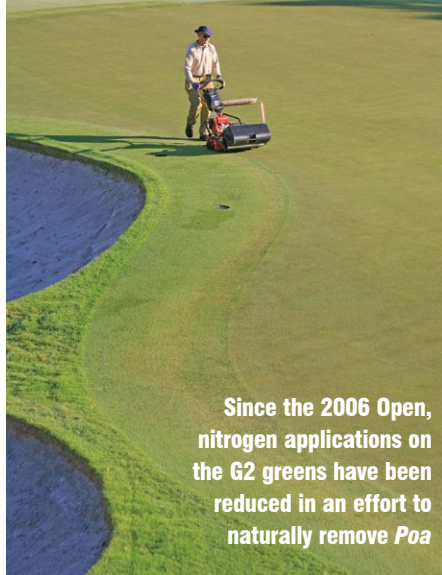
One bonus for Odell's preparations this time around has been the change in tournament schedule which came into affect last year. Having been the first of the three major tournaments in recent years, the Open now comes after the Masters and PGA.

"We're certainly looking forward to the tournament," says Odell. "It is always a great honour to host the national championship and seeing that it is the last tournament before Christmas we are hoping to build on the excellent crowds that attended in 2006."

DISEASE DILEMMA

While Odell and his staff will again have the course looking picture perfect for this year's Open, Odell will have one small issue that while not affecting tournament preparations will still be foremost in his thoughts.

Over the past four summers a couch fungal disease has spread across parts of the course and is progressively getting worse. The phenomenon is not just isolated to Royal Sydney and nearby New South Wales Golf



Since the 2006 Open, nitrogen applications on the G2 greens have been reduced in an effort to naturally remove *Poa*

Club, The Australian Golf Club and Bonnie Doon Golf Club have all been affected too.

Together the four golf clubs contributed \$16,000 in research funds last summer to help identify the causal pathogen and brought in Dr Percy Wong from the Plant Breeders Institute to undertake sampling and testing. Despite drawing a blank, his work will continue this summer after three of the clubs – Royal Sydney, NSW and Bonnie Doon – committed a further \$21,000. As part of the ongoing work, Dr Wong will conduct a number of field trials and laboratory tests on the efficacy of various fungicides and biological agents.

"It is concerning that we haven't identified it (the causal pathogen) yet, but at the same time we have been able to manage it somewhat as it is more an aesthetic thing," says Odell. "As far as the Open goes it won't cause much problem because we can mask it with heavy renovation. If we can ensure the turf is healthy as possible we can cover it up, but if we run the couch a little lean then the disease can be more apparent."

"At this stage nothing we seem to do has an impact on the disease. There is something similar up in Queensland, but all the fungicides that have been used to combat that particular disease haven't worked here. In the meantime we have been experimenting with different fungicides, different renovation techniques and will possibly look at trichoderma in the hope of finding a solution."

The disease first manifested itself on one of Royal Sydney's smaller tee areas about four summers ago. The following summer it reappeared on the same teeing ground as well as on a walk-off area from a green and has continued to spread unabated.

Starting off as a small patch about 5cm in diameter, the disease gradually forms a small orange-coloured ring which gradually radiates outwards and tends to break down the thatch. The turf in the centre recovers but an unsightly brown to orange ring up to almost a metre in diameter develops.

"It just appears anywhere and doesn't discriminate," says Odell. "It looks to be like a root fungal problem and we have found a number of different pathogens in the disease complex, from *gaeumannomyces* to *rhizoctonia*, but we just haven't been able to isolate the main pathogen."

"Trichoderma wiped out one of the disease complexes that Dr Wong plated out last year in the lab, and that is what we are sort of hanging our hat on at the moment. The other interesting thing is that in the two areas where the disease first appeared, there is now no sign of it at all. It looks as though the disease has run its course or has been acting for a while until an antagonistic fungi, like trichoderma, has come along and restored the natural balance." 🙏

BMS TURFLINE.com.au

Buy Online & Save

Turf Accessories for Golf Courses, Driving Ranges and Bowls Clubs



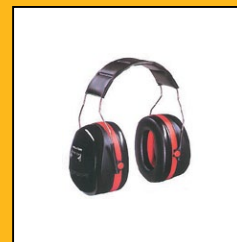
Golf



Tools



Irrigation



Safety

www.bmsturfline.com.au

Founded in the 1920s by a US Congressman, Congressional Country Club in the north east of the US has developed a reputation as one of the country's elite golfing establishments. Site of the 1964 and 1997 US Opens and 1976 PGA Championship, Congressional has been home for Australian greenkeeper Justin Bradbury since April 2007. Having been elevated to second assistant on the famed Blue Course less than a year after starting there, Bradbury gives ATM a unique insight into maintenance operations at the exclusive club which is scheduled to host the 2011 US Open.



After seven-and-a-half years at Bowral Golf Club in the southern highlands of NSW, four as assistant and three as superintendent, I decided I was looking for a new challenge.

I had spent the 2003 northern summer in the US as an intern at Woodloch Springs Country Club in north east Pennsylvania which had whetted my appetite for a return at some point in the future.

The US Open has always been a favourite event of mine and I harboured the desire to work at a facility the calibre of an Open venue. The decision was made to have a crack and see if I could fulfil the dream.

I was aware of the Ohio State Program (OSP) and thought that it could be a possible avenue to achieve this. I contacted OSP director Mike O'Keeffe and told him what I had in mind and asked if he could help. After a couple of weeks of waiting nervously Mike contacted me and said that Congressional Country Club was looking for someone and that I only had 48 hours to accept, as an

announcement was to be made about them hosting a new PGA event.

Forty-eight hours isn't much time to make such a massive decision and every waking hour was spent mulling this over. I was well aware of Congressional's history and what lay ahead for it in the future. This was an opportunity for me to get into the US industry at a level that I had dreamed about. I decided that I couldn't let this pass me and the time was right to do it.

Walking into the general manager's office to hand in my resignation after nearly eight years at Bowral was quite a strange feeling and it soon sunk in that I was about to leave my home town, family and friends to pursue my ambitions and develop my career.

After a whirlwind couple of weeks of making travel plans, getting visas organised and many phone calls back and forth to the States, I jetted out of Sydney with many well wishes from friends and family. I was eagerly excited about what lay ahead and the chance that I had been given.

FAMOUS FOOTSTEPS

I arrived at Congressional Country Club on 16 April 2007, via Los Angeles, New York and Columbus, Ohio, where I met Mike and had my orientation at the Ohio State University (a very impressive facility to say the least!).

Congressional Country Club is a 36-hole facility located in Bethesda, Maryland, just outside of Washington DC on the eastern coast of the US. The club was founded in 1924 and has a rich history and tradition. Former US presidents including Woodrow Wilson, Calvin Coolidge and Dwight D. Eisenhower have all been past members of the club.

Congressional is built on 156 hectares, encompassing the Blue Course, Gold Course, clubhouse grounds and driving range. It is an exclusive members only club with a long waiting list and high entrance fee.

Washington DC is located in the mid-Atlantic region of the United States, an area that in the summer months is subject to extended periods of oppressive heat and humidity, which makes it quite a challenge to manage the cool-



confessional

BY JUSTIN BRADBURY

Since 2007 Congressional Country Club has been the venue for the PGA Tour's AT&T National hosted by Tiger Woods. Congressional has two courses – the Blue and Gold – with the former set to host its third US Open in 2011

season grasses of both courses. In the winter months the region is subject to snow and sub-zero temperatures.

Consistently ranked in the top 100 US courses, Congressional's Blue Course is the well known championship layout and has hosted a number of events including two US

Opens, the 1995 US Senior Open, US PGA Championship and is the venue for the 2011 US Open. The former Kemper Open, later called the Booz Allen Classic, was played at Congressional seven times with notable winners including Craig Stadler, Fred Couples, Greg Norman and Sergio García.

The Blue Course was originally designed by Devereux Emmet and has been renovated over the years by numerous architects including the famed Donald Ross and Robert Trent Jones. Most recently it has been re-worked by Rees Jones, known notably for his work on US Open venues. It is a par 72 for members and plays at 7278 yards (6655m) at its longest, a par 70 for tournament play.

The green surfaces are undulating with a trend to slope from back to front. They are made up of approximately 70 per cent *Poa annua* and 30 per cent creeping bentgrass, with an average size of 5150 sq/ft (478m²). The tees and fairways are almost a pure stand of creeping bentgrass with *Poa annua* infestation controlled with Trimit (paclobutrazol) at 20oz/acre (1.5l/ha). The fairways cover an area of 23.85 acres (9.65ha) and the tees 2.76 acres (1.12ha). Total rough area is 51.8 acres (20.9ha) and bunkers 2.2 acres (0.9ha).

When I first arrived at Congressional the first thing that struck me driving up the tree-lined entrance was the opulent clubhouse which is nestled among well maintained gardens and trees. I was met by Gold Course superintendent Tom Turi who took me to the house where I would be living. Here I met Blue Course first assistant Derek Trenchard who would be one of my new house mates. There are a number of houses on the property and I would be living in the house with the other assistants. The guys advised me to report to work the next day for my orientation and for me the beginning of a new chapter in my greenkeeping career.

When I arrived at the maintenance compound early that first morning it was a hive of activity – people arriving for the day's work ahead, people setting mowers up for first duties and the managers in the office discussing the game plan for the day. It was such an eye-opener to see first-hand the inner workings of a first-class organisation.



DAVID GOLF
GOLF HARDWARE WITH SERVICE

TEE INFORMATION SIGNAGE

CALL DAVID GOLF FOR ALL YOUR SIGNAGE NEEDS






Sales Desk 1300 790 890 • www.davidgolf.com.au • dge@davidgolf.com.au



Since April 2007 Congressional has been home to former Bowral Golf Club superintendent Justin Bradbury who has risen to be second assistant on the Blue Course

At this point I met director of greens and grounds Mike Giuffre and superintendent of golf courses David Hutchinson. I had spoken with Dave on the phone a number of times and it was good to finally put a face to the voice. Dave is originally from South Africa so the conversation didn't take long to get around to rugby!

I was advised that I would be spending the summer on the Gold Course. It has a lesser profile than the famed Blue, but is a high quality course in its own right. It is ranked number five in the state of Maryland and is maintained to the same high standard of the Blue to meet the expectations of the membership.

I saw this as an opportunity to settle into my new position and get acquainted with the day-to-day running without the intensity of the Blue Course. I made it my goal to try and prove myself in the hope that a permanent position might present itself in the future and I would be considered. My role for the 2007 summer on the Gold Course involved a lot of hand-watering and spraying. I also had the opportunity to partake in the mowing and cultural practices.

When I first arrived at Congressional it had just been announced that the Blue Course would be the new venue of the AT&T National hosted by Tiger Woods during the 4th of July holiday week. It was 126 days from the announcement until the start of tournament week, a very brief amount of time to prepare for a PGA Tour event considering most venues know up to a year in advance.

The focus was definitely on the upcoming event during the spring and early summer. In May, Tiger Woods came to Congressional for a media day and the crew were fortunate enough to have a photo taken with him. The photo sits proudly in the break room now as a reminder of this inaugural event.

In the month leading up to the tournament there was an increased amount of activity around the place and a sense of excitement and anticipation. Being on the Gold Course I didn't expect to have a major role during tournament week and was prepared to enjoy

the experience and do the best I could at whatever my job might be.

When I was told that my duties for the week would be setting up the front nine greens, I couldn't believe it. I felt very proud and fortunate to be entrusted with this job. My afternoon job would be mowing approaches.

I thoroughly enjoyed the experience of my first tournament. The tournament was a huge success and the staff did a great job of pulling it off considering the amount of time to prepare. Unfortunately the weekend temperatures approached 100°F (38°C) which put a lot of stress on the course, particularly the greens, but all players and PGA Tour staff were very complimentary about the course and how it held up under the tough conditions.

In the weeks after the tournament I was approached by Dave Hutchinson who informed me that one of the assistants was moving on from the Blue Course and the position of application foreman was open. He asked me if I was interested in moving across to the Blue Course and taking on the role. You can guess what my response was.

Typically with the OSP you are moved to a golf course down south in the winter months. After speaking with Mike O'Keeffe he agreed it was a great opportunity to remain permanently at Congressional and I got back to Dave and duly accepted.

It was the first week of September when I shifted across to take up the new role on the Blue Course, however, I only held this position for a couple of months as the second assistant left and I was offered a further promotion. I gladly accepted and have held this position for almost 12 months now.

TALKING TURF

There are many cultural practices that take place in order to provide the high quality conditions that are required at Congressional. It all begins in the first week of March with the initial stage of spring renovations. We verticut the greens to a ¼ inch depth (6.35mm) with Mataway machines and they are given a light topdressing application with angular particle sand. The fairways also receive their first topdressing at this point.

A week later the greens are aerified with ¼ inch hollow tines to a four inch depth (10.16cm) and are immediately followed by dryjecting. This is a process whereby a machine injects water at high pressure into the green, creating a vacuum for dry sand to fall down tubes into a hole spaced approximately at three inches (7.62cm). Following the dryject, any sand that is left on the surface is dragged and the greens then rolled to smooth any imperfections.

Five weeks later in early April, a ½ inch hollow tine aerification is carried out, followed by topdressing where all the sand is pushed into the holes with brooms. This completes the spring aerification of the greens.

The course closes for four days in spring and autumn to carry out aerification on tees, approaches and fairways. Tees and approaches are aerified with ½ inch hollow tines and topdressed both times.

The fairways are vertidraind in the spring and aerified in the autumn. It is quite a process in the autumn. After the aerifying, the fairways are then dragged with a large drag mat behind a tractor, swept with a Toro vac to pick up the



Only in the States! For the AT&T National fairways are double cut daily in the afternoon with a fleet of 24 triplexes

plugs and blown to remove any remaining debris, all creating quite a dust cloud!

It is important to get any thin/bare areas that do not come out of the winter repaired once the weather is favourable for establishment. This is done by sodding the higher areas of cut and plugging on the shorter grass. This gives the turf sufficient time to establish before being placed under the rigours of tournament stress and the summer heat.

In late April light topdressing begins on the greens. This is done on a weekly basis by hand using Spyker rotary spreaders and continues until the beginning of the tournament to help maintain a consistent, firm playing surface.

After the tournament further dustings are applied depending on the health of the turf and weather conditions. The tees and approaches are given two more topdressings between spring and the tournament, four weeks apart. The fairways also receive another topdressing. Such a practice helps firm up the surface and tighten the density of the turf canopy on the tees/approaches and fairways.

Granular fertiliser applications are made to the tees and fairways in spring (20-0-20) and autumn. The greens are fertilised with ammonium sulphate 16-4-8 in spring and 12-2-24 in autumn, both proceeding aerification

aiming to apply .5lb (0.23kg) of total N to the plant. The greens are then spoon fed weekly with small amounts of N and K, along with weekly applications of Primo Maxx at 0.1oz/M (3.01g/100m²) (M = 1000 square feet).

An intense spray programme is vital in maintaining the health of the plant in the mid-Atlantic region. A preventative fungicide programme is developed well in advance of the season. The main diseases that are an issue in this region include anthracnose, dollar spot, brown patch, summer patch, pythium and grey leaf spot – many threats to combat to say the least!

A wide range of fungicides are used on a rotational basis to prevent resistance and ensure effectiveness. Some of the staple fungicides used for disease control on the greens are chlorothalonil at 2oz/M (0.06l/100m²), iprodione at 4oz/M (0.12l/100m²) and fosetyl-aluminum at 4oz/M (0.12l/100m²). Other products will be tank mixed from time to time and rates adjusted depending on disease pressures.

Summer patch is a constant threat in the hot, humid conditions and is controlled with rotational applications of azoxystrobin at 2oz/M (0.06l/100m²) and thiophanate-methyl at 8oz/M (0.25l/100m²).

Diseases are not as much of an issue on tees and fairways due to the higher height of cut and being predominantly creeping bentgrass. The main concerns are dollar spot and pythium. A product called Phosphite 30 is applied to fairways and tees every 14 days for pythium prevention along with a 12-3-12 liquid fertiliser in the fungicide tank mix.

Along with the fungicides, a comprehensive Floratine programme is carried out on the greens. A foliar application is made every seven days and a soils application every 14 days.

Precision fans are a recent addition to numerous greens to help control the micro-environment. The role these play in the health of the plant cannot be understated. A total of 11 have been installed to date and the other greens will be completed in the future.

Water on the greens is kept to a minimum and mostly done by hand. The only time heads are run is during aerification, after a soils application or a granular fertiliser application.

Leading up to the 2008 AT&T National, the golf course was in great shape due to above average spring rainfall and also the fine preparation work of Mike Giuffre and Dave Hutchinson. The last couple of weeks are spent fine-tuning and dialling in the course as

PLP

**POWERUP
LAWNCARE PRODUCTS**
www.poweruplawncare.com.au
Phone: 1300 363 027

**We won't be
beaten on
price on any
R&R product!**

**THE AUSTRALIAN DIRECT IMPORTER
OF R&R PRODUCTS FOR OVER
20 YEARS**



**Contact us for all your
golf course requirements**

HOVER MOWER

The Safest Way to Mow Steep Slopes

- Powerful 5.5HP Honda 4-cycle engine matched to the largest impeller in the business
- Ideal for slopes, wet grounds, lake banks & sand traps
- Cutting height 1/2" to 3"
- High density UV & chemical resistant polyethylene deck
- Ergonomic, 16 gauge steel, 52" handles for extended reach
- One year commercial warranty

HM19H4





After an initial verticut and light topdress, greens are aerified with ¼ inch hollow tines to a four inch depth

all of the major things have been taken care of. The greens were in great condition with the weekly dusting of sand topdressing and rolling with Tru-Turf rollers 2-3 times a week helping out immensely.

Cutting heights for tournament week are .110" (2.79mm) for greens and .375" (9.53mm) for tees/approaches and fairways. Only the greens are different from day-to-day heights as they are generally at .115" (2.92mm). The rough is cut at a height of 2.5 inches (63.5mm) for membership play, but is increased to 4 inches (101mm) for tournament play, with the final mow being on the weekend preceding tournament week.

In 2007 the rough was increased by ½ an inch (12.7mm) each week beginning five weeks out from the tournament until it reached the desired length. This wasn't possible in 2008 due to membership demands and the rough wasn't quite as uniform early in the week.

For the tournament, greens are double cut and rolled in the morning and single cut in the afternoon. The greens are stimped before the second cut and also the roll to ensure consistent green speeds. The average green speed was between 12.5 and 12.7 feet, exactly where Tour officials requested.

Tees and approaches were single cut daily and the fairways were double cut daily in the afternoon with a fleet of 24 Toro 3250 triplexes – an impressive sight and something that grabbed the attention of the crowds!

I was responsible for the back nine bunkers for the week. I had a crew of seven and in the mornings we would venture out in the early hours and double rake all the bunkers. I would follow the crew and make sure that they were of the highest standard. While checking them in the mornings, I would make a note of the moisture content in the sand and in the afternoons I would hand water any bunkers that were a little dry.

IN THE SHED

Shahid Bhatti is the equipment manger at Congressional and does an outstanding job

in maintaining a large fleet to the highest standard. He has two assistants and takes great pride in the machines.

We have a full fleet of Toro equipment consisting of 12 Flex 21 walk mowers, 16 1000 Series walk mowers, 12 3250 triplexes, two 4500Ds, four 5700D and two MP1250 spray rigs along with numerous tractors and other equipment.

Heights are checked daily on the mowers as they return to the shop and Shahid also goes out in the mornings to check the quality of cut while the machines are operating. He uses Bernhard grinders to maintain the cutting cylinders. Tee, approach and fairway mowers are grinded twice a year and greens mowers are done 10-15 times a year with supplemental back lapping.

All mowers are grinded two weeks out from the tournament and bedknives are replaced. This gives them a chance to remove what Shahid calls the 'goody' and he wants everything as sharp as possible. His desired angles on the knives range from 4 degrees on greens mowers to 7 degrees on the fairway units and he grinds the front face of the bedknife by hand.

EXCITING TIMES

It is an exciting time at Congressional. There is currently a multi-million dollar renovation being undertaken on the clubhouse with a spring 2009 opening scheduled.

The 2009 AT&T National will return and after the final round the Blue Course will shut for an estimated 10 months. During this time the greens will be totally reconstructed with yet to be determined specifications and bentgrass type along with other renovations on the course in preparation for the 2011 US Open.

I am very fortunate that the club has shown faith in me and sponsored me with a new visa. I will be staying at Congressional for some time yet and feel very privileged to be part of such a professional organisation.

ACKNOWLEDGEMENTS

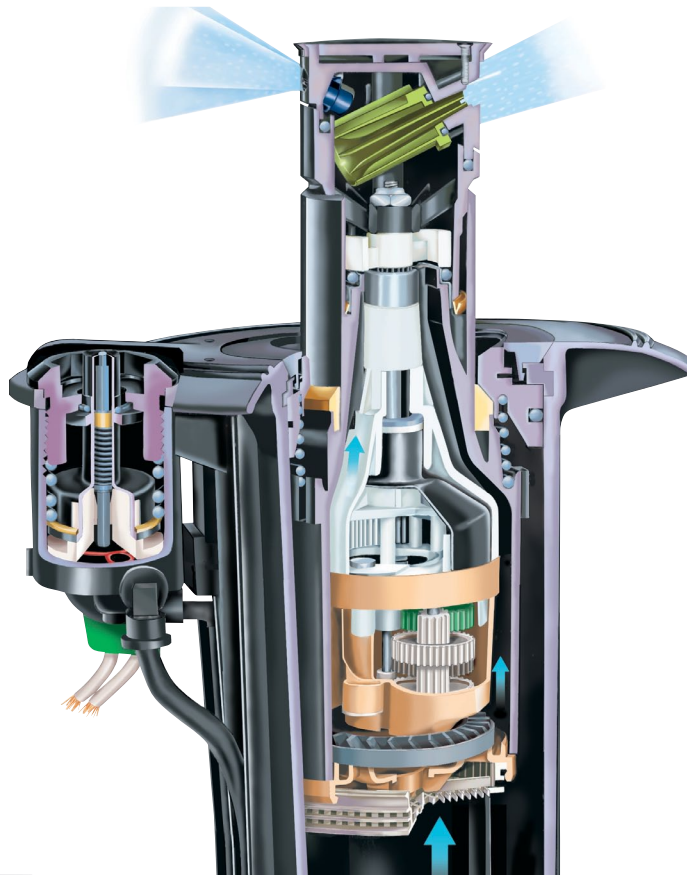
During my time in the US I have been very fortunate to meet some wonderful people and also get to see some great courses including Pebble Beach, Cypress Point, Pine Valley, Merion and Bethpage among others. Thank you to Adam Strachan (see Adam's article on page 22 – Ed), Coman Mulry and James Hayes for organising some of these visits.

I would also like to thank Mike Giuffre who epitomises professionalism and Shahid Bhatti who I am constantly annoying with questions and who is always very accommodating. I also owe Dave Hutchinson a lot as he has shown faith in me all the way and done an incredible job in allowing me to stay on at Congressional. Also to Mike O'Keeffe for his efforts in getting me to the USA and last but not least my fiancée, Erin, without whose support any of this would not be possible. She allows me to work in a job that is a dream! 🙏



Following the 2009 AT&T National, all greens on the Blue Course will be totally reconstructed in preparation for the 2011 US Open

It's what's inside that counts.



Install Confidence® Install Rain Bird® EAGLE™ Series Rotors.

For more than 14 years, Rain Bird EAGLE Rotors have been constantly innovated and improved to elevate the industry standard for performance and durability. This benchmark effort continues to deliver the lowest cost of ownership, and more importantly, best-in-class reliability. **Consult with your Rain Bird distributor about all the reasons why EAGLE rotors pop up on more courses around the world every day.**

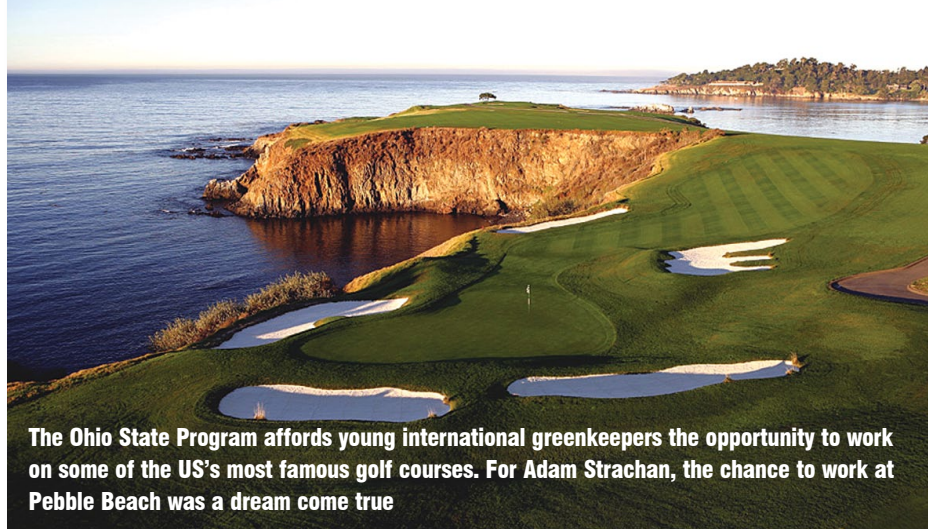


Rain Bird Australia

10 Mareno Rd, Tullamarine, Vic, 3043. Freecall: 1800 424 044 Freefax: 1800 424 050
Contact: Wayne Brown (0419 669 679) Troy Barbour (Vic, WA, SA, Tas 0409 123 191) Greg Smith (NSW, QLD 0438 503 070)
Dale Stafford (Technical Support 0409 115 000) Scott Johnstone (Pump Station Sales 0437 078 677)
www.rainbird.com.au Email: info@rainbird.com.au
© 2007 Rain Bird Corporation

BY ADAM STRACHAN

From Westside to Stateside



The Ohio State Program affords young international greenkeepers the opportunity to work on some of the US's most famous golf courses. For Adam Strachan, the chance to work at Pebble Beach was a dream come true

Photo by: Evan Schiller/www.golfsshots.com

The day had finally come. I was leaving for Pebble Beach Golf Links in California and all I could think about was how I would find my way through all the airports!

Leaving Perth International Airport was very emotional, one moment sitting and talking with my family and friends about my long-awaited adventure and the next moment walking through the departure gate realising that I was not going to see them for a whole year, or more. In fact, I had hardly made it to the departure lounge when I text messaged a few mates to help calm the nerves as this was only my second time out of Australia.

After 40 hours of flying and layovers in Tokyo, Los Angeles and Chicago, I arrived in Columbus, Ohio, home of Ohio State University (OSU) which runs the Ohio State Program (OSP). Once the plane landed in Columbus I started to get excited. After claiming my bags I headed to the front of the airport to find my hotel shuttle. When I finally located it I tried to jump in the driver's side which led the driver to yell, "Hey buddy, I'm drivin'!" Culture shock number one...only five minutes after my arrival!

After spending the first day and a half sleeping off my jet lag I received a phone call from OSP director Mike O'Keeffe telling me that he would take me out to lunch – and then on to my drug test (all OSP participants must take a mandatory drug test upon arrival). The next day I attended orientation where they taught us about taxes, social security numbers and other information on how to get by in the States.

Then it was off for lunch where we met the OSU staff who, themselves, were from many countries including Brazil, China, the Czech Republic, Denmark, England, France, Greece, Ireland, Poland, and, of course, the United States.

In the afternoon we were shown around the campus including the OSU College grounds, from the 108,000 seat football stadium to the basketball/ice hockey arenas. All the golf interns got to go to The Jack Nicholas Museum

When your father is one of Western Australia's most respected turf managers, chances are a career in greenkeeping is pretty much destined. So it has proved for Adam Strachan, son of Lake Karrinyup Country Club superintendent Trevor, who recently spent a year in the United States as part of the Ohio State Program. And which golf course do you head to when you venture overseas? Pebble Beach, of course, and here Strachan looks back at his time spent helping manicure one of the game's most famous public layouts.

which was a great experience getting to see the only Green Jacket outside of Augusta, Georgia.

THE MAIN ATTRACTION

Flying into Monterey, California was very exciting, looking out the window and trying to spot Pebble Beach among the many courses which are dotted along the Monterey Peninsula.

Getting off the plane was a shock as it was really cold. Once I found my bags it was time to find my ride to my new house for the next year. One of my future co-workers, Pebble Beach Shop manager Clayton Hughes, picked me up and this time I was sure to make it into the passenger seat. After arriving at my house and dropping off my bags, it was time to see the famous Pebble Beach.

Pebble Beach Golf Links was built in 1919 and was designed by Jack Neville and Douglas Grant. It is the jewel in the crown of Pebble Beach Resorts which also owns nearby courses Spyglass Hill Golf Course, The Links at Spanish Bay, Del Monte Golf Course and a par 3 golf course named Peter Hay. The region also contains Monterey Peninsula Country Club, Poppy Hills Golf Course and the equally famous Cypress Point.

Pebble Beach is a par 72 during regular play but is shortened to a 71 during the US Open. Pebble Beach is a public golf course which pushes around 77,000 rounds per year. For the last few years it has been named America's number one public golf course and sits at number five in the world rankings by Golf Digest magazine.

Pebble Beach hosts many tournaments throughout the year including three main events: the AT&T Pebble Beach National Pro-Am, Senior PGA First Tee Open and the Callaway Pebble Beach Invitational. Pebble Beach Golf Links has hosted four US Opens, four US Amateurs, one PGA Championship, and will host its fifth US Open in 2010. It is also the venue of the very prestigious annual car show, Concours d'Elegance, which has been running since 1950. Concept cars are displayed on the putting green and vintage cars are displayed on the 1st tee and the 18th fairway.

Once arriving at my new work place I met my new managers, course superintendent Chris Dalhamer, first assistant Jack Holt, his dog Lucky and new second assistant Billy Hausch. It was Billy's first day on the job as well so the two of us went on a tour of the course.

The Pebble Beach maintenance department has about 30 crew members. The majority are Hispanic and speak English fairly well so communication was not difficult. All of the Pebble courses are supplied with Jacobsen equipment and the aerifiers and tractors are shared between the courses. The new shop was built in the last few years and is very well decked out. As employees of the Pebble Beach Company we had great golf privileges, getting to play all the golf courses and also receiving health and wellness benefits.

TURF MANAGEMENT

Grass types at Pebble Beach consist of *Poa annua* greens and fairways and *Poa annua*/perennial ryegrass roughs.

When I first arrived there the 1st green was being reconstructed to USGA specification. The crew had just started to sod cut the existing green, cutting it into three feet rolls ready to move and re-lay the entire green on a tarp where it would sit for the next 23 days.

Before the green was removed it was shot at every two feet to ensure that the green would remain the same as it was when originally constructed back in 1919. After removing the sod, we dug a hole to see the many profile layers from almost 90 years of cultural practices.

While the green was under reconstruction Chris and Jack wanted to recreate the green the way it was during the initial years of course operation which required a few bunker renovations. One existing smaller bunker was stretched around the green to make a larger one (2538sq ft or 236m²), while a larger bunker was split into two mid-sized bunkers to help disperse foot traffic off the front of the green.

All the new bunkers were fitted with new drains and Staylock liner. Staylock is a product made from soil with polymer coatings to help it stick together and become watertight when compacted. This product was used to stop the

underlying native soil from contaminating the pristine white sand during rain storms.

The fairway bunkers received a makeover as well with kikuyu removed from the perimeter before fine fescue was added along the left side to reduce the amount of required mowing and water usage.

When it came time to lay the sod back onto the green, it was carefully rolled back up in its original order and placed back down on the sand green. Once all the sod was down and in place we rolled the green with a large water-filled barrel and applied soil amendments and fertilisers. The green was enlarged from 3390 sq ft to 3690 sq ft (315m² to 343m²) and was reopened in late August 2007, just in time for the Senior PGA Tour event.

My first few weeks of work consisted of what they call 'section work'. This includes hand-mowing greens, raking greenside bunkers, rotary mowing, spot watering, fixing ball marks and bombing divots. I looked after greens 2, 6, 10, 14 and 18. This work helps ease you into the way that the golf course is run and familiarises you with the course layout and machinery. I later started taking on other tasks like rough mowing, fairway mowing, TCA (tees, collars and approaches) as well as other general greenkeeping tasks.

Adam Strachan with
Pebble Beach Golf
Links superintendent
Chris Dalhamer



Just before the AT&T Pebble Beach National Pro-Am, I had the task of maintaining the greens nursery. I had to mow, fertilise, spot water and fill in any patches where there was no turf so it would look flawless for the tournament. Core plugs were used to repair bare areas as there is no seed for the *Poa annua* greens at Pebble. The thought of using *Poa reptans* was considered but it was found that the seed was fairly old and most likely wouldn't germinate.

When I began at Pebble, the weather was very foggy and wet, which took some getting used to. I later found that it can become very sunny with temperatures around 75°F (24°C) in summer, while in the winter months you can expect lows around 32°F (0°C) and highs around 67°F (19°C). On average Pebble Beach receives around 12 inches of rain annually and typically has weather similar to Perth.

Chris Dalhamer encourages his crew to volunteer for as many tournaments as possible to gain greater and more versatile experience. While there I volunteered for the US Amateur at the Olympic Club in San Francisco where my task was to cut cups and mow approaches. I also volunteered at the Schwab Cup at Sonoma Country Club, Sonoma, California, where I was on the bunker and divot bombing

MacKenzie
Creeping Bentgrass
The Masters Touch

EXCELLENT YEAR ROUND PERFORMANCE
UNIFORM PUTTING SURFACE
EXCELLENT WEAR TOLERANCE

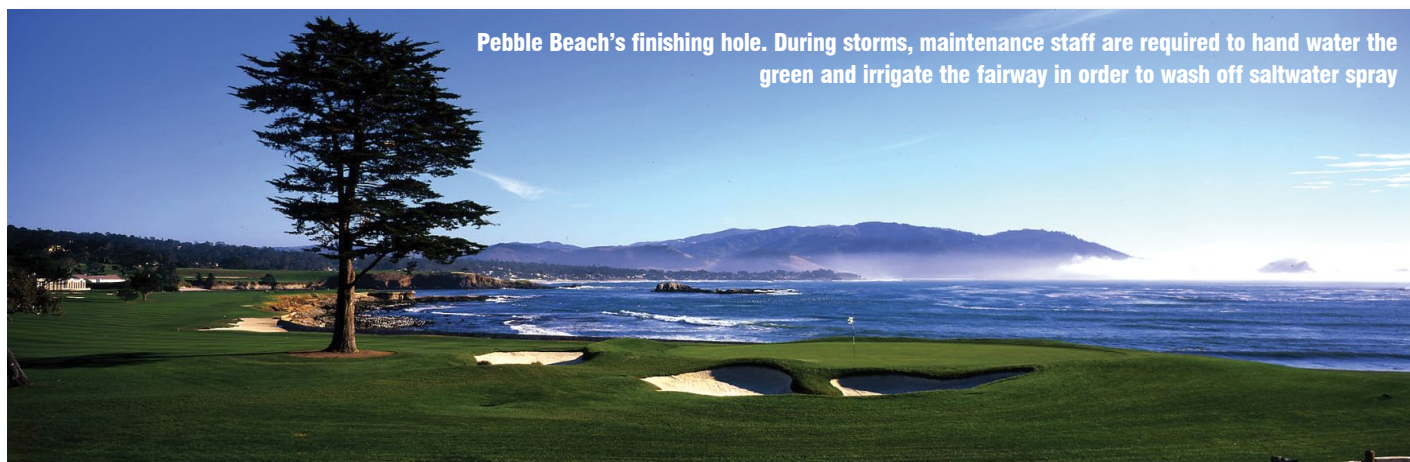
REDUCED FUNGICIDE REQUIREMENT
FINE LEAF TEXTURE
REDUCED BALL MARKS



FREE CALL AUSTRALIA: 1800 DURATURF
AUSTRALIA Ph: 03 9394 3412 info@pggwrightsonturf.com.au



PGG Wrightson Turf



Pebble Beach's finishing hole. During storms, maintenance staff are required to hand water the green and irrigate the fairway in order to wash off saltwater spray

Photo by: Evan Schiller/www.golfsshots.com

◀ crews. Both of these experiences provided networking opportunities and also the chance to see how different courses prepare for major tournaments.

During that time I also attended the OSP Short Course at Sea Pines Resort in Hilton Head, South Carolina. This was a great weekend where I met around 40 guys from all parts of the world such as Brazil, Canada, England, Ireland, New Zealand, Scotland and Australia.

We attended three days of seminars taught by Ohio State University lecturers and superintendents who covered a variety of topics from pest and disease control to how to build a resume. Networking was the goal for the weekend and we all networked very well!

TOURNAMENT TIME

AT&T Pebble Beach Pro-Am preparations typically take a full month to complete, however, in 2008 Pebble Beach received nearly eight inches (200mm) of rain in the three weeks leading up to the tournament which provided a major challenge for preparations.

We could not mow fairways, tees, collars and approaches because the ground was either too soft or underwater. We spent the weeks leading up to the tournament, which is held in early February, cleaning up debris from major storms and re-banking bunkers that had been washed out. We also had to check the depths of the bunkers to ensure the ball wouldn't plug and also make sure there was enough sand so players' clubs didn't hit the Staylock.

During major storms when the tide was up and the wind was howling, we had to water down the 18th green and run sprinklers on the 18th fairway. Manmade sea walls run the length of the 18th fairway dividing the ocean from the course and during such storms the waves crash into them creating a large amount of saltwater spray which lands on the greens. In order to flush the salt water we watered down all the grass from the green to the surrounding bunker faces to ensure the turf would not be harmed.

One week prior to the tournament the weather started to fair up and we started

mowing again. I was lucky enough to be one of the people that were mowing the immaculate straight lines on the fairways. We were double-cutting pretty well five days prior to the start of the practice rounds.

Throughout the tournament we cut fairways in the morning (10-4) and then again in the afternoon (8-2). On our breaks throughout the days a few of my co-workers cooked amazing meals for the crew. From bacon and egg burritos in the morning, to burgers and chili for lunch, to shrimp and filet mignon for the lucky ones in the evening (many thanks to Clayton and Rick for keeping us well fed!).

OPEN PREPARATIONS

Many changes have either been made or are scheduled in preparation for the 2010 US Open, such as rebuilding tee complexes, creating new tees and lengthening holes to new bunkers on the 3rd hole and moving bunkers to toughen up others. Another major priority is the removal of kikuyu around roughs, tee boxes and fairway bunkers and there is a dedicated crew of four workers assigned to this task alone.

While I was there, myself and co-worker Craig Schmidt (NCGA intern) were assigned to marking the fairways for the US Open so we could GPS them and start a spraying programme of Trimit (16oz/acre) once a month and an intense overseeding and aerification programme of the roughs.

As Pebble Beach narrows off the fairways for the US Open from 50 yards to 27 yards (46m to 25m), the *Poa annua* grass on the fairways tends not to quite grow to the desired length of 4-6 inches (102mm-152mm) in the rough. Therefore the Trimit programme helps to reduce the amount of *Poa annua* in the rough and the overseeding of ryegrass ensures that the rough will be at the desired length and consistent.



Following his stint at Pebble Beach, Strachan headed cross country to Congressional Country Club which is venue for the PGA Tour's AT&T National

NEXT CHAPTER

In among the many hours of work preparing ▶



A world of local knowledge™

For more information, contact Scotts Australia Freecall 1800 789 338 www.scottsaustralia.com

New Zealand (09) 299 6558 www.scottsnz.com

To find your nearest local Distributor, go to the Scotts website.

Professional Business Group, Scotts Australia Pty Ltd 11 Columbia Way, Baulkham Hills, NSW 2153

Phone (02) 8853 7300 Fax: (02) 8853 7310 ©Scotts Australia Pty Ltd 2007 ®Registered Trademark

BUILDING WATER EFFICIENCY INTO YOUR GREENS

New Sierraform® GT is an improved, unique formulation combining **slow release potassium** and nitrogen, for:

- increased efficiency of turf water consumption
- maintaining a higher bank of "available K"
- optimum protection against stress
- enhanced cold, heat, drought and wear tolerance
- minimised disease activity
- accelerated disease recovery
- proven minimal mower pick-up

Sierraform® GT



Congressional's greens are made up of 70 per cent *Poa annua* and 30 per cent creeping bentgrass, while tees and fairways are almost a pure stand of creeping bentgrass

for the AT&T National at Pebble Beach, Mike O'Keeffe asked me to have a think about my next placement. Given that such an opportunity would rarely present itself again I quickly agreed to stay on and after a few phone calls we came to the agreement that I would head across to Congressional Country Club, home of the AT&T National hosted by Tiger Woods, where I would be working on the championship Blue Course.

After leaving Pebble Beach I made a few stops before flying to Washington DC to start a summer of hard work. I stopped at The Valley Club of Montecito and also Las Vegas where I was lucky enough to stay with friends who I had met through my previous journeys.

Once I landed in Washington DC I was picked up by Congressional assistant superintendent Derek Trenchard who drove me to my new place of residence at the club. The housing provided for me was at the maintenance facility which was great as I didn't have to purchase a car to get to work. Once arriving there I was greeted by my Irish roommate Coman Mulry and fellow Aussie Justin Bradbury both of whom I had met at the OSP short course in November (**see Justin's full article on Congressional on page 15 – Ed**).

Congressional Country Club was established in 1924 by Congressman Oscar E. Bland and O.R. Lubring of Indiana. It was set out to provide a common ground for politicians and businessmen to meet as peers, unconstrained by red tape. The club took two and a half years from a vision to the grand opening. The club has many facilities including swimming pools, a bowling alley, a large practice facility, driving range and two 18 hole golf courses.

Grass types at both Congressional Country Club courses are *Poa annua*/bentgrass greens, Pennncross bentgrass fairways, perennial

ryegrass intermediate cut, and a mix of tall fescue, perennial ryegrass and *Poa annua* in the roughs.

The Blue Course has been redesigned several times over the years, most recently by Rees Jones in 1989, while the entire Gold Course was rerouted in 2000 by Arthur Hills. Among his changes were the reconstruction of all tees and bunkers, re-sloping and replanting of the fairways, installation of new cart paths and a new irrigation system.

The Congressional grounds and gardens department has around 70 staff, the majority being Hispanic. This consists of 30 staff for each course, four staff to maintain the gardens and of course assistants and superintendents for each course.

My first weeks of work consisted of small amounts of mowing as it was still pretty cold with temperatures -3°C in the morning to tops of around 12°C during the day. Greens, tees, approaches were mown by hand and the 1.5 inch collars around greens and tees were push mown.

The big rough unit was driven by a chap called 'Pops' and that was his job all day, everyday and had been so for 27 years! Around bunkers and near greens a Toro 36" mower was used and everything the large unit couldn't get to was cut with a Toro Sidewinder.

In the weeks leading up to the AT&T National all the interns were syringing greens, spot watering fairways and tees, basically being married to a probe and hose and spraying a lot of chemicals due to the high humidity and high amounts of rainfall received during the summer months (8 inches in May alone).

Tournament week finally arrived and myself and roommate Coman were in charge of cutting the cups on the back nine holes. The amount of steps taken to cut a cup

for the tournament was unbelievable! After determining the location the PGA supervisor had marked for that day we would then place a large board with a hole in it down on the green. I would then stand on the board and cut the cup making sure I dropped it and that I dropped it straight. Once I pulled out the plug I carried the cup cutter in a bucket across the green to the existing hole where I would replace and knit in the plug.

Coman would take over at the new cup, setting it and making sure he completed what we interns called the 'PGA tap'! The PGA tap is when you slam the flagstick into the cup ensuring the cup was all the way into the hole before it was painted white. This would ensure by the end of the day that the cup would not sink below the white paint thus showing the profile of the green.

In the afternoons I took care of mowing the intermediate cut, which was a great job as I got to watch the 24 triplex mowers double cutting the fairways. We had many volunteers, around 30, which allowed us to do many jobs such as hand raking bunkers, double cutting greens in the morning and mowing fairways with 24 guys and divoting and hand blowing fairways in the afternoons.

After the tournament it was mainly hand-watering of greens, tees and fairways to maintain that hard and fast playing surface. We also carried out coring, slit seeding and overseeding of all the high traffic areas.

I thoroughly enjoyed my time at Pebble Beach and Congressional Country Club, meeting great people and gathering new contacts. I would encourage any greenkeeper who has a dream of working on the world's best golf courses to get into the OSP and make that dream come true.

Getting the chance to play golf on some of the world's best golf courses like Cypress Point Club, Pebble Beach, Congressional Country Club and Pine Valley just to name a few will remain as great memories.

ACKNOWLEDGEMENTS

I would like to thank Mike O'Keeffe and his staff for everything they have done for me during my stay in the United States and Jacobsen Turf Equipment staff Volley Carr and Ralph Nicotera for the sponsorship of the programme and myself.

Also, I owe a great deal of gratitude to Chris Dalhamer, Jack Holt and Billy Hausch from Pebble Beach and Mike Guiffre, Dave Hutchinson, Derek Trenchard and Justin Bradbury from Congressional Country Club for giving me the chance to work in such great environments and the opportunity to further my learning in the art of turf management. 🙏

JACOBSEN®

WELCOME ON BOARD METROTURF!



Jacobsen's New **AR-522** Redefines Performance and Quality-of-Cut for Rotary Mowers.

The AR-522 features the revolutionary TrimTek™ cutting decks which pulverise grass clippings with an exclusive downdraft blade and leaves a smooth, superior, after-cut appearance.

Jacobsen is pleased to welcome on board the latest addition to the Australian dealer network.

Get in touch with MetroTurf today for quality Jacobsen machines and service!



SLF-1880

METROTURF
machinery pty. ltd

Call today: **1800 217 121**
21 Drovers Place, Pakenham VIC 3810
www.metroturf.com.au

PowerTurf
powerturf.com.au

Two of Adelaide's finest golfing establishments, The Grange and Royal Adelaide, were the focus of attention last month when they played host to a record 126 men's and women's teams for the 2008 World Amateur Teams Championships. The Grange superintendent Richard James and his crew had their work cut out hosting the women's Espirito Santo Trophy on the East and West courses, before turning around to set the West Course up for the men's Eisenhower Trophy, which it hosted in conjunction with Royal Adelaide (superintendent Jeff Kaines).

Both courses were lauded by players and tournament organisers, the International Golf Federation, for their presentation and ATM was fortunate enough to spend the second round of the Espirito Santo seeing The Grange crew in action. The Swedish team claimed the Espirito Santo, leading from start to finish to win by 12 strokes.

The Grange tees up for **World**

Todd Gibson tidies up the greenside bunker on 4 West



Brad Ayers concentrates on his lines





Far left: The Grange's 6th West in tournament condition

Left: Ryan Dienelt and Josh Laube give the 2nd West a shave following the second round

Below: Members of the maintenance crew watch on as Finland's Rosa Svahn tracks her tee shot on 17 West



Dennis Lee came across from Kingston Heath to volunteer for the World Amateur



Adam Fry trims the approach to the 4th West



Recently elected AGCSA president
has called Secret Harbour Golf Links
in Western Australia home for the
past 14 years

BY BRETT ROBINSON

A life on the links



After three years on the Board of the Australian Golf Course Superintendents Association, in July this year Secret Harbour Golf Links superintendent Allan Devlin was elevated to president of the national association. ATM profiles the Scottish-born turf manager and looks back at a career spent not only constructing and maintaining golf courses, but also



playing some of the best as a former professional.

For someone who ditched school at the age of 15 to chase a dream of becoming the next US Masters champion, Allan Devlin can look back on a career that, even though not quite panning out as planned, has given him a huge amount of satisfaction and contentment.

Although his desire to make some big bucks on the professional circuit was never fulfilled, Devlin did the next best thing and became a greenkeeper. Nearly 30 years on and Devlin has since carved himself a rewarding and successful career in turf management both in England and now Australia which has been home for the past two decades.

That career took another turn recently when Devlin was elected as president of the Australian Golf Course Superintendents Association (AGCSA) at the 24th Australian Turfgrass Conference in Melbourne. After three years as a director, the 52-year-old took over from retiring president Jeff Gambin and is now looking forward to the challenge of leading one of turf's peak bodies at a time when the industry is under mounting pressure from a number of different directions.

THE BEST OF BOTH WORLDS

Secret Harbour Golf Links, located 45 minutes south of Perth, WA and where Devlin has now been superintendent since 1994, is quite literally a world away from where he grew up. Born in Glasgow, Devlin spent all of his formative years in the southern English coastal city of Southampton after his father moved



Devlin manages a staff of seven at Secret Harbour along with assistant Paul Needham (centre)

there looking for work in the late 1950s.

Devlin's introduction to the game of golf came while on a family holiday to Cornwall when he was 10. Showing a bit of natural ability, Devlin quickly took to the game and by the time he was 13 was playing off single figures. Full of the vim and vigour of youth and harbouring dreams of teeing up at Augusta National, Devlin left school at the age of 15 to take on the world as a professional golfer. He managed to secure a traineeship and after doing his three years went to Lilleshall Hall Golf Club in Shropshire in the mid-1970s and qualified as a pro.

As a professional Devlin played a host of pro-ams around the UK as well as four European Tour events. Most notably, Devlin twice played what was then called the Martini International, a tournament which during its time (1961-1983) had Australian greats Greg Norman (a three-time winner) and Peter Thomson as champions. (As an aside, the 1971 Martini International saw history created when English pro John Hudson achieved the remarkable feat of scoring two successive holes-in-one at Royal Norwich Golf Club).

Devlin managed a 50 per cent strike rate in those four Tour events, making two cuts which gave him about £150 to stuff in his back

pocket. He also tried, unsuccessfully, three times to qualify for The Open.

Shortly after becoming a pro, Devlin shifted from New Forest Golf Club to Dunwood Manor Golf Club, located between Southampton and Bournemouth, where he was appointed as the assistant pro. Being a small club in a rural setting, it wasn't the busiest of courses and Devlin became friendly with the greenkeeping staff.

Admiring their work ethic and seeing they were a bunch of chaps who seemed pretty content with their lot, Devlin was attracted to the greenkeeping lifestyle and one winter spent a few weeks helping them rebuild a couple of holes. Enjoying the experience, Devlin took on work as a part-time greenkeeper to help him out with his playing expenses and when he wasn't playing in local tournaments and pro-ams started to learn the art of greenkeeping.

"I had the best of both worlds there for a while," recalls Devlin with a laugh. "But I eventually decided after some soul searching that there was more of a future in greenkeeping than playing golf as a professional. I simply wasn't good enough and one day I just looked at myself and said, well, I'm not making any money, I can't keep going along like this or I'll starve.

"I wanted to play golf. I tried teaching for a year and running the pro shop but I didn't like that at all. Once I knew that I wasn't going to be able to make it as a player I started to look at other avenues. Greenkeeping was the logical step so in 1977 I applied to be reinstated as an amateur and began to pursue a career in turf management.

"After two years as assistant head greenkeeper at Dunwood Manor, I was lucky that head greenkeeper Trevor Smith decided to move to a 36-hole complex up the road which meant the club needed a new course manager. Trevor recommended me and even though I hadn't finished my qualifications the club gave me a six month trial. That was 1979 and I have never looked back since.

"I found the transition into greenkeeping to be relatively easy. I didn't mind a bit of hard work and I've always been a pretty quick learner. What it did do was a give me a huge appreciation for what greenkeepers did. As a pro you tend to think that you are better than anyone else in the game, an attitude which still exists these days. You see the way some of these guys strut around nowadays and they don't have any idea of the hard work behind the scenes that goes into presenting a golf course. ►



Take a more scientific approach to the green

At Bayer, we're serious about science and even more serious about turf. Which is why we create products like Chipco Signature®, the only turf product that controls fungal disease and improves turf health. And with *Turf shield* technology, it leaves you with turf that looks great and plays great. To find out more, call 1800 223 002.

 **Bayer Environmental Science**
A Business Operation of Bayer CropScience

 **Turf shield**

Always use according to product label. Chipco Signature® is a Registered Trademark of Bayer ©2008 Bayer. BES1130/H&T

"In saying that though I think my background as a professional has without question aided me in being a superintendent. Over the years I have found a lot of the top superintendents are also good golfers themselves. I'm not saying that to be a good superintendent you have to be a golfer because I know some very good superintendents who couldn't hit it past their own shadow, but I think in my case it definitely helped when it came to applying for jobs. Committees tend to look at golfing prowess as something special and I think it also helps immensely when it comes to course set up because you know what the players are after."

DOWN UNDER CALLING

After eight years in the top job at Dunwood Manor, during which time he gained his formal turf management qualifications and oversaw the reconstruction of 13 holes, Devlin was looking for that next challenge and duly applied for the assistant's job at the 36-hole Sunningdale Golf Club just outside of London.

It was around this time also that a friend of then wife Tracy had just married an Australian and moved out to Perth (Devlin would eventually re-marry in 2005, to Julie). Tracy was keen to make a similar move in order to give their young family a better lifestyle (by this stage they had three children – Stewart, Sam and Amy). The plan was to give Australia a go for two years and when the Sunningdale job fell through the decision to emigrate was made.

Before leaving his homeland, Devlin fired off his resume to 15 golf clubs in Western Australia – "I chose the top 15 clubs with the most members" – and to his surprise he received nine letters of reply. One of those was from then Lake Karingup Country Club superintendent Neil Adams who said there was a job waiting for him as a senior greenkeeper when he landed. That offer of employment effectively sealed things and six weeks after applying the Devlins had their Australian visas approved.

Arriving in Perth in November 1987, Devlin set about working at Lake Karingup. Nine months into the job he was scrolling through the West Australian newspaper one Saturday and noticed the superintendent vacancy at Burswood Park, a new golf course development adjacent to the Swan River.

Initially responsible for the grow-in of the front nine and eventual construction of the back nine, which was opened in 1989, Devlin was promoted to superintendent of golf, parks and gardens just a year later. Including the golf course, Devlin was responsible for managing the entire 105ha park surrounding the Burswood Resort and at one stage had upwards of 70 staff underneath him.



Devlin, pictured here playing the 2007 AGCSA Golf Championships, started life as a golf professional, playing in four European Tour events in the mid 1970s

During his time there he completed a wide variety of projects, including the popular Burswood Heritage Trail, which was awarded the Sir David Brand Tourism Award in 1992. Devlin also played a key role in the formation of the Burswood Peninsula Nutrient and Water Management Plan and in 1993 was formally

recognised for his efforts by the Swan River Trust Environment Quality Committee.

"Burswood was a huge learning curve for me because I was very inexperienced with warm-season grasses," recounts Devlin. "All my training and previous experience had been on cool-season grasses and I must admit I did bullshit my way a bit early on."

"One of the major projects there was the installation of a new irrigation system and I used to stay on after everyone had left for the day trying to figure out the new irrigation control system. I didn't want to ask anyone for help because I was too afraid of looking like a dumb arse. But I soon picked it all up."

SOUTH TO SECRET HARBOUR

Devlin's next big break came one day in 1994 when he received a phone call from fellow WA superintendent Glenn Cross, who at the time was construction superintendent at the new Graham Marsh-designed Secret Harbour Golf Links. Cross informed Devlin that he was pulling the pin and heading off to Italy and enquired whether he would be interested in taking over.

Having run his course at Burswood and missing the more hands-on aspect of the superintendent role, the prospect of being involved in another new development appealed and Devlin soon found himself making the move south permanent. Fourteen years on and Devlin is still happily ensconced at one of Australia's top 100 ranked courses.

It is somewhat fitting that Devlin has ended up at Secret Harbour. The course has a distinct links appearance and feel, much like those courses which Devlin's former homeland is famous for. Indeed, in his design brief Marsh styled the course to emulate the feel of traditional Scottish links courses like Turnberry and Muirfield, with rolling fairways set among sand dunes, punctuated with pot bunkers and framed by fescues. The style of course also fits in ideally with Devlin's turf management philosophy which is firmly entrenched in the old school.

"Don't get me wrong, I grasp new technologies well, but I think a lot of it is getting overused by some of the young guys coming through," says Devlin. "Technology, whether it's watering systems or chemicals, has certainly made the job a lot easier but by the same token I think you can rely on it a bit too much at the expense of good honest traditional greenkeeping practices."

"I am very much a back to basics superintendent. I use straight fertilisers, rarely use compounds and do a lot of foliar feeding. I guess it's my English background; I have a more traditional approach to the art of

UNDER THE SPOTLIGHT: ALLAN DEVLIN

- 1974:** Qualified as a PGA Professional (UK)
- 1979:** Promoted to head greenkeeper at Dunwood Manor Golf Club, UK
- 1982:** Qualified as a turf manager, Amateur status reinstated
- 1986:** BIGGA national golf champion
- 1987:** Immigrated to Perth, Australia
- 1988:** Appointed superintendent at Burswood Park
- 1989:** Appointed superintendent golf and parks at Burswood Park
- 1994:** Appointed superintendent Secret Harbour Golf Links
- 1998:** Finalist AGCSA Fellowship Award
- 1999:** AGCSA Golf Champion and finalist AGCSA Fellowship Award
- 2000:** AGCSA Fellowship Award winner
- 2000:** Secret Harbour debuts Australia's top 100 courses at No.38
- 2005:** Appointed as director of AGCSA
- 2008:** Elected AGCSA president



In 2005 Devlin became a “new man” after tying the knot with wife Julie

GIVING SOMETHING BACK

While there have been many rewarding achievements during his tenure as Secret Harbour superintendent, including winning the AGCSA's Fellowship Award in 2000, one of the more fulfilling aspects of his career has been his involvement with both the Golf Course Superintendents Association of Western Australia (GCSAWA) and ultimately the AGCSA.

Having bagged the GCSAWA's golf title on no less than three occasions between 1989 and 1997, Devlin made the decision to join the committee, serving three years before being elected president. Then in 2005, he received a phone call from AGCSA Board member and good friend Martyn Black asking him to consider stepping up to the national association.

“You reach a certain point in your life where you should put something back in,” says Devlin, who is also a member of the British and International Golf Greenkeepers Association. “I knew Martyn and (other Board member) Jon Penberthy well and had an enormous amount of respect for then president Jeff Gambin, so

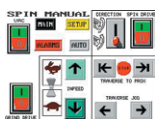
greenkeeping. We had such tiny budgets over there that we couldn't even afford fertilisers and we had to find other ways of making the course look good.”

Devlin arrived at Secret Harbour with the first nine already constructed and saw it through to opening in 1994. The back nine was then constructed in 1998 and the full 18-hole facility

was operational by 1999. Debuting at No.38 in Australia's top 100 course rankings and rising as high as 23, Secret Harbour has always maintained its status among that elite group and any who visit the course will get a true appreciation of the high level of conditioning Devlin, his assistant Paul Needham and their staff of seven can achieve.



Foley sets new standards in grinding



With newer grass strains, shorter cutting heights and the challenges of newer reel and traction systems, Foley United is the proven world leader in grinding solutions.

- Return to (all) manufacturers specifications?
- Spin Grind and Relief Grind?
- Quick and easy grinding?
- On-site availability?

If the answer is yes to these questions you need Foley United.



Setting the Standard with the World's Most Valued Grinders.

www.foleyunited.com

HERO/TOR0664J

www.toro.com.au

For more information speak with your local Toro representative.

For Customer Service call 1800 356 372

Distributed by
TORO Toro Australia



Just one of the many difficult duties the president has to attend to

"Already here in Western Australia we are seeing many courses operating with 50-70 per cent of the usual staff numbers, but players still expect course conditions to be perfect. Golf clubs and the game's administrators must be made aware of the possible repercussions and decline in course presentation if this employment and wage crisis is not addressed. Golf courses are multi-million dollar assets and I believe the staff should be rewarded accordingly for maintaining them as such.

"It is really hurting our industry, whether it's people leaving for higher paid jobs or a lack of apprentices coming through because the wages are poor. It is crucial that we make the turf industry an attractive one to get into rather than just something you do because you can't get into anything else. Hopefully the AGCSA's involvement with the recently formed Australian Golf Industry Council will aid us in achieving this goal."

Despite such issues presenting themselves, the one thing that Devlin draws comfort from is that in nearly 30 years in the game he has seen the respect and recognition of the superintendent profession continue to grow, which in no small part is due to the efforts of those practitioners who make up the industry.

"From my time back in England you were seen as the guy who mowed the grass and someone who held a very much behind the scenes sort of role," says Devlin. "Nowadays there is no question that a superintendent is the most important person at any golf club.

"Were it not for a superintendent's knowledge of not only turf management, but water management, environmental management and their ability to run a team and produce top notch playing conditions within the constraints of ever-decreasing budgets, some of the courses today simply wouldn't be here." 🌱

◀ it was hard for me to say no. I reckon I'm still getting more out of it than I put in, just with the people you meet and some of the issues you have to resolve. I love the role and being involved at this level."

After three years on the board, at the 2008 annual general meeting held in July, Devlin was elected as AGCSA president, taking over the reins from Gambin who stood down after nine years on the Board, including the last four as president. Devlin now heads a team that comprises fellow directors Pat Pauli (Horton Park Golf Club), John Odell (Royal Sydney Golf Club) and newest member Bryce Strachan (Pambula-Merimbula Golf Club) who was also elected at the Melbourne AGM.

Devlin is under no illusion as to what the Board faces in the years to come but is optimistic that it can achieve a number of goals to help further the association's position within the industry as well as continue to promote and protect the interests of a growing membership base.

High on the agenda is getting the recently formed Australian Golf Environment Foundation up and running, as well as tackling what Devlin describes as one of the gravest issues facing the industry in recent times – proper recognition of what greenkeepers are worth in relation to remuneration.

Devlin knows only too well the impact the industry's poor wages and lack of skilled staff coming through is having on the trade, particularly in WA. Last year he lost his assistant of 14 years, a third generation greenkeeper with over 30 years' turf management experience, as well as his pesticide technician to higher paying and less demanding jobs at Fremantle Wharf.

"I understand that we have to address other issues such as water availability and climate change, but the employment crisis is equally as important," says Devlin. "If left to continue, this staff and skill loss will eventually lead to a decline in golf course condition and player enjoyment.

La Prima™
BERMUDAGRASS BLEND

NEW

La Prima™ XD
BERMUDAGRASS BLEND

- ◆ Fast Germination for Rapid Cover
- ◆ Consistent High quality growth
- ◆ LaPrima XD offers X-treme Density
- ◆ For use on Sportsfields, Golf Courses & Parks

For the name of your nearest distributor contact:
ADVANCED SEED on (03) 9462-0340
www.adseed.com.au



How can a product that's so tough on grubs
be so gentle at the same time?



It's a little miracle we call Acelepryn

Over 300 independent trials in the US and Australia prove it. New DuPont™ Acelepryn® insecticide delivers excellent, long lasting control of white grubs plus other key turf pests in as little as one application. No other grub product can match the outstanding toxicological and environmental profile of Acelepryn®. Acelepryn® has an unscheduled poison status with no protective clothing requirements and has low toxicity on most non-target animals such as birds, fish and bees. Tough on grubs, yet gentle at the same time. DuPont™ Acelepryn®. Learn more by visiting us at proproducts.dupont.com/acelepryn-au/. **Kill them. With kindness.**



DuPont Professional Products



The miracles of science®

DuPont™ Acelepryn® is available exclusively through Nuturf. Visit www.Nuturf.com.au for your local sales representative

The DuPont Oval Logo, DuPont™, The miracles of science® and Acelepryn® are trademarks of DuPont or its affiliates. Copyright © 2008 E.I. du Pont de Nemours and Company. All rights reserved.

Now into its third year, the HAL-funded warm-season grass trial is being conducted at the QDPI&F Redlands Research Station and seven regional venues. Pictured are plots of Tifgreen (left) and TifEagle (right) at Coolangatta and Tweed Heads Golf Club site demonstrating susceptibility to disease (27 Aug, 2008)

BY JOHN NEYLAN

Warm-season and *Poa annua* trials update

MANAGEMENT GUIDELINES FOR NEW WARM-SEASON GREENS GRASSES IN AUSTRALIA

The warm-season grass trials (HAL project TU05001) are now into the third year with the split plot treatments being applied at the Queensland Department of Primary Industry and Fisheries (QDPI&F) Redlands Research Station and regular assessments being undertaken for quality, colour, disease and thatch. There are now five regional sites established with another two in the early stages of establishment.

The first split-plot fertiliser application was applied to the centralised greens test facility located at Redlands Research Station on 9 January 2008. Regular maintenance continues on the plots with mowing at 3.5mm without rolling, 3.5mm with rolling and 2.7mm without rolling. Fertiliser treatments (1kg N, 2kg N

John Neylan looks at the HAL-funded warm-season variety trials being conducted at various locations around the country and provides an update on the continuing *Poa annua* trials.



and 4kg N/m²/yr) have also been applied as scheduled to emulate practices representative of lawn bowls and golf.

Turfgrass quality from January to March 2008 (Tables 1a, 1b and 1c) for all mowing treatments shows no significant difference ($P > 0.05$) between monthly inspections within the individual species, however, significant differences were evident between the species with the paspalums displaying better quality.

Quantitative thatch measurements (Table 2) indicate that average thatch depth for the *Cynodon* hybrids and paspalum groups was 16.25mm and 18.18mm respectively. Tifdwarf (13.06mm) and Tifgreen (15.03mm) had significantly ($P < 0.05$) less thatch depth compared to all other cultivars.

Green speed measurements were taken in February 2008 using a modified stimpmeter and the results are detailed in Table 3.

TABLE 1A: SUBJECTIVE QUALITY RATINGS* FOR MOWING TREATMENT M1 (3.5MM CUT AND NO ROLL)

Cultivars	1kg N			2kg N			4kg N		
	16 Jan 08	14 Feb 08	12 Mar 08	16 Jan 08	14 Feb 08	12 Mar 08	16 Jan 08	14 Feb 08	12 Mar 08
Cynodon:									
MiniVerde	6.2	6.0	6.2	6.0	6.2	6.5	6.6	6.6	7.2
MS-Supreme	5.8	5.5	6.0	5.0	5.4	5.9	5.5	5.7	6.4
Novotek	5.8	6.1	6.3	5.9	6.0	6.4	6.0	6.4	6.7
Tifdwarf	5.4	5.8	5.9	5.3	6.0	5.9	5.5	6.1	6.3
TifEagle	5.7	5.8	5.8	5.7	5.9	5.9	5.8	6.2	6.1
Tifgreen	5.5	5.4	5.7	5.7	5.4	6.0	5.8	5.7	6.1
LSD ($P=0.05$)	0.9	0.6	0.7	0.8	0.7	0.7	0.7	0.6	0.8
Paspalum:									
Sea Isle 2000	7.3	6.3	4.9	7.5	6.8	5.3	7.5	6.9	5.1
Sea Isle Supreme	7.1	6.3	5.8	6.9	6.5	5.9	7.3	7.0	6.4
Velvetene	6.8	6.2	5.5	6.9	6.2	5.7	7.0	7.0	6.4
LSD ($P=0.05$)	0.3	0.6	0.6	0.5	0.4	0.7	0.4	0.7	1.4

* 0 (= worst) to 9 (= best); 6 = acceptable

TABLE 1B: SUBJECTIVE QUALITY RATINGS* FOR MOWING TREATMENT M2 (3.5MM CUT AND ROLL)

Cultivars	1kg N			2kg N			4kg N		
	16 Jan 08	14 Feb 08	12 Mar 08	16 Jan 08	14 Feb 08	12 Mar 08	16 Jan 08	14 Feb 08	12 Mar 08
Cynodon:									
MiniVerde	6.5	6.3	6.4	6.5	6.3	6.8	6.8	7.0	7.0
MS-Supreme	5.8	5.9	6.2	5.7	5.9	6.0	5.6	6.0	6.3
Novotek	6.3	6.2	6.3	5.9	6.1	6.3	6.5	6.4	6.9
Tifdwarf	5.3	5.8	5.9	5.7	6.0	6.2	5.6	6.0	6.1
TifEagle	5.9	6.0	5.9	5.7	5.9	6.1	6.1	6.4	6.3
Tifgreen	5.7	5.4	6.0	5.8	5.6	6.1	5.9	5.8	6.3
LSD (P=0.05)	0.7	0.7	0.7	0.8	0.7	0.8	0.8	0.6	0.7
Paspalum:									
Sea Isle 2000	7.1	6.4	5.3	7.3	6.5	5.6	7.2	6.9	5.9
Sea Isle Supreme	7.0	6.2	5.8	7.0	6.5	6.4	7.2	6.8	6.4
Velvetene	6.7	6.2	5.6	6.7	6.2	5.8	6.6	6.8	6.4
LSD (P=0.05)	1.0	1.1	0.4	0.6	0.6	0.8	0.6	0.5	1.2

* 0 (= worst) to 9 (= best); 6 = acceptable

At this point in time the main observation is that both species require a high level of fertility to achieve the best turf quality and density. However, the hybrid couchgrasses respond best to the higher cutting height whereas the paspalums perform best at the lower cutting height. The paspalums are very susceptible to scalping and if scalped are slow to recover. Therefore regular cutting on all species at the appropriate cutting height is a critical management requirement.

REGIONAL TRIAL SITES

There are seven regional trial sites established and data is being collected on grow-in, turf quality and pests and disease. The trial sites are at the following locations:

- Glenelg Golf Club, SA (Daryl Sellar);
- Chisholm TAFE, Rosebud Campus, VIC (Bruce MacPhee);
- Bermagui Golf Club, NSW (David Thomson);
- Coolangatta and Tweed Heads Golf Club, NSW (Peter Lonergan);

- Indooroopilly Golf Club, QLD (Charlie Giffard);
- Horton Park Golf Club, QLD (Pat Pauli);
- Twin Waters Golf Club, QLD (Gary Topp)

A summary on the observations to date have been provided by the turf managers at each location.

CHISHOLM TAFE

The trial at Chisholm TAFE on the Mornington Peninsular assesses a range of hybrid couchgrasses and seashore paspalums for their adaptation to Melbourne's climate. The trial consists of five *Cynodon dactylon* x *transvaalensis* hybrid couchgrasses Tifdwarf, Tifgreen, TifEagle, MS-Supreme and Mini Verde and two *Paspalum vaginatum* cultivars, Sea Isle 2000 and Velvetene. Some of these grasses, such as Tifdwarf and Tifgreen, have been used with some success in Melbourne in the past and the newer varieties will be assessed against these for quality, density, disease and insect susceptibility.

The trial was planted in late October 2007

and irrigation was applied three times daily during the grow-in period to ensure the soil was kept moist and sprigs were not allowed to dry out. It was up to five weeks before there were any real signs of growth from either the couch or paspalum varieties. This slow establishment period could be as a result of the fineness of planting materials made up of scarifyings with very few rhizomes or stolons intact.

At 14 weeks after planting, coverage across all plots was at 60-70 per cent with the paspalums being slightly more advanced. By March 2008 most plots had achieved full cover and were maintained at 5.0mm, being cut twice per week. The paspalums demonstrated a dark even colour with comparable quality.

The couch varieties were all relatively even in their growth rate and quality with Tifgreen and Tifdwarf exhibiting higher colour ratings than the newer varieties, both during active growth and entering dormancy.

April continued to provide above average temperatures and the grasses showed little sign of slowing down until the first real cold

TABLE 1C: SUBJECTIVE QUALITY RATINGS* FOR MOWING TREATMENT M3 (2.7MM CUT AND NO ROLL)

Cultivars	1kg N			2kg N			4kg N		
	16 Jan 08	14 Feb 08	12 Mar 08	16 Jan 08	14 Feb 08	12 Mar 08	16 Jan 08	14 Feb 08	12 Mar 08
Cynodon:									
MiniVerde	6.7	6.4	6.4	6.4	6.3	6.3	6.8	7.0	7.1
MS-Supreme	5.3	5.6	5.7	5.7	5.8	5.7	5.4	5.7	5.9
Novotek	5.7	6.0	5.9	5.8	6.0	5.9	5.8	6.3	6.6
Tifdwarf	5.0	5.4	5.3	5.0	5.6	5.6	4.8	5.5	5.7
TifEagle	5.7	5.5	5.6	5.8	5.9	5.9	5.9	6.1	6.1
Tifgreen	4.8	4.9	5.3	5.0	4.8	5.5	5.4	5.2	5.7
LSD (P=0.05)	0.8	0.7	0.6	0.7	0.7	0.5	0.8	0.8	0.7
Paspalum:									
Sea Isle 2000	6.5	5.8	5.1	7.1	6.2	5.3	6.4	6.3	5.7
Sea Isle Supreme	6.5	5.8	5.4	6.3	5.9	5.5	7.0	6.6	6.4
Velvetene	6.1	5.5	5.4	6.5	6.0	5.4	6.4	6.6	6.7
LSD (P=0.05)	1.2	0.7	0.6	0.7	1.0	0.6	1.0	1.1	1.2

* 0 (= worst) to 9 (= best); 6 = acceptable

TABLE 2: QUANTITATIVE THATCH MEASUREMENTS (MM) FOR ALL MOWING TREATMENTS

Cultivars	2.7mm cut (no roll)			3.5mm cut (no roll)			3.5mm cut and roll		
	1kg N	2kg N	4kg N	1kg N	2kg N	4kg N	1kg N	2kg N	4kg N
Cynodon:									
MiniVerde	20.8	19.5	20.8	16.5	20.8	18.0	20.5	17.8	17.5
MS-Supreme	15.8	18.0	13.8	16.0	16.0	15.3	16.5	14.8	14.5
Novotek	19.0	17.0	16.5	16.8	19.5	17.0	21.0	15.3	17.8
Tifdwarf	13.5	13.3	12.5	12.0	11.8	13.0	13.0	15.8	12.8
TifEagle	16.3	14.5	17.0	17.3	17.5	20.5	16.0	16.8	16.8
Tifgreen	12.5	13.8	14.8	17.8	15.3	15.8	15.0	14.3	16.3
LSD (P=0.05)	5.2	5.8	6.1	5.1	5.0	4.2	3.5	4.2	3.0
Paspalum:									
Sea Isle 2000	17.5	17.8	17.5	19.3	18.8	20.0	20.3	18.3	16.8
Sea Isle Supreme	17.0	15.3	19.5	17.5	18.5	17.8	17.8	21.5	19.8
Velvetene	17.3	17.0	17.3	18.0	18.8	17.3	18.8	17.5	18.5
LSD (P=0.05)	3.1	3.5	4.6	6.4	4.1	4.7	7.6	7.3	7.1

snap in May, where growth appeared to slow dramatically. With plants having moved into dormancy, Tifdwarf and Tifgreen were still exhibiting greater colour retention.

Overall the hybrid couches have all had similar quality ratings, while the paspalums tend to lose colour very quickly with the onset of cool conditions.

HORTON PARK GOLF CLUB

The warm-season grasses used in this trial are Tifgreen (328), TifEagle, Tifdwarf, MiniVerde, MS-Supreme, Champion Dwarf, Sea Isle 2000 and Velvetene and were planted in November 2007. Tifgreen, Sea Isle 2000 and Velvetene established the quickest, with Champion Dwarf being the slowest but still covered in reasonable time. Champion looked to be the most prostrate with Tifgreen having the tallest growth habit.

During the heat of summer, Tifgreen displayed signs of stress similar to that experienced on the golf course greens (Tifgreen) and in part is a confirmation of the trial observations. During this time Sea Isle

2000 and Velvetene had great colour and looked like they could have been mowed even lower.

At the end of March 2008 and the beginning of May there was an irrigation malfunction and the whole plot was without irrigation for some time and all the couches showed signs of stress. The Sea Isle 2000 and Velvetene were unaffected. Once the irrigation was fixed it was expected to see all the couches return to their original condition, but this did not happen.

Closer inspection using a hole changer to take profile samples revealed all couch plots had about 50 per cent dry area in the plugs while the Sea Isle 2000 and Velvetene were saturated. These observations indicate that there is a greater accumulation of thatch in the ultra dwarf couches that became hydrophobic when there was no irrigation and failed to wet up when irrigation was returned.

The plot area has had numerous topdressings over this period to remove the indentations between the different grass plots and it has had one mini-coring since the dry patch problem. It has had no fungicide

application and one light grooming in two directions with greens mower dethatching heads. All plots have recovered well from these practices.

In June there was 324mm of rain over five days and all plots of Sea Isle 2000 and Velvetene received considerable dollar spot damage. Sea Isle 2000 and Velvetene plots have had some degree of damage due to disease since January 08. In mid-June the couch plots had good colour for the time of the year with the Tifgreen plots a lighter shade of green and a little more open.

BERMAGUI COUNTRY CLUB

The warm-season grasses used in this trial are MS-Supreme, MiniVerde, TifEagle, Velvetene, Sea Isle 2000 and Sea Dwarf. The trials have been established on native sandy soil in a tidal area which is approximately 700-1000mm above sea level with soil sodium levels approximately 1000-1500ppm.

The plots were stolonised in December 2007. The TifEagle and MS-Supreme established within the month after planting,

TABLE 3: MODIFIED STIMPMETER READINGS (M) FOR ALL MOWING TREATMENTS

Cultivars	2.7mm cut (no roll)			3.5mm cut (no roll)			3.5mm cut and roll		
	1kg N	2kg N	4kg N	1kg N	2kg N	4kg N	1kg N	2kg N	4kg N
Cynodon:									
MiniVerde	1.55	1.61	1.45	1.41	1.52	1.40	1.55	1.54	1.44
MS-Supreme	1.61	1.55	1.66	1.43	1.38	1.37	1.54	1.44	1.47
Novotek	1.56	1.57	1.62	1.35	1.43	1.35	1.46	1.51	1.40
Tifdwarf	1.57	1.54	1.49	1.29	1.29	1.24	1.38	1.38	1.33
TifEagle	1.61	1.64	1.48	1.44	1.46	1.40	1.50	1.55	1.59
Tifgreen	1.52	1.49	1.40	1.18	1.19	1.13	1.28	1.25	1.25
LSD (P=0.05)	0.22	0.15	0.23	0.12	0.15	0.13	0.18	0.18	0.18
Paspalum:									
Sea Isle 2000	1.71	1.16	1.23	0.93	0.97	0.93	1.01	1.00	0.97
Sea Isle Supreme	1.42	1.30	1.41	1.08	1.11	1.09	1.09	1.14	1.13
Velvetene	1.33	1.25	1.29	1.03	0.98	1.03	1.02	1.07	1.07
LSD (P=0.05)	0.14	0.15	0.07	0.11	0.10	0.08	0.15	0.12	0.07

with MiniVerde being a little slower. Of the paspalums, Sea Isle 2000 was the fastest to establish and the Sea Dwarf the slowest.

In terms of turfgrass quality, colour and density, TifEagle and MS-Supreme are far superior to the MiniVerde, with MS-Supreme being the stronger looking couch out of the three. MiniVerde went into dormancy earlier than the other two cultivars.

Sea Isle 2000 was the quickest of the paspalums to establish and looked the better grass for a considerable period. The other two paspalums 'porpoised' (i.e.: stolons arch upwards rather than remain prostrate) quite badly. Slowly the Velvetene caught up to the Sea Isle 2000 and is now similar in turf cover. The Sea Dwarf has improved but not on par with the other two cultivars.

GLENELG GOLF CLUB

From the outset these trial plots have struggled to establish well, due to the late planting in June 2007. As a result, the speed of establishment was extremely slow with a full coverage barely achieved by the end of summer 2008.

The observations have been interesting from the perspective the grasses are growing in a southern location with localised challenges including:

- Morning shade, prolonged in the winter;
- Irrigated with marginal quality bore water
- Grown on a low lying section of the course - water table normally within one metre of the surface; and
- Site within sheltered amphitheatre, limiting air movement.

MS-Supreme was quickest to establish initially, despite the shade influence. Tifdwarf was very slow and by late summer still had a poor coverage. The ratings for colour, quality and density are detailed in Tables 4, 5 and 6.

TABLE 4: GLENELG GC TURF COLOUR

COLOUR	30.11.07	4.01.08	11.02.08	19.03.08	16.04.08	21.05.08	11.06.08
Sea Isle Supreme	6	7	8	8	6	6	5
MiniVerde	7	8	7	7	7	7	7
Flora Dwarf	7	7	8	7	7	7	7
Sea Isle 2000	6	7	8	7	7	6	6
Sea Dwarf	6	7	7	6	6	6	5
Champion	6	7	8	7	7	6	6
TifEagle	5	6	7	7	6	6	6
Tifdwarf	5	6	7	6	6	6	6
MS-Supreme	6	7	7	6	6	6	6

TABLE 5: GLENELG GC TURF QUALITY

QUALITY	30.11.07	4.01.08	11.02.08	19.03.08	16.04.08	21.05.08	11.06.08
Sea Isle Supreme	5	6	7	6	5	4	4
MiniVerde	7	7	7	7	6	6	6
Flora Dwarf	7	8	7	6	6	6	6
Sea Isle 2000	4	6	7	6	5	5	5
Sea Dwarf	5	6	6	5	5	5	5
Champion	7	8	7	6	5	5	5
TifEagle	6	7	7	6	5	4	4
Tifdwarf	7	7	7	6	5	5	2
MS-Supreme	6	6	7	6	6	6	6

TABLE 6: GLENELG GC TURF DENSITY

DENSITY	30.11.07	4.01.08	11.02.08	19.03.08	16.04.08	21.05.08	11.06.08
Sea Isle Supreme	5	5	6	6	6	6	6
MiniVerde	8	8	9	8	8	8	8
Flora Dwarf	8	8	8	8	8	8	8
Sea Isle 2000	4	6	7	6	6	6	6
Sea Dwarf	5	7	8	8	8	8	8
Champion	8	8	8	8	8	8	8
TifEagle	7	7	7	7	7	7	7
Tifdwarf	8	8	9	9	9	9	9
MS-Supreme	7	8	9	9	9	9	9

The paspalum varieties have shown a natural tendency to repel dew, whereas the couch varieties accumulate dew on the foliage. This is potentially an advantage in terms of disease management and playability at certain times of the year.

COOLANGATTA AND TWEED HEADS GOLF CLUB

Trials have been established to find an alternative to the struggling bentgrass greens which are observed in February each year on the course. The trial site was established in January 2008.

The fastest cultivar to establish was TifEagle and since then has continued to be a standout in turf colour and quality along with the latest release from the United States, MiniVerde. The trial has been set up as a split plot design to simulate a controlled and uncontrolled maintenance programme (i.e.: controlled plots have fungicide and fertiliser applied). Significant difference has been observed between the two treatments, in particular with the controlled plots having little to no disease evident.

The following ratings (1 = no disease, 10 = heavy infestation) were recorded by superintendent Peter Lonergan:

- TifEagle – 2
- MiniVerde – 3
- Champion Dwarf – 6





Analysis of the data collected indicates there has been a substantial shift in the *Poa annua* population from the less dense, stoloniferous and more annual types to the very dense, compact perennial types

- MS-Supreme – 6
- Flora Dwarf – 7; and
- Tifgreen – 9.

Fusarium patch (*Microdochium nivale*) has also been prevalent in the uncontrolled sub-plots. However, the disease is also found on other areas of the golf course and has not affected the spring green up.

Prior to disease setting into the plots you could barely tell the difference between the grasses with the exception of Tifgreen which was a darker green and seemed to thatch faster than the others. In April/May the other five plots, apart from the Tifgreen, looked visually similar.

A routine maintenance programme is implemented to maintain the colour and quality of the plots. With the exception of mowing daily (less in winter) at 3.5mm only the control plots have fertiliser, both granular and foliar applied.

INDOOROPILLY GOLF CLUB

The trial site was stolonised during the first week of May 2008. Sea Isle Supreme was the first to establish but was likely to be due to having a higher quality of sprig material compared to the other cultivars.

There was no real difference in which cultivar was the first to exit dormancy of the *Cynodon* hybrids. All cultivars of both species have picked up since the end of winter and Sea Isle Supreme has the best colour and quality appearance of the paspalums, while with the hybrids Flora Dwarf and MiniVerde are the better cultivars. No disease has been noted since the material has been planted.

TWIN WATERS GOLF CLUB

The trial site was stolonised with vegetative material sourced from QDPI&F on 11 March 2004. The first cultivars to establish were Tifdwarf and Sea Isle 2000 of the *Cynodon* hybrids and paspalum cultivars respectively. MiniVerde was the slowest to establish.

MS-Supreme to date has been the best performer of the nine cultivars being trialled

with a consistent colour and surface achieved throughout the year and has been the least susceptible to disease.

Sea Isle 2000 has been prone to dollar spot under cloudy conditions and Champion Dwarf, Flora Dwarf and TifEagle suffer from what appears to be drechslera from time to time. All plots are treated with an incidental maintenance programme to all other (Tifgreen) greens on the course and are subject to mowing heights between 3-4mm depending on the season. The trial site is irrigated with 100 per cent effluent (recycled) water.

A LIFE CYCLE APPROACH TO THE CONTROL OF POA ANNUA IN BENTGRASS GREENS

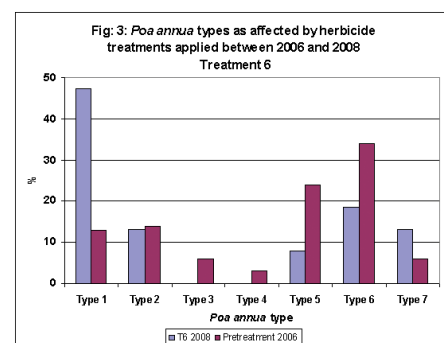
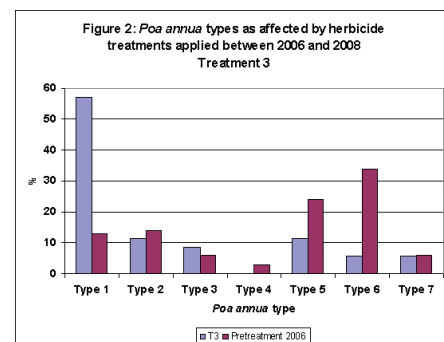
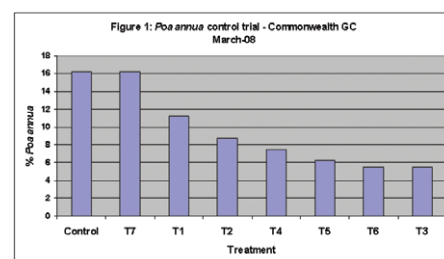
The *Poa annua* control trials (HAL project TU06003) continue to progress and as previously reported in ATM the treatments involving paclobutrazol, bensulide, ethephon and endothal have provided the best level of control (Figure 1).

Treatments are: Treatment 1 = monthly applications of paclobutrazol; Treatment 2 = paclobutrazol + dithiopyr; Treatment 3 = paclobutrazol + bensulide; Treatment 4 = paclobutrazol + dithiopyr + ethephon; Treatment 5 = paclobutrazol + bensulide + ethephon; Treatment 6 = paclobutrazol + bensulide + ethephon + endothal; Treatment 7 = endothal; Treatment 8 = untreated control)

At the Commonwealth Golf Club site, 10 *Poa annua* plants have been taken from each plot and grown to a mature plant. A total of 320 plants were collected and characterised in terms of;

- Plant height;
- Plant density;
- Plant diameter;
- Stolon formation; and
- Presence and number of flowers.

At this time there has been some analysis of the data collected and compared against the *Poa annua* population prior to applying the various herbicide treatments. The trends



indicate that there has been a substantial shift in the population from the less dense, stoloniferous and more annual types (Type 5 and 6) to the very dense, compact perennial types (Type 1). This data would confirm the herbicide tolerance trials where the Type 1 *Poa annua* plants are more herbicide tolerant compared to Type 5, 6 and 7 plants. (Figures 2 and 3) (For a full description of the various types, please refer to AGCSATech Update in Australian Turfgrass Management, Volume 9.5 – Sept-Oct 2007, pg 37 - Ed).



The *Poa annua* project will conclude by the end of 2008

Count on Toro for flexible financing options



**Need to lease a few electric vehicles
but still need the cash flow?**

**Or purchase a new rough mower
without affecting your bottom line?**

Toro will work out a financing plan that delivers the best for your business and your course. We'll evaluate your priorities and work out the most competitive payment options to deliver what you need without compromise. Whether you're buying, leasing or renting you can count on Toro to deliver the right financial options for your budget.

**For more information
call 1800 356 372**

www.toro.com.au

The Pulse

The game of golf has a love-hate relationship with turf renovations – superintendents love them because they improve the condition of their playing surfaces, while members loathe them for the inconvenience caused to their weekly round. With most golf clubs having recently completed spring renovations, The Pulse wanted to know how superintendents have refined their renovation practices over time and how they manage to tread the fine line between optimising the health of their turf while minimising disruption to golfers.

TONY FOGARTY Catalina Country Club, NSW



In almost 30 years of turf management it's fair to say that while the basic idea behind renovating turf surfaces hasn't changed much, the methods and equipment have.

In the early days at Catalina greens would receive major renovations in spring and autumn. Other turf surfaces received very little attention other than basic fertilising, mainly due to lack of funds and resources, not ability. In the early years each nine was closed for a week while greens were scarified by a walk-behind machine, raked by hand, cored and then cleaned up by hand, topdressed by hand and rubbed in by hand as well. A very tiring process. In those days members became quite irritated with the time it took to carry out renovations and much complaining was received by the powers that be to have this changed to reduce interruption to play. When the new nine came into play, renovations were over a three week period; not acceptable to the majority.

In recent years we hired contractors to carry out the basic renovation of greens and tees during spring and autumn. This proved to be a costly exercise, over \$20,000 per annum to carry out the basics. The club, over the past few years, has now purchased the required equipment and this has proven to be most successful. This was never more evident than the purchase of dethatching units that fit our greens mowers which has reduced the time frame of scarifying and dethatching 30 greens from 72 hours for three staff to nine hours for one staff member with a far greater result.

Our maintenance strategies these days are to lightly dethatch and needle tine all greens on a monthly basis, followed by light dusting. The view here is that we will only remove cores in spring to allow required amendments to be applied to the profile and the need for an

autumn renovation will be removed. The greens have improved immensely since this strategy has been implemented and the members can hardly tell that monthly maintenance is being carried out. They too can see the benefits and the results that we have achieved.

Constant communication to members over the years as to our reasons and our ideas in relation to all maintenance activities has been positive and reduced the amount of negativity towards course works as they have a better understanding of what it is we are trying to achieve. 🌱

TREVOR RIDGE Sawtell Golf Club, NSW



After 10 years of planning and performing renovations at Sawtell we have tried some different procedures over the years in order to fine-tune the required work to suit our situation. The best time for us to do the spring renovation on our 328 hybrid couch greens is the week after the October school holidays in NSW. This allows the greens to be in good order for the holiday visitors and also the weather has warmed up to maximise recovery. To allow the work to be carried out with maximum speed and staff safety, the back nine is closed on Monday and Tuesday then the front nine on Wednesday and Thursday. All renovation work for the back nine is carried out before moving to front nine.

Greens are dethatched twice (with thatch-away reels) and depending on weather and golf programme permitting in the two weeks leading up to renovation week. Now the hard work begins – renovation week. We first double scarify using the Turf-Tec (heavy breast) which removes a lot of material. To make sure the greens are completely clean of chaff they are blown off with backpack blowers then cut. Next we aerify using 1/2" hollow tines on the



AGCSA advice for to improve



Coremaster. Cores are removed and the green surface is again blown off to remove any stray cores. Greens are then fertilised followed by a heavy topdress. The first rub in is twice over with level-lawns followed by a rub in using a large dew broom (two staff tag team). Once the rub in is finished the greens are watered with a follow up rub in done on Friday using small brooms.

Some volunteers assist us during the week (staff of five) and we do overtime of two to three hours on Monday to Wednesday. To help keep the wage bill down our Wednesday short day is changed to Friday (a week-ending reward) and we also have a shed BBQ with cold beers for the staff and volunteers. If all goes to plan the last green is watered around 3pm on Thursday.

Another measure we have instituted is altering the golf programme to fit in with the greens renovation. Our Tuesday comp is played over the front nine twice, the ladies comp on Wednesday is played off the 1st tee only and we follow the last group. We do scarify and aerate the last four greens on the front nine in front of ladies comp having them completed before they reach them. No important events are scheduled in the couple of weeks after renovations. A second light topdress is done in the second week after renovations and rubbed in by broom. This programme works well for us at Sawtell. 🙏

STEVE JACOBSEN Carnarvon Golf Club, NSW



Currently we hollow tine greens three times a year, once in spring with larger tines and twice (autumn and early summer) with mini-tines. This is necessary due to serious layering that had developed over recent years after the club restricted the greens renovation programme because it was worried about

interfering with the revenue flow. This was okay for a few years, but slowly, with large numbers of golfers and irrigating with stormwater run-off, the condition of the greens deteriorated.

My challenge was to show the club how I could increase the renovation programme without a directly sizeable increase in costs and time the greens were compromised for play. The first step was to change the timing of the spring renovations to Wednesday and Thursday (so the mid-week comps weren't affected), gave us the time to complete the coring ourselves instead of with contractors. This provided a cost saving to start with and gave us the ability to treat the 60-year-old greens differently to the less than 20-year-old greens with either different sized tines and/or different spacings.

The benefit for the golfers was that the greens on that first weekend are still okay to putt on and by the following weekend they are back to nearly normal. The mini-tinings are completed on a Sunday night and Monday as there is far less work involved and the greens are back to normal for the following weekend.

By completing the greens renovations this way I have shown our cost savings far outweigh lost revenue and we have seen a large improvement in green quality and a reduction in inputs due to improved soil and plant health. In between the hollow tines we still use solid tines on a regular basis but with the use of our roller there is no inconvenience to the golfers at these times.

The club has been so happy with the results over the last three years that we now leave the course closed for an extra day in spring to assist quicker recovery, and this allows me to aerate greens surrounds and complete some spraying without dealing with golfers. I have also now begun to slice fairways and alternately core or scarify tees during summer on any 'quiet' days without any objections as the club has seen the benefits of allowing renovations to take place. 🙏

STEVE PELLATT Blackwood Golf Club, SA



Traditionally at Blackwood renovation of greens is carried out in the week immediately following the men's and ladies club championship finals. To enable renovations to be carried out as smoothly and as quickly as possible, but causing minimal disruption and inconvenience to the membership, the front nine is closed on the Monday and the back nine on Tuesday.

Soil tests are taken one month prior to renovations, with results determining which amendments are to be applied through the injection unit once coring is completed. The greens receive a 2kg/100m² application of a biologically enhanced organic fertiliser the week before coring to start them actively growing to accelerate recovery.

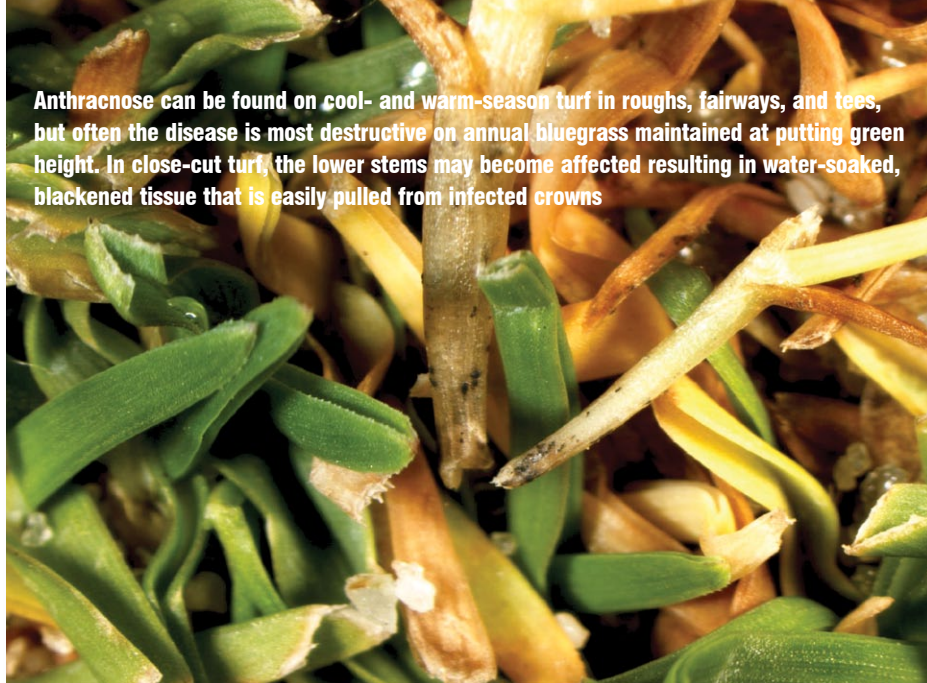
We are faced with the interesting challenge of having two distinct types of greens at Blackwood – 12 are original push-up style Pennncross/Poa greens and 11 USGA 1019/1020 greens. The coring process undertaken is geared to the thatch/organic matter depths recorded in the annual spring greens audit. The older push-up style greens, with the deeper levels, are cored to a depth of 125mm using the verti-drain. The newer USGA greens are cored to a depth of 75mm. They are then sanded using a drop spreader and widespin, with 60-70 tonne of sand being used, and brushed in using a Broyhill rotary brush. Weak areas are then oversown with a mixture of creeping bent at 250g/100m².

Extra sand is applied where needed and greens are again brushed and then dragmatted over the next 3-4 days, with the aim being for the greens to receive their first cut one week after coring using a set of old sand units at a raised height of 4.25mm. That height is then gradually reduced in stages back down to 3mm within 7-10 days. 🙏

superintendents and clubs golf course maintenance practices

Researchers in the north east of America are studying the biology, ecology and management of anthracnose of annual bluegrass turf on golf courses. They are examining biology of the pathogen, assessing fungicidal control and resistance development and evaluating the effect of cultural practices on anthracnose severity in order to devise a set of best management practices for the control of the disease.

Anthracnose can be found on cool- and warm-season turf in roughs, fairways, and tees, but often the disease is most destructive on annual bluegrass maintained at putting green height. In close-cut turf, the lower stems may become affected resulting in water-soaked, blackened tissue that is easily pulled from infected crowns



Best management practices for combating anthracnose

BY J. MURPHY, F. WONG, L. TREDWAY, J. CROUCH, J. INGUAGIATO, B. CLARKE, T. HSIANG AND F. ROSSI

Anthrachnose (caused by *Colletotrichum cereale*) is a destructive fungal disease of weakened turf that occurs throughout the United States, Canada, Western Europe and Australia (15) and is particularly severe on annual bluegrass (*Poa annua*).

The frequency and severity of anthracnose epiphytotics on golf course putting greens has increased over the past decade (13, 14) and is thought to be associated with some of the management practices used by superintendents to improve playability (ball roll). It is possible that combinations of management factors may be enhancing the severity of this disease.

Scientists within the NE-1025 multi-state turf research project in the US are studying the biology, ecology and management of anthracnose of annual bluegrass turf on golf

courses. They are examining the biology of the pathogen, assessing fungicidal control and resistance development, evaluating the effect of cultural practices on anthracnose severity, and developing annual bluegrass and bentgrass selections for disease resistance.

Completed and ongoing field trials within this five-year project (2005-2010) have evaluated registered and experimental fungicides, fungicide programmes, and annual bluegrass management practices including nitrogen fertility, chemical growth regulation, mowing, rolling, topdressing, verticutting, and irrigation, as well as the potential for some practices to interact. Ultimately, results from these experiments will be used to devise a comprehensive set of best management practices for the control of anthracnose disease on golf courses.

HOST SUSCEPTIBILITY

Anthracnose can be found on cool- and warm-season turf in roughs, fairways, and tees, but often is most destructive on annual bluegrass maintained at putting green height. Outbreaks are also common on creeping bentgrass (*Agrostis stolonifera*) and may develop on other cool-season turf species including ryegrasses, fescues and Kentucky bluegrass.

Although the disease is often most severe during warm weather, outbreaks may occur throughout the year causing either a foliar blight or a basal rot of leaf sheaths, crowns and stolons (15). Anthracnose is often present on turf mowed at a higher height without producing severe damage, which suggests that plant health (vigour and stress) is a major factor that determines disease severity. The disease can cause extensive injury on turf maintained at low fertility or turf grown under suboptimal conditions (drought stress, excess shade, high humidity).

The greater susceptibility of annual bluegrass to anthracnose is probably related to a number of factors including the weak perennial nature of this grass species. Annual bluegrass is well known for its prolific seedhead (flowering) expression that predominantly occurs in the spring. Seedhead development requires considerable metabolic energy, which re-allocates photosynthate away from roots and shoots toward seedheads just before the most stressful time of the growing season.



On annual bluegrass, symptoms first appear as orange to yellow coloured spots that range from 6-13mm in diameter.

Summer stress tolerance has been associated with increased root depth and number. Thus, the reallocation of photosynthate away from roots and crowns probably weakens annual bluegrass and increases its susceptibility to anthracnose.

CAUSAL AGENT

For over 90 years the pathogen responsible for turfgrass anthracnose was known by the same name as the fungus that causes anthracnose disease in corn, *Colletotrichum graminicola* G.W. Wils, because they closely resemble one another.

Recent DNA fingerprinting studies, however, indicate that the pathogen responsible for anthracnose in cool-season turf, while closely related to the corn pathogen, is a distinct fungal species, *C. cereale* Manns (5). This same fungus has been found across North America colonising numerous cool-season grasses in field crops, prairies, residential lawns, ornamental grasses, and other environments (4, 5). Outside of the golf course environment, it appears that *C. cereale* rarely induces disease because the fungus can colonise other host plants without causing visible damage.

Despite the fact that *C. cereale* can be found on many cool-season grasses, DNA

fingerprints of individual isolates collected from North America, Japan, Australia and Europe indicate that this fungus is subdivided into groups of host-specific populations (4, 5). With few exceptions, turfgrass pathogens are members of different populations of *C. cereale* than those found on other grass hosts. In addition, the populations of *C. cereale* infecting annual bluegrass are distinct from the populations that infect creeping bentgrass.

Such host-specificity is illustrated on golf courses by the appearance of the disease on one grass species at a time in mixed swards of annual bluegrass and creeping bentgrass (15). Although anthracnose can be found on many plants, the host specificity of *Colletotrichum* species indicates that stands of non-turfgrass hosts are not likely to harbour strains that could cause anthracnose on turfgrasses.

DNA fingerprinting indicates that *C. cereale* does not infect warm-season grasses (4). Anthracnose outbreaks on warm-season turfgrass, caused by other species of *Colletotrichum*, are rare and typically cause little damage.

BIOLOGY AND EPIDEMIOLOGY

Because the anthracnose pathogens on turf and certain field crops were thought to be the


same organism throughout most of the 20th century, much of the ecology, epidemiology, and pathogenic process of *C. cereale* are inferred from research on corn and sorghum. There appear to be environmental and host factors that promote both anthracnose foliar blight and basal rot in cool-season turfgrasses, but these are poorly understood.

In addition, the increase in anthracnose disease on turf during the past decade has given rise to speculation that more virulent strains of *C. cereale* may have emerged. However, no research data supporting this hypothesis have been reported.

Although successful field inoculations of annual bluegrass with *C. cereale* have been conducted, detailed studies of the biology of this pathogen have been hindered, in part, because a reliable method for infecting turf under controlled conditions in the greenhouse and growth chamber is lacking.

SYMPTOMOLOGY AND THE DISEASE CYCLE


On annual bluegrass, symptoms first appear as orange to yellow coloured spots that range from 6-13mm in diameter. As the disease spreads, spots may coalesce into large, irregularly-shaped areas of infected turf on




- Research
- Soil Nutrient Analysis
- Soil Physical Analysis
- Plant Tissue Analysis
- Disease Diagnosis
- Nematode Diagnosis
- Water Analysis
- Advisory Services

DO YOU KNOW THE QUALITY OF YOUR WATER?

Send samples to AGCSATech




John Neylan and Andrew Peart



Ph. 03 9548 8600
Fax. 03 9548 8622
Email. john@agcsa.com.au
Email. andrew@agcsa.com.au

Suite 1
Monash Corporate Centre
752 Blackburn Road
Clayton 3168 Vic



Infested foliar or stem tissue are often covered with numerous acervuli (reproductive structures) with distinctive black spines (setae)



putting greens, tees, and fairways. Older or senescing leaves are often colonised first resulting in yellow leaf lesions.

In close-cut turf, the lower stems may become affected resulting in water-soaked, blackened tissue that is easily pulled from infected crowns. Infested foliar or stem tissue are often covered with numerous acervuli (reproductive structures) with distinctive black spines (setae) that are used as diagnostic features for disease identification.

From these acervuli the pathogen produces masses of reproductive spores called conidia that can be spread by water or mechanically (foot traffic, mowing, etc.) to healthy plants. Once in contact with a susceptible plant, spores germinate to produce hyphae and a specialised structure known as an appressorium that adheres to the host tissue allowing the fungus to penetrate into the plant. Based on studies of corn and sorghum, *C. cereale* is thought to overwinter in turf as dormant resting structures called sclerotia or as fungal mycelium in infected plant debris.

Anthrachnose foliar blight is generally favoured by higher temperatures (29-35°C) in the summer and autumn. However, basal rot symptoms can be observed year round, often occurring simultaneously with foliar blight symptoms during periods of heat stress.

Laboratory studies indicate that some isolates of *C. cereale* grow best between 21 and 30°C, and are able to cause foliar infection between 27 and 32°C (8). These observations correlate with summer outbreaks of foliar blight and basal rot but do not explain the development of anthrachnose basal rot symptoms under cool conditions (winter or spring).

ANTHRACNOSE MANAGEMENT: CHEMICAL CONTROL

Research and experience indicate that preventive fungicide applications are far more effective than curative applications for the control of anthrachnose on putting

greens. However, due to a lack of knowledge regarding the disease cycle and epidemiology of anthrachnose, the best timing for preventive applications remains unknown. Generally, it is recommended that superintendents initiate a preventive fungicide programme at least one month prior to the normal onset of anthrachnose in their area.

Fungicides belonging to eight chemical classes are currently available for anthrachnose control: the benzimidazoles, DMIs (demethylation inhibitors), dicarboximides (i.e., iprodione), nitriles, phenylpyrroles, phosphonates, polyoxins, and Qols (strobilurins).

These products can be separated into two groups: multi-site inhibitors and single-site inhibitors. As the name implies, multi-site inhibitors inhibit several to many biochemical processes in the fungal cell. In contrast, single-site inhibitors suppress only one biochemical process. This is an important distinction because it determines the risk of a given product for fungicide resistance. Single-inhibitors have a moderate or high risk for resistance development, whereas multi-site inhibitors generally have a low resistance risk.

In addition to being more effective, preventive applications also expand the number of products available for use. Of the eight chemistries available for anthrachnose control, only the benzimidazole, DMI, and Qol classes have significant curative activity. The nitrile, phenylpyrrole, phosphonate, and polyoxin fungicides have little to no curative activity against anthrachnose, but are very effective in tank mixes or when applied on a preventive basis (6, 17). Moreover, tank mixtures and alternation of products within these eight chemical groups have generally been more efficacious than single products used sequentially in other trials.

Even though the benzimidazole, DMI, and Qol chemistries have curative activity, superintendents should not rely on this control strategy when anthrachnose has become a

persistent disease problem. These chemistries are also at-risk for fungicide resistance, as discussed later in this article, and curative applications may encourage resistance development in anthrachnose populations.

While primarily used to control *Pythium* diseases, the phosphonates have recently been shown to be very effective against anthrachnose when used preventively. Fosetyl-Al was the first phosphonate fungicide, released in the early 1980s. Originally marketed as Aliette and now sold as Signature or Prodigy, fosetyl-Al is a complex molecule that is broken down to release PO_3^- in the plant after application.

Since 2000, a new generation of phosphonates has been released into the turf market – the phosphite salts. These products contain PO_3^- in the form of a Na^+ , K^+ , and/or NH_4^+ salt.

Phosphonates have direct fungicidal properties and are also thought to reduce anthrachnose by improving overall turf health and stimulating host defence responses. The risk of fungicide resistance for phosphonates is considered low to moderate because of these potential multiple modes of action.

Research in North Carolina and Pennsylvania focused on evaluating fosetyl-Al and phosphite salts for anthrachnose management. When applied on a preventative basis, fosetyl-Al provided excellent control on both creeping bentgrass and annual bluegrass. While the phosphate salts have been very effective on annual bluegrass, these products have only provided moderate anthrachnose control on creeping bentgrass over three years of testing in North Carolina.

Proper application techniques are essential to a successful fungicide programme for anthrachnose. Research in Pennsylvania indicates that fungicides should be applied in 2 gal. $\text{H}_2\text{O}/1000\text{ft}^2$ (approx 800l/ha) using nozzles that produce medium to coarse droplet sizes. Applications in lower water volumes or using extremely coarse droplet sizes can significantly reduce fungicide performance.

FUNGICIDE RESISTANCE

Fungicide resistance has complicated anthrachnose management. Resistance has not been an issue for multi-site fungicides like chlorothalonil, but is a concern for those with a site-specific mode of action. Resistance has developed in anthrachnose to site-specific fungicide classes including the Qols, benzimidazoles, and DMI fungicides (22).

Resistance typically results from repeated use of fungicides from a single fungicide class and can result in immunity or tolerance to that fungicide class. Resistance develops independently to each fungicide class. ►



Shift your expectations of what
a trim mower can do.



The New 7400 TerrainCut Trim & Surrounds Mower.

At last, have the flexibility to handle every part of the rough, with the push of a button. Shift from a 68" to 74" width of cut, right from the seat. Shift a deck out 15" to trim around trees or bunkers. Or climb and cut with the GRIP all-wheel drive and best-in-class horsepower. Demo one. And never look at your trim mower the same way again.



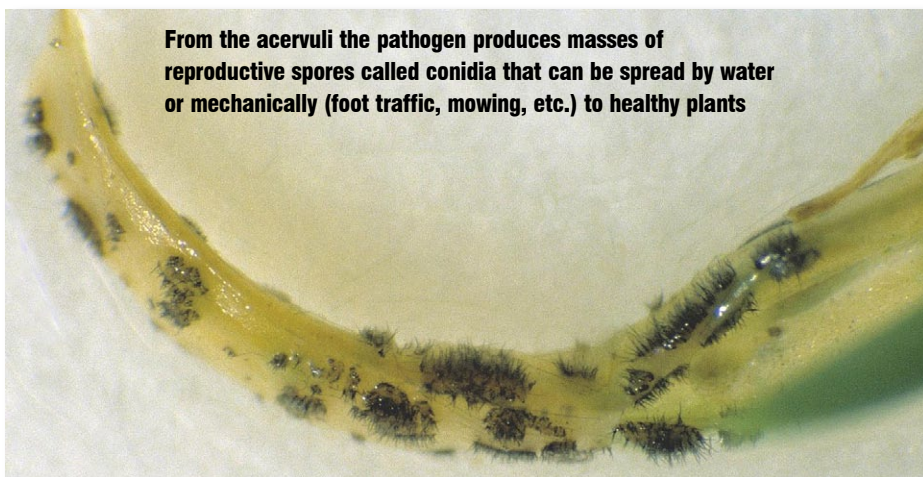
OFFICIAL
GOLF COURSE
EQUIPMENT
SUPPLIER

Nothing Runs Like A Deere™

www.JohnDeere.com.au



JOHN DEERE
GOLF



From the acervuli the pathogen produces masses of reproductive spores called conidia that can be spread by water or mechanically (foot traffic, mowing, etc.) to healthy plants

◀ Repeated applications of the same fungicide over time can quickly select for a higher frequency of resistant individuals.

Unfortunately, once resistance to a chemical class develops, it does not go away as long as the resistant isolates persist in the population (competitive with sensitive isolates and tolerant to environmental extremes), even if fungicides from that chemical class are not used or are used sparingly in the future.

The development of resistance can be delayed by limiting the number of applications from one fungicide class. Repeated sequential applications, late curative applications, and low label rate applications tend to encourage the development of resistance. The use of multi-site, contact fungicides is an important strategy for reducing the overall potential for resistance development because it can reduce the total amount and number of high risk, single-site fungicide applications.

Tank mixing fungicides (especially with multi-site fungicides) may not necessarily stop resistance development, but it can prevent total control failure from a fungicide application (i.e. a tank mix of chlorothalonil with a QoI fungicide still selects for QoI-resistance, but the chlorothalonil will contribute to disease control of both QoI-resistant and QoI-sensitive individuals.).

QoI FUNGICIDES

The QoI fungicide azoxystrobin (Heritage) was commercially released for use on turf in 1997. Resistance of *C. cereale* to the QoI fungicides developed quickly (1) and was fairly widespread in the US by 2004. QoI-resistant individuals of *C. cereale* are immune and cross-resistant to all fungicides in this chemical class, even when applied at 10 times the standard rates or higher.

Thus, the use of QoI fungicides for anthracnose control should be discontinued for locations with a history of poor QoI fungicide performance and/or confirmed resistance by laboratory testing.

There is no evidence that QoI fungicide resistance in fungal populations will decrease over time. However, for any given location, resistance may be localised to one or only a few putting greens. Subsequently, QoIs may still be effective on other putting greens where resistance has not developed.

DMI FUNGICIDES

DMIs have been used on turfgrasses since the 1980s and several DMIs are currently available for use on cultivated grasses. Unlike QoI and benzimidazole resistance, *C. cereale* gradually develops tolerance to DMI fungicides, which means that good control may be achieved with high labelled rates or shorter application intervals.

In California, isolates 2 to 10 times more tolerant to propiconazole (e.g., Banner MAXX) than sensitive isolates have been found on putting greens, but these isolates could still be controlled with the high label rate when applied at 14-day intervals (22). This suggests that DMI resistance is still manageable with high rates of DMIs. However, continued use of DMI fungicides at such locations will eventually result in complete failure to control anthracnose, so it is prudent to alternate the DMIs with other fungicide chemistries.

The potential for resistance development to the DMIs can be reduced by alternating fungicide chemistries, using the most intrinsically active DMI (propiconazole), and applying a higher labelled rate during cooler temperatures (phytotoxicity or thinning can occur at high label rates when some DMIs are applied during high temperatures) to obtain the maximum disease control with this class of fungicides.

MULTI-SITE FUNGICIDES

Since multi-site fungicides have a low risk for resistance, these are important tools in an anthracnose management programme. Chlorothalonil used alone or in a tank mixture can be very efficacious, especially when used

preventively. As mentioned above, tank mixes can also provide better disease control if QoI, benzimidazole, or DMI applications are made to resistant or populations with reduced sensitivity.

ANTHRACNOSE MANAGEMENT: CULTURAL PRACTICES

Minimising N fertility is one approach used by superintendents to increase ball roll (green speed) on putting green turf. However, management trials on annual bluegrass putting green turf in New Jersey indicate that soluble N applied every seven days at a low rate (4.8kg/ha) from late spring through summer can reduce anthracnose severity 5 to 24 per cent compared to the same rate of N applied every 28 days (11). Additionally, fungicide efficacy for the control of anthracnose was increased in plots that received an additional 6kg/ha every 14 days from late spring through summer (6).

Specific mechanisms associated with reduced anthracnose severity in plants with greater N fertility are currently unknown, although increased plant vigour has been proposed (20). Superintendents have frequently asked about the potential role, if any, of late- and early-season granular-N fertilisation and are seeking guidance on the relevance of this practice to anthracnose control on annual bluegrass turf.

Work on anthracnose foliar blight of fairway turf indicated that the annual N fertilisation should be moderate (1.39kg/100m²) and a greater proportion of the annual N fertiliser should be applied in autumn versus spring to reduce disease severity (8).

These effects are possibly explained by a depletion of carbohydrate reserves induced by aggressive spring N fertilisation and are exacerbated by low net photosynthesis during summer. Annual N rate and season of fertilisation need to be evaluated for anthracnose basal rot under putting green conditions, as well as the possibility of an interaction between summer soluble-N applications and granular-N fertilisation programming. Research trials addressing these objectives will be initiated late summer 2008 in New Jersey.

PLANT GROWTH REGULATORS

Plant growth regulators (PGRs) are widely used to reduce shoot growth between mowings, improve shoot density, increase stress tolerance, and enhance playability.

Trinexapac-ethyl (Primo) applied to annual bluegrass putting green turf at 0.4l/ha every 14 days from May through August (summer) reduced disease from late June to late July (6). Other research in New Jersey from 2003 through 2007 indicated that trinexapac-ethyl

or mefluidide used alone had infrequent and inconsistent effects on anthracnose, but did not greatly aggravate disease severity.

Additionally, mefluidide and trinexapac-ethyl used in combination reduced anthracnose severity 6 to 14 per cent compared to plots that only received one of these plant growth regulators during the last two years of a three-year trial (11).

At advanced stages of disease (end of the season) the combination of weekly N fertilisation with mefluidide and trinexapac-ethyl application provided the greatest reduction in disease severity. Many superintendents were using chemical growth regulation strategies not addressed in previous research, so further assessment was conducted from 2005 to 2007.

Treatments effects evaluated included rate (0.32l, 0.4l and 0.64l per hectare) and frequency (seven versus 14 days) of trinexapac-ethyl application, and combinations of trinexapac-ethyl with mefluidide (Embark) or ethephon (Proxy), which are commonly used to regulate seedhead development. To date, data from this trial have not been completely analysed. However, it is clear that use of these growth regulators alone or in combination are not increasing anthracnose severity.

VERTICUTTING

Verticutting is another common management practice used on putting greens to minimise puffiness associated with thatch accumulation and improve surface playability. Verticutting has been reputed to enhance wounding of host plant tissue and thereby enhance anthracnose (9, 13, 15).

Contrary to this perception, verticutting to a shallow depth (3mm) did not have a substantial effect on anthracnose severity in New Jersey (11). Infection studies with *Colletotrichum* in annual bluegrass and corn have demonstrated that wounds are not required for host penetration (3, 16, 19). However, Uddin et al. (18) reported that verticutting to a 5mm depth increased anthracnose in annual bluegrass.

Thus, verticutting to a depth that cuts crowns and stolons (severe wounding) and removes thatch may enhance plant stress and increase anthracnose, whereas verticutting to groom (light vertical mowing) the leaf canopy appears to have little effect on disease severity.

MOWING AND ROLLING PRACTICES

It is well known that a lower cutting height will increase ball roll distance (green speed) on a

putting green. Lower cutting height has also been associated with increased anthracnose severity (2). More frequent mowing (double or triple cutting) is used to increase green speed and is thought to intensify wounding of leaf tissue. Moreover, lightweight rolling is used to smooth the turf canopy and improve ball roll. Frequent use of these practices either alone or in combination was thought to increase stress and susceptibility to anthracnose on putting greens.

Research in New Jersey during 2004 and 2005 found that a 0.015-inch (0.4mm) increase in mowing height was sufficient to reduce anthracnose severity. But contrary to expectations, increasing mowing frequency from a daily single to double-cut did not increase anthracnose severity, and lightweight vibratory rolling every other day either had no effect or slightly reduced anthracnose severity.

Additional analysis of this data is underway, but it appears that the practices of double-cutting and rolling (rather than lowering the cutting height) should be used to improve ball roll without intensifying anthracnose severity.

Research in New York is currently evaluating the possibility that mower set-up factors including walk behind mower design, ►

QTurf
MACHINERY PTY LTD



Wiedenmann

**THE SMARTEST
AERATION
SOLUTION**



Terra Spike XF



Terra Spike GXi



Terra Combi

QTurf Machinery Pty Ltd

Clifford Court, Capalaba Qld 4157 • Fax: +61 (0)7 3245 1340 • Phone: +61 (0)7 3245 6082 • terry@qturf.com.au • www.qturf.com.au

bedknife position, and frequency of clip may affect basal rot anthracnose.

Moreover, traffic stress from manoeuvring mowing and rolling equipment on the edge of putting greens has been suggested as a potential cause of enhanced anthracnose on putting greens.

A trial has been initiated in New Jersey to determine if routine mowing and rolling operations can affect anthracnose severity depending on the location of the equipment traffic on a putting green (i.e., perimeter versus centre).

TOPDRESSING PRACTICES

Topdressing used to smooth putting surfaces and manage thatch accumulation has been suggested as contributing to anthracnose epidemics.

Trials were initiated in New Jersey to determine whether rate and frequency of sand topdressing influenced disease development. Initial data analyses indicate that sand topdressing may slightly increase disease at early stages of disease but later reduces disease severity.

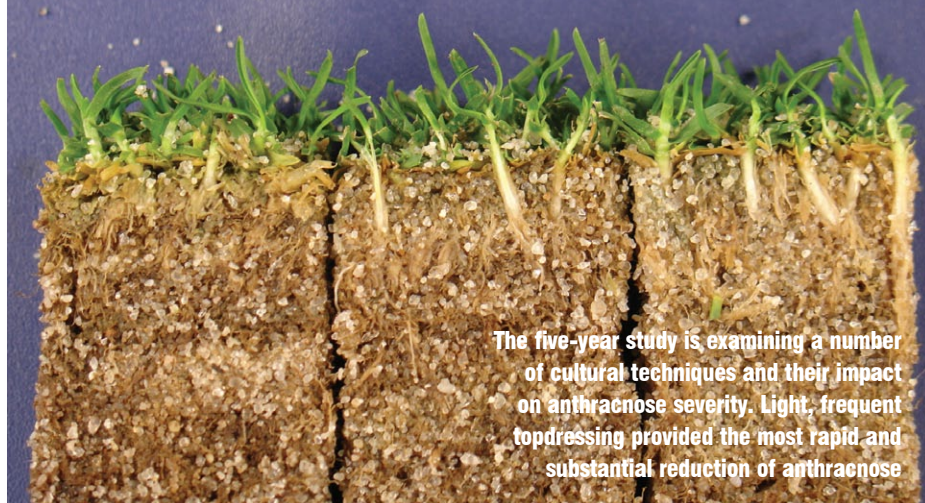
Light, frequent applications (topdressing every seven or 14 days at 0.3m³ or 0.6 m³/100m²) provided the most rapid and substantial reduction of anthracnose. Sand topdressing every 21 or 42 days at a higher rate (1.2m³/100m²) also reduced disease by August (end of summer) in 2006 and 2007.

A companion study in 2005 and 2007 assessed whether methods of sand incorporation and sand particle shape (i.e., round vs. sub-angular) affected disease severity. The incorporation methods evaluated in this study (i.e., stiff-, soft-bristled brush, vibratory rolling, or none) had no effect on anthracnose. Moreover, both sand types at first enhanced disease in July (summer), but continued topdressing reduced disease severity later in the season (August and September) each year compared to non-topdressed turf.

IRRIGATION MANAGEMENT

Proper irrigation management is critical to maintaining plant health and the playability of putting green turf. A trial was established in New Jersey to determine whether irrigation regime (i.e., 100, 80, 60, and 40 per cent of reference evapotranspiration, ETo) influences anthracnose disease. This trial is being continued in 2008.

However, initial data indicate that anthracnose severity was increased in plots irrigated with 40 or 60 per cent ETo compared to turf receiving 80 or 100 per cent ETo. Further data collection and analysis is needed to determine the veracity of these results.



SUMMARY

Currently, best management practices for the control of anthracnose disease on annual bluegrass putting green turf include implementing a frequent low N rate fertility programme initiated in late spring and continuing through summer. Soluble N applied every seven days at 4.8kg/ha from late spring through summer has been effective at reducing disease severity.

However, the annual N rate and seasonal aspect of fertilisation needs to be further studied, as well as the possibility of an interaction between summer soluble-N applications and granular-N fertilisation programming.

Chemical growth regulation strategies including the use of mefluidide, ethephon, and trinexapac-ethyl do not intensify disease severity and on occasion may reduce severity. Large reductions in disease severity have also occasionally been observed where frequent low N rate fertilisation is combined with the use of seedhead suppressants (mefluidide or ethephon) in the spring and sequential applications of growth regulator trinexapac-ethyl throughout the growing season.

If feasible, double cutting and lightweight rolling should be used to achieve greater ball roll (green speed) rather than lowering mowing heights. Increasing mowing height as little as 0.015 inch (0.4mm) can decrease anthracnose severity, whereas, daily double cutting and lightweight rolling increases ball roll and do not intensify disease. In fact, rolling may slightly reduce disease severity.

Preventive fungicide applications (generally one month prior to the normal onset of symptoms) are far more effective than curative applications. The benzimidazole, DMI, dicarboximide (iprodione), nitrile, phenylpyrrole, phosphonates, polyoxins and Qols fungicide chemistries can effectively control anthracnose, but resistance has been a problem with several of these groups.

Repeated sequential applications of single-site (benzimidazole, DMI, and Qol) fungicides, late curative applications and low

label rate applications tend to encourage the development of resistance and, therefore, should be avoided.

The use of multi-site, contact fungicides is an important strategy for reducing or delaying the overall potential for resistance development. Tank mixtures and alternation of these chemical groups are often more efficacious than single product applications and should be used to reduce the potential for fungicide resistance. Recent research suggests that fungicides should be applied in 800l/ha using nozzles that produce medium- to coarse-sized droplets.

Although much has been learned about the biology and management of anthracnose through this project, many questions remain unanswered. We must continue to gain a more comprehensive understanding of the anthracnose system on annual bluegrass and bentgrass that will enable us to develop more specific and better targeted management programmes.

Very little is known about the life history of *C. cereale* and the epidemiology of anthracnose, including where and how the pathogen survives and the weather conditions that drive infection and symptom expression. Such information would aid in the development of a useful predictive model for basal rot anthracnose.

Moreover, this knowledge would enable turfgrass managers to more effectively target fungicide applications or other management practices to key points in the disease cycle.

Continuing cultural management research will clarify the effect of topdressing, irrigation, and traffic on anthracnose disease severity from which best management practices can be enhanced.

ACKNOWLEDGEMENTS

ATM wishes to thank the authors and USGA TERO for allowing publication of this research (USGA TERO Volume 7, Number 16 – August 15, 2008). For a full list of references for this article, please contact the AGCSA on (03) 9548 8600. 🌱

University research states that if you incorporate rolling into your program on a regular basis there are many benefits:

- Faster Greens
- Truer Greens
- Healthier Greens
- Less Disease
- Greens retain moisture
- Excellent after renovations
- Reduced mowing
- Saves money

Tru-Turf for the past 25 years has been the innovative leader in golf greens rollers. Tru-Turf rollers have been chosen by the PGA TOUR to assist in preparing their greens for the tournament players.

Tru-Turf greens rollers are the only world wide rollers endorsed by the PGA TOUR.

Opportunity for all superintendents, course managers and greens committee members to email us at sales@truturf.com for a **free set of 3 DVD's** on why you should incorporate greens rolling into your program.



RS48-11C

Golf Greens Roller



R52-ELT

Electric Golf Greens Roller



Tru-Turf's premier Golf Greens Rollers boast a unique set of patented tri rollers that give premium results through design; not weight.

Tru-Turf rollers are durable, light weight and capable of rolling large areas in quick time.

Stainless steel roller bearings, heavy duty axles and tough trailer arms all add up to a rugged golf greens roller.

Officially licensed by the PGA TOUR these rollers are used on PGA TOUR, Champions Tour and Nationwide Tour events throughout the U.S. and Canada.

For information on any Tru-Turf products or to find the dealer nearest to you logon to www.Truturf.com

TRU-TURF

www.truturf.com

Longyard Golf Course's main irrigation lake, situated adjacent to the 3rd hole, will undergo major repairs in 2009 as part of a series of ongoing works to improve water use efficiency

Longyard locks in watertight future

BY BEN NORTON-SMITH

On arrival at Longyard Golf Course close to two years ago, I quickly realised that water management was an issue that needed to be addressed with high priority. After putting a plan together for the owner of the Greg Norman-designed course (titled Taking Longyard Golf Course into the Future), we started implementing the ideas that were on paper to ensure a more sustainable future for the club.

The upgrading of the current irrigation system was one such measure while the upgrading of all greens sprinklers and some of the fairway sprinklers another (360 degree sprinklers along dam banks etc.). Another key area we targeted was the draining, sealing, de-silting, enlarging and pumping from the course dams.

In December 2006, we accepted a quote from a local irrigation company to install a new Toro Osmac radio controlled computer and satellite system. By March of 2007 all the necessary components had arrived on site, which made for a much anticipated installation.

Due to be installed during the winter months of 2007, the local irrigation company arrived to start works on the system in August. On the electrician's inspection, it was discovered that we only had a 30 volt cable operating the current system, compared to the 240 volt cable required for the new system.

Since we had a fixed quote, the political problems then arose. After 13 months of battles, to put it politely, resolutions have finally been made and I would like to think that by the time this article goes to print our new system will be in operation.

In the winter of 2007, we also started works on the 17th dam to increase its size and to make it useable for our irrigation system

Situated in the rural NSW township of Tamworth, water has always been high on the agenda at Longyard Golf Course. Here superintendent Ben Norton-Smith looks at some of the proactive measures undertaken to improve water management.



PRINCIPAL PARTNERS

RAIN BIRD

TORO

across the course. Originally this dam was very narrow and excess silt reduced its capacity. With room to move towards the 18th fairway we projected that this dam, at capacity, could carry approximately 10 megalitres of water.

We broke the wall of the original dam and completely drained it to allow excavations to start. The whole job was done by a D7 dozer and 30 tonne excavator. All the silt was pushed out over the bank toward our driving range which sent about 1000-plus turtles heading in all directions. It was definitely a sight to watch all the birds come from everywhere to help themselves to a free feed! My staff wouldn't allow that, however, and they collected up the majority of the turtles and relocated them.

Once the silt had been removed the topsoil from the area was also pushed out and piled up for the finishing touches to the dam walls. Once we got to the clay section of material, we then planned to keep ripping and building walls until we hit the level of shale underneath the dam. It took about a week to get to the shale which was our base level. This was now 15 feet below the original overflow wall. After a little bit more levelling and putting the topsoil back around the course side walls, a new dam was created.

The dam now measures 100 metres long by 70m wide at a depth of 15 feet. All material (including the silt) was used on site and nothing had to be removed from the course. Currently as I write, a new pump station is being installed which will be connected to two mainlines for use across the course.

The dam on the 17th doesn't catch a great deal of run-off water, but we now have the ability to pump into it from our main storage dam on the 3rd hole which doesn't take long to fill. Until we actually pump from the 17th dam and reduce the level, all overflow water from our 3rd dam is lost to the creeks, which adds up to a lot of wasted water.

The 3rd dam is next on the list to be improved and work is due to start in winter of 2009. We are fortunate at Longyard to have a direct pipeline to Tamworth's recycled water centre, which can release up to a megalitre a day into this dam. The problem we have, however, is that when the dam is at capacity we have severe leakage problems and these will be the target of the upcoming work.

At capacity, the 3rd dam holds up to 20 megalitres. The run-off into this dam is extensive when the skies open up as it is fed by the new housing estates and roads around the course. With the way the developments



Starting in winter last year, Longyard increased the size of the 17th dam. A new pump station is currently being installed which will be connected to two mainlines for use across the course

are going ahead here, we predict that an inch of rain will fill the 3rd dam from any level that it sits.

With the leakage issues we are currently experiencing, our plans to resolve the problem have yet to be finalised. The two options we have come up with include:

- Keyhole the perimeter of the dam, digging down with an excavator as far as possible and backfilling this with a mixture of clay and bentonite; or
- Draining the dam and using the two clay islands in the dam to seal the shale wall section we believe the dam is leaking from (this option would also give us a little more water storage space).

As well as the works to the on course dams, during 2007 I applied for a Federal Government Community Water Grant to upgrade our greens sprinklers and other water wasting sprinklers around the course. After listening to the doubters from the club, and the hours of paperwork, it proved to be a worthy cause and we received \$42,000 which we have put towards upgrading sprinklers.

We purchased Toro 835 and 810 series sprinklers due to the options available on these heads as they suited this area well, especially with the high winds we can get in this region. Also, having full circle sprinklers on our greens created a lot of wet areas in the approaches which have now been remedied.

We received our new sprinklers in March 2008 and all greens sprinklers have been replaced and the water application our greens are now receiving will definitely save a lot of hand watering hours this coming summer.

So this is where Longyard is currently at. We have made some good inroads into our water management issues here and we still have a lot more options available to us in the future.

We have currently applied for a license to pump from a creek at the bottom of the course to our 3rd dam, which is already set up, but the previous owner took his license to use somewhere else. We also have bores that are currently unused, a windmill that needs repairing but is full of water, and a number of springs around the course that could be tapped into if necessary, although most of this is very high in salt.

From reading through previous editions of Australian Turfgrass Management, I see most clubs and courses are experiencing water problems given the ongoing drought and increasing impact of water restrictions. I just hope that club management across the country can be just as proactive as we have been here at Longyard and protect the future of their respective courses. 🌊

Simplot
FERRO-CIOUS
Summer

**THE CLIMATE IS
CHANGING...**

BE PREPARED.

SIMPLOT FERRO-CIOUS SUMMER
A combination of nutrients to assist in both hardening of turf grass and the development of natural green-up.

15% Nitrogen, 15% Potassium,
4% Iron, 2% Magnesium

Simplot
PRO LINE

www.simplotproline.com.au

Total annual water demand at Shortland Waters Golf Club is approximately 281M with the large on-site dam holding 150M



Shortland Waters shores up future

BY CRAIG MOLLOY

Shortland Waters Golf Course is located 15km west of the Newcastle CBD and borders Newcastle University and the Shortland wetlands. In 2006 shortly after I arrived at the club we started work on assessing our new water management strategy. The club had an aging irrigation system operating on mains supply using 38 megalitres per year.

Towards the end of 2006 the club was successfully awarded \$220,000 from the Australian Federal Government in round two of the Community Water Grants Scheme which provided the impetus to put our new water management strategy into action. The plan of attack was as follows:

- Conduct a water audit;
- Design and construct a new irrigation system;
- Use on site water supply;
- Monitor water usage; and
- Investigate the use of secondary treated effluent.

A water audit was undertaken by the University of Newcastle to identify current water uses and demands at Shortland Waters Golf Club (Lucas and Geary, 2006), before implementation of a proposed new water management strategy.

The proposed strategy to replace the current irrigation system and use secondary

A proactive stance to water management issues has realised savings of 38 megalitres of potable water for Shortland Waters GC.



PRINCIPAL PARTNERS

RAIN BIRD

TORO

treated effluent as a means of decreasing mains water use and reducing effluent discharge to natural waterways, has partially been completed.

While not yet using secondary treated effluent, the new irrigation system is currently operating using water from the on-site dam, with further discussion currently taking place with Hunter Water Corporation (HWC) regarding connection to the secondary treated effluent pipeline that passes through the golf course.

PAST WATER MANAGEMENT APPROACH

Total annual water demand at Shortland Waters Golf Club is approximately 281M/yr and sourced from either the mains supply (41M/yr) or the large on-site dam (240M/yr). The capacity of the on-site dam is 150M. Site water use and demand is divided between:

- Clubhouse;
- Maintenance shed and course uses;
- Tees, greens and fairways.

CHANGE IN APPROACH

Mains water supply for the clubhouse and the course is now separately metered, where previously all usage was measured from the one meter. Tees and greens demand (approximately 38M/yr) is now being satisfied from on-site storages using a new irrigation system.

Water use from the dam (fairways, tees and greens) is determined based on a computer-controlled remote irrigation system (Toro SitePro). Data from the new irrigation system has shown a 46.5M decrease in mains water use from February-October 2008.

A full weather station is in the process of being installed on the course to better understand climatic influences that could influence irrigation. This will be particularly

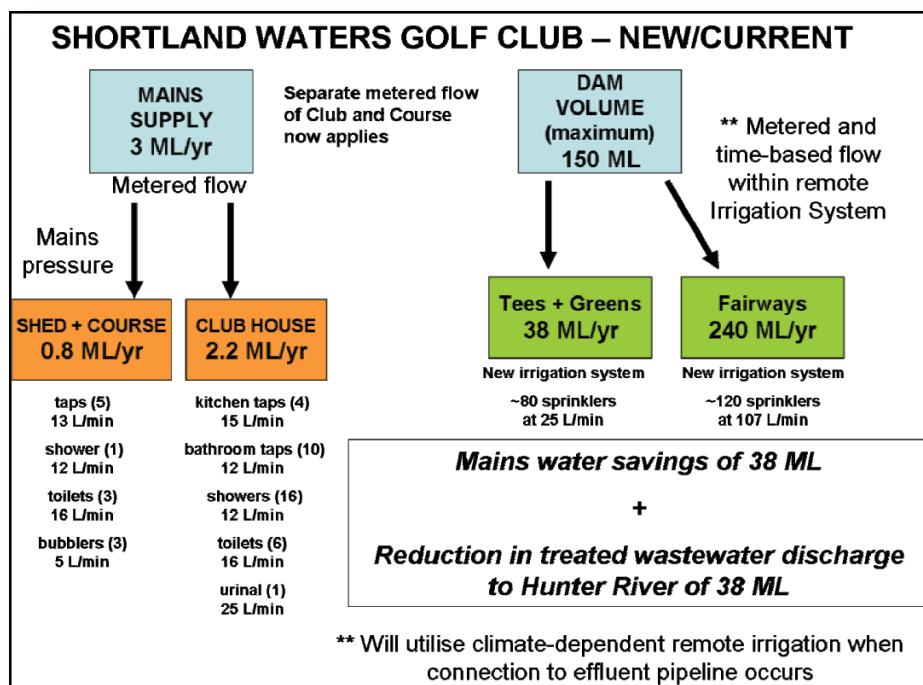
important when secondary treated effluent is used for irrigation in the future. The new irrigation scheme is now in use and the benefits are summarised in Figure 1.

As previously mentioned, 46.5M of mains water has already been saved by utilising an improved irrigation system and separately metering clubhouse and course uses to better understand water demands. In addition, the irrigation system and special sprinkler-heads designed for effluent reuse have also been fitted. Negotiations are continuing with HWC in securing use of its secondary treated effluent.

CONCLUSION

The past use of mains water to supply tees and greens was not financially sustainable for Shortland Waters Golf Club, nor sustainable for regional potable supplies. The new strategy has better utilised existing on-site water storages as a step forward in reducing potable supply, as well as improved metering of all water uses to better understand on-site water demands.

It is expected that increased mains water savings and conservation of on-site storages will continue to occur once secondary treated wastewater becomes available for irrigation.



REFERENCES

Lucas, S.A., and Geary, P.G (2006). *Shortland Waters Golf Club Limited: Water Audit, Report by the University of Newcastle for Shortland Waters Golf Club Limited, NSW, Community Water Grant ID 23743, December 2006.* [u](#)

Figure 1. Mains water supply for the clubhouse and the course is now separately metered with tees and greens demand (approximately 38M/yr) now being satisfied from on-site storages rather than mains.

Homogeneous Pellets

Reliable N-P-K delivery, balanced secondary elements and micronutrients, predictable response and consistent results are what you will see every time you apply **BEST®** Fertilisers. Research has shown that the maximum influence of nitrogen occurs when the nitrogen and phosphate are intimately associated together through a process known as positive nutrient interaction. Inside of every **BEST®** homogeneous pellet, there is a positive interaction between nitrogen, phosphorus and sulfur in increasing the availability and efficiency of each of these important nutrients.

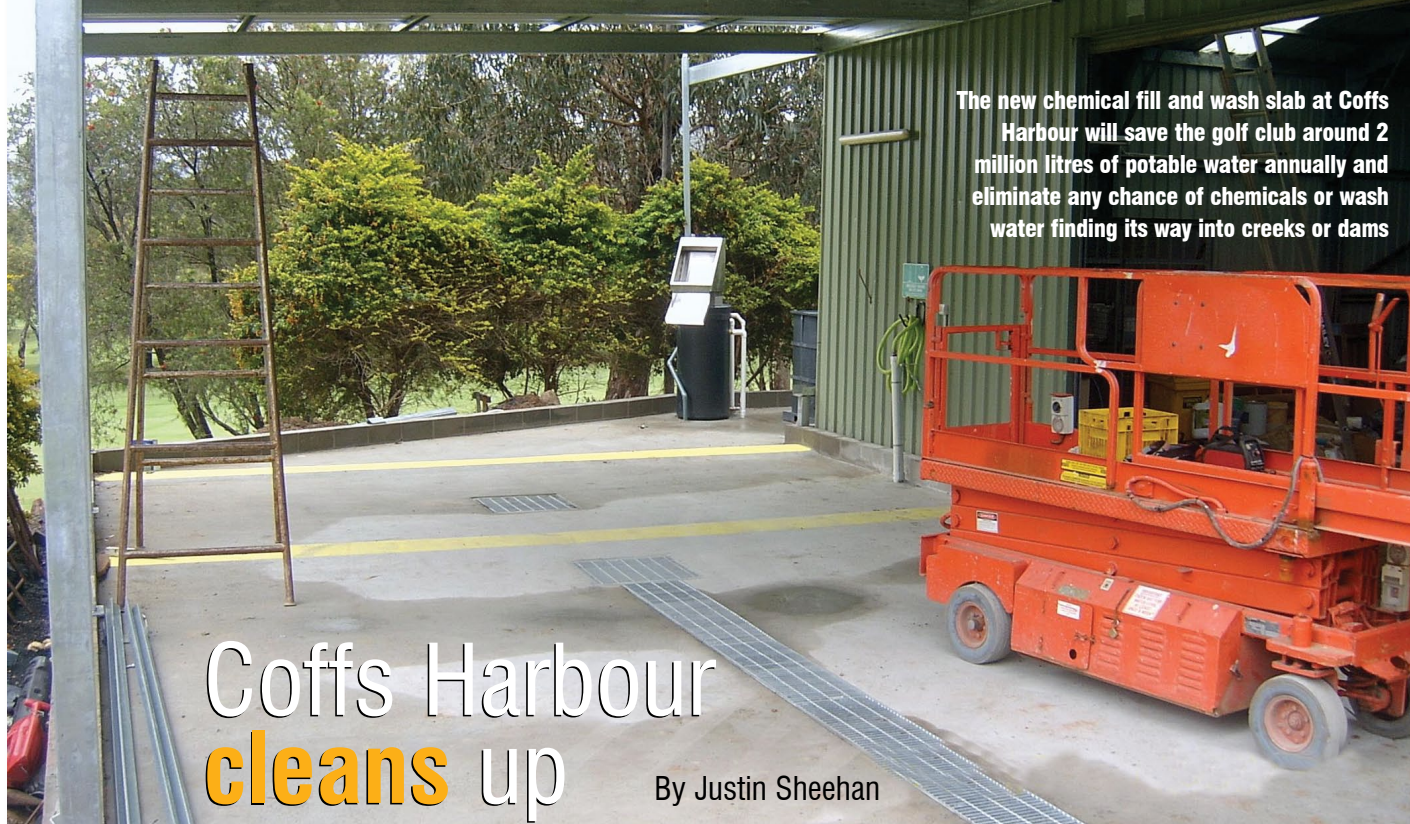
TURF SUPREME 16-2-6

The ultimate dust-free, homogeneous pellet. It's the professionals' choice for use on golf courses, landscaping, schools, parks, athletic fields and other green belt areas.

MINI TURF 16-3-6

Miniature homogeneous pellets manufactured for use on hybrid Bermuda and other closely maintained turfgrass areas. This fast-acting fertilizer contains a balanced N-P-K ratio with sulfur and iron.

www.simplotproline.com.au



The new chemical fill and wash slab at Coffs Harbour will save the golf club around 2 million litres of potable water annually and eliminate any chance of chemicals or wash water finding its way into creeks or dams

Coffs Harbour cleans up

By Justin Sheehan

An area that has received increased attention when focusing on environmental issues and golf courses is the maintenance equipment wash area. Considering Australia's current water shortage and resulting water restrictions, this aspect of environmental compliance is appearing at the top of most superintendents' 'to do' lists.

Every golf course maintains an area or several areas where they wash down their maintenance equipment. Some of the pollutants found in the wash residue of maintenance vehicles and turf equipment are oils and grease, other hydrocarbon products, detergents, herbicides, insecticides, pesticides, fertilisers, nitrates, lead and copper to name a few. All of these are potentially dangerous to humans and wildlife when introduced in cumulative amounts to the surrounding environment.

Water regulations in the country's driest areas have restricted the use of town supply water for washing vehicles or equipment unless it is in accordance with a Water Efficiency Management Plan or is conducted within 'best practice'. The practical solution to meet best practice is to find an alternate source of wash water. Existing options include treatment and use of on-site irrigation water, stormwater collection and wash water recycling.

Since my arrival here at Coffs Harbour Golf Club some 18 months ago we have been busy working towards safeguarding the club by constructing a chemical fill and recovery slab and wash slab for all golf course operations. The management and board at the time saw the need to prevent us from a possible environmental disaster if a spill of any kind

Coffs Harbour Golf Club has taken proactive steps to safeguard the environment with the construction of a new chemical fill and machinery washdown slab.



would take place. Most of the wash water and possible chemical spill could find its way into nearby creeks that neighbour the property.

When this was pointed out to management and where the liability lay they acted very quickly and we had the full support of everyone. The only thing was that because of other priorities the project had to wait as funding was needed to deal with the issue. We were

fortunate, however, to secure a grant through the Federal Government's Community Water Grants scheme to the value of \$50,000.

Our next step was to find a product that produced high quality reuse water for use by our staff and some members that had private golf carts that they frequently clean. We looked at three units - ESD, Waterstax and the Washmaster 18. All companies put in detailed scope of works and pricing and RGF Washmaster won the rights to construct our new water treatment facility.

Tony Julian from Ecologic and Alan England from SAS Water Solutions combined and were found to have a very good product that produced high quality reuse water as this was a big concern for us. After looking at all the other units we were happy that SAS was able to design our wash bay and chemical mix area and integrate the RGF Washmaster.

The Washmaster is a four-stage treatment unit. Wash water generated from the washing down of maintenance equipment is directed through a settling trench into a primary sump for removal of some grass, sticks and leaves. A submersible pump then feeds the water into the Washmaster for the biological treatment. The four stage treatment comprises:

- Grass catcher/screen;
- Biosorb Series1 – aerobic biological treatment for organics in the form of trace chemicals such as fertilisers, herbicides and pesticides along with light oil and grease;
- Filtration – multimedia filter for suspended solids, organics, oil and grease. Polish filters to 25 microns;

- Any contaminants remaining in the stored water are eliminated through an oxidation process, a tri-reaction of UV, ozone and residual oxy-puck within the storage tank.

The site that we were looking at at the time was out the front of one of our maintenance sheds that had been carved out of the side of a hill with some fill down one end. Some 20 pier holes were put in at a range of depths between 1.2m to 3m with concrete works costing around \$30,000.

The entire slab will be covered by an awning 12mx7m giving us plenty of room to wash two machines and conduct chemical handling at any time. It was advised to keep our chemical filling area and wash area separate, so the slab was designed to have separate wash and chemical recovery areas.

In the event of a spill or the need to dump the spray rig, there was a dummy pit installed with a pump to recover spray and reuse or remove. A 20,000 litre rainwater tank has also been installed to use as top up water for the recycle system and also all chemical filling into spray rigs.

When completed the facility will save the golf club and Coffs Harbour around 2 million litres of potable water annually and eliminate any chance of chemical water or wash water finding its way into creeks or dams. ㄿ

EBS JOINS FORCES WITH AUDUBON

Australian company Environmental Business Solutions (EBS) and Audubon International have announced a partnership designed to further promote adoption of environmental management systems and environmental stewardship in golf.

Audubon International, a not-for-profit environmental education organisation based in the United States, created and manages the Audubon Cooperative Sanctuary Program for Golf Courses (ACSP), with members in over two-dozen countries. EBS, founded by Terry Muir, has developed the award winning golf course specific environmental management system e-par which has been implemented by nearly 160 courses around Australia, including 71 in NSW alone.

Under the partnership, e-par and the ACSP for golf courses, an environmental education and certification programme will be delivered in one, easy-to-use electronic package. EBS will also provide annual financial support to Audubon International to help broaden the organisation's golf and environment initiative internationally.

"We're looking forward to working with the team at EBS to promote voluntary

environmental leadership in golf," says Audubon International executive director Kevin Fletcher. "The partnership between the organisations is a natural one. A central element to our golf and the environmental initiative is the increased adoption of environmental management systems throughout the golf industry.

"While anyone can develop an EMS for their business, we know that most professionals in golf are looking for an 'off-the-shelf' solution to help them comprehensively manage their environmental issues. We're happy to work with Terry and the rest of the EBS team to deliver e-par and the ACSP in one convenient package."

Audubon International is a not-for-profit environmental education organisation dedicated to educating, assisting, and inspiring people to protect and sustain the land, water, wildlife and natural resources around them. Audubon International engages people and organisations in good environmental stewardship and sustainable resource management through education and certification programmes, including a set of tools specifically for golf.

The Eradicator

BROADLEAF WEEDER

- Contains the synergy of 3 herbicidal actives
- Extremely broad spectrum including control of wireweed
- Cost effective against alternative brands
- Low application rates
- Low volatility, non ester formulation



BARMAC INDUSTRIES PTY LTD
3 Mary Street,
BLACKSTONE, QLD 4304
Phone: (07) 3280 3000

As a tool to monitor oil condition, oil sampling is an effective method in determining the general health of a machine's hydraulic system

As machinery has evolved, so too have the lubricants associated with their use. Turf technicians are now faced with an enormous selection of fully synthetic, semi-synthetic, biodegradable oils and greases and, of course, the traditional mineral oil-based range.

ENGINE OIL

Engine oil lubricates all metal surfaces inside the engine while dissipating the resultant heat of the combustion process. The selection of the appropriate oil is important because the life of an engine depends on the quality of oil used, but not all oils are the same.

Diesel engine oil differs from petrol engine oil in that it is developed to deal with the increased heat of compression found in diesel engines and contains more detergents to deal with the additional combustion by-products. They also contain anti-foaming agents which are not needed in petrol engines.

Newer synthetic engine oils available, particularly diesel specified, have been developed with the aim of resisting thermal breakdown, sludge formation and oxidation. Increased drain intervals and fuel efficiency, due to the reduced 'drag' created by higher viscosity oils, are other benefits associated with their use.

However, switching from a mineral oil to synthetic based oil in a well-used engine is not a straight forward procedure. Synthetic engine oils contain an Ester-based oil which has excellent natural detergency. This means that it will clean heat and oxidative generated varnish deposits from internal surfaces, the resulting suspended deposits clogging both filters and passageways.

Worn engines should be flushed before employing the use of synthetic oils and monitored closely. The same is true for gearboxes and other systems.

HYDRAULIC OILS

The hydraulic system generates a lot of discussion around the turf equipment maintenance industry, in particular the use of biodegradable oils. Advancements are continuing to be made with the next generation of synthetic hydraulic fluids known as polyalkylene glycol oils (PAG).

Having been trialled for some time in the United States, these fluids have the benefit of being less harmful to turf in the event of a spill (even when hot) with the added advantage of increased service intervals which goes



The good oil

BY LUKE SPARTALIS

Whether mineral or synthetic, the quality of oil used in any machine will have a major bearing on its performance and life expectancy.

Here Royal Melbourne Golf Club turf technician Luke Spartalis gives the lowdown on the lifeblood of any machine and poses the question – mineral or synthetic?



some way in offsetting the initial higher cost associated with their use.

However, while some attributes are desirable, some others are not. Corrosion, cavitation (due to viscosity issues) and filter media incompatibility are just some of the possible problems associated with their use. While the use of these oils does not necessarily void the manufacturer's warranty, thorough research is recommended before use as component failure or performance issues may not be covered.

Whatever the choice, cleanliness and regular service intervals are paramount to extending the life of hydraulic systems. Contamination of the hydraulic system can be prevented in several ways.

Firstly, contrary to popular belief, 'new' hydraulic oil itself can be contaminated. It can become contaminated during storage or may be shipped dirty from the supplier. Poorly maintained breathers or vents, or the use of high pressure water cleaners around these areas, can also result in the fluid being compromised, while dirt ingress via worn or damaged shafts and wiper seals on actuators is another possibility.

Of course the most common cause of contamination is through sloppy and inadequate maintenance procedures. Most hydraulic hose suppliers use high speed cutting equipment to manufacture hydraulic hoses. While it's a very effective method of cutting wire strand hose, it also produces metal and rubber particles which could damage precision components. Always thoroughly clean finished hose assemblies with compressed air and new O rings should also be fitted if equipped.

The large capacity of hydraulic systems means that oil replacement is generally a costly exercise. The manufacturer's guidelines are the best gauge to determine service intervals, however, unusual or extreme conditions may require more frequent servicing.

As a tool to monitor oil condition, oil sample analysis is an effective method in determining not only oil replacement intervals, but also gives a window into the general health of a machine's hydraulic system.

Moisture, dust and dirt and component wear are measured and through the use of trending graphs, accurate analysis is achieved and unnecessary and costly maintenance avoided.

Sampling is quick and easy with results available either as hard copy (see photo top of next page) or online.

Following Ryan Fury's departure to Killara Golf Club recently, former assistant Peter Svenne has taken over the top job at Sydney's Eastlake Golf Club. ATM puts the first-time superintendent through the grill.



Peter Svenne - Eastlake Golf Club

Full Name: Peter Svenne.

Nickname: Svenny.

Age: 49.

Family: Wife Karen.

Period as a superintendent: Two months.

Years as an AGCSA member: 12-13 years.

Previous clubs: Pymble Golf Club (10 years, progressed to 3IC); Castle Hill Country Club (7 years, 3IC).

Current club: Eastlake Golf Club (nearly three years).

Number of staff: Eight.

Course specs: 18-hole championship layout, par 71, 5639m. Most of the course is kikuyu, with Poa/bent greens, however, there is a gradual conversion to Santa ana couch tees, fairways and rough and G2 greens as part of the course master plan redevelopment.

Turf qualifications: TAFE Trade Certificate and TAFE Diploma in Turf Management.

Congratulations on your recent appointment as superintendent at Eastlake. Tell us a bit about your background and how you came to get the top job there.

Turf management was the last thing on my mind when I left school and I actually went into the world of banking. However, I was not really happy with that lot so at the age of 30 I decided on a career change and found work at Pymble Golf Club.

Pymble was a great place. They trained and educated me and the standards and ideals that I forged there I still use as a benchmark to this day (thanks Scotty). Sadly, my first superintendent, Keith Lees, died late August.

After 10 years at Pymble, where I rose to the 3IC position, I took up a stint with Martyn Black at Castle Hill. This was a good move as

it took my development to another level and exposed me to a very different style of course. Management techniques were different, most turf species were different too and even the weather conditions were quite extreme. I also experienced tournament golf and some major reconstruction works.

I was appointed to Eastlake as assistant superintendent in late 2005 and enjoyed the responsibilities that came with that role. I was given many opportunities to get involved with the club's management structure and I am sure this was to my benefit as when the superintendent's role became vacant the club's board had the confidence in considering me for promotion.

My transition has been good and relatively trouble free. I have had to come up to speed with a number of projects around the place, but it is more to know who is who in relation to contractors etc.

What are/have been some of the main challenges in making the move from assistant superintendent to superintendent? What has been the biggest adjustment?

The main challenge is trying to organise my day effectively. I plan each day, giving myself targets. However, as most readers will know those plans often don't come to fruition. One phone call can often change the rest of the day.

Personally I am pleased to be using my brain again (not that I haven't been using it) as now the buck stops with me and I don't have that next person to fall back on, so every decision I make has to be done with pros and cons in mind. I have to be more analytical.

The biggest adjustment is probably the fact that my hours of work are a little bit more

At the age of 30 Peter Svenne chucked in his job as a banker and turned to turf management. Now 20 years down the track and he has just been appointed superintendent at Eastlake

irregular. There are often issues that will keep me back after normal hours and phone calls till late, but that comes with the job so no worries. The good thing is I still sleep at night.

What do you hope to achieve during your time as superintendent?

The club has commissioned and implemented a master plan prepared by Ross Watson. It is a long-term project, subject to availability of funds, but will be completed over the next six to eight years or thereabouts. Four holes have been completed to date. I certainly want to be a part of this redevelopment and be part of a club that is going forward and to stamp my mark on the place.

The one thing you miss about being an assistant superintendent?

I miss being out in the paddock, as I love working outside. Unfortunately this role now requires more office work. I don't miss rainy days though. Unfortunately on those days there always seems to be lots of paperwork to be done which keeps me undercover.

Is there much opportunity within the industry for aspiring assistants to move up?

I don't think so, at least here in Sydney where turnover seems slow. There are not many advertised vacancies a year on average and you have maybe 30 to 40 applicants for each job. There are some very high quality assistants out there who just keep hitting brick walls.

Where is Eastlake at in regards to its turf management practices? What are some of the major turf management issues there and how are you meeting those challenges?

We are located near the coast and are sand based, coupled with our fair share of wind. Accordingly we have issues with some of our turf surfaces drying out. As good as our irrigation system is we cannot always provide enough water to keep everything moist. We do experience decoder failures and often it is a few days before the turf deteriorates to alert us that something is wrong. Then we need to act quickly to re-establish irrigation. This does put pressure on us during the warmer months.

Humidity and disease is another issue. A fungicide/pesticide and fertility programme is in place in order to keep the greens healthy and resistant to unwanted pests of turf. Greens are renovated twice per year, and tees and fairways once.



Eastlake has committed to a full reconstruction of the course over the next six to eight years

Are there any plans for the course in the coming years?

As mentioned above, the club has committed to a full reconstruction of the course to be completed over the next few years. Four holes have been completed, with tee to green surrounds turfed/stolonised with Santa ana and greens sown with G2 bent. The results, along with Ross Watson's vision, are stunning.

Water is obviously a critical issue around the country at present. How is Eastlake off in terms of its water supply, quality and quantity?

Fortunately water is not an issue here. We have the luxury of a good supply of bore water that is of good quality, which does not require any amendments. A new irrigation system was installed about four years ago which has had a few glitches over that time, but these are being sorted progressively; basically a big improvement to the course since installation. Water quality is checked annually.

Environmental management is obviously a high priority at Eastlake given its location. Outline some of the environmental management practices that form part of your management operations?

We participate in the e-par programme and are proactive in ensuring we become compliant with some of our deficiencies. We have some work in progress to address these issues. The club has an environmental policy in place and an environmental action plan. Having been in this role a short time, I need to come up to speed with this programme.

We are located next to the Botany Wetlands and our need to be extremely careful with chemical applications and turf management is paramount. We also have a few areas of native vegetation (Eastern Suburbs Banksia Scrub) that is declining in population and is accordingly treated as sensitive and are no go zones for us. This is managed by Sydney Water, from whom the club leases this land.

Best advice you have ever received on the job and who gave it to you?

Try not to take on too much too early. Advice from my good mate 'The Red Fox', former super at Tallwoods.

If you could change one thing about your job what would it be?

I'd love to get rid of the phone.

Best part about being a superintendent?

The challenge of maintaining this turf facility and gradually implementing my thoughts and ideas to make this a better course.

OFF THE COURSE

Any claims to fame outside of turf management? I represented NSW in rowing at U23 level.

Favourite movie? Monty Python's The Life of Brian.

Name three CDs you could not live without. I can name 10 – they are all Led Zeppelin albums.

If you could be any musician, who would you be? Bob Dylan.

Food you could not live without? Indian curry.

Favourite sporting team? Wallabies (when they're winning).

Sporting team you like to dislike? Brisbane Broncos.

Dream car? Ford 1971 XY GTHO.

Irritations? Idiot taxi drivers.

What book are you reading now? I have five on the go at the moment; I read according to my mood at the time. Favourite at present is Shantaram by Gregory Roberts.

Favourite golfer? Greg Norman

Golf handicap? 19. (It was 15 about five years ago).

What do you do to get away from it all? Jump on my motorbike and go for a good fang.

What's the best part about being involved in the turf industry?

The camaraderie of fellow supers and greenkeepers. I was quite flattered by the number of calls I received from guys who congratulated me on my appointment and who all offered to help with advice if needed.

Favourite spot on your course?

Up next to our 6th green. This is the highest point on the course and in the surrounding area where we have magnificent views from the city to Botany Bay. I have had my smoko there a couple of times over the years - very relaxing.

Favourite piece of machinery?

Greens roller. I love going sideways.

Most embarrassing moment as a superintendent/assistant?

One morning after a night on the curry, I've dropped quite a healthy fart. While savouring the delights of a wonderful meal, a female bush regen contractor walks into my office to see me. Well, you've never seen a guy move so quickly to try and escort her out of the room to a safer place. I'm sure her hair was straight when she walked in.

Funniest moment you have seen on a golf course?

Many years ago one of my workmates was towing a hose on the back of a postie bike. Flying through the rough between two fairways he gets the hose snagged on a tree root. I saw him get slingshot backwards about 10 metres! He was pretty hurt but you still had to laugh. At least I thought it was funny.

Worst excuse from a staff member?

An apprentice was late to work one day and used the excuse there were early morning roadworks. Problem was he forgot that I came to work the same way and there certainly weren't any roadworks.

Career highlight?

This appointment as superintendent.

The overseas golf course you'd most like to visit?

I walked St Andrews in Scotland about 15 years ago and felt a special sort of aura about the place. I was hoping to have a round of golf but unfortunately they were hosting a Dunhill Cup tournament and there was no chance of me playing that week. If ever I head back to Scotland I think that is definitely one place I would love to play. 🏌️

MENTORING PROGRAMME AIDS UP AND COMING GREENKEEPERS



Peter Beach (right) listens on as superintendent Martin Greenwood explains some of the turf management practices employed at Kingston Heath Golf Club. Beach spent two days at the sand belt club in July as part of the AGCSA's new mentoring programme

2007 AGCSA Graduate of the Year Award winner Peter Beach has become the first greenkeeper to benefit from the AGCSA's mentoring programme.

Beach, who now works as a senior greenkeeper at Royal Fremantle Golf Club in Perth, spent time either side of the 24th Australian Turfgrass Conference back in July at Kingston Heath Golf Club, Barwon Heads Golf Club and Thirteenth Beach Golf Links where he was shown around each course and given an insight into turf management operations.

Prior to the Melbourne conference, Beach spent two days with Kingston Heath superintendent Martin Greenwood who walked Beach through a number of the club's management procedures. One particular practice which interested Beach was Greenwood's use of a crushed carbon foliar spray to reduce dormancy in the Santa Ana fairways, which also aids in lessening winter and spring disease incidence and wear. Greenwood outlined the endothal programme the club employs to keep the A1 greens Poa-free, while Beach also got the opportunity to view some bunker reconstruction work.

After attending the conference, Beach headed south to Barwon Heads Golf Club. Staying in the historic clubhouse, Beach was given the grand tour by superintendent Peter Frewin, including the recently constructed maintenance facility. Barwon Heads is undertaking a massive four-stage \$1.45 million project to remedy its water issues and Beach was shown around the new reverse osmosis plant and on-site water storage facilities.

While at Barwon Heads, Beach was also able to call into neighbouring Thirteenth Beach Golf Links where superintendent Steven Hewitt showed him around the Beach Course. Of particular interest were the bentgrass greens which hadn't been cored in eight years but were in superb condition due to an intensive dusting regime.

"All up it was a terrific experience and I must thank Martin, Peter and Steven who were extremely accommodating," says Beach. "It was a great experience as all clubs were different in regards to turf management, technology and issues they face."

"The biggest thing I took out of it was the opportunity to see how other courses do

things. Having worked at smaller clubs it was amazing to see some of the resources the bigger clubs have, whether it was in terms of staff numbers, facilities or the equipment available, and what that enables them to do.

"The custom-built GPS-guided spray unit at Kingston Heath was an incredible piece of machinery and it was also great to take in the natural aesthetics of the course. I really enjoyed Barwon Heads and I even got to play the course. It was amazing to see the lengths the club is going to secure its future with the reverse osmosis plant."

For more information about being involved in the AGCSA mentoring programme, contact AGCSA events and education manager Simone Staples on (03) 9548 8600 or email simone@agcsa.com.au



AGCSA MACHINERY PURCHASING STATEMENT

With a wide range of new and used maintenance machinery in the turf market at present, the Australian Golf Course Superintendents Association (AGCSA) is reminding turf managers to be diligent when it comes to making a purchase for their club or facility.

The AGCSA aims to assist all golf courses to have the best possible playing surfaces and adjacent environment within the limitations of the available resources. In keeping with this goal the AGCSA recommends turf managers be thorough in their assessment

and purchase of equipment and products for their course.

The AGCSA recommends turf managers gather specific information including:

- Product reviews;
- Performance reviews specific to golf course operations;
- Warranty and guarantee conditions;
- Technical or servicing support post-purchase;
- Price vs quality of performance;
- The legality of the equipment/product (registered for use in turf); and

- If second-hand, what is the history of the equipment and does it meet the appropriate legislation that governs each state (e.g. C-Tick labelling).

Turf managers are employed by clubs as experts and as representatives of the wider industry to purchase products and resources to produce quality playing surfaces. It is important for turf managers to consider whether each purchase meets both quality and legal requirements, thereby ensuring the club gets the most out of its purchase and preventing costly downtime in the long run.

BUNBURY GOLF CLUB CLAIMS INAUGURAL JD TRANS-TASMAN TITLE

Bunbury Golf Club superintendent Des Russell has every reason to be smiling like a Cheshire cat after he was part of the victorious team to collect the inaugural John Deere Trans-Tasman Team Championship in September.

Russell teamed with fellow Bunbury management staff Jason Shine and Ron Trezise to beat home the contingent from South West Rocks Golf Club (NSW) and claim the title at Clearwater Resort in Christchurch, New Zealand.

Teams representing clubs from all states of Australia and New Zealand competed at regional qualifying rounds conducted by local John Deere Golf and Turf dealers during the year. As many as 30 clubs competed at each round for the opportunity to represent their club in the final at Clearwater, which is home to the NZ PGA Championships.



The Bunbury Golf Club team (from left) Jason Shine, Des Russell and Ron Trezise

Three-man teams played a popular three ball Ambrose format which ensured a level playing field for all participants despite their handicaps or level of experience. Winners of the regional rounds were hosted at Clearwater for three days to enable teams to play a practice round before the grand final.

Rene Lubbers, product manager of John Deere Golf and Turf products, praised all those who competed in the regional qualifying events and grand final: "With the John Deere Trans-Tasman Championship providing clubs the opportunity to compete, network and socialise in a friendly, casual environment the event is ensured to become more popular each year and grow as more and more clubs come on board to compete."

Brisbane Golf Club superintendent Ben Cavanagh also had a successful trip across the Tasman and despite failing to win the main prize did manage to bag the lucky draw prize which affords him an all expenses paid trip to the US, including a spot at the Superintendents Pro-Am held in conjunction with the PGA Tour's 2009 John Deere Classic at Deere Run.

ON THE MOVE

Less than three months after stepping down from the AGCSA Board, immediate past president **Jeff Gambin** shocked the industry in early October by announcing that he had resigned from Gold Coast Burleigh Golf Club. Gambin, who served nine years on the AGCSA board, including the past four as president, decided to step down from the superintendent posting for personal reasons after more than 15 years at the Gold Coast club. Gambin finished up at the end of October following renovations and is set to embark on a six month round Australia holiday with wife Karen. At the time of going to print, recently appointed assistant Allan Bishop was set to take over the top job in the interim.



Former Eastlake Golf Club superintendent and NSWGCSA Secretary **Ryan Fury** has moved across to replace **Bill Hopkins** at Killara Golf Club. At Eastlake Golf Club, Fury's former assistant **Peter Svenne** has been promoted to superintendent (see profile on Peter on page 60 of this edition) while **Jarrod Arps** has been elevated from 3IC to the assistant position.

Former St Andrews Beach Golf Club superintendent **John Geary** has joined the AGCSA as part of an expanded AGCSATech department. Geary slots in alongside AGCSATech manager John Neylan and senior agronomist Andrew Peart.

Geary, who is well known among the Victorian superintendent community, has been involved in the turf industry for nearly 30 years, beginning his career as an apprentice at Peninsula Country Golf Club in south east Melbourne in 1979. In 1986 he moved to nearby Frankston Golf Club where he resided as superintendent for more than 17 years. During that time John was also an active member with the Victorian Golf Course Superintendents Association and over a 10 year period held a number of positions on the executive, including president.

In March 2004 Geary was appointed as construction and maintenance superintendent of the new Tom Doak-designed St Andrews Beach development on the Mornington Peninsula. Despite being widely lauded, the club hit the headlines for all the wrong reasons last year after the owners sacked all clubhouse and maintenance staff before eventually shutting down operations. Following his departure there, John was employed as an alternative water field technical officer for South East Water, providing support for clients using recycled water.

Elsewhere in Victoria, **Darren Dicks** has taken over the top job at Koorringal Golf Club in Melbourne's western suburbs. Dicks, who spent seven years at Royal Melbourne including the last two as assistant superintendent of the West Course, takes over from **Michael Grant** who has left for a trade rep position. Prior to his period at Royal, Dicks spent a year at Loch Lomond in Scotland and 18 months at two courses in Florida.

After wowing many with his presentation on the new Dent Island golf course construction project at this year's Australian Turfgrass Conference, **Doug Robinson** has brought his time on the island to an end. In late September the former AGCSA president handed over the reins to former AGCSA Claude Crockford Environmental Award winner **Ben Marshall** who will now oversee the grow-in. Elsewhere in Queensland and GCSAQ committee member **Craig Toms** has departed City Golf Club, Toowoomba while **James Colwill** has been appointed as superintendent at Mt Warren Park Golf Club.

And finally, **Bryce Russell** has had to step down as superintendent at Nowra Golf Club in NSW on account of health reasons. Russell underwent a major operation recently which has forced his hand and will finish up in early November.

TORO'S 3150-Q A QUIET ACHIEVER

As part of its ongoing development of more ecologically sound machinery, Toro Australia has announced the launch of the new Toro Greensmaster 3150-Q.

The new muffler system on the Greensmaster 3150-Q makes it the quietest engine-powered riding greens mower on the market with Toro research demonstrating it is 8 per cent quieter in sound pressure decibels than its nearest competitor. Retrofit muffler kits are also available to convert any Greensmaster 3050, 3100 or 3150 models.

"Bystander noise is becoming more and more of an issue at golf courses, because of noise abatements and enforcement of regulations, so we have been working to

make this less of an issue," says Toro

Australia's national sales manager for golf Robert Rein.

Todd McNamee, superintendent at Coral Cove Golf Club in Queensland, recently had two Greensmaster 3150 machines fitted with the new quieter muffler system and has noticed immediate benefits.

"We've had a great response" says McNamee. "We have residential housing and guest accommodation around our course and had received quite a few complaints prior to the new system being fitted. Since then, we've hardly had one complaint. It's remarkably quiet and certainly gets rid of the normal humming noise."

In other Toro news, leading turf renovation equipment manufacturer Graden has signed a distribution deal with Toro Australia.

"For a small company, Toro offers a fantastic opportunity to broaden our distribution here in Australia," says company founder Clare Dryden. "Toro Australia is seen as the leaders in the industry and this deal offers us the opportunity to increase our marketing and sales distribution with the ability to demonstrate our benefits on a far wider scale."

The new muffler system on the Greensmaster 3150-Q makes it the quietest engine-powered riding greens mower on the market

Founded in Melbourne in 1987 by husband and wife team Clare and Graham Dryden, Graden has risen to become a leading supplier of quality turf equipment worldwide. Graden entered the turf machinery business with the development of a specialised turf roller for cricket wickets and a walk behind scarifier that evolved into the highly successful GS03 model.

In 1993 Graden first made international inroads into Singapore and has sold extensively throughout the US and worldwide after launching at the Orlando Golf Show in 1997. Graden also set up shop in the US, opening a base in Richmond, Virginia in 2004.

"This deal certainly brings together two key players in the industry," adds Toro Australia's Richard Walne. "For a long time now we have watched Graden's success through our Asian and US Toro network and we have heard from many of our mutual suppliers and leading superintendents about their benefits. Having them on the Toro Australia team offers our customers even more service, leading technology and a dedication to providing products at the top end of the industry."

For more information about the Graden range, please contact your nearest Toro sales agent, or for further details on the new Toro Greensmaster 3150-Q contact Toro Australia on (02) 8282 4100.

CLEARMAKE BAGS NATIONAL BUSINESS AWARD

Clearmake has tasted success at the 2008 Telstra Business Awards which were announced in Sydney in mid-October. Clearmake was acknowledged as the country's best regionally based business after being named the national winner of the 2008 Telstra Regional Award. The award comes on top of the company's success at the 2008 Telstra Queensland Business Awards where it collected the MYOB Small Business Award.

Clearmake helps business and government reduce water consumption and their impact on the environment and precious water resources. The company designs and manufactures water harvesting, treatment and recycling equipment for small business solutions through to large scale custom engineered systems.

AQUASPY NAMES NEW PRESIDENT

Soil moisture sensor producer AquaSpy has announced the appointment of a new president in August. Steve Quindlen has taken the reins

and will be responsible for all the operations, strategic development and sales for the US operations of AquaSpy Inc. and its golf and sports turf division GolfLinx.

Headquartered in Adelaide and Santa Ana, California, AquaSpy Inc designs, produces and distributes moisture sensors and smart information technology which optimise water consumption. Its golf and sports turf division GolfLinx has a growing customer base in the golfing and sports turf sectors in the US and Australia with test sites in both countries realising reductions in irrigation output of between 15-35 per cent.

For more information on AquaSpy visit www.aquaspy.com

NEW PHILMAC CATALOGUE NOW AVAILABLE

Water management product distributor and manufacturer Philmac has launched a new catalogue to keep customers up to date with the company's latest product offerings. The 2008/09 catalogue, which has been published

in two full-colour versions for trade and retail applications, is available in hard-copy in both versions and includes more than 700 new part numbers and with 3000 products listed in total.

Key features of the new catalogue include logical product category headings and colour-coded sections for ease of navigation, pricing for both trade and retail in the trade catalogue and a summary page of new products located at the front of the catalogue for quick reference.

To order a copy, contact a Philmac territory manager on 1800 755 899 or email sales_orders@philmac.com.au

UNDERHILL ROLLS IN

Irrigation specialist Underhill International has released RollerPro, a portable sprinkler base with solid brass impact sprinklers. RollerPro provides supplemental irrigation to dry spots and newly-seeded turf on sports fields, cemeteries, parks and other large sites.

The portable sprinkler base includes a 22"

(56cm) wide stainless steel roller and works with both ¾" and 1" hoses. The weighted design of the RollerPro provides a stable field position and prevents movement during use.

The brass Underhill impact sprinklers are featured in six models, ranging from 13 to 54 GPM. Full and part-circle heads offer 57' to 96' (17m-29m) of coverage (at 80psi) and have ¾", 1" and 1¼" MPT inlets. Underhill impacts also have stainless steel drive springs and chemical-resistant bearing seals for lasting durability. RollerPro sprinkler base and impact heads are sold separately.

For more information about RollerPro, visit the Underhill website at www.underhill.us, contact Australia distributors Better Methods on (02) 9524 5366 or visit www.bettermethods.com.au

BEAMRIDER LEAVES ITS MARK

Line marking has leapt into the future with the introduction of the BeamRider from Toro Australia. Unlike traditional line marking, the BeamRider uses laser-guided technology to create lines which achieve millimetre accuracy.

Developed over three years in conjunction with UK military researchers and optical specialists, the BeamRider features cutting

The Toro BeamRider uses laser-guided technology to ensure line marking is completed with millimetre accuracy

edge electronic and optical elements which ensure that lines are perfectly straight.

With mechanical components developed by top Swiss automotive engineers the BeamRider incorporates specifically developed software, which continually undertakes self-testing and error checking to ensure variations from normal operating functions are reported.

The BeamRider components include a laser unit, actuator, kombi and reflectors. Using the lasers and reflectors, users lock the BeamRider onto the laser beam and walk forward. The actuator automatically adjusts to remove any human error, and if the laser

beam is lost, the spray nozzle switches off automatically.

Whether marking fresh or existing lines, the BeamRider eliminates the need for traditional 3, 4, 5 triangles, string or line, and with such high accuracy can complete most work in under an hour.

Available in two models, the SX and CT, the BeamRider has found gainful employment at a number of venues throughout Australia, including Brisbane's John Paul College.

"After using a BeamRider we will never be satisfied with conventional line marking," says curator Martyn Hedley. "Line definition and presentation is improved dramatically and ease of use and time savings are a bonus. Fleet paints add to the presentation, mixing well and leaving a pure white finish."

For more information about the BeamRider, contact your local Toro dealer or go to www.toro.com.au.

TURF CULTURE APPOINTS NEW AGENT FOR NSW/ACT

Turf Culture has announced that Living Turf has joined its agent team in the NSW and ACT region. Living Turf can be contacted on (02) 9517 9107. For a full list of Turf Culture agents, go to www.turfculture.com.au.





FAST TRACK TO THE FUTURE !

WORK ON A TOP 100 GOLF COURSE IN THE USA !
BE PART OF THE CREW FOR A US PGA TOUR EVENT !
IMPROVE YOUR LONG TERM CAREER PROSPECTS !
GAIN VALUABLE EXPERIENCE & KNOWLEDGE FROM THE BEST SUPERINTENDENTS IN AMERICA !

GUARANTEED TO GET YOU AHEAD OF THE COMPETITION

HAVE YOU:
COMPLETED YOUR APPRENTICESHIP IN TURF MANAGEMENT OR EQUIVALENT IN AUSTRALIA OR NEW ZEALAND ?

REQUIREMENTS:
SINGLE, AGED 19 TO 28.
ABLE TO SPEND 1 YEAR IN THE USA.
CLEAN DRIVING / DRUG RECORD.

"THE TOP AMERICAN GOLF COURSES ALWAYS REQUEST AUSTRALIAN TRAINEE GREENKEEPERS"

FOR MORE DETAILS CONTACT:
 David Goldie, International Internship Advice,
 19 Newbay Close, Barwon Heads, Victoria 3227
 Telephone: 03 5254 1381 E-mail: dngoldie@hotmail.com
 OR GO TO: www.top.osu.edu/aboutus/magazines




KEY RESOURCES

Books from Landlinks Press

Nutrition of Sports Turf in Australia
 Jerry Spencer

Nutrition of Sports Turf in Australia shows how to grow a healthy, stress-tolerant turf capable of withstanding high levels of wear. It covers the concepts and principles of plant growth and the function of primary and secondary nutrients, micronutrients and soil organic matter.

Oct 2008 208 pp Paperback
 Illus. 9780643095137 **\$89.95**



Water Use Efficiency in Turf and Landscape Irrigation
 Geoff Connellan

Water Use Efficiency in Turf and Landscape Irrigation provides a logical and scientifically sound approach to irrigation in urban areas in Australia and is based on the need to deliver specific landscape outcomes using principles of water sensitive urban design.

Due May 2009 200 pp Paperback
 Illus. 9780643094291 **\$59.95**



CSIRO PUBLISHING, PO Box 1139, Collingwood VIC 3066
 Tel: 1300 788 000 Email: publishing.sales@csiro.au
 Order online at www.publish.csiro.au

TURF INDUSTRY BOOKSHOP

AGCSA PRODUCED DVD's	Non-Member	Member
(DVD) Environmental Issues for Golf Course Architecture	\$88.00	\$66.00
(DVD) HR presentation and templates by Daryl Sellar	\$88.00	\$66.00

AGCSA PUBLICATIONS	Non-Members	Members
2008 Turfgrass Management Diary	\$86.25	\$73.30
Sportsturf Protection Manual - The Complete Guide to all Turf Protection Products	\$253.00	\$215.05
Improving the Environmental Management of New South Wales Golf Courses	\$57.50	\$ 50.00
Improving the Eco-Efficiency of Golf Courses in Queensland	\$57.50	\$ 50.00

GOLF	Non-Member	Member
A Century of Greenkeeping	\$142.36	\$123.80
A Natural Course for Golf	\$142.36	\$123.80
A Practical Guide to Ecological Management on the Golf Course	\$ 87.04	\$ 73.98
Best Golf Course Management Practices	\$316.25	\$275.00
Bird Conservation on Golf Courses	\$ 94.88	\$ 82.50
Bunkers, Pits & other hazards	\$194.11	\$168.80
Cricket Grounds	\$208.39	\$181.30
Cricket Wickets: Science & Fiction	\$62.50	\$ 50.00
Discovering Donald Ross-The Architect & His Golf Courses	\$300.49	\$261.30
Ecological Golf Course Management	\$197.68	\$171.90
A Guide to Golf Course Irrigation System, Design & Drainage	\$253.00	\$220.00
Golf Course Architecture -Design, Construction & Restoration	\$208.49	\$181.30
Golf Architecture – A World Perspective Vol 3 – Paul Daley	\$ 63.25	\$ 55.00
Golf Course Design	\$221.38	\$192.50
Golf Course Irrigation: Environmental Design & Mgmt Practices	\$221.38	\$192.50
Golf Course Management & Construction	\$445.63	\$387.50
Golf Course Tree Management	\$151.00	\$131.30
Golf Course Turf Management: Tools and Techniques	\$316.25	\$275.00
Golf Facility Planning	\$222.86	\$193.80
Golf Greens and Greenkeeping	\$155.25	\$135.00
How to Build a Sand based Golf Green	\$86.00	\$ 75.00
Human Resource Management for Golf Course Superintendents	\$126.50	\$110.00
IPM Handbook for Golf Courses	\$197.68	\$171.90
Keepers of the Green: A History of GC Management	\$150.29	\$130.70
Managing Wildlife Habitats on Golf Courses	\$150.29	\$130.70
Masters of the Links-Essays on Art of Golf Course Design	\$ 87.04	\$ 75.70
Practical Golf Course Maintenance – Magic of Greenkeeping	\$173.99	\$151.30
Problem Solving in Golf courses, Sportsfields, the Landscape, and Racecourses	\$80.00	\$ 70.00
Rough Meditations (HB)	\$ 87.04	\$ 75.70
Superintendents Handbook of Financial Management	\$126.50	\$110.00
Sustainable Golf Course:Guide to Environmental Stewardship	\$165.36	\$143.80
The Care of the Golf Course – 2nd Edition	\$166.06	\$144.40
The Cricket Pitch & its Outfield	\$142.36	\$123.80
The Golden Age of Golf Design	\$221.38	\$192.50
The Golf Rules Dictionary	\$158.15	\$137.50
The Golf Course – Planning, Design, Const and Mgmt - HB only	\$366.61	\$318.80
The Good Doctor Returns	\$ 71.18	\$ 61.90
The Life and Work of Dr Alistair Mackenzie	\$215.63	\$187.50
The Links	\$189.75	\$165.00
The Sand Putting Green - Construction & Mgmt (leaflet)	\$ 28.51	\$ 24.80
The Sandbelt	\$156.25	\$135.90
The Spirit of St. Andrews	\$102.81	\$ 89.40
The Superintendent's Guide to Controlling Green Speed	\$142.36	\$123.80
Turf Management for Golf Courses	\$363.74	\$316.30

SOILS	Non-Member	Member
Growing Media for Ornamental Plants and Turf	\$100.63	\$ 87.50
Bioremediation of Contaminated Soils: Agronomy Monograph 37	\$347.88	\$302.88
Introduction to Soil Microbiology	\$173.99	\$151.30
Mineral Nutrition of Higher Plants – 2nd Edition	\$205.61	\$178.80
Practical Soil Management	\$ 57.50	\$ 50.00
Principles of Soil Chemistry – 3rd Edition	\$208.49	\$181.30
Soil Analysis: An Interpretation manual	\$194.11	\$168.80
Soil Fertility Evaluation and Control	\$180.25	\$156.74
Soils & Soil Management	\$257.36	\$223.80
Soils & Their Environment	\$215.63	\$187.50
Turfgrass – No 32 in the series Agronomy	\$221.38	\$192.50

TURF & PESTS	Non-Member	Member
Ausgrass: Grasses of Australia: CD-Rom & Manual	\$142.36	\$123.80
Australian Weed Control Handbook - 10th Edition	\$110.74	\$ 96.30
Beards Turfgrass Encyclopedia for Golf Courses, Ground, Lawns And Sportsfields	\$395.36	\$343.80
Biological Control of Weeds	\$142.36	\$123.80
Bowling Greens – A Practical Guide	\$ 35.99	\$ 31.30
Color Atlas of Turfgrass Diseases	\$270.25	\$235.00
Color Atlas of Turf Weeds	\$308.78	\$268.50
Compendium of Turfgrass Diseases	\$71.88	\$ 62.50
Compendium of Turfgrass Diseases 3rd Edition ON SPECIAL	\$11.000	\$ 98.00
Complete Guide to Pest Control With & Without Chemicals	\$208.49	\$181.30
Controlling Turfgrass Pests 2nd Edition	\$337.87	\$293.80
Creeping Bentgrass Management - Summer Stresses	\$184.00	\$160.00
Cricket Grounds	\$208.49	\$181.30
Cricket Wickets – Science vs Fiction	\$75.00	\$ 65.00
CSIRO Handbook of Australian Weeds	\$ 79.11	\$ 68.80
Destructive Turfgrass Insect - Biology, Diagnosis & Control	\$258.75	\$225.00

Diseases of Turfgrass	\$345.00	\$300.00
Diseases of Turfgrass CD-Rom	\$316.25	\$275.00
Fertilisers for Turf	\$ 79.11	\$ 68.80
Field Guide to Weeds in Australia	\$136.61	\$116.10
Fundamentals of Turfgrass Management	\$181.12	\$157.50
Fundamentals of Weed Science 2nd Edition	\$237.24	\$206.30
Gardening with Grasses	\$86.25	\$75.00
Grasses of New South Wales	\$ 51.75	\$ 45.00
Grasses of Temperate Australia – A Field Guide	\$103.50	\$ 90.00
Grasses: Systematics & Evolution	\$251.61	\$218.80
Handbook of IPM for Turf & Ornamentals	\$337.86	\$293.80
International Turf Management Handbook	\$337.86	\$293.80
Lawn Care – A Handbook for Professionals	\$222.86	\$193.80
Management of Turfgrass Diseases -3rd Edition	\$244.37	\$212.50
Managing Bermudagrass Turf – Selection & Construction	\$229.31	\$199.40
Managing Turfgrass Pests	\$359.38	\$312.50
Manual of Grasses	\$142.36	\$123.80
Mathematics of Turfgrass Maintenance – 3rd Edition	\$126.50	\$110.00
Native Grasses:Handbook for Temperate Australia 3rd Edition	\$ 38.86	\$ 33.80
Natural Turf for Sport & Amenity	\$173.99	\$151.30
Noxious Weeds of Australia – Revised Edition	\$280.36	\$243.80
Nursery & Landscape Weed Control Manual	\$142.36	\$123.80
Organic Control of Weeds	\$ 26.67	\$ 23.20
Picture Perfect, Mowing Tech for Lawn, Sports & Turf	\$122.24	\$106.30
Poa Annua – Physiology, Culture & Control of Annual Grasses	\$174.22	\$151.20
Rootzones, Sands & Top Dressing Materials for Sports Turf	\$122.24	\$106.30
Salt Affected Turfgrass Sites	\$221.38	\$192.50
Sands for Sports Turf Construction & Maintenance	\$ 79.11	\$ 68.80
Seashore Paspalum – The Environmental Turfgrass	\$213.54	\$185.70
Sports Fields – A Manual for Design, Construction & Maintenance	\$253.00	\$220.00
Sports Turf & Amenity Grasses – A Manual for Use & Identification	\$122.24	\$106.30
Sports Turf & Amenity – Grassland Management	\$158.13	\$137.50
Sports Turf - Science, Construction & Maintenance	\$316.25	\$275.00
Tree, Turf, Ornamental Pesticide Guide	\$115.00	\$100.00
Turf Irrigation Manual	\$179.74	\$156.30
Turf Managers HBK for Golf Course Construction, Renovation & Grow-In	\$213.54	\$185.70
Turf Weeds and Their Control (HB)	\$313.38	\$272.50
Turfgrass: Agronomy Monograph No 32	\$221.38	\$192.50
Turfgrass Diseases & Associated Disorders	\$115.00	\$100.00
Turfgrass Installation, Management & Maintenance	\$337.86	\$293.80
Turfgrass Maintenance Reduction Handbook – Sports & Golf	\$258.75	\$225.00
Turf Management in the Transition Zone	\$156.25	\$132.80
Turfgrass Management – 7th Edition	\$284.63	\$247.50
Turfgrass Management Information Directory	\$126.50	\$110.00
Turfgrass Patch Diseases	\$194.11	\$168.80
Turfgrass Pests	\$ 94.88	\$ 82.50
Turfgrass Problems: Picture Clues & Management Options	\$102.81	\$ 89.40
Turfgrass Science & Culture	\$323.49	\$281.30
Turfgrass Science & Management 3rd Edition	\$222.86	\$193.80
Turfgrass Soil Fertility & Chemical Problems	\$287.50	\$250.00
Weeds an Illustrated Guide to Weeds of Australia	\$197.68	\$171.90
Weed Science: Principles & Practices	\$284.63	\$247.50
Weed Ecology: Implications for Management 2nd Edition	\$401.11	\$348.80
Weed Control Handbook: Principles 8th Edition	\$363.74	\$316.30

WATER & IRRIGATION	Non-Member	Member
Agricultural Salinity & Drainage	\$ 79.11	\$ 68.80
Design & Construction of Small Earth Dams	\$230.00	\$200.00
Drainage for Sportsturf & Horticulture (PB)	\$ 58.53	\$ 50.90
Drip Irrigation Management leaflet	\$ 11.50	\$ 10.00
Evaluating Turfgrass Sprinkler Irrigation Systems (leaflet)	\$ 11.50	\$ 10.00
Fertigation	\$253.00	\$220.00
Nitrates in Groundwater	\$251.61	\$218.80
Simplified Irrigation Design 2nd Edition	\$196.29	\$170.70
The Surface Irrigation Manual	\$316.25	\$275.00
Turf Irrigation Manual	\$186.88	\$162.50
Wastewater Re-use for Golf Course Irrigation	\$316.25	\$275.00
Water in Australia: Resources & Management	\$136.55	\$118.75

BEST SELLERS FOR 2007/2008

Turf Managers Handbook for Golf Course Construction and Grow-In – **B. Charles**
 Destructive Turfgrass Insects, Biology, Diagnosis and Control – **Daniel A. Potter**
 Discovering Donald Ross-The Architect & His Golf Courses – **Bradley S. Klein**
 Growing Media for Ornamental Plants and Turf – 3rd Edition – **K. Handreck, N. Black**
 Golf Course Management & Construction – Environmental Issues – **James Balogh and W. Walker**
 Golf Course Irrigation System – Design and Drainage – **Edward Pira**
 Keepers of the Green – A History of Golf Course Management – **Bob Labbanace**
 Turf Managers Handbook for Golf Course Construction, Renovation and Grow-In – **B. Charles**
 Turf Management for Golf Courses – **James B. Beard**
 Turfgrass Soil Fertility & Chemical Problems – **R. N. Carrow, Waddington & Rieke**

Please note: All prices include GST - Prices are subject to change without notice

The AGCSA has an extensive range of books that can ordered through the AGCSA website, and also through the accompanying order form.

Postage: \$9.90 for first book and \$1.10 for every book after.

Creating Your Eco-Friendly Garden

By Mary Horsfall

CSIRO, 2008

In Volume 10.3 (May-June 2008) Australian Turfgrass Management reviewed Kevin Handreck's most recent offering titled Good Gardens with Less Water. Written as a practical guide to gardening with limited water, it was the first book in a series of gardening guides to be published by the CSIRO.

Creating Your Eco-friendly Garden, by Mary Horsfall, is the second guide in the series and outlines the steps to develop an environmentally friendly garden for little cost. Practically written, it is based on the author's first-hand experience as well as the wealth of knowledge she has amassed working at Grass Roots, a popular Australian self-sufficiency magazine.

Running to 168 pages, the fully-illustrated book offers advice on planning a garden, choosing plants, planting times, watering options and pest management following organic principles. It explains how to assess the soil and microclimatic effects of surrounding buildings and vegetation so that you can determine the style of garden that best suits your property.

Water efficiency, biodiversity, soil conservation, use of native and biodiversity-friendly plants, organic methods, use of recycled materials and avoidance of environmental weeds are themes that feature

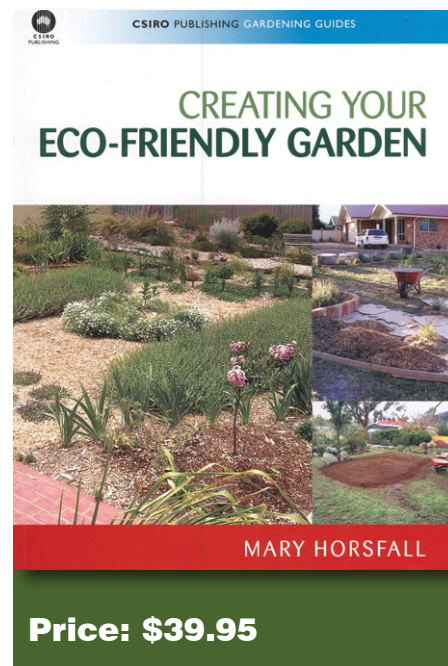
strongly throughout the book, and will appeal to gardeners/landscapers with strong environmental values.

As Horsfall espouses in her introduction: "We humans too often unthinkingly have a negative environmental impact; we use the earth's resources, leaving nothing but waste in their stead and fail to consider the importance of the natural systems that are essential to our survival. It is within our power to reduce our environmental impact, and creating an eco-friendly garden is a great way to start.

"Our gardens can continuously improve and replenish the soil, use no damaging chemical fertilisers or pesticides, be water efficient, incorporate pre-used materials where possible, include native and indigenous plants and be biodiversity-friendly."

The book begins with a look at the general concepts of site assessment and goal setting before looking at the importance of biodiversity. Following chapters deal with plant selection, preparation and construction and planting. There are also chapters discussing waterwise options, safe solutions to pest problems and drought proofing.

The book also includes a full glossary of terms as well as a handy reference guide of waterwise plants which are suited to particular situations.



Although Creating Your Eco-friendly Garden is targeted mainly at enthusiastic home gardeners and new home owners, it will also have value for horticulture students, landscapers and other horticulture professionals responsible for construction and maintenance of garden areas who are looking at ways of doing so in an environmentally sustainable manner. 🌱

ORDER FORM - ORDERS CAN ALSO BE EMAILED TO info@agcsa.com.au

Name:

Postal Address:

City/Suburb: State:

Postcode: Daytime Phone Number/Mobile:

Please supply the following books:

QTY	BOOK TITLE	AUTHOR	PRICE
.....
.....
.....

Subtotal:

Please add postage (\$9.90 for the first book, Each additional book \$1.10 per book)

Total now due: \$

☐ I enclose my cheque/money order made payable to the AGCSA, or

☐ Please charge this purchase to my credit card account

☐ Mastercard ☐ Visa

Card Number:/...../...../.....

Expiry Date:/.....

Cardholder Name:

Address:

Signature:

Send completed order form and payments to:



Suite 1, Monash Corporate Centre
752 Blackburn Road,
Clayton, VIC 3168
Phone: (03) 9548 8600
Fax: (03) 9548 8622
Email: info@agcsa.com.au

GCSAQ

Spring has certainly sprung in the Sunshine State with almost all superintendents around the traps reporting a return of grass growth. Indeed, we experienced the second hottest September day on record in Brisbane when the mercury topped 35. October/November also heralds the 'reno' season up here with virtually all superintendents tearing their courses apart in readiness for the summer.

Many supers around the country would be aware of the trials and tribulations that Jeff Gambin has endured in his employment over the past several years and it all came to a head in early October when he resigned his position at Gold Coast Burleigh Golf Club.

Anyone knowing Jeff knows of his dedication to his profession and his position, not to mention the perfection that he seeks and demands from his crew which resulted in the fine turf that his members enjoyed. Jeff has been a great mentor to many young supers and an even better friend to some of us older blokes over the years, not to mention his contribution to both the Queensland and Australian associations. The good news is that Jeff and wife Karen can now embark on their much awaited round Australia trip!

Given the electronic age we currently live in, I thought a quick email to various supers around the state asking what was happening in their neck of the woods might add some interest to my report. The replies were patchy but with no names mentioned one of our members recently had a colonoscopy, another is settling in to his new job just nicely, another's grandmother had just passed away and another couldn't care less as he was about to start annual leave!

The new Dent Island development is starting to take shape



However, there were some good reports and none happier than Brisbane Golf Club superintendent Ben Cavanagh who returned from the John Deere Challenge in New Zealand not only with a return airfare to the USA, but with a ticket to play in the Pro-Am at next year's US PGA Tour John Deere Classic. Ben is quite a capable golfer and at first most thought he had won on golfing ability, but alas it was just a lucky draw out of a hat! Well done Ben and the list of volunteer caddies grows longer every day. Jeff Lane from Paradise Palms has also got back from NZ, unfortunately empty handed, but glad to get back to the warmth of Cairns after an icy and wet sojourn.

GCSAQ life member Doug Robinson reports that he has now completed his contract on the Dent Island golf project and has handed the reins over to Ben Marshall who will continue to bring this amazing project to life. Doug will continue on a casual basis over the next year.

Doug enjoyed a month or so after finishing at Dent travelling around outback Queensland with wife Kay in their newly acquired caravan.

As mentioned above, Doug's fellow "lifer" Jeff Gambin is about to embark on a trip in his aptly named campervan as well which is a bit of a scary thought for me as they have both occupied the very seat in which I am currently sitting. Something to look forward to I guess! But the urge to travel is probably more to do with our life members, as Barry Cox is also off with the grey nomads at the moment too. (Fancy that – Jeff Gambin a grey nomad!)

South east Queensland John Deere dealer and GCSAQ Gold sponsor Chesterfield Australia hosted our August education day at Windaroo Golf Club. A fine and sunny day greeted us and the format was a field day arrangement with small groups travelling from demo to demo which made for some good opportunities to try some of the machines out first hand. About 60 members were in attendance which was an excellent turn out. Many thanks to Fraser Scott and Ryan Mulcaster and their team for the day.

Our Turf Research Golf Day is at Glenn Beauclerc's Robina Woods on Monday 10 November and there are a few spots left for last minute teams so call now on 0408 611 785 to book in your team. This day is a very important fundraiser for our contributions to research and a great opportunity to play a fine golf course.

And the most popular day of the year, with our kids anyway, is the Wet'n'Wild Christmas party at, you guessed it, Wet'n'Wild on the Gold Coast. \$10 for adults and \$5 for kids is great value and always well patronised – so book early.

PETER LONERGAN
PRESIDENT, GCSAQ

STA NSW



The year has certainly flown by with another season of winter sports concluded. We now prepare for the heat of summer and the effect it will have on our turf.

The Sports Turf Association recently held its AGM at ANZ Stadium and on behalf of all members I would like to thank all the previous committee members for their hard work and commitment to the association. Many thanks to Dave Chappell, Jarrod Quinell and Mark Mitchell who stood down.

Dave held the position of vice-president and due to work commitments was unable to be an active committee member. Jarrod, while not officially on the committee, will still be our

North Coast support. Mark was an original committee member and has always been tremendous help to the association.

I would like to take this opportunity to express my gratitude to members for their support in being elected once again as president. I would also like to welcome new committee members Joel Toogood of Green Horticulture (Campbelltown Stadium), Richard Herring of Marrickville Council, Paul Chalmers of St Aloysius College and Jim Linigen of Spotless. We are also delighted to welcome back John Cullen of Turfcare NSW.

I feel that with the support and experience of the existing members and the 'new blood',

this committee will be very enthusiastic and we will continue to grow and develop the association. A full list of committee members is available on the website.

At the time of writing, the Sports Turf Association is preparing for its biggest event of the year, the Sportsman's Charity Luncheon, to be held at Parramatta Leagues Club on Friday 14 November. We are anticipating another successful event and it is always satisfying to see the turf industry come together for a great social day.

GRAEME LOGAN
PRESIDENT, STA NSW

As I sit writing this report during pit stops while watching the great race at Bathurst unfold, I reflect on what has been occurring over the previous 2-3 months.

Coming out of the winter months, which was once a time to get on top of all the small jobs which seem to be pushed to the side during the main growing season, it seems that times have changed.

With golfing calendars and demands for trade events at our clubs ever increasing, there seems to be no time to revitalise the system prior to many renovations and the growing season sneaking back around.

At my club, we were still experiencing heavy frosts on a Thursday in mid August with the coming Saturday turning out to be 34 degrees. How can you prepare turf for such extremes? Our management is always changing and there will always be areas of improvement in planning for such issues and events as they unfold.

BOARD NEWS

The new look NSWGCSEA Board met for the first time at Asquith Golf Club on 4 September.

It is great to have some fresh faces on the board that are willing to give up some of their valuable time to help out our great association.

The board had previously agreed to supply each member club a copy of the Turf Management Safety DVD produced by the VGCSA, which we congratulate them on doing. The board hopes that all NSWGCSEA superintendents enjoy the DVD and put this tool to good use for staff induction and training.

The most recent NSWGCSEA education day was held at Concord Golf Club on 13 October, with communication and time management the theme for the day.

We had five great speakers for the day with host superintendent Mark Parker talking about construction management and what a golf course superintendent needs to know. Gary Beehag, from M. Collins and Sons, spoke on golf growing media specifications, while Graeme Logan from ANZ Stadium talked about communication and time management and managing a multi-use venue.

Nuturf's Craig Easton discussed sequential management systems while Daryl Sellar,

representing the AGCSA, spoke about the importance of communicating with staff, members and management and outlined successful strategies for superintendents to employ. Our appreciation must go to our joint sponsors for the day, M. Collins and Sons and Nuturf, for their great support.

HARBOUR CRUISE

The annual NSWGCSEA Christmas harbour cruise will this year be held on 3 December. Last year was a great success with the return to a larger boat which catered for the great numbers that this day attracts.

Please be reminded that the day does fill up quickly and is limited to the first 100 people so book in early to guarantee your spot on this great relaxing day on the best harbour in the world. Once again the day has been greatly supported by great sponsors Dad & Dave's Turf Supplies, e-par and Vermont Sands and their continued support of this annual event is greatly appreciated.

CRAIG WRIGHT
PRESIDENT, NSWGCSEA

EUROPEAN ENGINEERING, WORLD CLASS RELIABILITY



**Grass & debris
collection mowers
Wide area mowers
Road sweeper opt**



**High Speed Flails &
De-thatchers
Collect & Non-Coll.
Hi-lift & On-Ground
Dumping**



**Petrol, Diesel &
Electric Utility Vehicles
4WD, Long Bed &
Cabin options**



**Proudly distributing a "World's
Best" line-up, where every
product is best in its class!**

**Grass & Debris Collection
mowers (350 to 3000 Ltrs)**

**Wide Area Mowers
(Rotary & Flail, up to 5M)**

**PTO Flail Mowers & De-thatching
units**

**Utility vehicles up to 1T load +
2T towing capacity**

**Environmental Applications
(Benefits for Air, Soil & Water)**



JSB Equipment Pty. Ltd.
2137 Frankston - Flinders Rd
HASTINGS, VIC. 3915
P: (03) 5979 2788
F: (03) 5979 2688

For Sales enquiries contact:
John Bird 0407 600 100
"Dealers in all states"

JSB Equipment have a network of 58 dealers covering Australia & New Zealand

The TGCSA hosted its annual two-day seminar at Port Sorell Golf Club on 19-20 August. Both days were very well attended with upwards of 60 members present.

The Tuesday started with our gold sponsors Toro and Tas Turf Solutions both giving small presentations. Our guest speakers Peter Frewin (Barwon Heads Golf Club) and Daryl Sellar (AGCSA) gave very informative talks on recycled water and human resource management. The trade exhibition was well attended with up to 10 exhibitors showing various items of equipment.

Port Sorell Golf Club put on a delicious BBQ for lunch and in the afternoon the golf proved very entertaining. With the weather conditions deteriorating and the drinks cart heading back for shelter, the 19th hole couldn't come quick enough for most players. The winner of the Reg Roberts Memorial Trophy was Mark Johnson from Ulverstone Golf Club on the north west coast with 19pts.

After a big night on Tuesday, the fry up

breakfast was very welcome on Wednesday morning. The AGM was attended by 28 members and the following board was voted in for the 2008/2009 year:

President: Stephen Lewis (Royal Hobart GC)

Vice-president: Tony Smith (Launceston GC)

Treasurer: Barrie Brtevnik (Rosny Park GC)

Secretary: Danny Gilligan (Tasmania GC)

Committee: Kane McDonald (Devonport GC), Doug Ollington (Tas Turf Solutions), Ricky Barr (Longford GC) and Tom Crawford (Riverside GC).

Welcome back to past president Tony Smith who is having another go – well done mate. Also welcome to two new board members Ricky Barr and Tom Crawford. We hope their youthful enthusiasm will help keep the association moving in a positive direction.

After the AGM Peter Frewin and Daryl Sellar gave us an insight into some very large projects that they have undertaken at their courses. The day finished with a major raffle draw which Kane and Barrie cleaned up. Thanks must go to Port Sorell, all our sponsors

and Daryl and Peter for giving up their valuable time up to travel over the strait, and also to all the members for attending.

The south eastern region of Tasmania is still really struggling with drought and gale force winds over the past few weeks. The rainfall total for September at Hobart Airport was just 13.2mm and was the seventh month in a row of below average rainfall. The year to date total is 221.4mm. This is compared to Wynyard Airport's year to date figure of 714.8mm. Let's hope we get a little bit of precipitation in the south before the summer kicks in.

Our last TGCSA meeting for the year will be held at Longford Golf Club on 9 December. This meeting will be a fairly relaxed day giving everyone a chance to catch up and have a chat. Course superintendent Ricky Barr will be hosting the day and will include a course inspection. More information will be available shortly.

STEPHEN LEWIS
PRESIDENT, TGCSA

Superintendents in South Australia have been well aware of the seriousness of the ever growing water shortage in our state and have had to deal with water restrictions and the additional pressures associated with these issues for some time.

The SAGCSA has worked hard at developing a good relationship with the relevant water authorities and in particular with SA Water which has assisted clubs reliant on mains water in gaining better conditions than those relevant to the level of restriction for that particular period.

The Golf SA Water Task Force, which was formed in 2007 to ensure that Golf SA was contributing to protecting the industry from the effects of the drought and increasing water restrictions, has also become key to achieving ongoing availability of mains water to clubs faced with no alternative. The task force has representatives from Golf SA, SAGCSA and an industry consultant.

One of the problems we have encountered when dealing with water authorities has been a genuine lack of understanding of the water requirements and management expertise required when irrigating turf on golf courses, in particular greens and tees.

This has led to inequitable restrictions which have revolved purely around the days



and times clubs can access mains water. Clubs with large pumping capacity have been able to use far more water than clubs with less capacity.

Having set days and times for watering has not been an efficient way to use water as it does not cater for weather conditions or allow for efficient irrigation application.

From the first meeting with SA Water in 2003, the SAGCSA has argued that the most efficient method for clubs to manage mains water through periods of restriction is to be

given an allocation to manage using best irrigation and turf management practices.

I am really pleased to say that after the most recent meeting with SA Water, which had representation from the task force and clubs that are likely to use mains water this season, it has been agreed that clubs will be able to apply for a permit which will allow for an allocation of mains water to be used under the guidelines of the Irrigated Public Open Space (IPOS) Code of Practice.

This is a great result because superintendents can now use their allocations in an efficient manner. There are some additional requirements that come with this method of restriction, such as the submission of an irrigation management plan and monthly meter readings which are to be supplied to SA Water.

Should clubs require assistance through this process there is free advice available through Golf SA and an engaged consultant. I would encourage all clubs and superintendents who use mains water to maintain the required systems so that our industry continues to have access to the allocation method until alternative water sources become available.

ANDREW BLACKER
PRESIDENT, SAGCSA



Education chairman Mike Walker has been elected as a proxy board member for Primary Skills Victoria. This means we will now have the turf industry represented at board level. Training is at the forefront as the TGAA moves to launch its accreditation scheme this November.

The Victorian Government has announced major training package reforms called "Securing Jobs for your Future Skills for Victoria". Funding highlights include:

- Victorian Government will commit \$316 million over four years; and
- 172 extra government subsidised training places.

The government wants industries to retain their skilled workforce and included in the package is \$2 million for retaining apprenticeships. The TGAA fully supports the retention and expansion of apprenticeships for the horticultural/turf industry.

Your TGAA Victoria committee has been working towards organising events over the next 12 months, including a regional event in

The Australian Seed Federation trial plot at Mt Scopus College



Morwell. This event has been planned to cater for regional members and future events are also being planned for other regional areas in the coming years. Keep an eye on the TGAA website for further details.

Our Summer Seminar will be held in the Yarra Room, MOPT, on 25 November. This day will address the topic of recycled water options and initiatives. This one-day seminar will include the Melbourne Sports Precinct and Wesley College recycled water projects, NMIT presentation on soil sampling and a session on water quality and how it relates to soil management.

2009 will also include a follow-up session on the successful Australian Seed Federation seed trials at Mt Scopus and the bi-annual Bursars Day in May. Next year's Cricket Wicket Seminar has been booked for 24 June and will be held in the MCG's Olympic Room.

Membership fees for 2008-2009 are now due. For further information and a membership form, please call Sue Bailey on (03) 9791 6900, email admin@tgaa.asn.au or download a form directly from our website www.tgaa.asn.au.

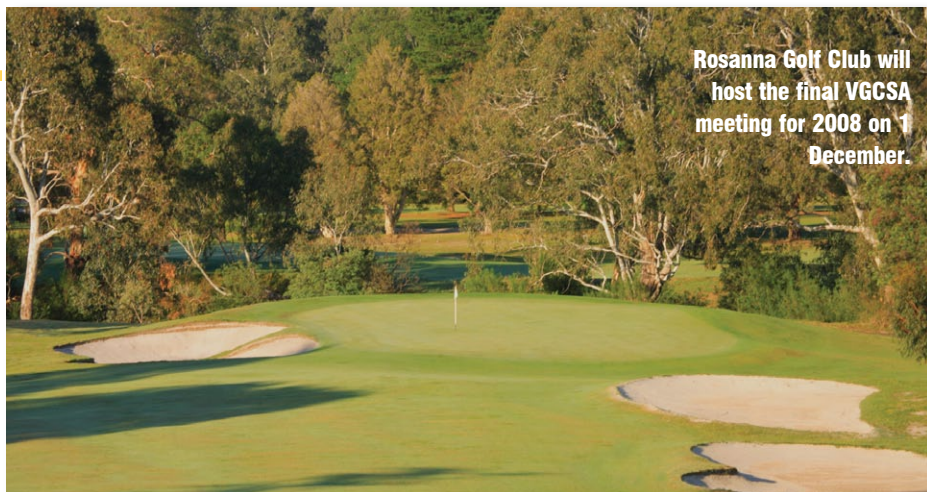
ROB SUNDBLOM
PRESIDENT, TGAA VIC



With a reasonable rainfall totals recorded in winter, spring was looking promising for Victorian superintendents. Hopes were quickly dashed, however, with Melbourne recording just 12mm for September, its driest since records began in 1855. The previous driest was September 1907 when 13.4mm of rain fell. Historically September is one of Melbourne's wetter months averaging 57.9mm.

This record low rainfall in September continues the very long drought which has affected Melbourne since late 1996. With just three months left in 2008, it is now virtually certain that Melbourne will record its 12th consecutive calendar year with below average rainfall. The previous record is six years set in 1979 to 1984, highlighting the unprecedented severity of the current drought. As I write this Melbourne is experiencing a few small rain events falls, but we need a lot more or else we will be in for another long hot summer.

The VGCSA has held two meetings since the last edition of ATM. The August meeting was held at the new Eynesbury Golf Club in August with around 70 delegates attending the day which was very pleasing to see. Mats Marklund from meeting sponsor Scanoz gave an entertaining talk on the history of golf carts and where the future of golf carts lies.



Rosanna Golf Club will host the final VGCSA meeting for 2008 on 1 December.

The format of the day was planned around the relevance behind soil and tissue testing with Phil Ford from NMIT giving an extremely well researched and informative talk on this topic with plenty of discussion from the floor. The VGCSA would like to thank Phil who is very generous with his time and is always willing to present topics to help us inform our members.

Superintendent Garry Collins gave a well informed presentation on the construction and grow-in period of the Eynesbury course. Given the terrain the course was constructed on it is a credit to Garry and his staff. Those who went on to play the Graham Marsh designed layout enjoyed a well presented and challenging modern golf course that had a feeling it had

been established years ago. Thanks to all the staff at Eynesbury who made us feel very welcome.

The most recent VGCSA meeting was the Turf Research Day held at Woodlands Golf Club (superintendent Glenn Stuart) and a full report on that day will be included in the next ATM. The final meeting of 2008 will be at Rosanna Golf Club (superintendent Ian Emery) on 1 December. The day will be sponsored by everyone's mate Ted Boltong from Active Safety with a shotgun start in the morning, with BBQ lunch and presentation to follow. Hope to see you there.

MICHAEL FREEMAN
PRESIDENT, VGCSA

GCSAWA

At our first state executive meeting after the August AGM it was a chance to welcome onto the committee Brad Sofield after a two year absence as secretary and Simon Bourne for the first time as golf secretary. There was a bit of shuffling among the committee with Glenn Cross now looking after education and events with Brad Anderson now vice-president as well as being our representative on the University of Western Australia Turf Steering Committee.

Also at the AGM members decided to again support a state conference to be held south of Perth, possibly at Bunbury, Busselton or Margaret River in May 2009. Glenn will be looking closely at all the possibilities and costs involved so please support this important event to ensure its long-term future! To all AGCSA members and other state association members, you are more than welcome to come across to WA and listen to local superintendents and see what's happening in the West. Details will be available through the AGCSA early in 2009.

The first e-par open session day organised by the GCSAWA was held at Lake Karrinyup Country Club in mid-October. The session was aimed to help registered members discuss the e-par system in an open forum and to look at methods of navigating through the various holes efficiently.

We managed to cover holes 1-13 with a lot of information shared and emailed to each



Recently elected committee member Simon Bourne took out the 2008 GCSAWA Golf Masters Cup

member on the day saving a lot of time and effort. The biggest benefit of the day was that everyone realised e-par is not as difficult as first thought and that there are plenty of short cuts provided on the e-par website that can be easily adapted to your system. This session was a way for the GCSAWA to help members with what is a very important aspect of golf course operations.

The final round of the GCSAWA Golf Masters Cup was also held at Lake Karrinyup in the morning. Simon Bourne from Cottesloe Golf Club won the overall event with 73 points with Brad Anderson second on 71. Geoff Stephens came in third on 70 points. I must thank all the sponsors which made this event such a great success and we look forward to next year and the savage handicapping of this year's winning trio.

Most clubs in WA have now finished their greens renovations and are gearing up for what we expect to be a hot dry summer, even

though the long-term forecast is showing well above average summer rains which would be more than welcome. I'm sure Mandurah Country Club and Seaview Golf Club will be looking forward to this summer with their new irrigation system upgrades completed.

The GCSAWA Christmas party has been booked again at the popular Rosemount Bowls on 5 December with confirmation to follow in early November via email or Divots. This is free to GCSAWA members and their families and provides a great wind up to the year.

I would like to take this opportunity to thank all state and national members for their support over the year and wish them a safe and merry Christmas and prosperous New Year. On a closing note I look forward to representing everyone within the GCSAWA and hope I can achieve some of the association's goals in the coming year.

DARREN WILSON
PRESIDENT, GCSAWA

TGAA ACT

Spring is in the air and most turf and landscape areas in and around the ACT have responded well to recent rain and are starting to fire up. With the cool- to warm-season transition occurring on some golf courses and sites the busy season is well and truly underway.

The TGAA ACT AGM was held on 27 August at Gold Creek Country Club and was well attended by turf managers from all spectrums of the industry, as well as those along for the free feed. ANZ Stadium venue manager and STA NSW president Graeme Logan was the guest speaker and gave an entertaining presentation on the highs and lows of being a high profile venue manager. Most turfies present were re-thinking how hard they do it after hearing Graeme's trials and tribulations.

Deputy Opposition leader and Shadow Minister for Sport and Recreation,

Brendan Smyth, opened the meeting and acknowledged the difficulties facing the turf industry, highlighting the drought and equally importantly the skills shortage.

The TGAA ACT has formed a skills shortage sub-committee and is looking at ways to attract and retain young people within the industry. This is a great initiative and highlights the importance we place on addressing the decline of industry professionals.

The new committee is currently toying with ideas on different formats and speakers to ensure the ACT turfgrass seminar continues to be one of the more popular gatherings of turf managers from Canberra and the surrounding regions. Those committee members in charge of organising the seminar insist that it will be bigger and better than ever. More details will be published in upcoming newsletters.

The couch trial, set to take place at Royal Canberra Golf Club, is moving forward with the

key stakeholders meeting recently to discuss the trial. Professor Peter Martin, university student Trent Fraser and TGAA ACT committee members gathered to discuss details such as trial layout, mowing heights, watering regimes etc. Once up and running, the trial will be a valuable tool for local turf managers as well as any other interested parties. Information will soon be available on the TGAA ACT website.

In closing I would like to take this opportunity to thank the TGAA ACT for welcoming both Glen Heunder and myself to the committee. I'm sure I can speak for Glen in saying that we both look forward to working with the committee in ensuring a bright future for our industry. And just to sign off, carn' the HAWKS!

BROCK WESTON
COMMITTEE, TGAA ACT

Achieving Par

Finding the balance



**Early Bird
Registration
Open**

Visit www.agcsa.com.au

-  **Turf Health**
-  **Budget Management**
-  **Personal Well Being**
-  **Staff Health**

**25th Australian Turfgrass Conference and Trade Exhibition
Hobart, Tasmania 13-17 July 2009**



"The growing-in phase of a new golf course is critical and requires detailed planning, particularly when it comes to irrigation.

When the new Settlers Run Golf Course at Cranbourne was in the early stages of planning we had no hesitation in recommending a Lowara pumping system because of its better control, long term reliability and ease of maintenance.

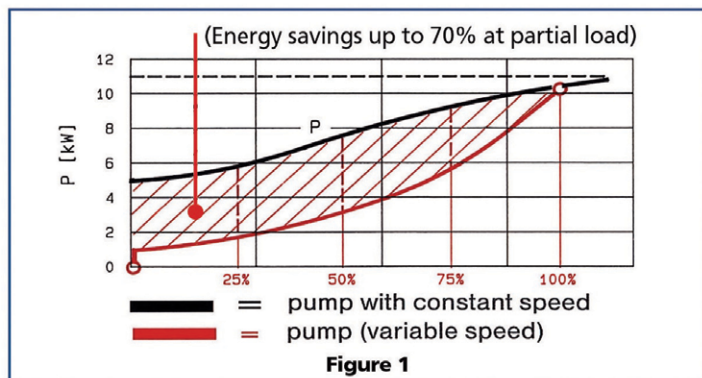
The Settlers Run pump installation incorporates 4 variable speed Hydrovars which are uniquely linked to Toro Irrigations' Sitepro software which delivers to the Superintendent precise information on the performance of the total pumping system, which is absolutely critical to the grow-in phase.

Combine that with Brown Brothers' exemplary after sales service and Settlers Run couldn't be in better hands."

Brendan Graham, A&M Watering

How the Hydrovar reduces energy consumption.

Most applications involve the pump operating either along its full speed performance curve or the pumps performance is throttled or regulated by a valve. The Hydrovar eliminates these operating methods by regulating pump speed and hence output to match the system demand. This saves wasted energy traditionally lost in these conventional pump systems. Energy savings of up to 70% can be realized. (figure 1)



What is Hydrovar?

Hydrovar has gained a reputation as THE pump mounted microprocessor pumping system controller. But it does much more than just change motor speed.

It actually manages the performance of the pump to match a wide range of system conditions and requirements.

Hydrovar is fully programmable on site as it incorporates the microprocessor and the variable drive in one compact and unique package

How Hydrovar reduces maintenance cost.

Hydrovar software is designed specifically for centrifugal pump operation, control and protection. Hydrovar can thus be setup to protect the pump from operating under various unfavourable conditions eg. cavitation, operating against closed head, low NPSHa or operation past a pumps maximum flow rate. Hydrovar will automatically shut down and alarm if adverse conditions occur.

Hydrovar provides the Golf Course Superintendent with the flexibility of watering required with substantial savings on installation, power usage and maintenance. For details about the experience of some of Australia and New Zealand's most prestigious Golf Clubs who have installed Hydrovar pumping systems, contact the Lowara distributors nearest you.

What is Flowlink?



To assist green-keepers and Superintendents in the golf course, turf and irrigation markets, Lowara and TORO Irrigation teamed up together to develop a link between the Toro Sitepro software and Hydrovar.

The link operates with up to 4 Hydrovar pump systems and monitor running / fault conditions and measures pressure and flow of the pump system.

All these parameters are displayed on the central irrigation control computer



Christchurch

Phone (03) 365 0279

Fax (03) 366 6616

Auckland

Phone (09) 525 8282

Fax (09) 525 8284

Melbourne

Phone (03) 9793 9999

Fax (03) 9793 0022

Sydney

Phone (02) 9671 3666

Fax (02) 9671 3644

Brisbane

Phone (07) 3200 6488

Fax (07) 3200 3822

Email info@brownbros.com.au

Web Site www.brownbros.com.au