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ANTEP ryegrass and tall fescue Couch salinity tolerance

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COVER: Royal Hobart Golf

Club: The 362m par 4 16th at Royal Hobart Golf Club. Superintendent Stephen Lewis and his crew will play host to the 2009 AGCSA Golf Championships on 13 July.

Photo:

Brett Robinson.





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superintendent Stephen Lewis. With the annual Australian Turfgrass Conference returning to Hobart for the first time since 1978, ATM catches up with Lewis to look at how some major changes in recent years have helped to set the course up for a long and prosperous future.

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Planting the seed of sustainability

Director of The R&A's golf course management committee Steve Isaac is set to touch down in Australia this September to present a series of workshops on sustainable course management. ATM quizzes him on his role and how superintendents can embrace the concept of sustainability.

George's final fling with Ailsa

The Open Championship returns to Turnberry's Ailsa Course in 2009 and it will signal the last hurrah for one of the UK's most respected and long-serving course managers.

25TH AUSTRALIAN TURFGRASS CONFERENCE

Your guide to Hobart 2009

Achieving Par

The Australian Turfgrass Conference makes a long-awaited return to Tasmania in 2009 and ATM will again act as your official conference guide to Hobart. From a rundown of events to

profiles of the 2009 AGCSA Awards finalists. this guide has everything you need to know about conference week.



Farewell to a Master

Graeme Grant, Martyn Black and Jack Newton pay tribute to former Huntingdale Golf Club superintendent John Wilson Spencer who died in May aged 66.

The long road to recovery

It has now been over five months since the Black Saturday bushfires changed the lives of countless Victorians. ATM catches up with superintendents Rob Christie, Tim Warren and Brad Tucker to see how the rebuilding process is going.

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Screening hybrid couch cultivars for salinity tolerance

Queensland Primary Industries and Fisheries scientist Bartley Bauer reviews the work being undertaken at Redlands Research Station to assess salinity tolerance of a range of hybrid couch cultivars.



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WATER MANAGEMENT Roseville Golf Club and Easts Leisure and Golf 68

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Seek and you shall find

ho in their right mind would want to buy, or build for that matter, a house! Well, me as it turns out and to be honest it's one of the most stressful things I have ever embarked upon. I thought marriage was a big enough commitment, but the thought of saddling myself, the War Cabinet and the Hurricane with 30 years of debt is equally as big, if not bigger, and has led to my significantly denuded bonce shedding what remaining hair is left. It's the sort of momentous time of your life when you need to call upon the support and sagely advice of family, friends and colleagues and I have no doubt annoyed the living suitcase out of everyone in my endeavours to secure a roof over Clan Robinson. As this note is typed the hunt, and incessant emailing and calling, continues in earnest...

Seeking the advice, support and comfort of others is not something many of us will admit to doing, but when times are tough or you're feeling out of your depth it is vital to do so – trust me on this one. Just as the recent Victorian bushfires have demonstrated, people are willing to go to amazing lengths to help people in need, but more importantly it is up to individuals themselves to recognise when going it alone is perhaps not the best solution.

With that in mind the upcoming 25th Australian Turfgrass Conference and Trade Exhibition in Hobart will probably be one of the most important events in recent times, especially given the tough climate in which superintendents and turf managers now have to operate in. All turf industry professionals have no doubt been asked to eke more out of their operating budgets in light of the global downturn which in some instances may stretch a few to breaking point. This year's conference will provide a timely opportunity to seek the assistance of and hear from colleagues facing similar situations and industry experts who can perhaps provide the answers you are looking for, whether it's on or off the course.

With the 25th Australian Turfgrass Conference just a few weeks away, this edition of ATM will again act as your guide to this year's gathering which makes a welcome return to Tasmania for the first time since 1992. This edition's cover story profiles Royal Hobart Golf Club superintendent Stephen Lewis who has notched up more than three decades at the club and together with his frost-hardened crew will set the course up for the 2009 Toro AGCSA Golf Championships. On the subject of Jack, Lewis is predicting an 85 per cent chance of an icy tee off for the golf championships and has advised punters to bring an extra layer of thermals for what promises to be an 'invigorating' start to conference week.

Elsewhere in this edition, we pay tribute to one of Lewis predecessors at Royal Hobart, John Spencer, who died in May after battling cancer. John was of course better known for the 20 years he spent as course superintendent at Huntingdale Golf Club and together with the help of Graeme Grant, Jack Newton and Martyn Black we look back over John's impressive career.

ATM's commitment to providing the latest in Australian turf industry research is again demonstrated in this edition with a look at the final results from the two-year ANTEP ryegrass and tall fescue trials, as well as the latest work from Redlands Research Station in Queensland screening hybrid couchgrass varieties for salinity tolerance. John Neylan also starts what will be a regular look in coming editions at the Horticulture Australia Limited-AGCSA funded literature review on golf and its relationship with the environment recently conducted by Peter McMaugh and Dr Ross Higginson.

See you all in Hobart for what should be a top week. Enjoy the read.



JOHN NEYLAN, AGCSA GENERAL MANAGER

Sustainability and efficiency more important than ever

n my travels it has been noticeable that golf clubs are generally tightening their belts either due to reduced revenue or in anticipation of the effects of the global economic turmoil. While budgets are starting to contract, the expectations of the golfer and possibly the golf course superintendent still remain high. This challenge is not new to superintendents and most find a way to deliver the same quality with fewer resources.

The question that needs to be asked though is 'how far can it go?' In discussing this issue with superintendents the things that get neglected are bunkers, rough maintenance, blowing debris off fairways and those areas not considered key playing surfaces.

As a general observation, while some efficiency gains can be made, superintendents and groundstaff are tending to work harder to achieve the same result. In the words of one greenkeeper to his superintendent in response to yet another committee demand to slice more off the budget but still maintain the same standards of presentation, "...you need to stop solving their problems for them."

The challenge here is to assess what is being done and how and whether particular tasks can be done differently and more efficiently. As a superintendent it is important to evaluate whether you have eked out all you can from the budget as it relates to a particular course standard.

It is unfortunate that too few clubs have a course standards policy document and tend to make grand statements such as "we want firmer and faster greens" or "the course needs



to be the best presented in the district." These may be admirable sentiments and ambitions but are they achievable within the limitations of the site and the available resources? There is little to be gained from arguing at a committee meeting without being armed with the facts. The onus is going to be on the superintendent initially to define a standard and then detail the resources that are required to meet that standard

Understanding what that standard may be can be a challenge to define, however, it may be as simple as observing the golf course and picking a point in time when you believe that it is representative of what is achievable most weeks of the year. This standard should allow for room for improvement where with additional inputs it can be lifted for special events

For that selected standard, manpower and equipment requirements to undertake each particular task must be defined and costed and then presented to management. At that point, reasonable decisions can be made based on facts. The high cost and labour input areas of maintenance need to be highlighted in this process.

Over the next few months the AGCSA will provide several opportunities to assist superintendents in better defining their position and what is achievable on the golf course. At the

25th Australian Turfgrass Conference in Hobart there will be a number of papers and forums presented discussing budgets and resource management. In September, The R&A's director of golf course management Steve Isaac will conduct a series of seminars around Australia based on the theme of sustainable golf. This will be an event for superintendents, general managers and committee members to hear from The R&A about where they see the challenges of golf course management and what can be done about it.

The AGCSA through its Best Practice Service can assist in the often onerous task of evaluating budgets and resource management. If you need assistance or guidance contact the AGCSA office. While there is often a reluctance to engage consultants, the best managers use all available resources open to them, whether internal and external, to get the job done. Getting the job done is the key and no one should feel challenged by admitting they don't know all the answers.

The role of the golf course superintendent is becoming more complex with the demands of managing staff, reporting to boards and general managers and keeping up with changes in new technology and legislation. Adding to these tasks is managing a golf course in a changing environment. At the same time there is a need to be on the golf course to ensure that all that has to be done is being done. As the complexities of golf course management increase the need for support also increases. Think about what you need and where you can get this support.

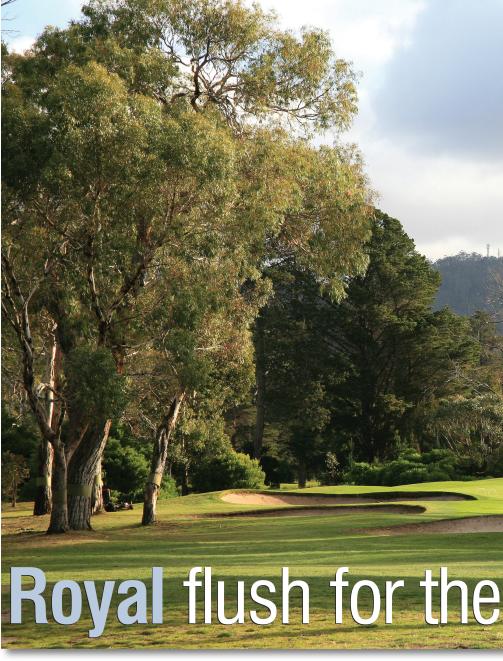


Royal Hobart Golf Club will entertain golf course management's elite when the 2009 AGCSA Golf Championships tees off during this year's 25th Australian Turfgrass Conference. It has been 31 years since a national turf conference was last in Hobart, the same year ironically as a teenager by the name of Stephen Lewis started as a groundsman at Royal Hobart. Three decades on and the club is still home to Lewis who has been superintendent now for the past 23 years. ATM editor Brett Robinson dons five jackets and a beanie to catch up with Lewis to see what makes Royal Hobart such a special place.

early three years on and nothing has changed. The tattered and faded Herald Sun footy posters are still there, somehow remarkably clinging to the door, while beneath them the smiles of the entire 1999 Essendon Bombers squad continue to beam out from an equally dog-eared poster.

Royal Hobart Golf Club superintendent Stephen Lewis isn't one for interior decorating, but then again given the work that has been ongoing at the club in recent years it's no surprise he hasn't had a chance to give his opulent office a bit of an update (either that or he is trying desperately to cling to fading memories of when Essendon were actually in contention come September!)

True, not much may have changed in the shed – well not yet anyway (more on that later) – but you only have to tour the course to see the significant works that Lewis and his crew have overseen since ATM's last visit back in November 2006. Foremost has been the installation of a new irrigation system,



construction of a 35 megalitre storage dam and connection to the Clarence Recycled Water Scheme.

Combined, these projects have effectively ended Royal Hobart's uneconomical and unsustainable reliance on potable water, while for Lewis it has been the sort of undertaking which has pushed him outside the comfort zone and reignited his spark for the turf management profession. With 31 years under the belt, the past 23 as superintendent, you could forgive Lewis for taking it easy, but now with a course that is essentially set for the years ahead, a new chapter in his career looks set to be written.

ROYAL START

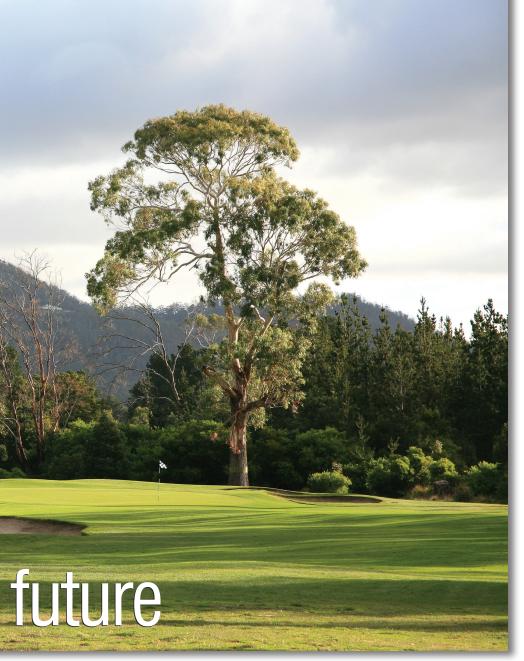
Royal Hobart has had a number of different incarnations since its inception back in 1896. Then it was known as Newlands Golf Club before changing its name in 1901 when the Hobart Golf Club was officially formed. The course was then located in Sandy Bay and

is recorded as the first organised golf club in Hobart.

In 1915 the club purchased 130 acres (53 hectares) of land on Hobart's eastern shore at Rosny and a new course was opened the following year. Nine years later the honour of the Royal Charter was conferred on the club. With major residential development of the area following WWII, the club then moved across to its present site at Seven Mile Beach, some 20 kilometres from the centre of Hobart.

Seventy hectares of expansive, gently contoured dune land was purchased and sought after architect of the time Vern Morcom was approached to design the new championship layout. The new course opened in 1963 and since then has hosted numerous championships including the Tasmanian Open, Australian men's and women's Amateur Championships and, its crowning moment, the 1971 Australian Open won by Jack Nicklaus.

While the Golden Bear was strutting around Royal Hobart en route to yet another



Australian Open title that year, a world away a young Lewis was growing up quickly in his home town of Brighton in England. As a lad Lewis never entertained the thought of a career in golf. All he knew was that school wasn't for him and a job outdoors appealed.

Lewis's father Ray, a butcher by trade, yearned for a better lifestyle for his young son and daughter Nita, so in 1977 he and wife Jill made the decision to pack up their lives and emigrate. Like a number of Brits of that era they headed to the Antipodes and despite picking out a couple of preferred destinations – Tasmania and New Zealand were top of the list – they ended up being sent to South Australia.

Lewis clearly recalls the day they left the UK and has vivid memories of brushing snow off the car before piling in and heading off to the airport to start their new life. When they eventually arrived in Adelaide it was 42 degrees!

A year later the family resettled in Hobart and there they have all remained for the past

three decades. As Lewis admits he loves the place and together with wife Tina the next generation of the Lewis clan – daughters Keryn and Claire – now call Hobart home too.

Being a kid who was allergic to school, it was no surprise that Lewis wanted out quick and not long after landing in Hobart in 1978 he came across an advertisement for a position at Royal Hobart Golf Club.

Still in his mid-teens the job offered was for a groundsman, not an apprenticeship which was what he was after, but it gave him a foot in the door nonetheless.

Not long afterwards that opportunity presented itself and Lewis was put on as an apprentice under then superintendent Kevin Flakemore. Soon he was travelling up to Burnie on block release and after getting his ticket was duly appointed assistant superintendent in 1982. Four years later, following the sudden passing of Flakemore, Lewis was elevated to superintendent, a position he has held ever since.

Royal Hobart Golf Club will be the setting for the 2009 Toro AGCSA Golf Championships which will kick off the 25th Australian Turfgrass Conference on 13 July. Pictured is the 176m par 3 8th

PIPE DREAM A REALITY

During his tenure Lewis has overseen what can be described as modest changes to the course. As he has come to appreciate over the years, Royal Hobart is a members club and attempts in the past to toughen the course and lengthen it have never got far. Rather, the members have been satisfied with small improvements here and there, whether it be construction of a new tee or bunker restoration.

Water, however, was always at some stage going to be a significant issue which required serious remedying. Historically, Royal Hobart has struggled with water and on an average year is lucky to record between 420mm-450mm of rainfall. Over the years the club has sunk bores and drawn ground water for irrigation which has been mixed with town water. As the price of portable water increased (last year's figure topped \$900 per megalitre) and with groundwater salinity levels on the rise (upwards of 2500-3000ppm) the club had little choice but to seek an alternative water source.

It was about eight years ago when Royal Hobart, and neighbouring golf clubs Tasmania and Llanherne, heard about a proposed recycled water scheme to be developed by Clarence City Council. The plan was to take treated effluent from the Rosny Treatment Plant and pump it along a major pipeline through Cambridge and up to the Richmond agricultural district. Tapping into that seemed a logical and simple step but despite putting their hands up the clubs met with some early resistance.

"The hard thing was to convince the council initially to allow recycled water to be used on a sporting facility," says Lewis, who is the current president of the Tasmanian Golf Course Superintendents Association. "The primary market was to be the produce growers and we had to keep pushing and pushing saying that we could take water 12 months a year and that we were willing to make the outlay to put the infrastructure in, which in our case was around \$200,000. We eventually got there but it was a lot of hard work."

Getting council approval was just the first step. Then there were the issues of irrigation infrastructure and storage. Royal Hobart's aging irrigation system wasn't sufficient to handle the strict requirements governing the application of recycled water so a new Toro system was installed which has seen the watering window shrink from 14 hours to just six.



Likewise the irrigation dam only held 5.5 megalitres which meant the club couldn't take advantage of any excess water produced by the system during the winter months (the system pumps out up to 8M per day). With the supply of water limited in the summer months due to the high demand from produce growers, the club decided to construct a 35M dam adjacent to the 8th hole at a cost of \$98,000. Completed in late 2008 the club can now store enough water which combined with the weekly allocation off the scheme means an ample supply through the summer months. The extra storage has also brought with it cost incentives and the club now pays just \$10 per megalitre for its irrigation water.

Total cost of all water-related projects – including irrigation system, dam construction, pumps, pipe infrastructure and lining of the existing dam – came in at around \$1.8 million, with the club receiving more than \$227,000 from the former federal government's Community Water Grants Scheme. The remaining funds came from the sale of land adjacent to the 3rd and 5th holes.

MANAGEMENT CHALLENGES

From a turf management perspective the switch to recycled water was always going to be a double-edged sword. While on the one hand it has provided a guaranteed water supply, on the other it has meant some significant changes in management practices. Lewis says the club was initially concerned about using the recycled water on greens but some initial testing of the water found it to be well within acceptable limits.

More concerned with the long-term affects of using the water, Lewis undertook a major monitoring programme. Five greens and one fairway were designated as test sites with four areas on each green sampled on a

A new 35 megalitre dam was constructed in late 2008 and now enables Royal Hobart to store recycled water that comes in from the Clarence Recycled Water Scheme

regular basis. Readings were taken prior to the recycled water coming online in October 2007 and then once it was being used. Monitoring continued throughout that first season and into the season just gone.

"We found that the nutrient levels varied depending on what water we were getting which can be a mix of Class A and B," says Lewis. "Of more concern were the salinity levels. We found that with increased usage of the recycled water, salinity levels in the soil rose during the summer period, but after winter those levels returned to normal.

"It hasn't been too much of a concern so far but we will continue to monitor just to keep on top of things. Last summer we used probably 75 per cent recycled water and 25 per cent town water, but this coming season we'll be 100 per cent recycled so it will be interesting to see if there is any change."

As for the cool-season fairways, the use of the recycled water has also brought about some marked changes. The first and most visible difference was the rapid increase in growth and change in colour due to the extra nutrients in the water. While cutting down on

Royal Hobart has been home to Stephen Lewis for the past 31 years, including the past 23 as superintendent. His crew is made up of (from left) Scott Collins, Gareth Kelly (assistant superintendent), Ethan Hitchcock (seated), Hugh Miller, Lindsay Groat and John Wright

future fertiliser costs, the excessive growth caused by the nutrients has seen a thatch problem develop in some fairways.

The native creeping bentgrass, which Lewis says is quite "matty" at the best of times, has become excessively spongy and in a bid to keep thatch levels in check he will start scarifying all fairways this spring. Lewis can probably count on one hand the number of times he has had undertake such a practice in the past two decades but such is the marked difference since the recycled water has came online he will now schedule an annual scarify into the works programme.

Other issues to arise include the build up of algae, not so much in the storage dams and filters, but in the irrigation pipes themselves which Lewis is trying to eradicate by chlorination.

"It's all these little things which keep you on your toes," says Lewis. "The whole switch to recycled water has been a major learning curve for us all. It has meant a lot for the club and we are now a long way towards securing our future irrigation requirements. It also means we can now concentrate on presenting the course in the best condition possible for members every day of the year."

While the turf surfaces have benefited from a secure water supply, there have also been tangible benefits realised off the course as well. Membership numbers have risen to 1200, the first time since moving to the Seven Mile Beach site that the club has had a full membership



The use of recycled water on the course has brought with it new challenges for Lewis, in particular managing salinity levels in greens and thatch accumulation in the fairways as a result of excessive growth

register. As Lewis comments such a rise shows that outlaying the money and going through the hair-tearing projects to get to this stage has been more than worthwhile.

NEW DIGS

With two big ticket items signed off, Lewis has just one more eagerly awaited project on the horizon – the construction of a new maintenance facility. The existing assortment of sheds has been around ever since the club moved to Seven Mile Beach and are in dire need of an overhaul. The middle structure, which has been transformed into a chemical storage facility, is in fact an old wooden fruit shed which was used to pack and store apricots that were grown on the site prior to course's construction.

Inside the main shed Lewis's workspace is perhaps the smallest superintendent office you're likely to set foot in. One entire wall, floor to ceiling, is taken up with shelves containing all manner of spare parts and once you throw



a set of sticks in, a few filing cabinets, an old wooden desk and a chair, there is barely room to stand let alone swing a Cleveland.

As Lewis explains they have simply outgrown the existing facility and with the plethora of OH&S and environmental requirements pertaining to golf course maintenance operations, the club has recognised the urgent need to bring its compound into line.

Given that the club is blessed with plenty of land, Lewis can practically pick and chose where he wants the new facility to be housed and at the moment has his eye on the parcel of

land directly behind the existing maintenance compound. As part of a scoping study to generate concepts and ideas for the new structure, Lewis arranged for one of the club's committee members to visit former Barwon Heads Golf Club superintendent Peter Frewin to view the club's recently constructed maintenance facility and get an indication of what current industry standards are.

"Maintenance facilities are no longer just sheds," says Lewis, who is hopeful construction will start in 2010. "There are so many requirements that have to be taken into consideration and it was great for the



STAND 27

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committee to see what a top line shed looks like. Obviously we won't have all the luxuries but as long as the basics are there and it is done properly the facility will serve the course for the next 20-30 years. The prospect of a new maintenance facility is certainly exciting and the lads are already dropping hints at various things they would like."

ON SHOW

For the immediate future however, Lewis has his sights set on the upcoming 25th Australian Turfgrass Conference which makes its return to Tasmania for the first time since 1992. In fact Lewis can even remember back to the last time the national gathering was in Hobart. It just so happened to be 1978 - the same year he started at Royal Hobart - and he can recall the club's practice fairway being used for the machinery demonstration day.

Royal Hobart will host the first major event of this year's conference - the 2009 Toro AGCSA Golf Championships - and it could provide the setting for another slice of AGCSA history should the stars align for one particular AGCSA member. Gold Creek Country Club superintendent Scott Harris will aim to

AT A GLANCE -**ROYAL HOBART**

Length: 6133m, par 72.

Greens: Penncross/Poa annua.

Tees and fairways: Cool-season mix of fine fescue, ryegrass, native creeping bentgrass and Poa annua.

Profile: Dune sand.

Average rainfall: 420-450mm (284.4mm

YTD - June 15, 2009).

Staff: Stephen Lewis (superintendent); Gareth Kelly (assistant superintendent); Scott Collins and Hugh Miller (qualified greenkeepers); John Wright (groundsman); Lindsay Groat (mechanic); and Ethan Hitchcock (apprentice).

become the second person in the history of the tournament to record three consecutive victories and should he do so will join Daryl Sellar to achieve such a feat.

Harris already has the 2007 and 2008 titles to his name and is red-hot favourite to add to his collection of Toro red jackets. Harris sunk a 25-foot birdie on the 18th at Royal Melbourne last year to pip Danny Brown (Royal Queensland Golf Club) by a single shot and that duel could resume when they tee up on what should be a brisk Hobart morning come 13 July.

All the usual suspects will grace the starting line-up up as well in the stroke competition, with previous champions Allan Devlin, Martyn

Royal Hobart's short dogleg par 4 5th. Land adjacent to this hole was subdivided and sold to help fund the major water management projects recently undertaken at the club

Black, Trevor Ridge, Anthony Toogood and Steve Jacobsen among them. Likewise in the stableford competition. Indooroopilly Golf Club superintendent Charlie Giffard returns to defend the title he won at Royal Melbourne last year.

There has been a slight change to the format of this year's golf tournaments with Toro also sponsoring the AGCSA Scramble which replaces the old AGCSA Corporate Cup. The Scramble, a teams Ambrose event, will be played at nearby Tasmania Golf Club (superintendent Danny Gilligan). In another change, a combined presentation luncheon will be held at Royal Hobart following the completion of both golf competitions which will feature iconic Tasmanian woodchopper David Foster as guest speaker.

"There'll be an 85 per cent chance of a frost - that's a guarantee," laughs Lewis. "The course will be set up as we do for the members and we'll do a little more grooming, but nothing too tricky. My only advice would be to watch out for holes 13, 14 and 15. If you get to that stretch in contention and manage to get through safely you may just have one hand on the trophy." w

BEST ON GROUND – STEPHEN LEWIS

If there is one regular attendee of the annual Australian Turfgrass Conference knows how to get his money's worth, it would be hard to go past Royal Hobart's Stephen Lewis. From the much soughtafter coconut bra of the Brisbane 2002 conference to the card-clad gambling addict of Melbourne 2008, Lewis has always made a special effort to get into the theme of the Welcome Reception much to the mirth of his fellow conference delegates.

One of his more memorable outfits appeared at the Melbourne 2004 conference function held at the Telstra Dome. Together with then Claremont Golf Club superintendent Mark Potter, Lewis dressed up in the colours

of his beloved Essendon Bombers, capped off with a red and black jester's hat and red and black eye patch. Not to be outdone Potter, resplendent in a white AFL umpire's coat, sported beer-glass goggles and a



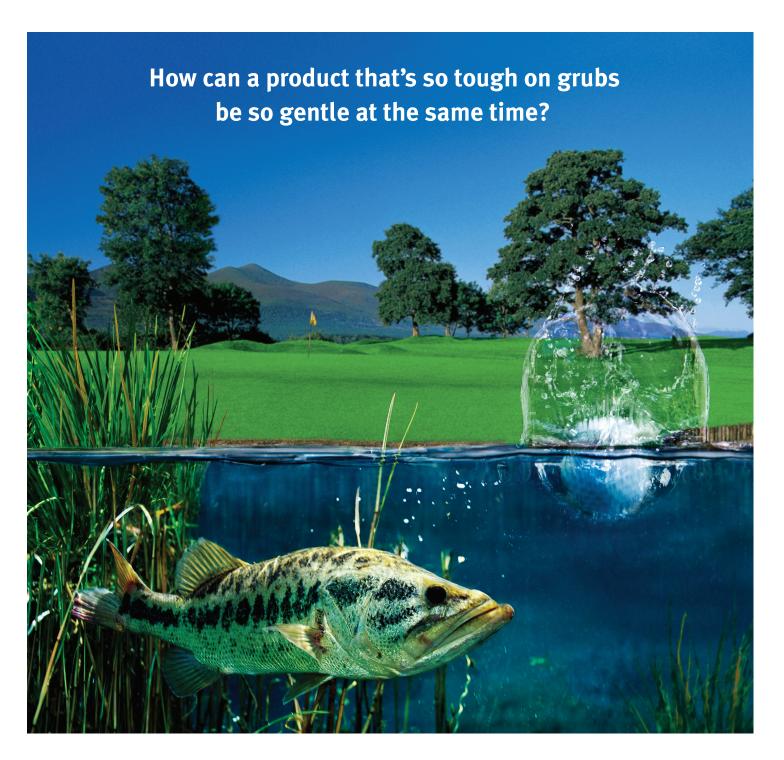
hat which read 'Eddie's mate', and together the together the duo duly won 'best on ground' honours that night.

Lewis is well known as a

Bombers fanatic and ever since arriving in Australia from the UK with his family, he started barracking for the Essendon. Lewis isn't quite sure why he picked the Bombers, but reckons it had something to do with the fact that when he was a lad he grew up following the Arsenal football club, or the Gunners as they are more popularly known as. Gunners, Bombers...a logical progression.

Given that this year's conference is in his own backyard the pressure is on Lewis to come up with another lavish outfit.

When quizzed what he has planned Lewis was playing his cards close to his chest, but with year's Welcome Reception carrying a 'convict' theme, expect something right out of the box!





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Golf courses in Australia have never been better conditioned and presented than they have been. However, climate change, weather extremes and the current global economic downturn are creating new challenges for clubs and now more than ever sustainability is becoming a key tenet in the golf course maintenance industry



Planting the seed of sustainability

he R&A is golf's world rules and development body and organiser of The Open Championship. It operates with the consent of more than 130 national and international, amateur and professional organisations from over 120 countries and on behalf of an estimated 30 million golfers in Europe, Africa, Asia-Pacific and the Americas (outside the USA and Mexico, which is under the auspices of the United States Golf Association).

Among its many and varied activities The R&A also provides best practice guidance on all aspects of golf course management, with specific reference to ecological and conservation issues, to help grow the game in a commercially and environmentally sustainable way.

The term sustainability has become a critical focal point for the golf industry in recent years, more than ever before. Climate change, weather extremes, the current global economic downturn and environmental pressures have all brought about new challenges for golf clubs to maintain the high standards of course presentation which golfers have come to expect.

With the pressures of diminishing resources, in particular water, and tightening budgets, golf clubs are having to assess what is sustainable. Sustainability is defined as "capable of being maintained at a steady level without exhausting natural resources or causing severe ecological damage".

In 2003 The R&A appointed Steve Isaac as director of golf course management to develop and enact The R&A Golf Course Committee's sustainability programme. Isaac, who spent the previous 18 years with the UK's Sports Turf Research Institute, which included acting as the consultant agronomist at three Open Championships, has since toured the globe spreading the word on sustainable golf course management and to date has travelled throughout Europe, Africa, Asia, New Zealand, South America and the USA.

Sustainability is a buzzword in most industries these days and nowhere more is it relevant than the golf course maintenance profession. In September The R&A's director of golf course management Steve Isaac will touch down in Australia to conduct a series of talks on sustainable golf course management and how The R&A is playing a leading role in driving home this message. ATM editor Brett Robinson caught up with Isaac in early June to talk about his role and what he hopes to get from his brief trip Down Under.



♦AGCSA





In conjunction with the Australian Golf Course Superintendents Association (AGCSA) and the state superintendent associations, Isaac will head to Australia for the first time this September. As well as seeing how the Australian industry measures up, Isaac will host five workshops around the country where he will share The R&A's philosophy of sustainable golf, The R&A's role in southeast Asia, Australia and New Zealand and use of golf course benchmarking as a management tool.

Isaac's visit will be an invaluable opportunity for superintendents and golf club management to find out how the game's governing body is aiming to meet the challenge of sustainable course management practices as well showcase some of the excellent work being undertaken at Australian golf courses. The seminars will be held on the following dates (please note these dates were correct at the time of this edition going to print. Venues will be announced shortly on the AGCSA website www.agcsa.com.au):

- Melbourne: Tuesday 8 Sept
- Sydney: Thursday 10 Sept
- Brisbane: Monday 14 Sept
- Adelaide: Thursday 17 Sept
- Perth: Monday 21 Sept

In light of his impending trip Down Under, Australian Turfgrass Management Journal caught up with Isaac to talk about his challenging role with The R&A and to see what he hopes to get out of his September sojourn.

First and most importantly Steve, you must be distraught about Everton's loss in the FA Cup – 1-0 up after 25 seconds only to lose 2-1 to Chelsea. How have you and the Everton faithful dealt with such a loss? Grrrr...badly.

digress Steve. You

I digress Steve. You are heading to Australia Down Under in September to talk about sustainable golf and the role of The R&A in driving home this message across the

globe. What is the key message you will be hoping to deliver to Australian golf clubs and superintendents?

That this is an issue that golf must embrace and that golf can deliver on the parameters to our definition of the sustainable golf course – environmental stewardship, economic performance and social responsibility – without compromising on playing performance.

Why has The R&A made sustainable golf course management such a major focus? Do you think it is winning in getting the message across?

The R&A ploughs the surplus funds available from The Open Championship, about £4 million a year, into golf development projects around the world. Most of these relate to playing the game (e.g.: coaching or junior programmes), but for the game as a whole to be sustainable and, thereby, ensure its long-term future, the principles of sustainable facility development and management must be applied. We are working hard to present our message but accept that it will not happen quickly. The R&A has been around for over 250 years so we have learnt the arts of perseverance and patience!

Why is sustainability an important concern for the golf maintenance industry? Isn't the industry as a whole, through the development of new technologies and implementation of improved management practices, doing enough already?

There is massive room for improvement and new technologies have, over the years, brought as many negatives as positives to the table. Sustainability is critical for the golf maintenance industry as the construction and management of our golf courses must not be seen as a significant draw on precious resources, e.g.: water and protected habitats.

Has the whole drive to a more sustainable future come about as a reaction to the so-called Augusta Syndrome? Has the Augusta Syndrome hurt the industry and the notion of sustainable golf course management?

I do not want to comment on such specifics but the golf maintenance world is facing great challenges in terms of economics, the availability and quality of water, climate change and increasingly stringent pesticide regulations. We have to learn to live with these, and more, and develop a philosophy of

Sustainable golf course management is an evolving thing and to be successful requires balance and adaptability

adaptability so we can cope with a world that is changing more rapidly in many areas than ever before.

Do you think current maintenance practices and standards achieved by course superintendents around the world are sustainable in their current guise? Have superintendents inadvertently shot themselves in the foot by striving for perfect conditions day in, day out and in doing so creating unrealistic expectations?

I believe that golf courses should "fit" in with the landscape and work with nature in so far as this is possible, whilst accepting that golf courses are man-made to one degree or another and that they require management to serve their purpose. In relation to how we present our courses, the perception of "perfection" for many might not agree with this view but that does not mean that we cannot achieve a more natural look and enjoy a good quality of playing surface.

How easy is it to be sustainable? What are the necessities for a golf course to be sustainable? Is it merely a matter of having the resources available or is it more a mindset that has to be instilled?

Anyone operating a break even or profitable business within the law is sustainable, for the time being. The real challenge is being more sustainable and achieving this over the long-term. Having resources now does not make you sustainable if you use them up and have no alternative strategy. Taking a sustainable overview is a mindset requiring a long-term and strategic approach.

If there is one area where golf courses and/ or superintendents let themselves down when it comes to sustainable golf course management what would it be and how can they remedy that? The one thing that amazes me as I travel round the world is that even after over 100 years of greenkeeping, the presence of too much thatch is still an issue that requires a notable investment in terms of finance and time. The need to apply intensive cultural programmes, which stress turf, to counter intensive irrigation and fertiliser programmes which produce too much thatch, with notable fungicide programmes to check disease which is a consequence of both intensive programmes, is a vicious circle that should not still be going round!

Is there any one facet of sustainable golf course management which is paramount over the rest?

At the moment it is undoubtedly economic performance as a consequence of the global recession. However, 18 months ago my answer to this would probably have been environmental stewardship, notably water availability/quality and our ability to adapt to a world of more stringent pesticide legislation. This just goes to show that sustainability is an evolving thing and being successful in achieving sustainability is all about balance and adaptability.

Looking at your neck of the woods, in the 20+ years of working in the industry how do UK and European golf courses stack up in the sustainability stakes? Have UK and European golf clubs and their superintendents embraced the concept of sustainable golf course management?

There are notable exceptions but I don't think many grasp the overall picture. We all tend to focus on one issue at a time, one day at a time, and are unaware of or try to ignore difficulties that can be put off until tomorrow. Across Europe many of those hurdles have to be jumped now, from water issues in southern Europe to strict pesticide regulations



Isaac says The R&A is working hard to spread the word on sustainability but accept that it won't happen overnight

across the European Union. Few of us really appreciate the consequences of our actions but we are now facing a world in which this is essential and we also need to be confident in being able to predict that what we do now will not backfire on us in relation to regulation or other challenges.

UK and European courses vary greatly in how they stack up in the sustainability stakes. Many are walking a tightrope financially (often those where the golf course was mere mitigation to the real estate that was intended as the profit maker, but the real estate has now become a millstone round the development's neck), while others have become wholly reliant on huge quantities of water, fertiliser and pesticide that is now unacceptable socially and environmentally and cannot be supported financially.

Given the game of golf has its origins in the UK and with the plethora of links courses there, are sustainable practices more ingrained or easier to foster/adopt?

We are extremely fortunate to have the majority of the world's 220 or so true links in the UK. Their natural excellent drainage qualities, lack of shade issues and native grasses that not only require low water, fertiliser and pesticide inputs but also produce super golf surfaces from tee to green and beyond, means they should have a head start when it comes to sustainability.

However, many have been inappropriately managed in the past, changing their native grasses to less sustainable ones for this stressful environment (drying winds and salty air) through over-watering and over-feeding. As often seems to be the case, man's ego in believing he can control nature is man's downfall (eventually)!

Economic recession, difficulties in accessing adequate quality water, climate change, pesticide regulations – there are so many challenges coming together at the moment that put a real strain and doubt over the future viability (sustainability) of high input/intensive course management regimes.

In the UK and Europe, what is the general image of golf courses among the wider public in terms of issues such as environmental management, water management and general sustainability. Has this image changed over time and if so why and how? In the UK, where approximately 12 per cent of the population play golf and where golf

began on public land, the game is generally



accepted as part of the social fabric. Across continental Europe, 1 per cent or less play golf. When 99 per cent of the population either know nothing about the game or see a very small number of socially and economically elite individuals using hundreds of hectares of land, and perhaps see lush green courses on the television that are perceived to be kept that way by polluting the environment with excessive amounts of fertiliser and pesticide, while using up precious water supplies, the view of golf is somewhat different! Where the perception is reality, we are trying to change practices. Where perception is false, we are trying to establish and promote the truth.

You were appointed to The R&A in 2003. In the years since what sort of changes have you seen and what have been some of the big gains made in sustainable management?

The last six years have been a major learning curve for me. The biggest gain, I think, is the growing awareness of the issues that pose a serious threat to the game and the acknowledgement by many that we can't bury our heads in the sand and that we must take appropriate action to ensure the future of golf.

What are some of the immediate challenges facing UK and European golf courses and superintendents in terms of sustainability?

Finding ways of breaking the reliance on water, fertiliser and pesticides. Until relatively recently these have all been available in plentiful supply – a safety net for practices which are now considered less and less sustainable. Legislation is certainly a driver in this process, as is the current economic situation.

One of the topics you will be exploring while Down Under is the practice of benchmarking.

How have UK superintendents used such a tool to their advantage?

It has been difficult to get acceptance that using this free service is worth the time it takes to input information. Superintendents are very busy people and the last thing they need is more paperwork. However, we firmly believe that the ability to record, monitor and report on our on-course activities is essential. Regulation demands that land managers are accountable and it is our view that benchmarking, and showing that golf can keep raising the environmental/economic and socially responsible bar, can be a means of achieving this.

In your role with The R&A you have travelled extensively spreading the word about sustainability. How has this been received in those countries or regions where golf is relatively new and developing or experiencing a major boom? How is The R&A assisting these new markets with their drive to be sustainable?

We are always well received but we accept that it will take a long time for our message to be truly taken on board in many parts of the world, particularly those where a booming golf market is only a reflection of a booming economy and industrial development. We are trying to help by providing information, often based on what may now be considered the mistakes of mature golfing markets.

There are few situations that have not been seen before, few questions that do not have a workable answer and we are convinced that informed decision making is the way forward for the sustainable development of the game. This is one the main reasons why we travel so much to mature golfing nations as well as to developing ones. We can all learn from

each other and we want to uncover and share sustainable solutions. Many of these are not new; they are tried and tested but often ignored or abused.

In getting your message across about sustainability and its benefits, whether it's in the UK or overseas, do you find you have to convince some sectors of the golf industry more than others? What, if any, barriers are you coming up against from these sectors and how can you combat these.

I think the world is such a different place now to what it was only 10 years ago that it is relatively easy to convince everyone that we have to be more sustainable. However, as with all messages, it is easier to get across and to understand if it is done face-to-face with the ability to question and debate. The Golf Course Management department at The R&A comprises myself and my secretary, Wendy. We do get help in spreading the message from our Committee but we are a very small group and covering all The R&A's 120-plus affiliated golfing nations is going to take a long time!

This is one reason why we are trying to use the world-wide-web to help spread the message but it is our view that the world is not yet 100 per cent geared up for us to take full

advantage of this method of communication. Having said that, please do visit our best practice website at www.bestcourseforgolf.org, register your course and use the tools that are available free of charge!

Is there any particular group within the golf industry that can make a real difference or does it require a whole of industry approach? Do certain sectors within the golf industry need to do more (for instance, do Tour professionals need to play a more active role in promoting the sustainable message).

This really is a team effort and everyone on the team (including the substitutes) need to fully understand what sustainability is really all about and what are the real challenges that golf courses face in this regard. I think superintendents have a head start as they work with nature day in and day out and have a better understanding of how fickle she can be than those who do not have to combat the massive variables of working in an uncontrollable environment (in the broadest sense of the word).

How does The R&A regard what Australian golf clubs and superintendents are

achieving in terms of their efforts to be sustainable?

One of the purposes of this trip is to find out as much as we can about the challenges Australian golf clubs and superintendents are facing and of their achievements in overcoming current difficulties and their awareness of how they might address future ones. I read the AGCSA's Australian Turfgrass Management Journal and visit its website, and am obviously aware of issues such as the water crisis in the Melbourne area and the awful consequences of the February bushfires in Victoria, but nothing can better our appreciation and understanding than seeing for ourselves and talking with those at the coalface who have to deal with such problems.

Finally, what do you hope to learn about Australian golf clubs and superintendents during your time in Australia?

As much as I can in what, I appreciate, is a very short period of time. I hope to witness plenty of good practice, be able to pick up on plenty of potential case studies which will benefit others around the world to improve on their sustainability and to meet plenty of other disgruntled Evertonians who can help me drown my sorrows with a beer or two! w



The 10th hole with the iconic Turnberry lighthouse and Ailsa Craig in the distance. The Ailsa Course will host The Open Championship for just the fourth time since 1977 in mid-July

George's final fling with Ailsa

The same week as local superintendents converge on Hobart for the 25th Australian Turfgrass Conference, the eyes of the golfing world will shift north as one of Scotland's finest links layouts plays host to the 2009 Open Championship. Turnberry's Ailsa Course is set to entertain the game's elite for just the fourth time in its history and as UK STRI agronomist Alistair Beggs writes it will also mark the end of an era for one of the UK's longest-serving and most respected course managers.



e have all heard of George and Mildred, George and the dragon, but few would have heard the tale of George and Ailsa. Unlike the other two, George and Ailsa are still alive and happily married and set to cause a stir on Scotland's Ayrshire coast come mid-July.

The Open Championship will return to the shores of The Firth of Clyde from 16-19 July to the much-changed Ailsa Course at the famous Turnberry links. Unlike many of the links courses on the Open rota, which have hosted The Open on numerous occasions, this will only be the fourth time Turnberry has challenged the best in world golf. This will come as a surprise to many but it becomes a little more understandable when one reflects that its history is somewhat newer than many of its counterparts.

Golf was first played at Turnberry in the late 1800s and The Turnberry Golf Club was formed in 1906 but it was not a regular venue for Championship golf. The links were used as an RAF station during WWII and many of the runways which criss-cross the site can still be seen.

They continue to perform an important role in the delivery of The Open helping with car parking and aiding storage and the movement of heavy equipment around the site. For the last few years they have also housed courses and estates manager George Brown's special homemade cocktail for the grass, the primary ingredient being seaweed from the nearby Turnberry beach.

Golf architect Mackenzie Ross was brought in post war (1948) to upgrade the links and create a golf course of Championship standard. The land was ideal and the sea frontage spectacular. He made the most of it and the revamped layout was opened for play in 1952. The course was a great one from the outset and the fortunes of the Ailsa Course and the hotel at Turnberry changed in the early 1970s when The R&A decided that Ailsa would host the 1977 Open. It was a decision that would resonate around the world.

There is little need to recount what happened on the burnt turf in July 1977 other than to say that in the opinion of most commentators it was the best Open Championship ever staged. In what was dubbed the 'Duel in the Sun', on account of the brilliant sunny conditions which blessed the tournament, Jack Nicklaus and Tom Watson went shot-for-shot over the final two rounds. Regarded as one of the finest showcases of golf ever seen, Nicklaus and Watson delivered entertainment beyond the imagination.

Watson went on to triumph by a single shot and in doing so thrust the Ailsa Course onto the international golfing map. It has stayed there ever since and in more recent years has risen to No.1 in Golf World and Golf Monthly magazine rankings in the UK and Ireland.

The success of 1977 led to The Open returning to the Ayrshire links in 1986. On this occasion the weather could not have been more different with wind and rain prominent as Greg Norman won his first Championship (helped in no small part by a blistering second round 63). Brown had only six months to prepare the links for The Open following the untimely death of his predecessor Russell Brown in the lead up to the Championship. Despite this, the links triumphed again.

Nick Price's snaking 50-foot putt across the 17th green remains the abiding memory of the 1994 Championship. His eagle denied Jesper Parnevik, and although he would go close again up the road at Royal Troon in 1997, the Swede was destined never to win the Championship.



ALTERED AILSA

It is a long time since 1994 and many are asking where Turnberry has been? The hiatus has had more to do with off course matters, although the links will show a number of changes since The Open was last played.

The 10th and 16th holes have been changed significantly, remodelled by Martin Ebert of Mackenzie and Ebert Architects. The 10th now plays from a new tee (Brown was responsible for first noting the site) overlooking the beach and demands a tee shot across the bay.

There is a real risk and reward element to the shot with the golfer having a choice of taking a tight line between beach and bunker to a narrow strip of fairway, or playing conservatively to the right, avoiding further bunkers yet leaving a longer shot to the green. As always, the choice will depend on the weather and the wind direction but if nothing else, the new hole is more of a visual feast than its predecessor.

The 16th hole has been lengthened and the fairway moved to the left to create a dogleg from a previously straight hole, add a more challenging angle to approach shots over the burn and to create room to move the Championship tee for the 17th further back.

Each piece of fairway turf was laboriously stripped and re-laid in the winter of 2006/7 to create a surface for play the following spring. Much time and effort has gone into perfecting the surface, which should be comparable with other fairways by the time The Open is played.

Some 21 new bunkers have been added to ensure that the Ailsa of the 21st Century tests the very best in the world. Most of these new bunkers are encountered off the tee rather than alongside the greens, putting a much greater premium on accurate driving. New Championship tees have been introduced at the 3rd, 5th, 7th, 8th, 10th, 14th, 16th, 17th and 18th holes and these new tees stretch the links to about 7200 yards (6584m).



Outgoing Turnberry course manager George Brown (left) with Ailsa Course head greenkeeper Martin Lothian

Brown and his team have focused on improving links grass composition on fairways through aggressive overseeding and improving firmness and trueness through plentiful topdressing. The mowing patterns on some green complexes have been adjusted to accommodate extended run offs and work continues to perfect the turf in these areas.

The greens are unique in that many of them are bowls which collect both balls and water. The 3rd, 4th, 9th, 11th, 14th, and 17th are the most prominent in this respect and Brown is ever vigilant about turf decline in such circumstances. Aeration packages and programmes have been varied and plentiful over the years to get the best from the greens and some progress has been made with bents and fescues, although heavy playing levels at Turnberry mean that annual meadow-grass will always have some role to play in the turf.

Currently, inputs are focused on minimising this in line with best practice guidelines set out by the Golf Course Committee of The R&A. In the future Leisurecorp, the new Dubai-based owners of Turnberry, are committed to delivering further improvements and ensuring that all the courses at Turnberry (the complex also boasts the Kintyre and Arran layouts) offer the very best of golfing experiences.

Another new aspect in the lead up to this year's Open has been the development of a comprehensive colour guide on the sustainable management of the Turnberry links. Commissioned by The R&A and to be produced in time for The Open by the Scottish Golf Environment Group, it is hoped that this study will raise awareness of important wildlife and habitats around the Ailsa Course.

Despite its rugged and inhospitable location, Turnberry is a haven for innumerable species of flora and fauna which serve to refine a landscape sculpted by the elements. The booklet will be available at Turnberry to encourage Open spectators to take a moment to look beyond the golf and into the future of sustainable golf course management.

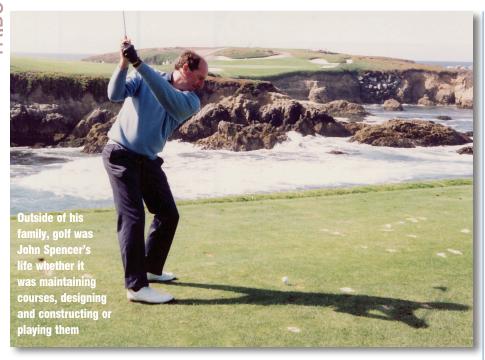
LAST HURRAL

So, Ailsa is being made ready again, helped this time by new ownership and a seven-month rest. However, one thing has not changed and that is the responsibility for delivering agronomic excellence the week of the Championship. Brown has been in charge at Turnberry since 1985 and this will be his third and last Open before he retires.

It would be wrong to call Brown 'the greenkeeper'. Yes, he is the greenkeeper and a very good and experienced one at that, however, he is 'Mr Turnberry' and it is difficult to imagine this great links with anyone else at the helm. He has looked after the grass, the members, golf's cognoscenti and world leaders when they have come to play. He has beaten most of us with his clubs, and told others all about it in his own inimitable way; a way no other man can.

This is Brown's Open and no other custodian of any links the world over deserves a successful outcome more than he. It has been a real privilege to walk these fairways and talk turf and golf in his company and I will help him all I can to add the final chapter to one of the most interesting and successful careers in this industry. George and Ailsa has been a match made in heaven for many years and here's to one last hurrah for one of greenkeeping's great raconteurs.





Farewell to a Master

ohn Wilson Spencer was one of this country's finest golf course superintendents and spent his life in golf as a player, course designer, construction supervisor and turf management consultant. It was a period of great change and major advances in the preparation of Australian golf turf surfaces and during this time John was at the forefront of his profession, commanding great respect from amateur and professional golfers alike.

John started his life in golf as a promising junior, winning the 1958 Australian Schoolboys Championship and then playing in the Victorian junior team. Billy McWilliam, one of the country's best teachers, was so impressed with John he had him spend a week with Bruce Crampton and tried to persuade him to consider a professional career. In his father's opinion, however, he was too young and needed to get a trade.

John was very forward as a youngster – some would call it 'streetwise' nowadays – and he had to be growing up in Melbourne's western suburbs. He was also somewhat rebellious. In the state junior squad he fell foul of the selectors when he and one of his mates decided to go for a counter lunch in between rounds. It was a pretty hot day and John could think of nothing better than a couple of refreshing pots to accompany a bite to eat! The authorities thought otherwise.

Although John had desires on a career as a golfer he became a qualified motor mechanic, something that stood him in good

stead later on before the days of golf clubs employing a dedicated mechanic.

A LOVE OF THE GAME

Although having a trade, John's career would be intricately bound up in golf. He struck up a friendship with Eric Horne, the curator at Medway Golf Club, who was also running his own golf course design business. John was soon working for him building the Keilor and Whittlesea courses but there were hiccups with an earthmoving company and no more construction work eventuated. John stayed on at Whittlesea as curator, married Joy and had a son, Darren, who eventually became a golf professional.

In 1968 he was appointed curator at Royal Hobart Golf which, coming from Whittlesea, was quite an achievement but John had the knack of winning committees over at his first meeting. While in Hobart he prepared the course for an Australian amateur series and the 1971 Australian Open won by Jack Nicklaus.

John was immensely proud of his course and his staff. He spoke of the greens being much like those Claude Crockford prepared for tournaments at Royal Melbourne, quite believable given a trip to Melbourne in 1970 to meet Crockford and talk about his philosophies.

John's golfing background helped shape his ideas on how a course should be prepared not only for tournaments but year round. He became a member at many of the clubs he worked. At Royal Hobart he played pennant On 16 May 2009 the Australian turfgrass management industry lost one of its most influential characters with the passing of John Wilson Spencer, aged 66. Friend and business partner of some 30 years Graeme Grant, together with Jack Newton and Martyn Black, help ATM pay tribute to one of the pioneers of the superintendent profession.

and one year led the club championship by nine shots after two rounds from Peter Toogood. That Saturday night John had a back spasm and couldn't play the next day. Peter went on to win.

Whether or not he was a member, John was always a larger than life part of any club he went to. He always mixed with the members and they enjoyed his company both on the course and over a beer later on.

Once the Australian Open had come and gone the challenges at Royal Hobart had diminished so John felt it was time to look out for a new position. In 1972 Kingswood advertised for a course manager. The money was better and a major reconstruction was planned. John won the job hands down.

Although the job promised much, things didn't pan out as expected at Kingswood so when Narooma Golf Club advertised for a curator in early 1974 he drove to the south coast of NSW to check the course out. He liked what he saw, got the job and headed country.

He spent seven years in Narooma and left an everlasting impression not only as the course superintendent, architect and club champion but also as a motorbike daredevil! John was watering greens one evening in the days before automatic irrigation systems and had one more shift to go. When he passed the 4th tee the stand of his motorbike got caught in a rut on the track and tipped him over a cliff to the rocky beach some 80 feet below.

He cracked a bone in his neck and badly damaged his knee but suffered very few after

Spencer and his Huntingdale Golf Club crew, including current day superintendent Michael Freeman (third from right) who was John's assistant for 12 years

other injuries due mainly to club captain John Limon going out to look for him as John hadn't come back for his shout. Limon was scared of heights but when he saw John lying at the bottom of the cliff he went straight down to comfort him.

John's nickname prior to this was 'Specified', the name of the local concrete company. As golfers in Melbourne would later find out John believed that you had to put your own stop on the golf ball. Soft greens weren't for him. He believed in and produced firm, true and fast bentgrass surfaces.

His first foray into golf course design was at Narooma where he added nine holes of the highest standard. He became a sought after designer in the area after that and planned the extensions to the Eden course.

Once he'd finished designing and constructing the new nine, John longed for a new challenge and so in 1981 went to Royal Canberra Golf Club. It was a brief but productive stint at Royal Canberra where he turned the greens from basically *Poa annua* into pure bent within 18 months. He changed the club's perceptions of good golfing turf and trained his assistant, Michael Rose, to eventually take over.

John came to this club with very strong course designing credentials but Thomson & Wolveridge were the incumbents. He reviewed their plans for substantial alterations and made alternative suggestions which his business, Grant Spencer & Associates, put forward as a plan. Many of these recommendations were



implemented but not in the name of his company. This caused John much anguish and meant he was on the move again.

THE MASTERS YEARS

In March 1982 Huntingdale Golf Club advertised, John applied and he got the job before the interview was complete. He spent 20 years there and eventually re-designed all 18 holes. The Australian Masters had been played for four years before John arrived and his first event coincided with a Greg Norman victory and Channel 7 TV coverage. This was a combination that would see the tournament become the most popular in the country.

Prior to John's involvement with the Masters things weren't too promising. Insects and fungal problems in summer had left the greens patchy and bumpy which along with other issues made the tournament seem quite

Although he came to the job with all the necessary expertise, the task was enormous. In the heat of February he had to produce firm fast putting surfaces on *Poa annua* turf. There would be few who knew how much that took out of him and he would lose 6-7 kilograms each year in the lead up to the tournament.

Each year was different for the turf but in general all would be okay until he had to lower

the mowers and start cutting the wintergrass four and five times a day to get the surface he was after. Then the trouble would start. The stress placed on the turf meant it would be susceptible to just about any disease. When he'd exhausted all his knowledge trying to solve a problem he'd send samples off for analysis and they would invariably come back with the result "no active fungi". He thought he had a new disease variety!

The months in between tournaments he had the task of controlling the *Poa annua* and promoting the bentgrass in the greens. This required great skill and a deal of frustration as just as he was making the progress he wanted he had to change tack and start thinking of the tournament.

It took longer than he wanted but he eventually got rid of the *Poa* and produced some of the finest bentgrass playing surfaces this country has seen. All the great overseas players, including Jack Nicklaus, Seve Ballesteros, Tom Watson, Nick Faldo and Tiger Woods got a taste of how good our golf courses could be because of John Spencer.

The Masters and Huntingdale provided John with many memorable moments, none better than when his son Darren made the cut and played the last day in the group ahead of Greg Norman.



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When John came into the golf course industry, the skills of greenkeepers were not highly regarded and they were poorly paid. By the time he retired the industry had realised the value of the course superintendent to golf. This is no coincidence. The way John went about his business was instrumental in improving the packages offered to the superintendents of today.

A BENT FOR DESIGN

Turf management was only part of John's story and in 1977 he formed a partnership with myself spreading his turf management skills and golf course design expertise throughout the country. In 1986 we joined with Jack Newton to become Newton Grant & Spencer.

Although some at Huntingdale may have been concerned about the time spent away from the club, most realised that there were benefits for them and that John would be giving back the knowledge he was gaining in spades.

The company designed Juo Country Club in Japan and this required many trips to ensure the construction people could build the course with the features and style wanted. The owner was exceedingly difficult to please but John struck up a special rapport with him even though there was no common language. This was one of John's great attributes. He had a sharp wit and easily endeared himself to people in all walks of life.

Due mainly to his role at Huntingdale and the Masters John wasn't able to fully extend



Spencer's latter years were spent in Inverloch where he became an honorary member of the Leongatha Golf Club for helping to improve the course's layout and turf surfaces

himself into course design. Links Lady Bay, south of Adelaide, was the only course in Australia to be designed by his company. This course is rated 3rd in SA behind Royal Adelaide and Kooyonga.

Although the re-design of Huntingdale has the company's name on it, this is really John's work and he bore the brunt of unfair criticism. In 'The Spirit of St Andrews' Alister MacKenzie says he had become accustomed to having his best work criticised and upon the opening of Cypress Point said he was disturbed because no-one had described it as unfair!

If the critics had been able to sit with John and hear the rationale behind the design they would have come away with a better understanding of it and maybe play it better as a result. Prior to the re-design Huntingdale was always wet in winter and spring. Even during the summer tournaments, water would pond on the greens after rain. If we ever return to a normal weather pattern there is no chance of that happening again.

ONE LAST ACHIEVEMENT

Golf was John's life which meant he had to

travel to see and play the best courses in the world and broaden his knowledge for use at home. Such courses he ticked off along the way included Pine Valley, Cypress Point, Pebble Beach, Royal County Down, The Old Course and many others in the world's top

When he retired from Huntingdale he moved to Inverloch on Victoria's South Gippsland coast and played at Leongatha Golf Club where he was made an honorary member in appreciation of his help to improve the turf and design on that course.

As well as his son Darren, John had two daughters, Kerrianne and Sally, and eight grandchildren. Joy, his ever-loving wife, was prepared to pick up the family and travel to any place with her husband.

Although he had achieved most things in his golfing life, one had eluded him until recently, but there was a twist. He had never struck a hole-in-one but managed to put one in at Leongatha while playing alone one evening!

John Spencer enriched the lives of many people, none more so than the writer of this article. He will be sadly missed.

ACKNOWLEDGEMENTS

ATM would also like to thank Michael Freeman, Alison Holden and the Huntingdale Golf Club for their assistance in putting this article together. Photos courtesy of Graeme Grant and Huntingdale Golf Club's publication Sands and Success, by Brian Meldrum and Gary Mansfield (1996).

THE TYPE OF BLOKE YOU'D WANT BESIDE YOU IN THE TRENCHES

knew John Wilson Spencer for 18 years but knew of him for a lot longer. I played Narooma Golf Club as a young fellow and I was so impressed by the layout and condition of the course that I enquired as to who built it. The blokes in the clubhouse said their greenkeeper had but he had since moved on to Royal Canberra. I subsequently went on to play many times at Royal Canberra during John's reign there and was always blown away by the superb putting surfaces, equal to the most famous surfaces anywhere in the world in my humble opinion.

It wasn't until the design company of Newton Grant and Spencer started work at Castle Hill Country Club that I got to know John as a friend. The first impression I had of him was a fairly quiet man who did more listening than talking, but when he spoke everyone listened! It took quite a while to break the ice with John, and Graeme Grant for that matter, and I had to earn their respect.

I think I did this by working hard to implement their designs and by not being shy in putting in my two bob's worth. After several meetings and course inspections, we soon got to know each other and I discovered the classic dry humour that John possessed.

One example of this was the morning we were discussing a boundary issue on the 6th hole. Upon telling the 'three amigos' that the owner intended to build a 175 square mansion John replied "Shit, even I could hit that!" That comment belied the fact that John was a very accomplished gofler.

One of my best memories is having a game on some of the brand new holes at Castle Hill in official opening ceremonies which invariably included a beer and a BBQ. John was a good judge of a light shandy and we had several fun dinners over the years when he and Graeme would come up from Mexico and stay a couple of weeks to work from dawn till dark until the work was done.

I found John to be a rock solid supporter of his mates and one day when one of my club's less intelligent members was having a very audible go at Jack Newton [of course Jack was in Newcastle at the time] I saw John's eyes narrow and his teeth clench. He announced very slowly and deliberately "that bloke needs a good punch in the mouth!" At another venue I am pretty sure John would have done just that.

I will finish by saying that I think John Spencer is the sort of bloke that you would want with you in the trenches and I am very proud to have been able to spend time in his company. Like countless other greenkeepers who came in contact with him, John taught me a lot and I hope for our industry's sake there are more like him to come."

MARTYN BLACK CASTLE HILL COUNTRY CLUB

CLASS AND CREDIBILITY ON AND OFF THE COURSE

ohn Wilson Spencer was too good a bloke, had too much information to impart to the golf industry and too many good yarns to tell over a cold beer or a glass of red wine to be taken from our world at just 66 years of age.

I first met John over 30 years ago, then more formally when he became superintendent at Huntingdale Golf Club in 1982 where he completed some of his finest work. Having played in the first Australian Masters in 1979 I considered the conditioning and layout of Huntingdale, surrounded as it is by Australia's best sand belt courses, to be an ordinary conveyance by comparison. For those who can remember back that far, John spent his tenure at Huntingdale successfully converting it into one of the sand belt's better conditioned, updated and more interesting layouts to play.

During his time at Huntingdale John demonstrated his talent as an architect. construction consultant and turf manager. His penchant for couchgrass fairways and pure bentgrass greens - his trademark, which many said couldn't be achieved with success in the Melbourne climate - was clearly on show at Huntingdale even though he copped plenty of early criticism. It is interesting how opinions mellowed on the issue as time went on.

John was always a very measured, understated person who quietly backed his abilities, his experiences and his better

judgement. When John voiced his opinion, usually very calmly, those with any nous would shut up and listen. I always felt John gave the golf course at Huntingdale class and a certain credibility, traits that could easily be described as two of John's strong suits along with his honesty and integrity.

John was a fiercely proud and supportive family man and possessed a dry, quirky and witty sense of humour which made him great company, particularly over a cold beer or a bottle of red. Brian Jones, my cheeky travelling mate in those early Masters days, always called him "greenkeeper" over a few beers in the clubhouse. John tried to explain that he was now called a 'superintendent'. Jones wasn't having a bar of it - "you'll always be a grasscutter as far as I'm concerned!" at which point everyone burst out laughing.

Another hilarious incident occurred when we designed and built Juo Country Club in Japan. Construction company Kumagai Gumi did all the earthworks and at the conclusion of construction invited us to celebratory drinks which turned in a major piss up, even if communication was reduced to nodding heads and hand gestures.

Towards the end of the night John brought the place to an hysterical standstill when he slung a Kumagai employee over his shoulder like a bag of fertiliser and walked out the door! This was the 'unmeasured' side of John that made him unique, comical at times but always fantastic company.



20 years Spencer ruled the roost at Huntingdale Golf Club, helping transform the sand belt course into one of the best presented in Australia

John will be sadly missed by all that knew him, particularly his immediate and extended family. When it came to golf course design, construction and turf management, in my opinion anyway, he had no peer in this

Perhaps his greatest legacy to the game was all those budding greenkeepers who were indentured to him. The knowledge, advice (when asked) and wisdom John propagated can never be underestimated. I've been one of the lucky ones.

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The clean up continues on the back nine at the Marysville Community Golf and Bowls Club and superintendent Rob Christie is hoping to have the full 18 back in play come August

ou can just imagine it. Marysville Community Golf and Bowls Club covered wall-to-wall in two inches of snow less than four months after the Black Saturday bushfires tore through the course and the nearby township.

To arrive at work and see the course and surrounding hills blanketed in white was something of a surreal moment for superintendent Rob Christie and given the catastrophic events that changed Marysville forever back in February, for just a few hours at least on one Wednesday morning in early June the place returned to the tranquil and idyllic haven that it was once renowned as.

Once the snow had melted away, however, the reality quickly set back in. Although a lot has been achieved in a relatively short amount of time there is still a long way to go but as each day passes Christie and his team take another step down the long road of recovery.

A key marker along that road was the reopening of the front nine in late May. While the numbers haven't exactly been pouring through the gate it was still a momentous day for Christie and the club after what can only be described as an overwhelming few months.

While there is still plenty of work to be done, in particular on the back nine, the Marysville course is slowly transforming back into the picturesque gem it once was before the fires attempted to steal that away. The front nine is practically back to normal, give or take a few minor areas, and once the bridges across the river have been repaired the back nine will quickly follow suit.

Since Black Saturday the industry has rallied around all those clubs impacted by the fires, none more so than Marysville. As reported in the last edition of ATM, around 45 greenkeepers spent two days resurfacing 15 greens and surrounds in April. A few weeks later another gang of 29 volunteers from Victorian golf clubs and turf industry companies, organised by Devilbend Golf Club superintendent Trevor U'ren, topdressed the resurfaced greens, scarified and topdressed surrounds as well as undertook a mountain of tidy-up work around the course.

"Things have certainly moved along quickly especially with the help we have received from the industry," says Christie. "The greens have come up great and took extremely well which meant we didn't even need temporaries when we opened the front nine. All the greens are



It has now been over five months since the Black Saturday bushfires changed the lives of countless Victorians. For those golf clubs and maintenance staff caught up in the terrible events of 6 February 2009 it has been a long road back to normality and even now that process is still ongoing. ATM catches up with superintendents Rob Christie (Marysville), Tim Warren (Horsham) and Brad Tucker (Whittlesea) to see how they and their crews have managed to get through the past few months.

ready for play but our hands have been tied a little with the construction on the bridges and we are probably a few months away from having the back nine open."

When ATM called Christie in mid-June the clean-up on the back nine was still ongoing and not just as a result of the fires. Christie was, at the time, repairing damage to the 13th tee caused by wombats and lyrebirds! Once the bridges are constructed the remaining debris can be removed and fairways topdressed. More importantly, though, the club was eagerly awaiting its insurance claim to come through after which time real progress can be made.

"Hopefully we'll be pretty much right once the insurance money comes through," says Christie. "We have got all the quotes for a new irrigation controller and pump system and are just waiting on the money to come through. The irrigation system will be our first priority and we want to make sure that is in and operational before summer. I'm sure when we fire it up for the first time there'll be quite a few problems so it is important we get on to that as soon as possible.

"We have also placed a large order with Toro which includes a couple of rough cutters, greens and tees mowers, a Workman with a topdressing unit, fairway unit and bunker rake. Toro have really helped us out with a price and what I had on my wish list I have pretty much got. It'll certainly make a pleasant change having some new and reliable machinery. At least I won't have to spend half a day every day repairing something!

"From then it will be a matter of sitting down with the treasurer and looking at items we still need to purchase and formulating a priority list. At this stage we should have most things covered. The new maintenance shed will obviously take a bit and we still have to reconstruct the 11th green (something which was on the cards before the fire) which we haven't even touched yet."

While the Victorian turf community has united around the likes of Christie and his crew at Marysville to help get the course back on track, the New South Wales Golf Course Superintendents Association (NSWGCSA) and New South Wales Turf Equipment Technicians Association have also played their bit. Rather than donating to the nationwide bushfire relief appeal, the two associations decided to give money directly to two individuals who were affected more than most by the fires.

In early June, NSWGCSA president and Cabramatta Golf Club superintendent Craig Wright spent a day in Victoria touring the NSWGCSA president Craig Wright (second from left) visited Victoria to personally hand over donations of \$1500 to Whittlesea Golf Club apprentice Daniel Shaw (second from right) and Kellan Fiske from Marysville. Pictured also are Whittlesea superintendent Brad Tucker (left) and Dale Tucker (right)

bushfire affected clubs of Marysville and Whittlesea with AGCSA representative John Geary. Wright was able to surprise young Marysville apprentice Kellan Fiske and Whittlesea apprentice Daniel Shaw with a cheque for \$1500 each to help them with the rebuilding process.

"Kellan didn't know anything about it and was stoked to receive the cheque," says Christie. "It was a fantastic gesture on behalf of the NSW boys and I'm sure Kellan will put it to very good use."

JUICES FLOWING

While Christie looks forward to getting a full complement of holes back into play, his counterpart at Horsham Golf Club Tim Warren is getting somewhat excited. The juices are starting to flow again given the virtual blank canvas that the fires have left behind and even though he reckons he has only just got his mouth above the water line, he is in a much



better situation than a few months ago when he barely had his nose above it!

When ATM caught up with Warren in early June he had just entertained four staff from Royal Sydney Golf Club who had made a 13-hour road trip to Horsham by car to lend a hand for two days, yet another example of the extent members of the turf industry have gone to in order to help out colleagues during a time of need.

Warren says the Royal Sydney crew – made up of assistants Tim Moule and Shane Bromfield, senior greenkeeper Adam Marchant and apprentice Mat McKay – were tremendous and helped to repair a few greens that hadn't quite recovered as well as remodel a bunker. As a parting gift they assisted Warren and his crew with course preparations for that Saturday's competition. The extra pair of hands certainly came in handy for Warren who





has been minus one staff member since April after apprentice Nathan Turner went in for a double hip replacement and isn't due back on deck until August.

As winter has approached the clean up has continued in earnest around the course and Warren is hopeful that come the end of August that will be complete. Turf surfaces are generally in good knick and have enjoyed some welcome rain in May and June (for the 21 days from 25 May to 15 June Horsham recorded 113mm) and aside from a few patches of greens turf Warren says they are as good as they will get until he is able to rip into them during November renovations.

It's off the course, however, where most of the action has taken place in recent times, a fact which is reflected in Warren now spending just as much time in front of a computer than out on the course.

Golf course architects Neil Crafter and Paul Mogford (Crafter + Mogford Golf Strategies) have completed their report on the course and have put forward a conceptual Master Plan, while Warren has been busy compiling a proposal, with the help of a committee member, about construction of a new maintenance facility.

Perhaps the most interesting development has been an approach from Mitchell Water, the company constructing the nearby Wimmera-Mallee Pipeline. As part of its contract Mitchell Water has to replant 20 trees for every one that it removes during the pipeline construction process. The Black Saturday fires wiped out around 90 per cent of Horsham Golf Club's vegetation and the approach by Mitchell Water, which would see the course turned into a native regen site as part of a 10-year agreement, is something the club is seriously looking at.

"Together with Paul Mogford and course development committee member Ron Dodds, who happens to head up Greening Australia in western Victoria, we have already discussed it and it fits in with what we envisage for the course," says Warren. "We have already talked about what species should go where and once the plan develops then we can start to look at things in more depth.

"It will all be indigenous plantings which is what we've got to get back to. That's more the look I would like to see rather than a mix



LETTER OF THANKS FROM WHITTLESEA GOLF CLUB

On behalf of Daniel Shaw and myself I would like to thank the New South Wales Golf Course Superintendents Association and the New South Wales Turf Equipment Technicians Association for their support and commitment to helping the two young blokes most affected by the Black Saturday bushfires, Daniel Shaw and Kellan Fiske.

After receiving a phone call from the NSWGCSA president Craig Wright, a time was set up so he could fly down and meet Daniel and Kellan. I know from our side of things that the meeting was very much appreciated by Daniel and I'm sure the same goes for Kellan. The talk Daniel had with Craig and John Geary from the AGCSA on the day did him a lot of good. Once again thanks for your time, effort and support.

BRAD TUCKER SUPERINTENDENT, WHITTLESEA GOLF CLUB

A group of 29 volunteers helped in further clean up work at Marysville in early May

of exotics and introduced natives. We've got to have something endemic to the area because that's the stuff that adapts to the climate and is easier to manage. We've got a chance to move in a positive and Horsham can effectively be used as a revegetation model.

"It's all starting to tick along nicely and actually when you look at the bigger picture it is going to be a very exciting time at Horsham coming up. It's unfortunate that it has taken a fire to do all this but there's so much going on. With all this planning happening it really gets the juices flowing and, pardon the pun, but I guess the fire has sparked things into action. Hopefully we'll all be able to sit back in 10 years time and say that some good did come out of this terrible event after all."

CRUEL TWIST

Brad Tucker, superintendent at Whittlesea Golf Club, is also hoping for something good to come of everything, but just at the moment he can't quite see what that is. That's not surprising given what can only be described as cynical twist of fate which befell the club in late autumn.

Having dodged a huge bullet on Black Saturday – the fire front got to within 800m of the course boundary before a wind change saved the club from certain carnage – on Sunday 3 May an electrical fault sparked a fire in the Whittlesea Golf Club clubhouse causing a fire which gutted the entire facility. All the club's records, historical information, trophies and honours boards were destroyed, while the fire-fighting effort caused substantial damage of the adjacent practice putter which more than likely will need reconstructing.

The fire proved to be a little too close to home for Tucker's young apprentice Daniel Shaw who in the Black Saturday fires lost all his possessions after the house he was sharing with his girlfriend and her parents was destroyed.

"It [the clubhouse fire] was a huge shock for us all," recalls Tucker. "The site has since been cleaned up and a couple of temporary buildings have been erected. We are currently sorting through paper work, finding out just what has been lost and then starting the process of rebuilding.

"It hasn't been much fun up here for most of the year but to the credit of my two apprentices, Daniel and my son Dale, they have really stepped up and got on with the job despite the difficult circumstances. For now we just keep looking ahead and continue to rebuild."

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The Pulse

Given the current economic climate, superintendents across the country have no doubt been asked by management to trim even more from operating budgets to help their clubs ride out the downturn. In light of this ATM wanted to get an idea of some of the cost-saving measures and techniques that Australian superintendents are employing to make their maintenance operations more efficient.



"After discussions with Mark Parker from Concord Golf Club who gave me the idea, we have purchased a motorised wet screed and associated equipment which allows us to concrete our own paths for less than half of a contractor's price. Initially the work wasn't up to that of a contractor, but over time staff are presenting a very professional product. It allows us to drive the dollar further. A great winter job!" Tony Fogarty, Catalina CC, NSW

"We have put in place for the next budget that all overtime will be taken as time in lieu (e.g.: for one hour of overtime worked you will get 1.5 hours off)." *Mark Findlay, Sunshine GC, VIC*

"A huge cost saving for us this year has been the use of volunteer labour. For example, if a person has lost their job in a local industry, in order to obtain the Job Start allowance he/she has to do 15 hours per week for a not-for-profit organisation. We have two such people and this has saved us money using outside contractors for certain jobs, while at the same time lifting the appearance of the golf course." *Eddy Ruis, Portland GC, VIC*

"At Bermagui we had to make some pretty severe budget reductions last year. I had to retrench a good staff member to reach the reductions required by the board. This was one of the hardest tasks I have ever endured – give me an angry Ladies captain any day!

We reduced our mowing regimes except for special events. This of course reduced our fuel costs which were elevated the previous year due to excellent growing conditions (rain) and fuel prices. We traded two of our most heavily worked machines (rough and fairway mowers) which had accumulated 5000hrs+. The replacement machines were put on operating leases and the end result was a 60 per cent reduction in repair and maintenance costs. We also dropped the autumn greens renovation.

With these cost-cutting measures in place the overall budget was reduced by 14 per cent from the previous year. Last year was a challenge, but tough times require tough measures. Through the improvement in the club's balance sheet, this year some capital has been allocated for course improvements. This makes it all worthwhile, especially when the board sticks to its word! It might sound stupid, but last year was very satisfying in the way we met the required reductions and there was definitely a feeling of accomplishment when presenting the figures to the board." David Thomson, Bermagui CC, NSW

"Earlier in the year we were told fertiliser was going up substantially, and it did, over 125 per cent in some cases. I contacted my supplier and asked how much stock he had and as this was last year's stock it would be at last year's price. I purchased my entire yearly budget in one hit (\$30k) and stored it. I asked my supplier half way through the year if I was to purchase the same amount how much it had gone up. The same amount was now \$48k, so I made a saving of \$18k through a bulk purchase.

On a smaller scale we used to get sandwiches provided by the club for around \$3.50 per person per day. We were asked to cut back so we now purchase sandwich fill from Coles and make our own at a cost of \$1.50 per person. We have reduced contractor usage and do more in-house renovation than



AGCSA advice for to improve



before (e.g.: drainage, coring, verti-draining, construction etc). We have also switched mobile phone providers and now all calls within the fleet are free which wasn't the case before." Andy Hugill, Mona Vale GC, NSW

"At Huntingdale Golf Club we manage this course with minimal outside contractors. This is by no means new and is something we have done over the past eight years to keep costs down. This month we have built new lockers for staff PPE out of some old materials that we had in the shed – nothing goes to waste. We have also bought a washing machine and dryer to wash staff uniforms rather than send to the drycleaners." *Michael Freeman, Huntingdale GC, VIC*

"Having spent 20-odd years working at a club that has operated on a small budget with low staff members, I have been constantly looking at efficiencies and cost savings. Developing a volunteer culture at the club has been a great way to involve the members as well as getting some real work done. It is amazing what 40-50 bodies can do in a short time at a working bee. I have also had volunteers that turn up 1-2 days a week religiously to work on pet projects that paid employees do not have time for. This translates to real cost savings and enhanced club pride within the volunteer group which can often be contagious." *Andy Blacker, Adelaide Shores, SA*

"We have a six month, \$180,000 project in the planning stage here at Eastlake. The plan is to begin the project towards the end of the financial year and complete in following financial year, so as to spread the funds over two accounting periods." *Peter Svenne*, *Eastlake GC*, *NSW*

"One thing I have done for several years is a tender process for all products (fertiliser, herbicides, fungicides, wetting agents) and then haggle on the price. Let's face it, if you were to buy something from a shop for around \$1000 you would bargain with them for the best price. The reps aren't always happy to do this, but you might be surprised at the difference in price that each rep is prepared to sell for. In doing so you must look at what is best for the club. I initiate the tender process around the start of financial year. The savings may not be huge but may be enough to do an extra application of something." Jason Ferry, Queanbeyan GC, NSW

"The use of trichoderma, bacillus and kelp products on greens when soil temperatures are reasonable (e.g.: September to May) has saved us thousands of dollars on fungicides and its better for the environment and golfers too." *Gary Day, Flagstaff Hill GC, SA*

"The biggest cost saving measure we have used is employing apprentices. With their reduced wages and government rebates they cost less than 50 per cent of a greenkeeper or labourer." *David Stone, Ashlar GC, NSW*

"For about two years now we have been using a purpose built lightweight greens roller throughout the year, but particularly on weekends. The pull-behind roller was built by our mechanic with electric lift up wheels and is about 3m wide attached behind a cart (with slick tyres). It basically takes the place of dew brushing but has the added advantage of smoothing out the surface of the greens prior to play. It takes about one and a half hours to

get over all the greens compared to three and a half hours of cutting.

They say necessity is the mother of invention as we needed to find a way of presenting the greens on Sundays with the pressure of noise pollution to the surrounding neighbours. Rather than go with an electric mower (which we had tried before) we found the roller provided a far superior playing surface without the extra burden on the turf that cutting brings and achieved in less than half the time. It is probably the best \$2000 I have spent in 14 years!" Ian Todd, Victoria GC, VIC

"Reduce the amount of lights left on in the maintenance facility during the day." *David Nicholls, Gosford GC, NSW*

"Cut greens with triplex mowers – one person six hours compared to four people four hours with walk-behinds. Reduce cutting frequency. Employ more apprentices. Spray out fairways for all grass and broadleaf weeds once per year rather than twice. Apply more wetting agents. Construct dams to harvest water to save on water costs. Reduce fertiliser use. Space applications out further and maybe do fairways once per year rather than twice." Peter Jans, Sandhurst Club, VIC

"Review all your electricity usage. Are there new tariffs in place that take advantage of off-peak price savings? Are there more efficient ways of running your pumps, bores, aerators etc. in line with these times? Jeff Lane, Paradise Palms CC, QLD

"I wouldn't say this is new to us because of the economic climate but it was due to cost cutting and the rising cost of fuel. Since late last year we have been using Primo on our fairways and tees mainly as a cost-saving and man hour-saving exercise. I spoke to Syngenta and they had a programme to work out the

superintendents and clubs golf course maintenance practices



■ savings. At the time we were actually down one person and weren't looking at replacing him for six months. By the time you allow for the spraying and chemical costing I still save nearly \$5000 in six months plus the fairways actually look better also. We also changed the shape of some fairways, shortening them to reduce mowing in unused areas." Jason Bushell, Rowes Bay GC, QLD

"A wetting agent injection system has made a dramatic difference to Point Walter, priceless I reckon. Such a system is relatively inexpensive and pays for itself many times over inside a few years due to labour savings in both application (particularly on broad acre areas such as fairways and the watering in, usually a two-person, all-day operation) and removed inconvenience to golfers by not needing to water in on fairways. Also with an unreliable irrigation system or a spike of hot dry wind, just flick it on and watch the water go in the ground where it needs to go.

There are also tangible safety advantages as well. Staff are not among golfers who may get impatient and hit up on them when trying to spray large areas and not driving on possible slippery surfaces due to wetting agents or washing in. And if one is fortunate enough to have a valve-in-head system then it could be used to aid recovery or prevent stress in particular areas, providing improved uniformity." Andrew Arrah, Point Walter GC, WA

We currently have 12 full-time staff including myself and our mechanic. With such a large site to look after as well as having one staff member full-time maintaining entry roads and clubhouse landscaping, getting all the jobs done is always a problem.

We have a good relationship with nearby schools which sees us utilise some students for work experience and we also currently have two school-based trainees doing Cert II Horticulture working with us. One of them works one day a week and the other works one day a week through school but also does an extra day each week out of his own time. There are good government incentives for hiring these school-based trainees and with the lower pay rates it has enabled us to get extra jobs done with minimal cost. Their theory training is carried out in school time and they attend blocks at TAFE during their school holidays which is paid for by the government." Ben Baumman, The Glades GC, QLD

"We are feeling the strain of the economic downturn in a number of ways even with a new 27-hole facility! With a new golf course and immature turf, reduced cutting techniques have been applied over the winter period. From seven day mowing we have reduced to three at the moment and cutting in the afternoon has improved quality. Staff taking accumulated leave is also assisting the bottom line and giving staff a well-earned break. Time in lieu is also another way of assisting the budget during times where bottom line figures need to be adjusted.

Other measures you can look at include using up all the fertilisers/chemicals sitting at the back of the store that you may have overlooked; best practice with use of IPM with all chemical applications; and re-calibrate spray tanks to maximise efficiency." *Gary Bass, Yering Meadows, VIC*

"I think there are many issues that are affecting the golf course industry that could be changed to help superintendents run their course more efficient. I think the major problem is teaching golf committees and members that by cutting budgets each year the course maintenance programme has to be cut to meet the unrealistic demands. Don't ask me the best way to do this as all clubs are different. I think all superintendents go home from some committee meetings thinking 'that was a waste

of time' and it would be easier to give in to committee demands when you know it is going to cause problems in maintaining the course.

Some strategies we have made here at Gold Creek include converting cool-season fairways (rye/Kentucky bluegrass) to warmseason (Transcontinental couch). This programme was proposed by myself and my 2IC back in 2006 when the private owners were looking at ways to reduce the bills of buying water and complying with water restrictions. The programme cost the club \$125,000 over a two-year period and since then we have not spent any money on potable water (the bill for water in 2006 was \$250,000!).

Wages is the other big issue that affects every club. At Gold Creek we have eight staff all working for one goal – to present the course in the best possible condition every day. I believe by creating pride in the workplace and an enjoyable work environment you don't need a large maintenance crew. Superintendents should get back on the tools and stop sitting in the office writing reports on cost savings for board meetings!

One of the first items that is always cut in budgets is staff training. I think it is time for the AGCSA to look at reducing the cost of membership and holding the AGCSA conference every second year to allow all clubs to send the superintendent to what is a very important event. Just in NSW/ACT alone there are at least 10 events a year you could go to before you even look at the AGCSA conference and each association expects your support." Scott Harris, Gold Creek CC, ACT

At The Links we have a very small council operating budget. It has been no secret that fuel prices have soared and this has had an impact, particularly on the price on prilled fertilisers. For me one of the ways I have saved money is to fertilise with screened raw chicken manure straight from the coop. In doing this I am able to fertilise the fairways



MEMBERSHIP RENEWALS FOR 2009-2010 FAST APPROACHING

ALL MEMBERS – renewal packages will be sent out in mid-May so remember to keep your contact details up to date.

SUPERINTENDENTS – for the first time ever you will receive renewal information on behalf of your staff to provide you with immediate assistance for your budget planning – let us know what you think.

APPRENTICES – the AGCSA requires some information about your studies; your renewal package will include this information.

QUERIES? Contact AGCSA on (03) 9548 8600 and ask for membership manager Pip Dudley, or email info@agcsa.com.au





four to five times during the course of the year, rather than just one or two times using prilled products. There are some negatives to this, one being the smell, but if you can spare the time to communicate the pros and cons to the members they generally understand. I haven't had any issues to this point.

We use Primo more at low rates which has helped in reducing cutting times and increased times between cutting intervals which means less machinery maintenance and running costs. And with only four of us on staff it has also allowed us to achieve the majority of golf course maintenance operations." Nathan Bradbery, The Links Shell Cove, NSW

"I have enlisted a number of measures over the past few years at Long Reef to help save the club money or to benefit the club in different ways. Check local, state and federal government grants available to industry. Over the past three years the club has been successful in obtaining over \$300,000 which has been used for stormwater diversion from beaches into our irrigation dams and also for the promotion of native grasses on the course.

Elsewhere we have: dropped one staff member in the last six months; reduced the use of fertilisers and now carry out site specific fertilising where needed; utilised the use of salaried staff more for summer weekend monitoring which cuts down on overtime costs; stopped major fairway renovations with the use of hired equipment; and undertaken numerous

light renovations which do not require major clean up and recovery." Peter Donkers, Long Reef GC. NSW

"At Moonah Links carts and the wear areas they create, especially around greens and tees, has been and will continue to be a concern. Having two championship golf courses in the natural 'Cups' land, we are mindful of what resources can be utilised to retain carts to the paths provided considering the surrounding areas maintained. While there are some concrete paths, most areas are crushed rock and we have been using toa tree logs as edging. This is a natural resource available to us when we clean up selective areas of the property. This has proved quite effective in the areas used while maintaining a natural appearance.

Some of the directional signage around the course for carts, GURs and bunker warning signs are made up on site using timber, and discounting labour content these are produced for around \$7.50ea. Native grasses and plants propagated and produced from our nursery is another method utilising a natural resource that helps produce the desired effect." *Kyle Wilson, Moonah Links, VIC*

"We are getting three quotes for all orders of supplies. Each company has one shot, no 'ducks and drakes' trading back and forth. The best price wins. We have also instituted a no weekday O/T policy as well as ensuring only high priority spending – luxury spending is put off. Spraying at night has also proven a success – no golfers, no hassles, no complaints and a faster and more effective use of labour and time. Finally, making lazy, unproductive, uncooperative staff redundant; having a job in these times is paramount and we are all lucky if we have one." John Odell, Royal Sydney GC, NSW

"We have just started our club's new financial year and our course maintenance budget

certainly was scrutinised more so than any other year. For us the belt tightening began a couple of years ago. This process was driven by several big capital expenditure projects commencing shortly.

Our first strategy was to start operating with one less full-time staff member. We began using a 'seasonal' casual during busy periods. I would always try to hold our staffing levels by replacing straight away after someone left. This 'voluntary' situation forced us to re-think tasks. With change comes innovation and we found that we could cover ourselves and still present and maintain a private golf course at a similar standard

One of the big savers of time and money with improved presentation was to roll greens using a three-point linkage attachment (power broom or scarifier) on the back of a tractor with galaxy tyres. We adjust the 'working' part of the attachment to its highest setting so as to not have it come in contact with the putting surface; very easy to do.

The attachment is equivalent weight over two long rollers, similar to a dedicated roller. It is cleaner, faster and delivers the same results. We now finish rolling greens at the same time as we finish mowing them; multi-use of standard equipment already in the shed. Our two dedicated rollers will be traded in. Our Gators that were used to tow the dedicated rollers around the course are now freed up in the mornings to assist in hand raking bunkers. Our weekly stimpmeter readings have shown this initiative to work well." Adam Robertson, Kew GC, VIC

"This year we have delved into the taxation department and found we can claim fuel tax credits for businesses as we are a reacreational facility. This has resulted in a \$3000 return for this finacial year which is almost 1 per cent of my annual budget and 17 per cent of my fuels and oils budget". Callum Hitching, Busselton GC. WA



To pick up this great book from the AGCSA Bookshop call **03 9548 8600**



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The new Eclipse 322 has been designed according to specific customer feedback and is the most advanced greens mower available for today's golf industry.

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With a simple battery-powered system, the Eclipse 322 reduces noise, maintenance needs and fuel consumption, resulting in lower cost of ownership than traditional hydraulically driven machines.

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Achieving Par

Finding the balance



Official Guide



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25th Australian Turfgrass Conference and Trade Exhibition Hobart, Tasmania 13-17 July 2009

25th Australian Turfgrass Conference and Trade Exhibition Hobart – 13-17 July, 2009

The invigorating fresh air of Hobart awaits delegates for the annual Australian Turfgrass Conference which for the first time in 17 years makes its way back to the island state. ATM will again act as your official guide to this year's 25th gathering, to be held at the fabulous Wrest Point complex, and over the next 20 pages delegates will find all the information they need to get the most out of conference week.

WELCOME TO HOBART

f you thought it was cold in Melbourne last year we have managed to find somewhere even colder for you this July...beautiful Hobart! All delegates heading to the 25th Australian Turfgrass Conference and Trade Exhibition on the Apple Isle will need to make sure they pack plenty of warm clothes. It will give us all the opportunity to experience some diverse weather as well as have a look at some cool-season grasses growing in their natural conditions...just like being back in the UK! It has been 17 years (1992) since we last took the conference over the Bass Strait and I am sure a few of you will be enjoying a few extra days discovering the wonders that Tasmania has to offer after the event.

Our theme for this year's conference is 'Achieving par – Finding the balance'. In these stressful times we have to deal with drought, ever decreasing budgets, staff problems and a plethora of administration issues. The programme in Hobart will consist of discussion forums and lectures across these subjects and many more pertinent topics.

AGCSA events and education manager Simone Staples has brought together an excellent line up of presenters, most of whom are local industry colleagues. In conjunction with presentations from Beyond Blue and Tasmen on health and well being, we have tried to cover all aspects of the profession and the inherent problems it throws at us.

After a hard day at the seminars and workshops there will be our famous social functions where delegates can meet up



with old friends and let their hair down over a few quiet drinks. We have some great social events again this year for all delegates to enjoy.

I must thank the trade who despite the tough economic times have again thrown huge support behind the conference. Without these dedicated companies the event would struggle to survive. I encourage all delegates to have a good look around the trade exhibition to see what latest products and technology they have to offer.

I hope to meet up with as many of you as possible in Hobart and trust you all have a week of high quality education, great networking opportunities and most importantly an enjoyable experience.

ALLAN DEVLIN PRESIDENT, AGCSA SUPERINTENDENT, SECRET HARBOUR rom an AGCSA perspective, the 2008 conference in Melbourne was a huge success with attendance and participation in all sessions beyond the expectations. Last year's conference was always going to be hard to beat and the challenge for the AGCSA in 2009 has been to come up with a programme that will both engage and inform delegates. Interestingly, the key to putting together this year's conference has been the questions left unanswered from Melbourne.

Last year the discussion forums on human resources and personal management revealed some interesting facts relating to the stresses associated with managing a golf course or turf facility in the current climate. During these sessions it became obvious that over the past few years or so there have been combinations of factors that make the job of being a superintendent or turf manager more stressful and in many cases less satisfying. Drought, water shortages, high expectations, tightening budgets, the lack of qualified staff and the never-ending paper trail is challenging many turf managers and in some circumstances they are leaving the industry as the burden becomes too much to bear.

In recognition of the fact that turf managers are faced with different challenges, not all of them agronomic, this year's conference will explore the theme of achieving a healthy balance. Be it the health of the course, a club's financial health or the physical and mental wellbeing of the superintendent and maintenance personnel, a balance must be achieved for a successful working environment.

To facilitate this, the programme in Hobart will consist of discussion forums and lectures across these areas. We have engaged Beyond Blue to look at depression and how to help those colleagues who may be struggling. Tasmen will also discuss a range of men's health issues.

Elsewhere the extensive Hobart programme will have the usual assortment of experts covering a wide range of topics from organic amendment research, thatch management, managing golf courses and expectations of users, drought-tolerant sportsfield management, bunker management and maintenance budgets.



To wrap up conference week, the Friday turf tour will take in an eclectic mix of Tasmanian turf facilities including Test cricket venue Bellerive Oval, StrathAyr's Richmond turf farm and Australia's oldest golf course Ratho Golf Links in Bothwell.

SERIOUS FUN

While the education sessions and turf tour will spark the grey matter and provide plenty of ideas for superintendents, assistant superintendents and turf managers to take back and implement at their respective facilities, there is of course the lighter side

of conference week. The Australian Turfgrass Conference has developed a reputation as being an excellent networking event thanks in no small part to the fantastic array of social gatherings planned during the week.

Taking advantage of the Apple Isle's colourful past, the Bayer Welcome Reception carries a 'convict' theme and will be held in Wrest Point's Derwent Room. The following evening will see the Scotts state of origin challenge hit the gaming tables, while to end the week the Syngenta President's Dinner heads trackside at Tattersalls Park for a night of greyhound racing!

After last year's gathering in Melbourne, Hobart's Wrest Point complex will host the 25th Australian Turfgrass Conference from 13-17 July

TEEING OFF

Conference week will again tee off with the 2009 Toro AGCSA Golf Championships. Royal Hobart Golf Club (superintendent Stephen Lewis) will host the event, while just up the road at Tasmania Golf Club superintendent Danny Gilligan will entertain those playing in the Toro AGCSA Scramble.

There has been a slight change to the format of this year's golf tournaments with Toro now sponsoring the AGCSA Scramble which replaces the old AGCSA Corporate Cup. The Toro AGCSA Scramble will be a teams Ambrose event similar in format to the popular Holden Scramble and as well as being a fun new format there will be some great prizes on offer from.

The AGCSA board and staff, together with conference major sponsors Horticulture Australia Ltd, PowerTurf, Toro, Rain Bird and Syngenta welcome you to Hobart and hope you have an informative and entertaining week.

25TH AUSTRALIAN TURFGRASS CONFERENCE - EVENT INFORMATION AND CONTACTS

2009 Toro AGCSA Golf Championships

Where: Royal Hobart Golf Club When: Monday 13 July

Details: Buses will depart for Royal Hobart from Wrest Point Hotel at 7am. Light breakfast will be served upon arrival. This year's luncheon and presentation ceremony will be a combined affair with the 2009 Toro AGCSA Scramble being held at Tasmania Golf Club. The lunch will feature Tasmanian axeman David Foster as guest speaker. Buses will depart Royal Hobart at about 3pm for Wrest Point Hotel.

2009 Toro AGCSA Scramble

Where: Tasmania Golf Club When: Monday 13 July

Details: Buses will depart for Tasmania GC from Wrest Point Hotel at 7am. Light breakfast will be served upon arrival. At the conclusion of golf players will be bussed across to Royal Hobart Golf Club for the combined presentation luncheon.

(Please note tee times and bus departure times for both golf competitions may be subject to change due to the weather conditions on the day.)

Bayer Welcome Reception

Where: Wrest Point Hotel (Derwent Room)
When: Monday 13 July (7.30pm-10.30pm)
Details: Seeing we are in Tasmania this year,
the 'convict' theme was a given for popular
Bayer Environmental Science Welcome
Reception. Come dressed as a convict,
copper or corporal (punishment). This event
is included in the price for all fully registered

Scotts Gaming Night

delegates.

Where: Wrest Point Casino

When: Tuesday 14 July (4.30pm-6.30pm)

Details: Putting away the darts from Melbourne, this year's Scott's state of origin challenge will be fought out on the gaming tables at Wrest Point. The state with the most money at the end of the night will be

crowned champion.

25th Australian Turfgrass Conference Trade Exhibition

Where: Wrest Point Convention Centre When: Wednesday 15 July (9am-5pm) and Thursday 16 July (9am-2.30pm)

Details: Over 40 companies will be exhibiting their products and services in Hobart. Entry

to the trade exhibition is free. See later in this guide for a full company listings.

2009 AGCSA AGM

Where: Wrest Point Convention Centre When: Wednesday 15 July (5pm)

Details: Open for all current financial AGCSA

members.

Syngenta Presidents Dinner and 2009 AGCSA Awards Presentation Ceremony

Where: Tattersalls Park

When: Thursday 16 July (7.30pm-late)

Details: To cap off a week of camaraderie and education we have planned a casual interactive night of fast action greyhound racing at Tattersalls Park. The dinner will include the 2009 AGCSA Awards

presentation ceremony.

Conference Enquiries

Contact: Simone Staples

During conference: (03) 6221 1720 or 0415

322 213

Trade Exhibition Enquiries

Contact: Melissa Wallace

During conference: 0417 011 745

25th Australian Turfgrass Conference Keynote **Speakers and Education Sessions**

From dealing with stress and men's health issues through to finetuning budgets and the discovering the latest results in turf research, the 25th Australian Turfgrass Conference is bound to have something for everyone.

ATM looks at the top line-up of education sessions which are set to feature in Hobart.



Recognising, helping dealing stress and depression in the workplace

Terese Fitzpatrick - Beyond Blue

Participants will learn how to recognise depression and related disorders in the workplace. Through the use of case studies, delegates will become more confident in the strategies required to approach a colleague they may be concerned about. Time will also be spent discussing how to develop plans to increase the awareness around your club or facility.

Threats and prevention tips for outdoor workers Tasmen

This seminar will provide a range of information on men's health issues. Being a man should not only mean taking care of your family, but also taking care Women are twice as likely as men to visit their doctor and follow up when symptoms arise. Statistics show men also tend to internalise and self-medicate instead of seeking professional help and that virtually all stress-related diseases are more common in men. This session will empower delegates to be proactive when it comes to their health and well being.



WA-based researcher heading a project managing soils through the use of soil amendments. The overall aim of the project is to evaluate the effects, both positive and negative, of the addition of various soil amendments to various golf course and sportsfield soils. The soil amendments focus on organic wastes generated by management of the facility, but also include other wastes such as green waste compost, natural clays, fly ash or other urban/industrial wastes.



Soil choice for construction and renovation

Gary Beehag - M. Collins and

Gary will discuss the importance of getting the right growing media for your construction or renovation project. Many ventures suffer due to time/growth delays. Some of these problems can be resolved by involving your chosen soil suppliers who have the practical and technical expertise in growing media specification.



sportsfield audit trials

Matt Roche is a scientist for the Department

of Employment, Economic Development and Innovation (formerly the Queensland Department of Primary Industries & Fisheries). Over the last four years Matt has been working extensively with automated traction and wear tolerance concerning both community and elite sports venues. His presentation will cover trials being undertaken for the 'Best use modelling for sustainable sports field surfaces' HALfunded project with the Sports Turf Institute. The aim of the project is to develop a best use model and appraisal system for regional sports field allocation and development.



Thatch management John Neylan - AGCSA

While there have been many innovations in turf management, it is usually the basics and how they are managed, or otherwise, that determine the quality of the turf surface. There is no doubt that thatch and how it is managed is one of these key basic elements that affects water management (infiltration and drainage), turf health and surface quality. John will go back to basics and look at what is thatch composed of, factors affecting thatch formation, the influence of thatch on water retention and drainage, thatch as a harbour for disease and thatch management.



Turf management - How far has the profession come?

Martyn Black - Castle Hill Country Club, Daryl Sellar -Glenelg Golf Club and Jon

Mathias - Indooroopilly Golf Club

This session will set the theme for the conference. Daryl will introduce some of the changes that modern day turf managers face, the toll they can take and warning signs that indicate that something may be wrong. Daryl will also discuss planning and management with your immediate staff and those you report to and how effective management decisions lead to an efficient workplace. Martyn will look back at the profession and how some old techniques can still be used today to combat workplace stress, while Jon will explore the importance of good management techniques and how SEIS does matter.



Managing golf courses and the expectations of their

Mark Jennings - Box Hill Golf Club, Justin Sheehan -

Coffs Harbour Golf Club and Tony Smith - Launceston Golf Club

This session will see three superintendents with low to medium budgets discuss how they manage their golf courses. Time has been allocated for a question and answer session at the conclusion of their presentations.



2008 **AGCSA** Claude Crockford **Environmental** Award - Magenta Shores Kenton Boyd - Magenta Shores Golf and Country Club

2008 AGCSA Claude Crockford winner Kenton Boyd will discuss the environmental innovations that he and his team have implemented at Magenta Shores.



Interactive session Reviewing and dealing with cost changes

Mark Parker - Concord Golf Club, Daryl Sellar - AGCSA

and Gerry Charlton - IPOS Consulting

Sustainable management is a term often used within the turf industry. In particular, the economic sustainability of the practices we undertake at our various facilities is often the most heavily scrutinised. It is increasingly important for the modern turf manager to be able to demonstrate the value the club/ organisation is getting for its money and the likely impact of cost increases on turf quality and/or expectations. Experienced turf managers will present their thoughts and generate discussion on ways to demonstrate the real costs of turf management.



The

AGCSATech research update John Geary and Andrew Peart - AGCSATech

AGCSATech

team

25TH AUSTRALIAN TURFGRASS CONFERENCE - REGISTRATION

will discuss with you the various research projects they are currently overseeing and some that have been recently completed. These projects include Poa annua control in bentgrass greens, hybrid couchgrass selection trials, bentgrass selection and development, bentgrass variety trials, warm-season grass management guidelines and the AGCSA's Water Management Initiative.

he conference registration desk is

located in the entry foyer of the Wrest

Point Convention Centre. Delegates are

requested to visit the registration desk prior

to attending the conference to confirm

their arrival and receive their conference

registration desk can assist delegates and

guests with any conference requirement

including: providing a message service to

fellow delegates; hosting a notice board for

any general information and the promotion

Throughout the conference the

accreditation and delegate satchel.



From regional ground to AFL venue for a day

Andrew Peart - AGCSATech and Bryan Dunn - York Park AGCSATech senior agronomist

Andrew Peart looks at the process of getting a regional sports ground up to standard to host matches as part of the AFL's preseason NAB Challenge. Bryan will look at venue management of Launceston's premier sporting ground York Park.



Bunker workshop

Daryl Sellar and John Neylan AGCSA and Richard Chamberlain

In recent years, bunkers seem to have invoked more discussion, criticism and comment among golfers than any other part of the golf course. Golfers are often concerned with bunkers being too soft and that buried lies are making shot play too difficult. The challenge for golf course superintendents has been that as grass surfaces get better they are expected to produce equally high quality playing surfaces in the bunkers, often to an unrealistic and unsustainable standard. Consequently, sand selection, bunker construction and rejuvenation, and on-going maintenance have become significant budgetary items.

This bunker forum will be an open discussion on the architectural purpose of bunkers, the soil physics in selecting the 'best sands' and the cost of preparing an all-day, every-day consistent surface that will provide the 'perfect' lie. Richard Chamberlain will explain the purpose of the bunker in defining a golf hole and the strategies and challenges the designer is trying to achieve. John Neylan will detail the soil physical aspects that define an 'ideal' bunker sand and the research behind the analytical tests, while Daryl Sellar will describe the man power and cost black holes that can skew the budget. As maintenance budgets are squeezed, this forum will assist in putting into perspective the purpose of one of the high input areas of the golf course and identify what can be done to make the job a little easier and more cost-effective.



Making your equipment dreams come true

Jeff Blunden - JB Advisory Jeff Blunden has an intimate knowledge of the golf industry

and has been responsible for many major reports commissioned by the PGA, AGCSA and VGA. Based on first-time industry research, his latest report deals with equipment financing and its relevance to the superintendent. The presentation will outline the typical benchmarks required for finance, leaving delegates with a simplified understanding of options available to them when planning budgets and seeking approval for equipment funding.



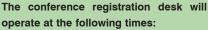
Drought tolerant sportsfield management

Dean Holden - Evergreen Turf and Bruce Stephens - Anco Seed & Turf

Due to the impact of drought over the past decade many traditional cool-season playing surfaces have been converted to warmseason grasses to alleviate water demands over the summer months. Dean and Bruce will discuss the management requirements for these sportsfields and the issues that must be addressed so they provide the best possible playing surfaces all year round.

Guest Speaker - Peter Toogood

The final session on Monday will see a presentation from one of Tasmania's and Australia's leading amateur golfing figures Peter Toogood. The Toogood name is synonymous with Tasmanian golf and Peter will recount his time as one of this country's leading amateur players. Peter's career included winning the 1954 Australian Amateur Championship and the 1956 New Zealand Amateur Championship. He was leading amateur in the 1954 Open Championship and was part of the Australian team to claim the inaugural Eisenhower Trophy in 1958 at St Andrew's in Scotland.



of or changes to a particular session,

function or venue. The desk will also

receive and store lost property, and handle

any other enquiries.

Sunday 3pm-5pm Monday 9am-4pm Tuesday 7.30am-4pm Wednesday 8am-4pm **Thursday** 8am-2.30pm











2009 AGCSA AwardsHonouring the Industry's Leading Practitioners

The AGCSA Awards represent the ultimate in recognition for members of the golf course maintenance industry



syngenta and a strong field of finalists has again been assembled in 2009.





s in previous years, the AGCSA will bestow four awards at this year's 25th Australian Turfgrass Conference— the Distinguished Service Award (sponsored by Scotts Australia); the Claude Crockford Environmental Award (sponsored by Syngenta), the Excellence in Golf Course Management Award (sponsored by John Deere) and Graduate of the Year (sponsored by Toro).

While the Distinguished Service Award is bestowed by the AGCSA Board, the AGCSA annually calls for nominations in the Excellence and Claude Crockford categories. After narrowing down a field of excellent submissions, the 2009 finalists were flown to Melbourne in mid-June to present to an expert panel of industry judges. The AGCSA, in conjunction with Scotts, Syngenta, John Deere and Toro, is pleased to announce the successful finalists.

AGCSA EXCELLENCE IN GOLF COURSE MANAGEMENT AWARD



Presented in partnership with John Deere

Andy Hugill, Mona Vale Golf Club, NSW

The immediate past president of the NSWGCSA, Andy Hugill

knew he was in for a challenge when he took over as superintendent at Mona Vale Golf Club back in June 2003. Upon accepting the position, the club's board gave him just one single challenge – within five years bring the quality of the golf course to a level where it is generally recognised as the best conditioned on the northern beaches of Sydney. Six years on and you only have to visit the course to see that Hugill has risen to that challenge and brought Mona Vale back to its rightful status as one of Sydney's best.

Over the years Hugill and his team have undertaken major drainage works to particular areas of the course, enhanced the playability and presentation of the kikuyu fairways, improved management of the greens as well as managed a tee resurfacing programme. Hugill has also overseen the installation of a new irrigation system and rehabilitation of the course's wetlands.

As well as the on-course accomplishments, Hugill has also made some significant inroads in the off-course management of maintenance operations. Among the changes implemented include the development of formal position descriptions, half-yearly reviews and staff bonus system and a more refined KPI format for staff.



Craig New, Lakelands Country Club, WA

Craig New has been a stalwart of the turf management profession for many years and has been an active

participant at both state and national level. He was a director on the AGCSA Board from 1997-1999 and has been heavily involved with the GCSAWA for 13 years.

While these and other roles have kept him busy – he was also a lecturer at Murdoch TAFE – it's as his role as superintendent of Lakelands Country Club where New has demonstrated his true talents.

Since his appointment in July 1994 New has improved Lakelands immeasurably thanks to his foresight and turf management nous. New took over when the course was just 10 years old and was charged with the task of improving playing surfaces from tee to green, not an easy task given the club's limited resources.

Rising to the challenge New quickly set about improving the greens and bravely recommended a radical renovations programme in his first year to help remove upwards of 200mm of thatch that had accumulated. Over 100 tonnes of organic matter was removed and over the past 14 years that practice has continued and the greens are now at a stage where they are rated in the top five in WA.

AGCSA CLAUDE CROCKFORD ENVIRONMENTAL AWARD



Presented in partnership with Syngenta

Jodie Grainger, Yering Meadows, VIC

Jodie Grainger has the potential to create a slice

of AGCSA history at this year's awards. If successful, the Yering Meadows environmental officer will become the first female recipient of the AGCSA's Claude Crockford Environmental Award, the first female in fact to take home any of the association's prized awards.

Grainger has been an employee of the Croydon Golf Club for the past three years and joined the club at a time when it was about to embark on construction of a new Ross Watson-designed course at Yering.

The club was looking for a person to undertake and lead a team in developing and implementing a landscape of 300,000 plants, 6700 walnut trees and all course landscaping including the clubhouse surrounds. The new site (165 hectares) was originally a working horse and cattle farm with very little vegetation on it. A number of creeks and the Yarra River are significant parts of the landscape which also added to the challenge of developing the golf course landscape.

With her skill and expertise Grainger has been able to significantly enhance the landscape of this new 27-hole facility through extensive native vegetation planting, restoration of existing waterways and general upgrading of the site.



Andrew Smith, Yamba Golf and Country Club, NSW

During his tenure as superintendent at Yamba Golf and Country Club, Andrew Smith has proven that you

don't necessarily need a big budget in order to be proactive when it comes to effective golf course environmental management. Yamba is located at the mouth of the Clarence River on the NSW north coast and the golf club is situated in a tea tree wetland between the ocean and the sensitive river estuary. That has meant management practices are focused on ensuring the optimum health of the local estuarine system as well as protecting the course's native wetlands.

Since his appointment Smith has implemented a biological control programme which has produced wonders. Fungicide applications have reduced and in the past

nine years he hasn't had the need to spray for nematodes. Through this programme Smith has also realised other benefits, in particular savings in water usage, a 15 per cent reduction in fertiliser usage as well as less grooming and dethatching requirements.

Currently Smith is overseeing the upgrade of the irrigation control system to a solar powered radio controlled system. By going solar this will reduce the club's carbon footprint and with no need to trench in power cables there is no chance of digging up acid sulphate soils or disturbing native vegetation.

2009 AGCSA GRADUATE OF THE YEAR

Presented in Partnership with Toro

The Graduate of the Year Award rates as perhaps the most unique in the AGCSA Awards programme. Today's recipients will go on to become tomorrow's superintendents (well, in the case of this year's field one finalist has actually already achieved that) who will play a major role in the development and direction of golf course maintenance practices in Australia and potentially overseas.

This year's six finalists come from the respective state superintendent association and TGAA apprentice of the year programmes, and in deciding upon who wins the national honour the judging panel will consider the graduate's academic achievements, career goals, ambassadorial skills and how winning the award will assist them in meeting their career aspirations. The finalists are:

ACT



Wade Williams Federal Golf Club

This year's ACT representative Wade Williams has been a member of the maintenance crew at Canberra's Federal

Golf Club for almost eight years. Starting out as a turf technician, Wade decided on a change in career and started a turf management apprenticeship in 2006, capping off a series of excellent academic results by winning the 2009 TGAA ACT Living Turf Apprentice of the Year.

During his time at Federal Wade has been involved in green reconstruction and bunker reshaping as well as being involved in the club's major programme to convert all coolseason fairways to couch. Wade's passion for the industry was further highlighted recently when he took on a part-time teaching role at the Canberra Institute of Technology's School of Horticulture in addition to his own Certificate IV studies.

NEW SOUTH WALES



Port Kembla Golf Club
NSW has a fine record in
this award in recent years
and David Sutherland will be
hoping to emulate the feats of

last year's winner Chris Thompson (Maclean Golf Club) and 2006 winner Sean Kinsley (Yamba Golf Club). Sutherland is currently employed at Port Kembla Golf Club but served his apprenticeship at Gerringong Golf Club on the NSW south coast.

David Sutherland

QUEENSLAND



Joshua Kelly
Pacific Harbour Golf and
Country Club

Twenty-two year old Joshua Kelly will represent the Sunshine State and hails from

Pacific Harbour Golf and Country Club, Bribie Island where he is part of an 11-man crew under the guidance of superintendent Kelvin Nicholson. Joshua is the current irrigation technician as well as first aid and OH&S officer for the maintenance crew and is soon to embark on a Diploma in Turf Management.

When Kelly first started his apprenticeship he had his sights on becoming superintendent of a large course overseas. However, having spent some time in the industry he says he has now come to realise that it doesn't matter how prestigious the course you run is, as long as you are able to make a positive difference at whatever course you work at is what makes a great superintendent.

SOUTH AUSTRALIA



Jeff Hull
The Vines of Reynella

The SAGCSA will be represented by 32-year-old Jeff Hull who has been involved in the turf industry

for the past three years. Hull, who spent brief stints at Adelaide Golf Links and Unley Council, is currently undertaking Certificate IV in Horticulture (Turf Management) and for the past 18 months has been employed at The Vines of Reynella Golf Club under superintendent Rob Millington.

VICTORIA



James Stewart
Gisborne Golf Club

It has been a whirlwind past year for Victoria's representative James Stewart who has undoubtedly taken one of the more interesting routes to this year's Graduate finals. Prior to entering the golf course management profession Stewart was a highly promising golfer and at the age of 16 was playing off a 1 handicap. In 2000 he was part of the Victorian Junior team before becoming a trainee golf professional in 2002.

After two forgettable years, Stewart had a change of heart and joined the maintenance crew Goonawarra Golf Club in Melbourne's northern suburbs. Stewart took to the greenkeeping lifestyle with vigour and thanks to the encouragement of course superintendent Brad Morcomb decided to take up an apprenticeship. After 15 months at Goonawarra, Stewart transferred to Gisborne Golf Club under superintendent Craig Evans and in May 2008, in the third year of his apprenticeship, was appointed 2IC of the five-man team. Just five months later Evans resigned and Stewart was offered a threemonth trial as superintendent. After just six weeks he was offered the job full-time.

Such a rapid rise has been a testament to Stewart's abilities and desire to further his skills and in working at Gisborne Golf Club he has been able to learn from one of the best. On his crew Stewart is fortunate to have former Gisborne superintendent and industry icon Ray Keane.

WESTERN AUSTRALIA



Daniel Zoccoli

Mt Lawley Golf Club

GCSAWA representative

Daniel Zoccoli began his
career in turf management
at Mount Lawley Country

Club and it soon became apparent that he would become a key asset for the club and superintendent Glenn Cross.

Taking to the usual apprentice tasks quickly and competently, Zoccoli progressed rapidly and by his second year was given additional tasks that would be expected of a qualified greenkeeper, such as irrigation installation, preparing turf from seed bed to play and tournament preparation.

Zoccoli completed the fourth year of his TAFE studies in December 2008 in the top three. In early in 2009 he was named the GCSAWA's Turf Management Best Indentured Apprentice Award recipient and shortly after won the TAFE Horticulture Apprentice of the Year Award as well.







25th Australian Turfgrass Conference Schedule

Golf Course Management Stream Monday 13th July

7.30am - 2.00pm 2009 Toro AGCSA Golf

** ♦** AGCSA

Championships Royal Hobart Golf Club TORO

2009 Toro AGCSA Scramble

Tasmania Golf Club

** ♦** AGCSA

2.00 - 3.30pm **Toro AGCSA Golf Lunch** TORO

Royal Hobart Golf Club (this is for both the AGCSA Golf Championship and AGCSA Scramble fields)

7:30pm - 10:00pm **Bayer Welcome Reception**

Wrest Point (Derwent Room)

Bayer Environmental Science



Tuesday 14th July

PLENARY - Conv. Centre Auditorium

8.10am - 10.00am

Turf managment - How far has the profession come and at what cost?

8.10am - 8.50am

Daryl Sellar

Learning from past mistakes

8.50am - 9.30am

Jon Mathias

Importance of good management techniques

9.30am - 10.10am

Martyn Black

What can go wrong

10.10am - 10.30am

Morning Tea

10.30am - 12.30pm

Therese Fitzpatrick - Beyond Blue Interactive workshop recognising, helping and dealing with stress and depression in the workplace

12.30pm - 1.30pm

Lunch

1.30pm - 2.30pm

Kenton Boyd

Environmental consideration and initiatives at Magenta Shores G&CC 2.30pm - 3.30pm

Peter Toogood

4.30pm - 6.30pm

Scotts Function Wrest Point Casino



Wednesday 15th July

Convention Centre Auditorium

8.30am - 9.10am

Jeff Blunden

Finance 101 - How your equipment dreams can come true

9.10am - 9.50am

Katrina Walton

Latest research in organic soil ammendments

9.50am - 10.30am

Andrew Peart and John Geary AGCSATech Research Update

10.30am - 11.30am

Morning Tea and Trade Show

11.30am - 1.00pm

Mark Jennings, Justin Sheehan and Tony Smith

Managing golf courses and the expectations of golf course users on low or medium budgets

1.00pm - 2.30pm

Lunch and Trade Show VIP Lunch

2.30pm - 3.30pm

Tasmen - Health and Wellbeing Information on mens health issues including threats and prevention tips for outdoor workers

3.30pm - 5.00pm

Trade Show and Happy Hour

5.00pm - 6.30pm

** ♦** AGCSA

AGCSA Annual General Meeting

Thursday 16th July

Convention Centre Auditorium

8.30am - 10.00am

John Neylan, Daryl Sellar, Richard

Chamberlain

Bunker Management Workshop Includes time and cost investment vs overall course design, alternatives and management techniques

10.00am - 11.00am

Morning Tea and Trade Show

11.00am - 1.00pm

Soils ain't Soils

Gary Beehag

Choosing the right soils for construction and renovations

John Neylan

Profile analysis and thatch management

1.00pm - 2.30pm

Lunch and Trade Show

2.30pm - 4.00pm

Final Interactive Session (Budgets) Daryl Sellar, Mark Parker & Gerry

Charlton

Reviewing and dealing with cost changes, proactive contractor defence

7.00pm - 12.00am

Syngenta Presidents Dinner and

2009 AGCSA Awards

#AGCSA

syngenta

Tattersalls Park

Friday 17th July

8.30am - 4.00pm

Post-conference Turf Tour

Bellerive Oval, StrathAyr and Ratho Golf Links

Sportsfield Management Stream **Monday 13th July**

7.30am - 2.00pm

2009 Toro AGCSA Scramble

Tasmania Golf Club

** ♣** AGCSA TORO

2.00pm - 3.30pm

Toro AGCSA Golf Lunch

Royal Hobart Golf Club (this is for both the AGCSA Golf Championship and

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TORO

#AGCSA

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2.30pm - 3.30pm

Peter Toogood

4.30 - 6.30pm

Scotts Function Wrest Point Casino



Wednesday 15th July

8.30am - 9.15am

Matt Roach

QPIF trials into sportsfield auditing process

9.15am - 10.00am

John Neylan

Profile analysis and thatch management

10.00am - 11.00am

Morning Tea and Trade Show

11.00am - 1.00pm

Interactive Workshop - Henk Smith, Terry Muir, Andrew Peart Includes various aspects of turf management including PGRs, managing fuel/labour costs, carbon emissions and carbon-neutral facilities

1.00pm - 2.30pm

Lunch and Trade Show

2.30pm - 3.30pm

Dean Holden and Bruce Stephens Managing sportsfields that have been planted with warm-season grasses in a transitional climate

3.30pm - 5.00pm

Trade Show and Happy Hour

Thursday 16th July

Boardwalk Gallery

8.30am - 9.30am

Tasmen

Information on mens health issues including threats and prevention tips for outdoor workers

9.30am - 10.10am

Gary Beehag

Choosing the right soils for construction and renovations

10.10am - 11.10am

Morning Tea and Trade Show

11.10am - 11.45am

Katrina Walton

Latest research into organic soil ammendments

11.45am - 1.00pm

Andrew Peart and Bryan Dunn From regional ground to AFL venue for a day; Venue management of York Park, Launceston

1.00pm - 2.30pm

Lunch and Trade Show

2.30pm - 4.00pm

Final Interactive Session (Budgets) Daryl Sellar, Mark Parker & Gerry Charlton

Reviewing and dealing with cost changes proactive contractor defence

7.00pm - 12.00am

Syngenta Presidents Dinner and 2009 AGCSA Awards ** ♦** AGCSA

Tattersalls Park

syngenta

Friday 17th July

8.30am - 4.00pm

Post-conference Turf Tour

Bellerive Oval, StrathAyr and Ratho Golf Links



The AGCSA would like to acknowledge the following companies and organisations for their support of the 25th Australian Turfgrass Conference and Trade Exhibition in Hobart.

Principal Sponsors







Supporting Organisations

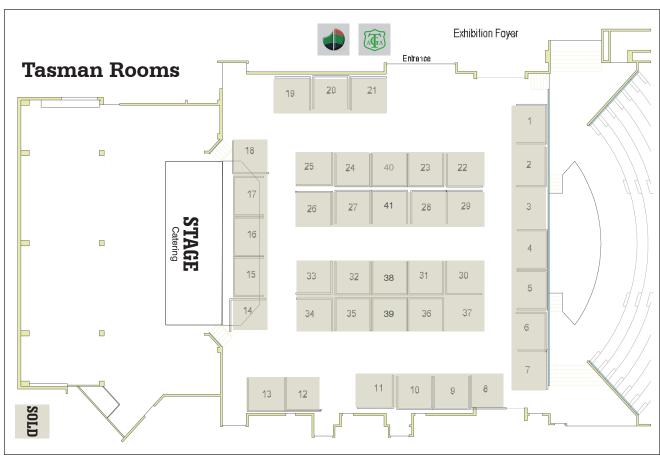






2009 Trade Exhibition

Wednesday 15 July (9.00am-5.00pm) and Thursday 16 July (9.00am-2.30pm)



- 1. Nuturf Australia
- 2. DuPont
- 3. David Golf & Engineering
- 4. BMS-Better Methods
- 5. Floratine
- 6. Brown Brothers Engineers
- 7. Q-Turf Weidenmann
- 8. Enware Australia
- 9. Parchem
- 10. Redexim
- 11. Dint

- 12. Casetech Horticulture
- 13. Greencare
- 14. PowerTurf Australia
- 15. Evergreen Turf
- 16. PGG Wrightson Turf
- 17. Barmac
- 18. Tru-Turf
- 19. Country Club International
- 20. Syngenta
- 21. Globe Australia
- 22. Toro-Commercial

- 23. Toro-Irrigation
- 24. Scotts
- 25. Rain Bird Australia
- 26. Geofabrics
- 27. Simplot Pro-Line
- 28. Tycrop & Foley
- 29. Graden
- 30. Legend Couch Grass
- 31. Turf Drain Australia
- 32. Advanced Seed
- 33. Nufarm

- 34. Bayer Env. Science
- 35. Aust Seed & Turf Farm
- 36. Hunter Industries
- 37. Turf Culture
- 38. Phantom Core
- 39. Mentay
- 40. John Deere
- 41. StrathAyr Turf Systems

Exhibition Foyer AGCSA and TGAA

ADVANCED SEED Advanced Seed

Stand 32

Advanced Seed is a leading importer and provider of turfgrass seed and related products for both the commercial and retail markets throughout Australia. Our products are used by leading racecourses, golf courses, turf farms, local governments and sporting facilities. Our extensive range of both cool- and warm-season grasses allows us to provide the very best selection of products to turf managers.

Access to major seed producers and breeders from USA, Europe and NZ allows us to provide a product range at the cutting edge of turfgrass research. These suppliers include Seed Research of Oregon,

responsible for high performance varieties such as SR4600, SR4420 ryegrass, SR8600 tall fescue, Tyee, 007 and Dominant X-treme bentgrasses. They are also responsible for some of our warm-season grasses such as LaPrima, LaPrima XD and Veracruz. Our other major supplier is DLF who have developed some leading turf type ryegrasses including All*Star 3, Regal 5, Essence and fine fescue varieties such as Longfellow 2 and Cindy Lou.

Apart from highlighting our turfgrasses, we will be displaying information on our Evergreen turf covers and Earthway spreaders. Be sure to visit us at Stand 32 where we will be happy to assist you with all your enquiries. www.adseed.com.au

AGCSA *AGCSA

Exhibition Foyer

The official host of the 25th Australian Turfgrass Conference, the Australian Golf Course Superintendents' Association is committed to the ongoing professional development and support of all those involved in the golf course maintenance industry. With a membership of over 1000, the AGCSA is growing in size and offers a range of services to help superintendents and their staff who are seeking access to resources, training and networking opportunities.

Visit the AGCSA stand to experience first hand the extensive range of services and how they have been tailored to meet the needs of people working in the golf

course maintenance industry. Copies of the AGCSA's flagship publication, Australian Turfgrass Management journal, will be available, merchandise and turf text books will be for sale at discounted prices. New membership applications from delegates are always welcome and these can be lodged and processed at the stand which will be located in the entry foyer to the trade exhibition. Current members can renew their membership, update their contact details and arrange access to the members-only section of the AGCSA website. AGCSA Board members and staff will be present throughout the show to help out with any queries.

AUSTRALIAN SEED & TURF FARM Stand 35

The Australian Seed & Turf Farm management collectively have over 100 years' experience in the turf industry. This has contributed to Australian Seed & Turf Farm's market positioning as one of the leading suppliers of instant turf in the commercial market Australia wide. We pride ourselves on understanding our commercial client's needs.

We offer our standard varieties for commercial clients and also specialised varieties such as bentgrass and fine fescue. Our standard bentgrass varieties available all year round are Penn G2, Penn A1 and Penncross. We grow all of our bentgrass on USGA specification sand and there is no netting inside the turf sod hence making it easier to maintain after establishment (i.e.: de-thatching, scarifying, and aerating). Our Standard fine fescue blend available all year round is 50 per cent Creeping Red fescue and 50 per cent Chewings fescue. Like the bentgrasses, our fine fescue blend is grown on USGA specification sand and with no netting. We have a range of warm-season drought tolerant turfgrasses also available including Santa ana couch, kikuyu and Matilda buffalograss.

BARMAC INDUSTRIES Stand 17

A lot has happened at Barmac since the last AGCSA conference. We have extended our team of turf specialists to support our growing range of products which includes Mann-turf, The Andersons, Noculate, CoRoN, leading turf nutritional products. Fungol 500, Rysol and Chloroturf are proven fungicide performers, while DSMA, Poa Pro and Broadleaf weeder are reliable herbicides. Barmac is now into full production of specialty blended fertilisers designed to meet your specific requirements.

Paul Jackson has joined Barmac to take charge of the speciality product division. To assist Paul with product development and analytical services Ryan Kearns has also joined the team having spent time as a turf research officer. Paul and Ryan are available to assist you with your enquires along with Wayne Sear and Jon McCarthy.

Barmac is proud of its ability to assist turf managers' technical enquiries and support with university-trained agronomists. Barmac will be launching the new to Australia Turf Nutritional Tool from The Andersons, so be sure to attend the stand for a demo and to design your nutrient programme. We hope you will visit our stand and we look forward to providing information on our extensive range of turf management products and services.

BAYER ENVIRONMENTAL SCIENCE Stand 34 Bayer Environmental Science (BAYER)

Bayer Environmental Science has been a long-term supporter of the AGCSA and we are proud to be a sponsor of the Australian Turfgrass Conference for another year. We will be using the Hobart conference as an opportunity to launch the exciting new turf fungicide Dedicate which brings two new active ingredients to the turf industry, providing a tool for fast disease control, longterm protection and fungicide resistance management. We invite you all to visit our stand to find out about Dedicate and our commitment to sustainable development.

With an historically strong position on product stewardship and environmental responsibility, our commitment as one of the principal partners of the Australian Golf Environment Foundation in 2008 is also part of our ongoing 'Protecting Tomorrow ... Today' sustainable development initiative. This is a long-term commitment which we believe is critical for the ongoing viability of our industry.

BETTER METHODS BMS Stand 4

Andy Knox from Better Methods will have a wide and interesting variety of new products to display in Hobart. BMS has very recently developed and launched a 2.5m wide, lightweight aluminium dew broom. This helps to get through a stack of work quickly compared to the standard 1.8m timber backed broom. Another new product is a recycled plastic Dummy Rake; hard wearing, efficient and no splinters!

Some 12 months ago Better Methods picked up the distribution rights for Underhill irrigation products. These have proved a

great addition to the range and they too have several new products on display. The Claw is an anchor for quick coupler joints to stop them blowing apart - safe and sensible - and far more effective than two star pickets and some utilux clamps! Underhill has developed a range of brass and stainless steel irrigation nozzles to retro-fit both Toro and Rain Bird heads. These FCI nozzles, which have been awarded the Australian Smart Approved Water Mark, can greatly reduce wear and improve uniformity of distribution and droplet size. In the US this has been shown to save up to 20 per cent water use. Golf America is now fitting all its courses with these nozzles.

BROWN BROTHERS ENGINEERS Stand 6 Brown Broth

Today at Brown Brothers Engineers we are proud to continue our leading role in the Australian pump industry. We are committed to using our technical expertise and industry experience to work in partnership with clients to deliver quality pumping systems and services uniquely suited to Australian and New Zealand applications. Our mission statement illustrates this commitment to the industry and, more importantly, to our clients. From small domestic pressure systems to large industrial process pumps, Brown Brothers Engineers provides a full range of pumps and pumping solutions. We are the sole distributor for some of the world's leading brand pumps including Lowara, Goulds, Vogel, Hydrovar and Pioneer.

Our Australian operation includes the assembly, distribution, testing and custom building of pumpsets and pumping systems as well as after sales service. Qualified engineers work closely with customers and engineering consultants to select exactly the right pump for the job. And our commitment doesn't stop there. We are always available to advise on, adapt or extend pumping systems as needs change, or to resolve problems with operations and maintenance. Our qualified tradespeople provide expert after-sales support, backed by dedicated service and testing facilities in Melbourne, Sydney and Brisbane.

CASETECH HORTICULTURE Stand 12



Casetech Horticulture manufactures and supplies premium grade coir and peat turf amendment products. By using coir or peat as an amendment in sand you increase the moisture retention and capillary porosity. Coir and peat are excellent products as they do not decompose as readily as other amendment products. Casetech Horticulture has developed a world-first, leading-edge, water-saving hydration facility that delivers a consistent product, never seen before in the industry. The products are hydrated inside, not exposed to the elements and therefore eliminating risks of contamination.

Traditionally peat has been the preferred turf amendment product. Peat is becoming less available due to strict regulation governing the mining and post production procedures in Europe and coir will be the future in turf amendment products. With coir, all our raw materials are selected by highly trained staff and manufactured in our production facilities according to RHP Standards. The products are washed, machine dried, pH and EC balanced. With peat, the raw materials are mined in Lithuania according with EU rules and regulations. For more information and sales inquiries please contact: Annie Hart on (03) 9212 3500, 0439 335 990 or email annie@casetech.com.au. Our office is at 19 Zilla Court, Dandenong.

COUNTRY CLUB INTERNATIONAL Stand 19

Country Club International is today probably the most diverse supplier of equipment to the golf industry of almost any company in the world. The driving philosophy over the years of sourcing and manufacturing the 'best' products available have created an eclectic high quality range of equipment from some of the biggest and best in the business.

Country Club International is the master distributor of Par Aide golf course equipment, Waste2Water wash water treatment systems, Enviromist spray equipment, Convault fuel storage systems, Range Servant Sweden golf range equipment, Southwest synthetic turf, Redden safety barrier netting, Seair irrigation water treatment systems, Greenjoy range and course equipment and much more. Complementing these big names, Country Club also distributes selected lines from Better Methods, Repeat Plastics, Netting Australia, Miller Brothers, Store Safe, Eagle One USA, Derone Enterprises, Parklands Trading, Enware, Turf Irrigation Services, Fiberbuilt, Tee-Up and many others.

While 'world's best' has been the yardstick, environmental and safety issues have been the driving force. Enviromist CDA spray equipment, manufactured in Australia, has now been launched into the US with the assistance of Country Club, while Waste2Water has quickly become the leader in washdown systems in just two years on the Australian market

DAVID GOLF & ENGINEERING

David Golf & Engineering is pleased to be exhibiting at the Australian Turfgrass Conference in Hobart. Established in 1956, David Golf is Australia's largest supplier of golf course hardware, driving range equipment and outdoor signage. With over 200 items in our product line, the majority of which are made in Australia, we have an emphasis in quality and service.

David Golf & Engineering services Australia wide with offices and warehouses in Melbourne, Sydney and Brisbane. Contact us for all your golf course solutions on 1300 790 890, email dge@davidgolf.com.au or visit www.davidgolf.com.au Come and visit us at Stand 3 and find out about some great show specials. We look forward to seeing you.

DINT © DINT Stand 11

The 25th Australian Turfgrass Conference trade exhibition promises to be something a little different for DINT and its customers. It is great to be back in Tasmania and we will be taking the opportunity to showcase the newest facets of the DINT business. We will also be proudly displaying a number of exciting and innovative new products. We are looking forward to catching up with all the delegates, so be sure to visit DINT at Stand 11. DINT – innovation through experience. Visit www.dint.com.au.

DUPONT OPON

Stand 2

DuPont Acelepryn has delivered exceptional benefits to turf professionals during its first year on the Australian market. Providing long-lasting control against a wide range of insect pests, including African black beetle, Argentinean scarab, billbug and Argentine stem weevil, many turf managers have benefited from reduced insecticide applications, saving time and money. Turf managers have also remarked on the long residual protection that can be achieved from caterpillar pests such as cutworm, webworm and armyworm. This long lasting performance has been delivered despite the significant rainfall this season and is due to the physical and chemical properties of Calteryx, the new insecticide in Acelepryn.

DuPont Calteryx insecticide is an entirely new class of chemistry with a novel mode of action. DuPont Acelepryn has been classified as an unscheduled poison and has extremely low toxicity to most non-target species including birds, fish and bees. As a

result there are no requirements for personal protective equipment while using Acelepryn and there are no re-entry restrictions after spraying. This outstanding handling profile coupled with its low environmental impact make Acelepryn a valuable addition to IPM programmes. Please stop by the DuPont stand to learn more about how to get optimal performance from Acelepryn.

ENWARE AUSTRALIA **SENWARE**Stand 8

For wash water recycling and safety solutions visit Enware's display which features the WaterStax wash water treatment system made specifically for golf and turf applications. The WaterStax uses bioremediation to remove contaminants such as grease, oil, herbicides, insecticides and pesticides – hydrocarbon-based contaminants which remain in the water unless treated. There are two output options to suit your site requirements – discharge or recycle as wash water. Collect your free DVD that provides more information including a walk through on how the WaterStax system works.

Safety showers and emergency eye wash equipment are required where hazardous chemicals are stored or used. Enware will show a range of Australian made plumbed and self-contained options compliant with ANSI Z358.1 and AS4775. Spill containment and portable bunding solutions, including spill pallets and drum dispensing, will be on display. Enware has a wide range of products to help you meet your OH&S and environmental requirements.

EVERGREEN TURF Stand 15

Evergreen Turf commenced operations in Pakenham, Victoria in 1982 and is now a leading turf and services provider to the sports grounds industry. Evergreen Turf can offer a full range of services from cultivation of new or existing surfaces, warm-season turf conversions to turf consultancy and management Evergreen's committed team ensures that every job, big or small, is done to the highest standard with back up support.

This service now extends into NSW with the establishment of Evergreen Turf NSW. Based in Pitt Town, Evergreen can now offer its full range of services to Victoria, ACT and NSW. Evergreen Turf now also offers a range of synthetic turfs to help maintain high traffic areas or for golf tees or putting greens.

Evergreen Turf has a range of turf products available including a new breed of couchgrass called Grand Prix. Grand Prix

offers a rapid growth rate with low seedhead numbers. It is hard wearing with low water requirements making it idea for the golfing industry. The Evergreen Turf exhibit is at Stand 15 so come and discuss your needs.

FLORATINE Stand 5

For nearly 20 years Floratine Products Group has been dedicated to working with superintendents and turf professionals to provide the strongest turf through education and proper plant nutrition. Floratine uses the highest-quality, pharmaceutical- and foodgrade ingredients in its products to provide the best plant health and nutrition for the strongest turf. Because there is no cookie cutter solution for achieving results for your turf needs,

Floratine takes an individualised approach with its customers and provides service and resources for proactive turf health. Floratine's philosophy is to strengthen turf through proper nutrition. Our main product focus can be divided into two categories – foliar applications and soil treatments. Floratine also offers specialty spray additives, as well as products formulated to enhance microbiological activity.

Whether it is dealing with high salts or toxicity, black layer, excess moisture, low CEC, nutrient tie-up, nutrient deficiency or other issues, there is a product for you in the Floratine toolbox. For more information please visit us at Stand 5 in Hobart, visit our website www.floratine.com or contact one of our regional distributors.

FOLEY UNITED AND TYCROP

If you are looking for superior grinding equipment, Foley United Grinders are now available through Toro Australia. Featuring an extensive range of rotary, reel, spin/relief and bedknife grinders, the Foley United range offers technical superiority and performance combined with easy maintenance and use. Elevate your performance, increase cut quality and production with the leading name in grinding equipment.

Since 1985, Tycrop has worked with commercial turf managers and golf course superintendents to design some of the best material handling and top dressing equipment. Available exclusively in Australia through Toro Australia, this line of products gives maintenance crews the ability to work better, faster and with less manpower to achieve exceptional turfgrass surfaces and improved playing conditions. The Tycrop

range features the new Propass 200 among other leading turf equipment. This new machine offers efficient and smooth ultralight to ultra-heavy topdressing to accurately topdress turf and maintain a beautiful course.

To discover more about the Tycrop and Foley ranges talk to your local golf specialist at the Toro Australia stand and see the difference these machines can make to your golf course. For more information please contact Toro Australia on 1800 356 672 or visit www.toro.com.au

GEOFABRICS COLF & GOLF

Geofabrics - Golf has made a name for manufacturing and distributing high quality golf specific products. Our BunkerMat product has become the benchmark when it comes to bunker liners. BunkerMat is recognised around the world for its high UV-stabilised fibres, tensile strength and superior sandholding capabilities. Geofabrics Megaflo flat panel drainage system is manufactured from recycled plastic out of our Albury plant. Megaflo is now becoming an integral part of golf course design specifications around the world. Architects and designers are seeing the ease and the speed or a trenchless drainage system that is approved by authority bodies like the USGA.

Other products Geofabrics offers to the golfing community include a range of erosion control products such as our Jute matting which is a bio-degradable erosion control product. Grassroots is a high density polyethylene mesh that will allow grass to grow between its profile thus reducing wear. Geosynthetic Clay Liner provides exceptional liquid containment. Gabions are not only robust and durable, but when filled with a locally available rock, a natural rock wall can be achieved. We are proud to be an Australian manufacturer.

GLOBE AUSTRALIA 60 with 610bc (Stand 21

Globe is supporting the industry with a strong presence at the conference trade exhibition. You should not miss the Globe stand which is located just inside the door with plenty to attract your interest and attention. There will be 15 of Globe's key golf client managers in attendance to discuss the use of any products and how it could have a use in your turf management practices.

The Globe representative who looks after your account will be found on the stand to talk and socialise with you. The Globe team will be anxious to discuss some of our new

products and our products that have become proven industry standards. We wish you all an enjoyable time at the Hobart conference.

GRADEN GRADEN Stand 29

Graden is a dynamic company enabling it to bring new and innovative products to the market faster. Last year a strong alliance was formed with Toro Australia to distribute Graden products in Australia. Graden's GSR1200 Greens Roller has some great features which make it stand out from the pack. A highlight of the machine is the twin steering heads which not only undulate with the contours of the green, but are also 'split' to avoid scuffing and make steering easier. Importantly, they also overlap to eliminate any chance of ridging or creasing between the two heads.

The large diameter smoothing rollers on this machine are also better for grass sward and prolong stimpmeter readings over the day's play. The drive roller is rubber covered with a soft compound, giving better grip, especially in wet conditions. And new for this year the in-built trailer mechanism is now integrated with the tow bar, making this a much easier machine to use. For more details about the Graden range please visit our website or contact your local Toro Golf specialist www.graden.com.au

HUNTER INDUSTRIES **Hunter**° Stand 36

As one of the world's leading manufacturers of irrigation equipment for the landscape and golf course industries, Hunter Industries has enjoyed a well-established reputation as the innovation leader in irrigation. We continue to focus on the needs of the irrigation professional, just as we have since being founded 28 years ago. Hunter is the only manufacturer to offer a true total top service valve-in-head rotor that is in both adjustable and full circle models.

This year we are excited to be displaying the G900 which completes the Hunter Golf range of rotors, our award winning ACC (Advanced Commercial Controller) and Surveyor, our simple powerful central control for golf. Come and visit us at Stand 36 to see more or contact Hunter Industries on 08 8363 3599.

JOHN DEERE Stand 40 JOHN DE

John Deere Golf has its customers to thank for the new products it will unveil throughout 2009. Based on vital feedback we receive from

customers, operators' needs and industry insight guide the development of each new piece of equipment. One of the biggest changes for 2009 is the introduction of the new cutting units to our reel mowing range. The early morning routine of adjusting cutting heads will get a little faster for technicians and superintendents with the John Deere Quick Adjust Cutting Units featuring the patented Speed Link system. Previously unseen in the golf industry, these units can be instantly adjusted in a few seconds from one point on the cutting unit.

Talk to our John Deere Golf representatives about other new additions to the line up. including the new 7200 PrecisionCut trim and surrounds mower, featuring width-ondemand for cutting width adjustments on the fly and the 220 E-Cut Hybrid walk-behind greens mower, with a floating head that hugs contours, making it easier to achieve the perfect cut on any course. As the official golf course equipment supplier to the US PGA Tour, John Deere can be trusted to provide superintendents the tournament-level quality needed on today's golf courses.

LEGEND COUCH GRASS Legend Stand 30

Legend - the King of Couch Grass. Legend is Australasia's premiere couchgrass. For over 15 years Legend has continually proven itself as a top performer from elite golf courses and stadiums to parklands and home lawns. Proven performance qualities include excellent recuperative ability after wear, rapid establishment, good winter colour, excellent spring green up rate, low thatch accumulation and excellent recovery after drought stress. Proven around Australasia. Please come by Stand 30 for details of your licensed local producer. www.legendcouch.com

MENTAY ((C mencay Stand 39

It has been one of our best years making cricket associated gear with 10 rollers going to Queensland. Now we are in a recession and it's not like a toothache which will go away guickly. It seems to get worse and the telephone calls have stopped coming which means our days are quieter. We have been building a stock of items, like the cricket pitch rollers, in the hope they will sell. We have been everywhere in recent times and now we are heading to Hobart. I remember the conference in Launceston when the gear arrived in Tasmania three weeks after the show ended. We sold gear without showing the customer - now that is something!

NUFARM I Stand 33

Nufarm, the largest pesticide chemical company in Australia, has had a strong focus in the turf and amenity horticulture industries for the past three decades. Nufarm currently has more than 30 registered turf and amenity products. Our products go through extensive research and development programmes prior to commercial release and are specifically designed to perform in the tough Australian conditions.

Nufarm is the only manufacturer of noncrop products in Australia with an extensive network of regional service centres. These centres are based in key geographical areas which allows Nufarm to store products closer to you, enabling them to be available in the shortest possible time. Armed with a team of technical specialists offering support and local know-how, Nufarm Specialty Products has all your plant protection requirements covered. Come and see the Nufarm Specialty Products booth to discuss how we can maximise the value of your plant protection

NUTURF AUSTRALIA 💩 NUTURF



If it's healthy turf and the best advice you want, then you need to visit the Nuturf stand at the Hobart conference (Stand 1). Nuturf continues to deliver first class customer service and is the leader in the technical development of products and services in the turfgrass industry. We will have on hand territory managers representing each state plus some of our agronomy team to discuss solutions to your turf problems. Just a few of the things you will see at the Nuturf stand;

- The latest cutting edge drought tolerant turf seed varieties;
- The new addition to our Stamina range of wetting agents. Now the best wetting agent on the market is available in an easy to use form for fast and convenient treatment of 'dry spots' and hydrophobic
- The latest technology in turf insect control;
- The Nuturf Earth Safe Terralift nutrition;
- The Nuturf range of analytical services to ensure the turf manager gets the best science behind their decision making.

Don't forget to ask about our show special offers. With these latest innovations we will continue to be number one supplier to the turf industry. Nuturf - we are the Specialists Providing Solutions.

PARCHEM parchem Stand 9

Parchem Construction Supplies combines the companies formerly known as Flextool, Concrete Technologies and the former Parchem Construction Products business into a company which is focussed on providing our customers with quality products and technical support. Parchem offers the most complete range of concrete finishing, surface preparation, concrete vibrators, flexshaft pumps and compaction equipment in the market. Specialising in light construction equipment, the innovative design and technical expertise make the brands in the range the leading choice for the professional contractor. With industry leading brands such as Flextool, Mikasa, Blastrac, Allen and ProFinish the quality engineered products are performance driven.

Parchem's range of construction products include concrete repair, grouts and anchoring systems, engineering and architectural coatings, concrete curing compounds, flooring and surface treatments, jointing systems, sealants, waterproofing materials and water stops, with trusted brands such as Emer-Clad, Durafloor, Fosroc, Vandex, Corkjoint and Index. Our comprehensive range of decorative concrete products includes stamped impression concrete, stencil concrete, concrete colours and resurfacing products and internal flooring solutions which will complement any style or design allowing you to create the look you want.

PGG WRIGHTSON TURF

PGG Wrightson Turf has been supplying the Tasmanian turf industry through their local partner, Roberts Ltd, with quality turf seed for over 10 years. PGG Wrightson Turf's varieties are ideally suited to the Tasmanian conditions and this has been supported by many independently conducted trials over the years. PGG will be joined on the stand by representatives of Roberts Ltd who are able to assist with any turf related enquiry. Roberts Ltd are now part of the Ruralco group of companies and are Tasmania's largest supplier into the agricultural and horticultural market. They have 16 stores throughout the state as well as a dedicated seeds division based in Carrick.

PHANTOM CORE PHANTOM CORE



Stand 38

Phantom Core is unique in its offering, tailor made to aerate, remove organic matter and improve player/surface interaction characteristics, with one machine, all in a single pass. This innovative product utilises a drum core chassis with over three hundred 12mm hollow tines to core and harvest in a single pass. With productivity of over one hectare an hour, you have never completed both practices with such efficiency.

The tine spacing is designed to allow implementation of the overriding turf maintenance principle of 'light and frequent'. This also allows you to aerate year round with no need to wait for a break in play or favourable weather patterns. Aerate when your turf needs it, not when your schedule dictates it. The tumble action of the drums ensures only organic matter is removed with rootzone material filtering back through the drum as an invisible dusting.

Also introducing Harrod UK to Australia, the UK's leading manufacturer of sports ground equipment. From the Manchester Commonwealth Games, the Millennium Stadium, Twickenham, English Premier League clubs, Wembley to the Emirates Stadium. Within the Harrod UK range you will find a product to meet your needs and all are built for quality, strength, safety and performance.

POWERTURF PowerTurf

This year PowerTurf is providing solutions to problems, a complete range of products for renovations, maintenance and manicuring and a new product that will simply blow you away. Jacobsen is founded on a commitment of providing world class products, responsive customer service and leading edge innovations. Jacobsen's industry firsts include the walking greens mower, riding greens mower and magnetic bedknifes.

PowerTurf strides with this foundation with its Australia-wide distribution for Jacobsen, Ransomes, Cushman, Ryan, Turfco and Daedong. With commitment, dedication and experienced staff and dealer network throughout Australia, PowerTurf is committed to providing top quality products.

This year Jacobsen is pleased to introduce another first in the industry with the Jacobsen Eclipse 322 triplex greens mower. Available in 2010, the Eclipse 322 has been designed to meet the requirements of the operator, technician, superintendent and owner. Its many features reduce cost, increase productivity and improve overall golf course operations. Come to our stand and take a closer look at why the Eclipse 322 overshadows anything else out there.

Furthermore, come visit our stand and receive more information on any of our PowerTurf products. Have a great 2009 show from all at PowerTurf Australia.

Q-TURF — WIEDENMANN ₩ wiedenmann Stand 7

Q-Turf – Wiedenmann will be available to discuss the full range of Wiedenmann turf care products. Included in this range is the new Greens Terra Spike GXi and the all new Terra Spike XD. Both of these machines offer the operator a high productivity with ease of use. The Terra Spike XD is the latest in the Wiedenmann range of innovative deep tine aerators. This machine offers the productivity of lighter machines with increased weight and operating depth. Come and visit us on Stand 7 and discuss your needs for 2010.

RAIN BIRD AUSTRALIA RAIN BIRD.

Now more than ever performance counts with your irrigation system. Complete confidence in your irrigation system gives you peace of mind. Rain Bird understands your need to get the most from your irrigation system. Our industry leadership and sole passion is irrigation and we continue our commitment to innovative irrigation solutions every day.

Rain Bird Corporation – Golf Division manufactures a wide range of irrigation products for golf courses – pump stations, Rain Bird Eagle gear drive rotors, field controllers, map-based central irrigation systems, decoders, swing joints, flow meters, filtration systems and valve and irrigation accessories. Rain Bird central control and pump station components are serviced and supported by a comprehensive Global Service Plan (GSP).

We invented irrigation technology and continue innovating every day. We are the world leader in irrigation expertise with a proven reputation for high quality products and services. See MI Series Mobile Controller, latest release software and the new Eagle Series rotors. For further information regarding Rain Bird golf course irrigation system expertise, visit us at Stand 25 or contact Rain Bird Australia Pty Ltd on 1800 424 044 or at www.rainbird.com

SCOTTS AUSTRALIA Scotts Stand 24

The Scotts Company is a recognised leader in the industry, producing and supplying specialty fertilisers, turf protection and wetting agent products. Scotts' R&D division is dedicated to product research

and development and we look forward to introducing to Australia many new technologies presently in development.

The latest introduction will be Greenmaster Liquid Effect, a new liquid chelated iron containing TMax, a new nutrient activator. Greenmaster Liquid Effect offers:

- Liquid slow release iron to harden turf and provide a deep green colour;
- Very quick green up, within three hours;
- True green up within plant no blackening, no wheel or footmarks;
- Long lasting up to six weeks;
- Treats iron chlorosis;
- Can be used all year round;
- 6.9% Fe liquid (Fe EDTA chelation, Fe complexed);
- Includes TMax nutrient uptake activator rapid uptake, quick results;
- Both foliar and root absorbed;
- Buffered formulation (can be used on acidic soils without further reducing pH and is universally effective); and
- Can be used where black layer is present
 At Scotts we deliver excellence from
 manufacture through to the end user. You
 can rely on the Scotts philosophy 'Growing
 success'

SIMPLOT PROLINE SIMPLOT PROLINE

Simplot Proline is proud to sponsor the 25th Australian Turfgrass Conference in Hobart. We pride ourselves on being leaders in turf nutrition and plant protection with our showcase BEST granular fertilisers and Signature Series liquid range. With support from Syngenta and Nufarm Speciality Products we continue to have all your requirements for healthy turf covered.

We will once again be running our competition to attend Simplot Proline's study tour of the USA which provides one lucky winner the opportunity to see first-hand Simplot's fertiliser facilities as well as attending the international Golf Show to be held in San Diego in February 2010, along with various sports turf facilities. You've got to be in it to win it so see one of our territory managers on how to enter.

The Grass Roots Blues Night featuring the legendary Kevin Borich Express (and friends) will be back bigger and better than ever! In conjunction with our good friends at Toro this musical extravaganza will be held on Tuesday 14 July from 9pm onwards at Wrest Point Casino. Come and see us at Stand 27 on Wednesday morning at our 'recovery station' where we will fix those weary heads. See you at the show!

STRATHAYR TURF SYSTEMS Stand 41 StrathAyr

StrathAyr provides turfgrass varieties and turf systems for all applications. The many varieties grown in Victoria include Legend, Santa ana, Wintergreen, Sir Walter, kikuyu, RTF self-repairing tall fescue and bluegrass/rye. Bentgrass is provided from StrathAyr's Tasmania farm to VIC, NSW and SA.

StrathAyr Turf Systems products include reinforced all-weather turf system for stadia, in use in seven NRL stadiums. StrathAyr Track is in use at Moonee Valley Racecourse, Launceston's TOTE Racing Centre, Singapore and Hong Kong. Portable 'drop in' cricket wickets, removable turf systems for stadia and racetrack crossings and natural turf car parking systems. For all your turfgrass needs please come by Stand 41 and see the StrathAyr team. www.strathayr.com

SYNGENTA syngenta

Stand 20

Syngenta provides a range of innovative turf protection products in Australia and around the world, and supports them with the highest levels of technical service and support. Syngenta invests US\$2 billion into research and development every year to provide solutions that are specific to the needs of our customers, especially those involved in golf and sports turf. Please visit our website www. greencast.com.au or contact out technical advice line on 1800 067 108.

TORO AUSTRALIA – COMMERCIAL TORO Commercial Equipment Stand 22

For many years, Toro Commercial turf equipment has been considered some of the very best machines in the business, with features that have won fans Australia wide. Toro Australia continues to provide unparalleled service and new technical advances across all of the ever-expanding fleet. Each Toro model is designed to make the job safer, easier, more economical and kinder to the environment.

As part of this, the new ProCore SR series deep-tine aerators will be launched at the 25th Australian Turfgrass Conference trade exhibition highlighting a continued focus on innovative technology. Whether it's a championship golf course or your own golf club, the name Toro is synonymous with golfing paradise. Discover the Toro difference and be a part of the finest turf equipment story in Australia. For more information please contact Toro Australia on 1800 356 672 or visit www.toro.com.au

TORO AUSTRALIA - IRRIGATION

Stand 23 TORO Irrigation

Water usage and availability continues to impact the golf industry and many superintendents are seeking practical and cost effective solutions. Toro strives to build innovative products that help manage water, energy and labour resources as efficiently as possible while delivering optimum conditions.

We continue to develop technologically advanced ways for courses to conserve water including premium level programming control, flow management and industry leading precision nozzles. Our flexibility and choice in nozzle combinations, extensive trajectory adjustment options and full/part circle operation provide unmatched solutions to manage the unique watering requirements of every course. To quantify the efficiencies achieved, Toro Turf Guard provides real time monitoring of soil moisture, temperature and salinity. By use of wireless technology, installation is quick and easy.

In either new course construction or existing system renovation Toro is able to provide solutions that deliver the best playing conditions while saving your budget and the environment. Beyond innovation, our priority is to provide you with the best irrigation products supported by the most experienced team of service professionals in the business. To further support the industry we participate in programmes and partner with leading associations, including our role as a principle partner of the AGCSA Water Initiative.

TRU-TURF TRU-TURF

Tru-Turf's history in designing and building golf greens rollers dates back to the early 1940s with the advent of turf rolling. With innovative design we have been able to produce a quality, lightweight roller that is exported to England, Scotland, Ireland, Sweden, Spain, Germany, Austria, USA, Canada and throughout Asia. Since 2003, the US PGA Tour has been using our Roll 'n' Spike golf greens rollers for preparing the greens for their prestigious tournament events. In 2008 we rolled the greens at 80 tournaments! For information on our range of turf maintenance equipment, visit us at www. truturf.com

TURF CULTURE TURF

Turf Culture's aim is to develop innovative and professional products for the turf market. We develop products for a whole range of uses that will help the turf manager establish, maintain and manicure their turf surface to the highest quality. The only focus of Turf Culture is turf. We do not have products for the agricultural industry.

We are an independent company that is Australian owned, and where possible we manufacture our products in Australia, which is a rare practice in the chemical industry. By doing this most of our products generate jobs, security and strength to the Australian workforce and economy. Most of our competitors do not share the same links to Australia in terms of ownership and manufacturing. All of our products come with a formulation guarantee, which ensures the turf manager can be extremely confident they are applying a quality product. Come and visit our stand to learn more about our new product registrations of herbicides and insecticides

TURF DRAIN AUSTRALIA

Turf Drain Australia offers a range of services associated with the drainage and construction of sports grass surfaces. We only use the latest machinery, time proven techniques and vast experience on all projects that we undertake. Our sportsfield drainage systems are extremely effective in removing water from grass surfaces. Sportsfields can be made useable immediately after a rainfall event. A properly installed system will also reduce soil compaction, turf loss and allow mowing and playing schedules to be maintained. A drainage system will also provide for the recycling of irrigation and precipitation to a single outlet.

We have installed hundreds of drainage systems over many years in a wide variety of applications and soil types. Drainage systems can be designed to meet both a budget and particular site conditions. Because low ground pressure machinery is used, minimal compaction and disruption of the grass surface occurs during installation. Our experience in sportsfield drainage is extended to sportsfield construction. We have been building and shaping football fields, turf cricket wickets and bowling greens for many years. Over that time we have completed projects for club and school sportsfields, top level rugby league, rugby union, AFL and international cricket.

Disclaimer: All stand numbers were correct at the time of this edition going to print.



Listen to the Experts...



At Box Hill Golf Club, we have been utilising **BunkerMat**® with great results to modernise and correctly drain our bunkers for a number of years now. **BunkerMat**® has allowed us to transform our bunkers from high maintenance and poorly draining 'holes' into free draining and easily maintained bunkers that our Members now appreciate as a 'fair' hazard from which to play from. I personally, highly recommend **BunkerMat**® for any bunker installation.

Mark Jennings - Superintendent Box Hill Golf Course, Australia

We used **BunkerMat**® at our project, Carya in Turkey. Neil Taylor and his team at Geofabrics were extremely helpful in the early stages to co-ordinate the importation of the material to Turkey and throughout the whole delivery and installation period. **BunkerMat**® proved to be an invaluable product to help us achieve our desired design philosophy. It allowed us to raise the bunker faces to allow for maximum visual impact for the golfers whilst also maintaining workable barrier from contamination of the native soils to our imported bunker sand. **BunkerMat**® is a fantastic product and we will definitely use it again on future projects we undertake around the world.



Tim Lobb - Thomson Perrett Lobb, United Kingdom



Example from recent actual installation;

Sixty-two bunkers installed with **BunkerMat®**, expect cost recovery in 1.5 years due to decreased labour imput.

Example 38 bunkers after heavy rain event (50mm rainfall); Prior to **BunkerMat**® installation, 40hrs labour to restablish bunker sand and faces. After **BunkerMat**® installation 4-6hrs restablishment time.

Geoff Andrew - TIC Golf & Sports Turf Group Ltd, New Zealand

At our Horizon Hills Golf Course in Johor Bahru, Malaysia it still provides an amazing sight to see sand staying on bunker faces during one of their infamous afternoon cloud bursts. The **BunkerMat**® product has already been used on several of our golf courses around the globe and has revolutionised the way we build our bunkers. Thank you **BunkerMat**®

Richard Chamberlain - Ross Watson Golf Course Architecture, Australia





We have tried many products over many years here at Castle Hill in an attempt to reduce the amount of manpower required to reinstate our bunkers after heavy rain events. **BunkerMat®** by Geofabfics is proving to be the best, we have literally saved thousands of dollars in labour and sand since starting with the product some 3 years ago! This Australian made fabric has now been down in what were our worst affected bunkers for 3 years and there is no sign of deterioration.

Martyn Black - Course Superintendant Castle Hill Country Club, Australia

Geofabrics Golf Product Range includes:

Megaflo® • ELC□SEAL® • GrassProtecta • Jute • Grassroots™





Carbon sequestration role a real positive for golf

In Volume 11.1 Australian Turfgrass Management ran a summary of the study undertaken by Peter McMaugh and Dr Ross Higginson on the environmental social. economic and health benefits of turf. As an extension of that project, the AGCSA commissioned the authors to provide a literature review relating to golf courses and the environment. In this and future AGCSATech Updates, ATM will publish excerpts from the report and in this edition looks at the positive role golf courses can play in carbon sequestration.

he Australian Golf Environment Foundation (AGEF) was formed by the Australian Golf Course Superintendents Association (AGCSA) in 2008 to administer funds derived through the Australian Golf Environmental Initiative. All funds are directed to the AGEF for the express purpose of funding research projects, education programmes and study bursaries related to managing the golf course environment.

The AGEF advisory committee identified three key areas that required research;

- Identify and compile the available literature related to golf courses and the environment. The literature review is to identify where there is critical information lacking and to provide a guide for future research activities.
- Quantify the carbon footprint of a range of golf courses (e.g.: heavily treed to links style) and to develop a check list. Identify the key factors that can reduce the size of the carbon footprint.
- Undertake a web-based survey of golf courses to determine the contribution they make to vegetation other than turf (indigenous and introduced); fauna habitats; and wetlands.

The first study funded has been the literature review. This was seen as a key document that would establish the available knowledge base and provide a guide for

future research activities. The literature review was undertaken by Dr. Ross Higginson and Peter McMaugh with support funding from Horticulture Australia Limited (HAL Project No. TU07034 – Environmental and Health Benefits of Golf Courses - A Literature Review).

Over the next few editions of ATM, sections of the report will be published with the full report soon to be available on the AGCSA website (www.agcsa.com.au). In this first instalment the topical subject of carbon sequestration and golf courses is presented.

WHAT IS CARBON SEQUESTRATION?

Carbon sequestration is the removal and storage of carbon from the atmosphere in carbon sinks (such as oceans, forests or soils) through physical or biological processes, such as photosynthesis.

Natural sequestration utilises the natural processes of the global carbon cycle and consists of three main areas including oceans and terrestrial ecosystems through vegetation and soils (Formeller et.al., 2008). Oceans represent the Earth's largest active carbon sink and are known to currently take up a third of the carbon emitted by human activity, roughly two billion metric tons each year. This happens through two main functions – the solubility of CO₂ into the ocean and the photosynthesis of phytoplankton.









Peter Williams & Assoc





The value of large green spaces as carbon sinks with their combination of trees and turf cannot be underestimated in an urban environment

Terrestrial carbon sequestration is the removal of CO_2 from the atmosphere by plants and microorganisms in the soil and the prevention of CO_2 emissions from terrestrial ecosystems into the atmosphere (Formeller et.al., 2008). Sequestration in vegetation is through the absorption of CO_2 during photosynthesis and storage in their tissues. Within soils, CO_2 is mainly sequestered through the activity of microorganisms and other members of the soil ecology, as well as through the roots of plants. Carbon as plant organic matter is sequestered in soils. Soils contain more carbon than is contained in vegetation and the atmosphere combined.

Turfgrasses, as well as other crops and plant ecosystems, play key roles in removing carbon from the atmosphere and translocating and storing it in soils (Bremner, 2007). Through the process of photosynthesis, plants absorb CO_2 from the atmosphere and synthesise it into various sugars. Thereafter, some of these 'photosynthates' are transported below ground and become a part of the roots, which remain in the soil even after the plant or root dies. Sequestered carbon is primarily a combination of decomposing roots and above-ground plant leaves and stems that have fallen onto the surface and eventually merged into the soil.

Organic matter in the soil, which is typically the dark layer near the surface, plays an important role in the health and structure of the soil. The dark colour is carbon, which is important in improving soil structure (it increases water infiltration and effective rooting depth), the soil chemical environment and soil biodiversity. Greater carbon content in the soil reduces wind and water erosion, which also has benefits for air and water quality (less wind-blown dust particles and runoff into streams and leaching into groundwater).

CARBON SEQUESTRATION AND TURF SYSTEMS

The following is taken from the Dr. Ross Higginson and Peter McMaugh's study (TU07034 – Environmental and Health Benefits of Golf Courses - A Literature Review).

"Australian soils are generally, on world standards, very low in carbon. The usual range for organic carbon content in Australian soils is between 1 and 5 per cent (CSIRO, 1983). Some unusual and rare soils, such as alpine humus soils, can accumulate up to 12 per cent, but most Australian soils are exposed to high temperatures and dry conditions which limit carbon accumulation.

The effects of living organisms on soil organic matter and carbon are substantial. Of these, vegetation is the primary source of soil organic matter and thus the major influencing factor on the amount present. Grasses in general, and particularly turfgrasses, develop a dense root mass and an organic thatch layer that is ideal for storage of carbon in soils. The extensive fibrous root system of turfgrasses contributes substantially to soil restoration and improvement through organic matter and carbon additions (Beard, 1993).

When people think 'carbon' they usually think 'trees', but in reality 82 per cent of carbon in the terrestrial biosphere is in the soil (Jones C., 2007). Healthy grasslands may contain over 100 times more carbon in the soil than on it, making a well managed perennial grass ley the quickest and most effective way to restore degraded land (Jones C., 2007).

As stated above, grasses develop a dense root mass and an organic thatch layer that are both ideal for aiding the storage of carbon in soils. A study of historic soil testing records in the USA at Fort Collins, Colorado, (Y. Qian & R.F. Follett, 2002) estimates that golf course greens and fairways alone can sequester carbon (C) at average rates approaching 0.9 and 1 tonne per hectare per year, respectively. They concluded that C sequestration in turf soils occurs at a significant rate that is comparable to that reported for USA land that has been placed in the United States Department of Agriculture (USDA) Conservation Reserve Program (Follett, R et al., 2001).

The above researchers at Fort Collins report on historic data that indicates a strong pattern of soil organic matter response to decades of turfgrass culture. Total C sequestration continued for up to about 31 years in fairways and 45 years in putting greens. The most rapid increase occurred during the first 25 to 30 years after turfgrass establishment.

A further paper by the same research team (Bandaranayake et al., 2003) using CENTURY model simulations near Denver and Fort Collins indicate that turfgass systems can serve as a C sink following establishment. Model estimates are that 23-32Mg/ha (tonnes/ha) of soil organic carbon were sequestered in the 0-20cm layer below the soil surface after about 30 years.

These results compare very favourably with those estimated above from soil testing records (Qian & Follett, 2002). They conclude that this research indicates that turfgrass systems serve as a sink for atmospheric C for approximately 30-40 years after establishment at approximately 0.9 to 1.2Mg/ha/yr.

By extrapolating from published data on root dry matter under turfgrass swards, it is possible to obtain another estimate of the role that turf plays in carbon storage within soils (Boeker, 1974; Boeker & Von Boberfeld, 1974). These authors report root dry matter from 0-20cm under various turfgrass swards grown in the Rhine Valley, Germany. The results indicate that up to 11 per cent of a cubic metre of topsoil can be comprised of organic matter derived from root material. This represents a very substantial addition of carbon to the soil, approximately 4.5 per cent by weight in the top 20cm. Results are summarised in Table 1.

As these results were collected at two or three sampling dates, it is possible to estimate the rate of carbon sequestration. Averaging all of the Rhine Valley data in Table 1 provides a carbon sequestration rate of about 2.2 tonnes/ha/year. This is about twice the rate reported by Qian & Follett (2002) in Denver and Fort Collins, Colorado. There is considerable variation in the Rhine Valley data which appears to be very much species related. Results are compared in Table 2.

The above data indicate that turfgrass is able to sequester carbon at about 1-3 tonnes/ha/yr. This agrees with a tropical study

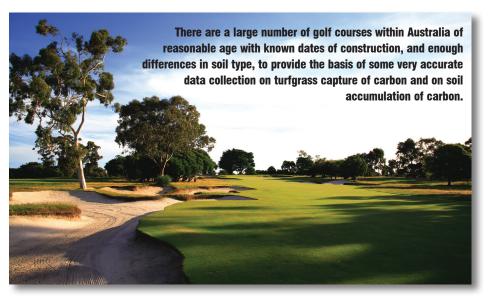


TABLE 1: RESULTS FROM BOEKER & VON BOBERFELD (1974)*

Soil depth	Root dry matter	Organic matter	Organic matter	Organic carbon
(cm)	(Gm/1000 sq.cm.)	(% by volume)	(% by weight)	(% by weight)
0 - 5	110	11	7.81	4.45
5 - 10	3.5	0.35	0.25	0.14
10 - 15	2.0	0.2	0.14	0.08
15 - 20	1.0	0.1	0.07	0.04

*Assumes a soil bulk density of 1.4 gm/cubic cm and an average C content in organic matter of 57 per cent (Hazelton & Murphy, 1992).

undertaken in the eastern plains of Columbia, which are treeless plains of the Orinoco Basin, where introduced pastures have been estimated to accumulate about 3 tonnes of carbon/ha/yr (Fisher and Thomas, 2004).

A study in the USA, reported in the International Turfgrass Society Newsletter (Novak, J., 2006), states that there are an estimated 40 million acres (16.2 million hectares) of tended lawns in the USA, making turfgrass one of their largest crops and one that has a significant and positive impact on their economy, health and environment. It adds that lush lawns are a 'sink' for carbon dioxide, pulling in greenhouse gases out of the atmosphere as they grow. It is estimated that 2 per cent of the US land surface covered by lawns could account for about 5 per cent of the carbon dioxide absorbed by all plants.

In another estimate from the USA (Kent, S. et al., 2007), urban turf is estimated to cover 20 million hectares. Using Qian & Follett's (2002) estimate above of carbon being sequestered under turf at about 1 tonne/hectare/year, US urban turf would be responsible for carbon storage of about 20 million tonnes/year. This figure compares favourably with a gross carbon sequestration rate of 22.8 million tonnes/year by urban trees in the USA (Nowak, D.J. & Crane, D.E., 2002).

Another study of carbon storage and flux in urban residential greenspace (Jo and McPherson, 1995) reports much lower rates of carbon sequestration than those reported above. Total net annual carbon inputs from

grass and other herbaceous plants were estimated to be between 0.2-0.3 tonnes/ha/yr, whereas trees and shrubs contributed between 5-8 tonnes/ha/yr. This study, conducted in north-west Chicago, indicates that great variations in carbon sequestration rates are to be expected due to variations in temperature and other climatic conditions.

The value of large green spaces as carbon sinks with their combination of trees and turf cannot be underestimated in an urban environment. Many golf courses in Australia have in recent years become very much aware of their critical role as natural sanctuaries for wildlife in the urban environment (Australian Golf Union, 1998).

Their role, however, in carbon sequestration is another positive environmental image that has not yet been exploited by the industry. There are a large number of golf courses within Australia of reasonable age with known dates of construction, and enough differences in soil type, to provide the basis of some very accurate data collection on turfgrass capture of carbon and on soil accumulation of carbon."

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TABLE 2: ESTIMATES OF CARBON SEQUESTRATION RATES BY VARIOUS AUTHORS.

Authors	Results reported		Carbon tonnes/ha/yr
Qian & Follett			
Bandaranayake et al.	Soil test results Century Model	1.6 – 2.1	0.9 – 1.2
Boeker & Von Boberfeld	Poa/Festuca	3.2	1.8
Boeker, 1974	Agrostis/Table 1	0.7	0.4
Boeker, 1974	Festuca/Table 3	4.6	2.6
Boeker, 1974	Lolium/Phleum/Poa/		
	Table 5	3.8	2.2
Boeker, 1974	Festuca/Table 7	5.4	3.1
Boeker, 1974	Festuca/Table 8	6.5	3.7
Boeker, 1974	Lolium/Table 9	2.4	1.4

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Following on from last edition's

Pulse topic on green speed, AGCSA

agronomist John Geary mulls over

one of the most hotly debated topics

in golf course management.

n the last edition of Australian Turfgrass Management (Vol 11.3 May-June) The Pulse asked superintendents, "Do you lose any sleep over the speed of your greens." This is a subject that has been debated routinely for the past 30 years with a plethora of material written on the merits and demerits of measuring green speed and in particular the use of the stimpmeter to measure green speed.

Nevertheless, it is important to recognise the significance green speed plays in the psyche of the game of golf. When was the last time you read an article about Royal Melbourne Golf Club which did not talk about its famed slick putting surfaces. Similarly, part of the great mystique the US Masters holds for golfing fans the world over are the tales of triumph and tragedy experienced by golfers putting on the ultra slick greens.

To reinforce this point a survey conducted in 2002 by the Golf Course Superintendents Association of America concluded that golfers consider green speed as the number one factor to know about a golf course. Given that almost half the strokes recorded on the scorecard by most golfers are taken on the greens it is understandable that golfers place such a high emphasis on putting green quality.

While the pace of greens and in particular quick greens is seen by many golf clubs, club members and golfers as the most important attribute in determining the quality of good putting surfaces, some such as AGCSA president Allan Devlin, believe "the ridiculous obsession with green speed has had no positive effect on the condition and management of golf courses whatsoever".

HOW IS GREEN SPEED MEASURED?

The device which has been adopted across golf playing nations, including Australia, is known as the stimpmeter. Named after its inventor Edward S. Stimpson, the stimpmeter is a 36-inch extruded aluminium bar with a grooved runway on one side. A notch in the runway is used to support a golf ball until one end of the stimpmeter is lifted to an angle of roughly 20 degrees (Vermeulen, 1995). Three



balls are released in two directions and their distances measured and averaged.

Stimpson first wrote about the stimpmeter in 1937 but it was not until 1978 when the USGA commercially marketed the device that it became widely used on golf courses. Uniformity was a major objective in the creation of the stimpmeter (Nikolai, 2005) and its use is seen as the best way for golf clubs to achieve similar green speed on all 18 holes for play. It is also intended to be used to measure the uniformity of individual greens, in other words to measure the speed of intended pin locations on contoured greens to see if they vary greatly from the rest of the green.

Possibly the most contentious element of the introduction of the stimpmeter was the inclusion of speed charts which accompanied its release (Table 1). Many believe these charts were the catalyst for golf clubs and superintendents to compete with one another to see who could achieve the fastest greens.

Interestingly the stimpmeter instruction booklet still outlines that "it is not intended for course comparisons" and "it is not the intention of the USGA to attempt to standardise green speeds, which should remain up to course officials, with the input of the superintendent of each individual facility".

Thomas A. Nikolai who has published a book entitled 'The Superintendent's Guide to Controlling Putting Green Speed' believes while the speed charts may be partially to blame for accelerating green speed, it was inevitable that green speed would increase with or without the stimpmeter.

This is due to a combination of new technology such as improved grass cultivars,

the manufacturing of thinner bedknives which allows for closer mowing, along with a greater focus on management practices such as vertical mowing, frequent light topdressings of sand, hand mowing, greens rolling and a greater knowledge of watering practices.

David Warwick (Avondale Golf Club) makes an interesting observation when he states, "Why do we produce firm, fast greens of tournament standard on a daily basis? Because we can. Grasses, maintenance practices and technology have all improved but more than anything expectations have increased."

GREAT EXPECTATIONS

The question for superintendents now is what strategies can be implemented to deal with these increased expectations. One possibility is to conduct a survey of golfers to determine the desired green speed for your club. This concept has been pioneered by Nikolai and Mike Morris, superintendent of Crystal Downs Country Club located in Frankfort, Michigan.

In 2002, Morris started taking stimpmeter readings at two different greens twice a day while also recording weather data to determine the actual green speed. Regular surveying of members who represented a cross section of skill levels was also conducted which asked them to rate the speed of the greens as either too fast, fast but okay, okay, okay but slow or too slow.

After an extended period of collecting data, measuring green speed and what inputs impacted on speed, Crystal Downs Country Club adopted an ideal green speed range which both Morris and his greens committee

TABLE 1: USGA GREEN SPEED CHART - COMPARISON TABLE*

Relative Green Speed	Regular Play (m)	Tournament Play (m)	Regular Play (ft)	Tournament Play (ft)
Fast	2.59	3.20	8'6"	10'6"
Medium Fast	2.29	2.90	7'6"	9'6"
Medium	1.98	2.59	6'6"	8'6"
Medium Slow	1.68	2.29	5'6"	7'6"
Slow	1.37	1.98	4'6"	6'6"

(* Adapted from Neylan and Robinson, 1996)

There is no doubt that green speed will always be a topic which will be hotly debated. Above all else, superintendents need to communicate with their greens committee and members on the complexities of producing consistent, firm, smooth putting surfaces

believe can be maintained consistently and keep their members happy.

Another method which can be used to analyse green speed is to adopt the five criteria represented by the acronym S-P-E-E-D. Promoted in the mid-1990s by American agronomist Paul Vermeulen the acronym stands for:

- Status of the turf:
- Principal resources;
- Environmental conditions;
- Expertise of the golfers; and
- Design

Many superintendents lament that their club and members do not recognise the number of variables such as green design, budget constraints, volume of play, weather conditions, soil and grass type and the skill level of golfers which all contribute to the overall quality of putting surfaces. Vermeulen believes that by auditing your greens using the above criteria golf clubs can set a limit for putting green speed by using the two or three criteria that produce the lowest speeds (Table 2).

LOOKING AHEAD

In reviewing the responses of superintendents in the last edition of ATM the general consensus is that firm, smooth, consistent playing conditions are the most desirable attributes. Charlie Giffard (Indooroopilly Golf Club) states that "turf health and consistency are paramount, which, if done well, leads to good fair playing surfaces", while Stuart Gill (Terry Hills Golf & Country Club) believes in "consistency over speed" stating he would "rather have consistent greens running at 10 feet than inconsistent greens topping 12 feet".

While not widely used at present, implements such as a soil moisture probe and the recently released TruFirm are implements superintendents will turn to in the future to quantify green speeds. The TruFirm, which is similar in principle to the Clegg impact hammer, has been developed specifically for a golf course application which is aimed at providing an objective evaluation of surface hardness.

It is also important turf managers keep up to date on the latest information and trial data relating to green speed. As mentioned earlier, there has been a great deal written on the subject, most of which can be easily accessed by searching the Internet. For a comprehensive summary of green speed, please refer to the references outlined below.

One publication which is not widely read but relative to Australian superintendents managing *Agrostis* greens is the HAL-funded 'Bentgrass maintenance for putting greens' paper. Authored by the AGCSA's own John Neylan along with Michael Robinson, the report outlines the findings of trial work conducted on a practice putting green at Royal Melbourne Golf Club in the mid-1990s.

While we do not have enough space to outline the finding's here, the results discuss the effects of variety and cultural practices on green speed, changes to green speed over a day, effects of nutrition and renovation on green speed and turf agronomic characteristics.

There is no doubt that green speed will always be a hotly debated topic. It is interesting to note that a small number of clubs have started to implement green speed key performance indictors (KPIs). While it could be argued that KPIs are in effect what have been introduced at Crystal Downs Country Club, KPIs have the potential to place huge strain on turf managers. Club's implementing KPIs need to be realistic in their expectations taking into account the site's unique characteristics.

Above all else, superintendents need to communicate with their greens committee and members on the complexities of producing consistent, firm, smooth putting surfaces. Using the club newsletter or club website to outline your management strategies is a simple yet effective way to constantly reinforce your management goals.

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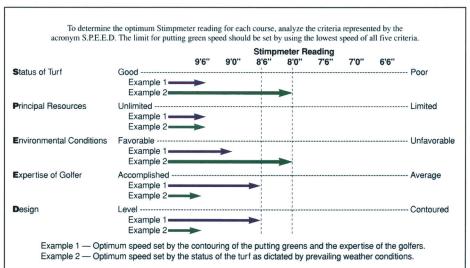
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TABLE 2: S-P-E-E-D COMPARISON TABLE





AGCSATech senior agronomist Andrew Peart provides a snapshot of the final results to emerge from the two-year

ANTEP ryegrass and tall fescue trials conducted at Mt Scopus Memorial College in Victoria.

n 2006 the Australian Golf Course Superintendents Association (AGCSA) was commissioned by the Australian Seed Federation to conduct a two-year turfgrass evaluation programme of perennial ryegrass and tall fescue varieties. The trial was established in September that year with 38 perennial ryegrass (plus Victorian perennial ryegrass) and 18 tall fescue varieties being evaluated.

The site chosen to host the trial was located at Mt. Scopus Memorial College in Burwood, Victoria. The trial site was located on the north east corner of the main oval, an area that was generally out of play as it was well away from school buildings and outside the boundary line of the football oval.

The area was also irrigated under an automatic irrigation system and there was no presence of kikuyu or couchgrass. The oval had been constructed with a sand profile and sown with perennial ryegrass. Over the years there has been considerable thatch accumulation and a large proportion of the turf cover was dominated by winter grass.

Companies participating in the trial were Advanced Seed, DLF Seeds, Gidley and Co, HG Turf, Heritage Seeds, PGG Wrightson and Seed Force. The varieties submitted can be identified by the abbreviation of the company name in brackets after the variety name in the accompanying tables (see key page 60).

SEEDING

The trial site was sown on 26 September 2006. The perennial ryegrass varieties were sown at the equivalent rate of 30g/m² and the tall fescue varieties at 40g/m². All varieties were adjusted to allow for differing germination rates and sown to provide 100 per cent germination.

The plot size of the perennial ryegrass varieties was two square metres (2.0mx1.0m)

and the tall fescue was 1.5m² (2.0mx0.75m). All varieties were replicated on three occasions with the exception of the Victorian perennial ryegrass variety that was only replicated twice.

IRRIGATION

Irrigation was applied on an 'as need' basis during the establishment period. This was generally on two occasions, early morning and

TABLE 1: OVERALL RANKING OF EACH PERENNIAL RYEGRASS VARIETY FOR TURFGRASS COLOUR AFTER TWO YEARS

Variety	Yr 1 Ave	Yr 2 Ave	Overall	Ranking
Pennant III (HG)	7.9	7.6	7.7	а
Derby Xtreme (DLF)	7.2	7.1	7.2	b
Fiesta 4 (PGG)	7.3	6.9	7.1	bc
SR 4600 (AS)	7.1	7.0	7.1	bc
Cutter 2 (G)	7.2	6.9	7.1	bc
Regal 5 (DLF)	7.2	6.9	7.0	bcd
All Star 3 (DLF)	7.2	6.9	7.0	bcd
1G2 (PGG)	7.1	6.8	7.0	bcd
Pinstripe (G)	7.1	6.8	6.9	bcde
Tophat II (DLF)	6.9	6.9	6.9	bcde
Harrier 2 (DLF)	6.9	6.7	6.8	cdef
Mach 1 (PGG)	6.9	6.7	6.8	cdef
SR 4420 (AS)	6.9	6.7	6.8	cdef
Pinnacle II (HS)	6.8	6.7	6.8	cdef
SR 4220 (AS)	6.9	6.6	6.8	cdef
Ringer (G)	6.8	6.7	6.8	cdef
Keystone 2 (DLF)	6.9	6.6	6.8	cdef
LSD (P<0.05)	0.3	0.3	0.3	

Once a season plots were assessed for vertical growth

mid-afternoon although on very warm days a supplementary application was made in the middle of the day.

Irrigation continued to occur on an 'as need' basis although it was restricted with the implementation of State Government water restrictions. Mt. Scopus was able to obtain an exemption during the first year of the trial but during the second year, when Stage 3 restrictions were enforced which limited the amount of water that could be applied, turf deterioration occurred on some occasions.

MOWING AND FERTILISER APPLICATIONS

The varieties were mown at a height of 26mm throughout the duration of the trial either weekly or twice a week depending on the season, and fertiliser applications were applied on an 'as need' basis after establishment had occurred. Generally the trial area received an annual application of 1.5kgN/100m².

ASSESSMENTS AND RESULTS

Once the trial site was established assessments were undertaken for two years. Plots were assessed every two months for turfgrass colour, density, leaf shredding and disease. These ratings were conducted by visual assessment with a rating from 0–9 (for colour and density 0 = poor and 9 = excellent; for leaf shredding and disease 0 = none and 9 = high).



Once a season plots were visually assessed for vertical growth which was again rated 0–9 (0 = no growth, 9 = vigorous growth) and on an 'as need' basis plots were rated for any sign of disease or other damage.

The ryegrass tables presented in this article are not the full representation of all varieties due to the limitation of space. However, the tables tend to show the better performing varieties although many varieties that are not shown may be as good as those presented.

A full list of the trial's results was handed out to attendees at the TGAA Victoria's annual Cricket Wicket Seminar held on 24 June at the Melbourne Cricket Ground. Further copies are also available by visiting the Australian Seed Federation website www.asf.asn.au.

Varieties are significantly different from each other if the difference in rating score between the two varieties is greater than the LSD figure. This has been presented with an alphabetical letter which represent any significant difference of the overall result.

For those varieties with no common letter it means they are significantly different to each other. Where there is a common letter, the varieties are deemed to be not significantly different in their performance.

For example in Table 1 Pennant III has a significantly darker green colour than all other varieties, while the varieties Derby Xtreme to Tophat II are not considered to be significantly different from each other as they share the letter 'b'.

The ryegrass tables that are presented show the results of turfgrass colour, turfgrass density and winter growth for each of the first two years and then an overall rating, which is an average of the two years. As can be seen from the results many varieties have performed very well and most are not significantly different from each other.

There was, however, a standout variety in terms of colour, with Pennant III having a significantly darker green colour than all the other ryegrasses, while the varieties Victorian ryegrass and Matilda, which are not shown, were significantly lighter green than any of the other varieties.

TABLE 2: OVERALL RANKING OF EACH PERENNIAL RYEGRASS VARIETY FOR TURFGRASS DENSITY AFTER TWO YEARS

Variety	Yr 1 Ave	Yr 2 Ave	Overall	Ranking
Cutter 2 (G)	7.5	7.3	7.4	а
Fiesta 4 (PGG)	7.3	7.3	7.3	ab
Derby Xtreme (DLF)	7.2	7.4	7.3	ab
Keystone 2 (DLF)	7.4	7.1	7.3	ab
All Star 3(DLF)	7.3	7.2	7.2	abc
SR 4600 (AS)	7.1	7.3	7.2	abc
Premier II (HG)	7.3	7.0	7.1	abcd
Harrier 2 (G)	7.2	7.1	7.1	abcd
SR 4220 (AS)	7.1	7.1	7.1	abcd
Citation Fore (HS)	7.1	7.1	7.1	abcd
Arena 2 (PGG)	7.1	7.1	7.1	abcd
PR 8821 (DLF)	7.0	7.1	7.0	bcd
Regal 5 (DLF)	6.9	7.1	7.0	bcd
Mach 1 (PGG)	7.0	7.0	7.0	bcd
Integra (PGG)	6.9	7.1	7.0	bcd
Pennant III (HG)	6.9	7.1	7.0	bcd
LP 4317 (HS)	6.9	7.1	7.0	bcd
Penguin II (G)	6.9	7.0	7.0	bcd
Pennant II HG)	6.9	7.0	7.0	bcd
Atlas (PGG)	6.9	7.0	7.0	bcd
LP 40C (HS)	7.0	6.9	7.0	bcd
LSD (P<0.05)	0.3	0.3	0.3	

The results for ryegrass density averaged after two years showed that there were 11 varieties that provided the most dense turfgrass coverage that were not significantly different to each other, while there were another 20 varieties that provided only a slightly less dense cover. The variety Matilda, which is not shown, provided the least dense cover.

The results for winter growth (Table 3) indicated that Matilda provided the greatest winter growth, significantly more than any other variety, while Victorian ryegrass provided the second highest amount. After these there were another 15 varieties that provided the next greatest amount of vertical growth that were not significantly different from each other.

The tall fescue results shown in Table 4 outline the average over two years for turfgrass density. It can be seen that Jamboree, Bullseye and Essential exhibited significantly greater turf density than all other varieties when averaged over the two years, while there was very little difference between the remaining 15 varieties.

ACKNOWLEDGEMENTS

The AGCSA would like to thank Mt. Scopus Memorial College and in particular the efforts of curator Nathan Tovey and his staff for maintaining the trial area, particularly during the summer months. W



A number of industry field days were held during the trial

TABLE 3: WINTER GROWTH OF PERENNIAL RYEGRASS VARIETIES IN THE FIRST AND SECOND YEARS

Variety	Yr 1	Yr 2	Overall	Ranking
Matilda (AS)	7.7	7.3	7.5	a
Victorian Rye	6.5	5.8	6.1	b
Atlas (PGG)	5.7	5.0	5.3	С
PR 8821 (DLF)	5.3	5.3	5.3	С
SR 4600 (AS)	5.0	5.2	5.1	cd
Saint (HG)	5.2	5.0	5.1	cd
1G2 (PGG)	5.0	5.2	5.1	cd
Pacesetter (AS)	5.0	5.2	5.1	cd
Indy (G)	5.0	5.2	5.1	cd
Centurion (PGG)	5.3	4.8	5.1	cd
SR 4420 (AS)	5.0	5.0	5.0	cde
Pennant II (HG)	5.0	5.0	5.0	cde
Harrier 2 (G)	5.0	5.0	5.0	cde
Ragtime (SF)	4.7	5.2	4.9	cdef
Derby Xtreme (DLF)	4.7	5.2	4.9	cdef
Integra (PGG)	5.0	4.8	4.9	cdef
Arena 2 (PGG)	5.0	4.8	4.9	cdef
Premier II (HS)	4.7	5.0	4.8	def
LP 4317 (HS)	4.7	5.0	4.8	def
Penguin II (G)	4.7	4.8	4.8	def
SR 4220 (AS)	4.7	4.8	4.8	def
SF R51-001 (SF)	4.7	4.8	4.8	def
Pinnacle II (HS)	4.3	5.2	4.8	def
Fiesta 4 (PGG)	4.7	4.8	4.8	def
Mach 1 (PGG)	4.7	4.8	4.8	def
LP 40C (HS)	4.7	4.8	4.8	def
Brightstar SLT (HS)	4.7	4.8	4.8	def
Keystone 2 (DLF)	4.7	4.8	4.8	def
LSD (P<0.05)	0.7	0.5	0.4	

TABLE 4: OVERALL RANKING OF EACH TALL FESCUE VARIETY FOR TURFGRASS DENSITY AFTER TWO YEARS

Variety	Yr 1 Ave	Yr 2 Ave	Overall	Ranking
Jamboree (DLF)	7.3	7.4	7.3	а
Bullseye (G)	7.2	7.4	7.3	а
Essential (DLF)	7.1	7.3	7.2	ab
Turbo RZ (G)	6.9	6.7	6.8	С
Rebel 4 (PGG)	6.8	6.6	6.7	cd
Justice (PGG)	6.6	6.7	6.7	cd
Grande 11 (AS)	6.6	6.6	6.6	cd
Tarheel II (HS)	6.7	6.5	6.6	cd
Barvado (HS)	6.6	6.5	6.6	cd
Escalade (G)	6.5	6.6	6.6	cd
SR 8600 (AS)	6.6	6.5	6.6	cd
Regiment 11 (G)	6.6	6.5	6.5	cd
Barlexas II (HS)	6.6	6.5	6.5	cd
Shelby (HG)	6.6	6.4	6.5	cd
SFR52-001 (SF)	6.6	6.4	6.5	cd
Houndog 6 (DLF)	6.4	6.5	6.4	d
Rhizing Star (DLF)	6.4	6.3	6.4	d
RTF (HS)	6.4	6.3	6.4	d
LSD (P<0.05)	0.3	0.3	0.3	

Key for participating companies:

(AS) - Advanced Seed

(DLF) - DLF Seeds

(G) - Gidley and Co

(HG) - HG Turf

(HS) - Heritage Seeds

(PGG) - PGG Wrightson

(SF) - Seed Force



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Allan Shoreland

Secretary Manager
The Metropolitan Golf Club



Increasing salinity levels within
the urban environment is having a
major impact on the provision of
sporting and recreational facilities
for communities around Australia.
Queensland Primary Industries
and Fisheries research scientist
Bartley Bauer reviews the work
being undertaken at the Redlands
Research Station to assess salinity
tolerance of a range of hybrid

HAL

couch cultivars.

hile agricultural land is the major focus of the National Action Plan for Salinity and Water Quality, established by federal and state governments in 2000, it has been predicted that salinity effects in urban areas may, in the future, become more costly than those experienced in rural regions (Nicholson, 2003).

Large urban centres are often proximal to sea water, subject to clearing of vegetation (and a fall in the water table) and requiring an increase in the use of recycled water due to the demands of an ever-increasing population on limited water reserves. All of these factors can contribute to salt accumulation in a soil profile.





Screening hybrid couch cultivars for salinity tolerance

One of the principle threats of saline soil to urban landscapes is the potential damage to areas used for sport and recreational activities. As well as directly impacting on tourism and real estate, damage to public green spaces can significantly reduce the cultural, social and health benefits, afforded by such an area (Aldous, 2008).

With consideration of such issues, Queensland Primary Industries and Fisheries (QPIF, part of the new Department of Employment, Economic Development and Innovation) began researching the effects of salinity on turfgrass growth in 2001. The current project "Establishment and Management

of Salt-Tolerant Amenity Grasses to Reduce Urban Salinity Effect" is based at the Redlands Research Station, Cleveland and is entering its final year.

Partially funded through Horticulture Australia Ltd, this work is comprised of experiments on station as well as on sites maintained by the councils who are also providing funds - Gold Coast City and Redland City. With high profile foreshore areas supporting prime real estate and tourist activities of international importance, these councils are supporting a range of experiments that will clarify best practice in all aspects of turfgrass cultivation on salt-affected sites. Selection and establishment of appropriate cultivars as well as soil nutrition, aeration and monitoring are all being combined to build an holistic management protocol for such situations.

This report examines one specific aspect of the work being carried out – salinity screening. Although a broad range of warmseason turfgrasses have been tested for tolerance to salt exposure, over the life of the project, the results presented here pertain to a trial containing hybrid green couch (Cynodon dactylon (L.) Pers. x C. transvaalensis Burtt Davey) cultivars.

As they are among the most widely used warm-season turf grasses, it is important to understand any halophytic (salt-tolerant) properties of this group. This work is especially significant given the current issues surrounding

Trial entries grown at the highest salinity, showing differential salinity tolerance

Current research by Queensland Primary Industries and Fisheries, supported by the Gold Coast and Redland City councils, is refining best management practices for an holistic approach to sustainable plant and soil health in saline areas. Pictured is the hydroponic system used to screen for salinity tolerance with the six tubs representing six different salinity treatments

irrigation water quality. Drought-affected groundwater sources will have relatively high concentrations of salts, as can recycled water, which is in greater use than ever before.

SCREENING PROCESS

Since turfgrass salt tolerance ranges from extremely low to very high, it is useful to identify cultivars that are halophytic and can be utilised in saline soils. By assigning salinity tolerance to all cultivars, quantitatively, turfgrasses can be matched to their optimum soil environment, exploiting their physiology for maximum benefit.

Since soil salt concentration is highly variable in the field, even over short distances, glasshouse experiments have been used for accurate determination of salinity tolerance of all tested cultivars. This has allowed selection of the most halophytic turfgrasses for trials in foreshore parkland, where the effects of other factors (for example, light, foot traffic and soil moisture) can be assessed.

Glasshouse trials have been conducted at Redlands Research Station. To investigate salt tolerance in 12 hybrid green couch cultivars, a completely randomised design was used and also included a South African couch

TABLE 1. EC₅₀ VALUES FOR ALL TRIAL ENTRIES*

Species	Cultivar/Accession	EC (dSm ⁻¹) at 50% of control DM yield (EC ₅₀)	r2
South African couch	KGC	12.8	0.805
(C. transvaalensis)			
Green couch	FLoraTeX	10.7	0.882
(C. dactylon)			
Seashore paspalum	Sea Isle 2000	18.0	0.649
(Paspalum vaginatum)			
Hybrid couch			
(C. dactylon x	CD	12.8	0.605
C. transvaalensis)	Champion Dwarf	15.1	0.553
	FloraDwarf	17.2	0.549
	MiniVerde	13.9	0.579
	MS-Supreme	13.8	0.547
	Novotek	15.8	0.607
	Patriot	11.9	0.749
	Santa ana	12.3	0.728
	Tifdwarf	13.5	0.677
	TifEagle	14.2	0.556
	Tifgreen	13.4	0.734
+ F0	TifSport	13.0	0.773

^{*} EC_w values (dSm⁻¹) corresponding to 50 per cent of the control dry matter yield for each genotype, based on linear regression of average clipping yields recorded at weeks 10 and 12 (i.e.: over the final four weeks of the experiment).

(Cynodon transvaalensis) accession, green couch (Cynodon dactylon) FLoraTeX and seashore paspalum (Paspalum vaginatum) Sea Isle 2000. The latter two are reference species that have been used in previous screening trials, representing medium and very high salt tolerance, respectively.

All 15 entries were planted into square pots containing a washed sand profile, overlying a layer of 5mm gravel. The six replicates of all

cultivars were randomly positioned in each of six hydroponic "flood and drain" systems (see photos on opposite page).

Each system bathed pot media for 15 minutes, 3 times per day with a nutrient solution maintained at a specific salinity. The electrical conductivities (EC_w) of the six salinity treatments were <0.1 (control), 6, 12, 18, 24 and 30 deciSiemens per metre (dSm⁻¹). (Seawater has a salinity of 43dSm⁻¹).

RESTRUCTURE SEES CHANGE IN NAME FOR REDLANDS TEAM

The Redlands Research Station Lifestyle Horticulture Research Team would like to inform the turf industry of recent changes to Queensland's Department of Primary Industries and Fisheries (DPIF). As part of a major restructure, DPIF no longer exists as a separate entity and has been merged into the newly created Department of Employment, Economic Development and Innovation (DEEDI).

DEEDI brings together a number of the key economic drivers such as employment; mines and energy; primary industries and fisheries; regional development; tourism and trade. DEEDI consists of the previous:

- Department of Mines and Energy;
- Department of Primary Industries and Fisheries:
- Office of Rural and Regional Communities from the Department of Local Government, Sport and Recreation.

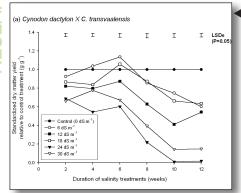
- Department of Tourism, Regional Development and Industry;
- Office of Liquor, Gaming and Racing from the Treasury Department;
- The part of the Department of Employment and Industrial Relations responsible for employment and indigenous initiatives;
- The part of the Department of Justice and Attorney-General responsible for Fair Trading;
- Trade Queensland from the Department of Transport; and
- International Collaborations from the Department of the Premier and Cabinet

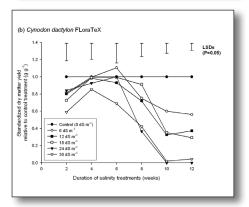
The old DPIF is now referred to as a unit within DEEDI with the title Queensland Primary Industries & Fisheries (QPIF). In terms of the turf research component of DEEDI, the new arrangements will not impact the team's work and a 'business as usual' approach will be continued.

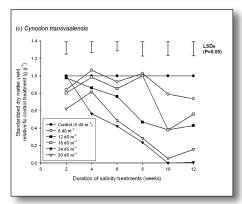
Currently the DEEDI team is working on a number of research projects across the lifestyle horticulture sectors of turf, nursery, cut flowers, landscaping and public open space. In turf this includes research into salt-tolerant grasses, drought-tolerant grasses, sportsfield assessment and benchmarking, greens grass trialling, sportsfields wear trials and tropical turf selection and trialling.

Research team leader Shane Holborn says: "I expect the new arrangements to significantly enhance the team's ability to undertake research in the field of sports turf and am looking forward to working within the new structure as the focus on commercial outcomes will allow us to deliver even better results to industry and the community."

For more information on the QPIF team and its work visit www.dpi.qld.gov.au or call Shane Holborn on (07) 3824 9565.







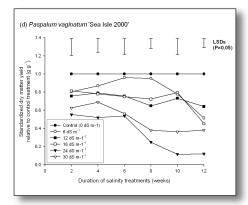


Figure 1: The effect of salinity level (0-30 dSm⁻¹) on two-weekly dry matter yield of clippings on four taxa over time. *Cynodon dactylon x C. transvaalensis* is shown as the mean of 12 genotypes. All data are expressed relative to the control dry matter yield for that particular taxon and harvest date (control = 1.00).

The trial was run over a 12-week period and an overhead flushing irrigation was administered weekly to prevent excessive salinity occurring in the media through salt accumulation in pots. The nutrient levels, $EC_{\rm w}$ and pH were adjusted as needed each week.

Every two weeks, all pots were trimmed, removing shoot and leaf growth from the previous fortnight. These clippings were dried at 65°C for 24 hours and then weighed. For each cultivar, each dry matter yield for a given salinity treatment was divided by the dry matter yield of the control. This provided a standardised dry matter production to allow comparison of salinity effects between species and cultivars.

GROWTH RESPONSE TO SALINITY

Figure 1 illustrates the impact of exposure to different salinities on standardised dry matter production of the four taxa. A general trend can be observed with growth rate maintained, to some degree, during the first six weeks, followed by a rapid decline in dry matter production over the following two weeks and then relatively stable yields seen again over the last four weeks. Exceptions to this pattern are generally associated with the major decrease in dry matter production being delayed at lower salinity levels and advanced at higher salinity levels.

The fluctuations in growth rate, displayed over time in Figure 1, reinforce a critical point made by Munns (2002). Halophytic properties are specific not only to genotype but also to time of exposure to a saline environment. Therefore making a distinction between cultivars in terms of salinity tolerance can be difficult due to the dependence on the period of growth in salt-affected soil.

The graphs seen in Figure 1 are consistent with the two-phase growth response to salinity, described by Munns (1993). The first 4-6 weeks of treatment appear to correspond to a "physiological drought", where the osmotic effect of a relatively high concentration of salts in the rootzone restricts water uptake. This phase is associated with a relatively minor reduction in dry matter production.

After six weeks, a greater decline in growth may be associated with the accumulation of toxic ions, particularly in genotypes that are relatively salt-sensitive, where excessive Na⁺ and Cl⁻ cannot be excreted or compartmentalised in cell vacuoles. With consideration of this general response over time, the last four weeks were chosen as the period most relevant for determining salt tolerance differences over the longer term.

The growth response to increasing salinity can be used to quantify salinity tolerance

through the calculation of an EC $_{50}$ value. This is defined as the salt level that equates to a 50 per cent reduction in shoot yield, determined with linear regression using data from the last four weeks. Table 1 displays EC $_{50}$ values for all trial entries.

Sea Isle 2000 achieved the highest EC_{50} , indicating the greatest salinity tolerance. FLoraTeX was associated with the lowest obtained value, a result that does not agree with the work of Marcum and Pessarakli (2006).

The higher salinity tolerance seen for FLoraTeX in the previous study is thought to be related to the shorter trial period (five weeks) which would tend to reflect tolerance to osmotic effects rather than ion toxicity. The result obtained for the KGC accession of South African couch may not be indicative of the species as a whole, as Kenworthy et al. (2006) have documented considerable genetic variation within *Cynodon transvaalensis*.

While differences between hybrid green couch genotypes was not great, sufficient variation was detected to aid selection of appropriate cultivars for use with saline media or irrigation water. FloraDwarf, Champion Dwarf, Novotek and TifEagle were found to be the most salt-tolerant, while Patriot and Santa ana displayed the poorest growth of hybrid *Cynodon* cultivars under saline conditions.

Some genotypes indicating relatively low salt-tolerance (i.e. Santa and CD) showed strong root growth throughout the trial (data not shown) and may therefore perform better than predicted over a longer test period.

Although there are physiological mechanisms associated with osmotic adjustment, it has been argued that survival of a perennial grass is more closely related to the ability to exclude or regulate toxic ions (Marcum, 2006).

The ability to prevent root absorption of Na⁺ varies between genotypes however *Cynodon* species are capable of compartmentalisation of Na⁺ and Cl⁻ within vacuoles in cells (Munns and Tester, 2008).

Differences in salinity tolerance may also relate to salt excretion through glands of varying density and efficiency (Marcum and Pessarakli, 2006). Seashore paspalum lacks salt glands and therefore partitions Na+ and Clwithin cells, keeping cytoplasm concentrations low (Lee et al., 2007, 2008).

An understanding of species/cultivar growth response to different levels of salinity is a useful tool in the management of a salt-affected amenity area. However, it is not the only issue that needs to be addressed. Turfgrass selection must encompass all of the potential problems at a given site (shade, wear, drought, extreme temperatures etc)

Exudation of salt through glands apparent on the leaves of hybrid couch Santa ana

and cultural practices can be modified to optimise turfgrass health where salinity is a threat. Current research by Queensland Primary Industries and Fisheries, supported by the Gold Coast and Redland City councils, is refining best management practices for a holistic approach to sustainable plant and soil health in saline areas.

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RAISING THE PROFILE OF GOLF COURSE ENVIRONMENTAL MANAGEMENT

As part of the Australian Golf Environmental Initiative, the AGCSA has launched **Keeping it Green**, a monthly newsletter to help increase the environmental profile of Australian golf clubs.

If you've got a positive story to share with the industry contact: John Geary on 0412 293 125 or email jgeary@agcsa.com.au



Around 45 turf industry personnel attended Redlands Research Station to view progress of the warm-season greens grass trials being conducted by DEEDI and the AGCSA

▼WARM-SEASONGREENS GRASS TRIAL FIELD DAY — MAY 09

Since 2005 the Department of Employment, Economic Development and Innovation (DEEDI) (formerly the Department of Primary Industries & Fisheries) and the Australian Golf Course Superintendents Association (AGCSA) have been collaboratively undertaking research activities to determine the geographic adaptation and optimum management inputs to provide high quality golf and bowls playing surfaces.

The four-year Horticulture Australia (HAL) funded study has seen eight regional trial sites set up within South Australian, Victoria, New South Wales and Queensland including a centralised test facility located at Redlands Research Station, Queensland.

Each regional site, positioned predominantly down the east coast of Australia, were provided with the opportunity to grow-in and trial up to 12 greens quality grasses eight Cynodon dactylon x C. transvaalensis (hybrid green couch) cultivars MiniVerde, MS-Supreme, TifEagle, Novotek, Tifgreen, Tifdwarf, Champion Dwarf and FloraDwarf; and four Paspalum vaginatum (seashore paspalum) cultivars Sea Isle 2000, Velvetene, Sea Isle Supreme and SeaDwarf - depending on their available space and budget. We would like to acknowledge each superintendent, club and committee for their support and efforts in being involved in this study.

The centralised test facility located at Redlands Research Station was purposely built to USGA specifications to compare all of the cultivars under a similar management programme. The coordinated approach has enabled DEEDI and collaborative AGCSA staff to speed up rational assessment of the new cultivars and thus greatly improve the understanding of their characteristics and management requirements such as nitrogen fertiliser rates, cutting height and grooming treatments. The end result will provide faster, more affordable determinations by each club/course/facility of the replacement strategy which best meet its requirements.

One such method to inform the superintendents and clubs/courses/facilities of the developments was to hold a field day. The latter occurred on 12 May 2009 at Redlands Research Station and was attended by over



45 industry personnel. Presentations were made by DEEDI research staff about how they tested and evaluated the *Cynodon* hybrid and seashore paspalum cultivars that were set up in a two-way strip plot design to facilitate varied mowing (including mowing and rolling) and nutrition programmes to assess turfgrass colour, quality and thatch among others.

They also spoke about the rigorous scientific testing that commenced in early 2007 following the grow-in and the achievement of the desired management programme obtained by Jon Penberthy, DEEDI's own qualified greenkeeper. Measurements taken over several seasons included:

- Greens speed using a modified stimpmeter;
- Turf colour (subjective and quantitative);
- Turf quality;
- Thatching (subjective and quantitative);
- Rooting depth; and
- Pest and disease incidence.

Temperature buttons were also positioned 1.5m above ground (air) and 150mm below the surface to measure soil temperatures. Both buttons logged data at two hourly intervals and will prove handy when comparing temperature variation between the sites.

AGCSA agronomist John Geary presented data to the predominantly Queensland attendees on the results acquired from the regional trial sites located in Victoria (Bruce Macphee, Chisholm TAFE), South Australia (Daryl Sellar, Glenelg Golf Club) and NSW (David Thomson, Bermagui Golf Club). Some of the results indicated that a selection of the warm-season grasses would have little to no use in southern parts of Australia where bentgrass greens dominate.

Presentations were also made by the three Queensland superintendents involved in the trial – Pat Pauli (Horton Park Golf Club), Gary Topp (Twin Waters Golf Club) and Charlie Gifford (Indooroopilly Golf Club) – as well as Peter Lonergan from Coolangatta & Tweed Heads Golf Club. It was interesting to hear that geographic location even within such a close proximity resulted in different grasses providing better results. This was even before

various forms of management practices were implemented. Such a finding emphasises the need for multiple trial sites to be set up in varied locations when conducting trials looking at the performance of different grasses.

To date DEEDI and AGCSA staff have had the opportunity to collect and analyse a mass of data that has been acquired during the course of this trial. Research staff from both groups expect to get good information about the performance of these new turfgrass cultivars in comparison to the older industry standards (Tifgreen and Tifdwarf) enabling golf and bowls clubs to make effective decisions about which greens cultivars are likely to perform well in their situation.

DEEDI and AGCSA staff would like to thank Globe for sponsoring the day, and presenters Pat Pauli, Gary Topp, Peter Lonergan, Charlie Gifford, John Geary and Jon Penberthy for providing their time in addressing the audience. Special thanks must also be given to Cynthia Carson, senior extension officer of DEEDI, for her time and effort in organising the event.

The current HAL funded trial (TU05001) ends in December 2009. As a result, discussions are being undertaken between DEEDI and AGCSA technical staff about potential research opportunities with the Redlands centralised test facility. To have the infrastructure in place and to be able to continue to trial these new greens quality grasses, there is significant opportunity to gather information which has previously not been made possible.

For further information please contact Matt Roche (DEEDI) on (07) 3824 9502 or John Neylan (AGCSA) on (03) 9548 8600.

Editor's Note: For more in-depth results from these trials see John Neylan's AGCSATech Update in recent editions of ATM or visit the AGCSATech Research section on the AGCSA website www.agcsa.com.au/agcsatech/research which houses a series of newsletter updates about this project.

Matt Roche, DEEDI

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An aerial view of the completed 26 megalitre dam at Sydney's Roseville Golf Club. Six years in the making and officially opened in May 2009, the dam has gone a long way to ensuring the future viability of the club



Over the past six years Roseville
Golf Club in Sydney has embarked
on a major project to not only tweak
the course layout but to secure a
more sustainable future in terms
of its water supply. Superintendent
Mark O'Sullivan (pictured) looks
back at this wide-ranging project to
date which is due for completion by

the end of next year.



PRINCIPAL PARTNERS







Built on the side of a hill Roseville also has Moore's Creek running through the lower section of the course. The course is the last developed area before water is lost to Middle Harbour which made it a perfect site for stormwater harvesting



Roseville set to bloom

he introduction of water restrictions across Sydney at the start of this century prompted the then board of Roseville Golf Club to look at how to make the course self-sufficient with its own water supply for irrigation and in so doing ensure the future viability of the club.

The subcommittee formed for this purpose looked at two alternatives – stormwater harvesting and sewer mining. When speaking to the various company representatives and technology consultants they all asked the same question – "where are you going to store the water?"

It was then decided a golf course architect be engaged to determine the best site for water storage, what changes to the course layout would follow and whether any increase in the length of the course was possible. Jim Wilcher from Golf by Design was commissioned to develop a Master Plan in conjunction with the subcommittee.

PRIME SITE

Roseville Golf Club was built in the 1920s and is situated on the upper North Shore of Sydney. The course is a par 65 on 70 hectares of land boarded by bushland and residential properties with a sporting oval in the middle. Thirty-five hectares of land is leased Crown land managed by Ku-ring-gai Council and the club owns the remaining 35ha.

The course has for years been known for the many difficult par 3s which vary between 155m and 224m in length, many with blind tee shots. The elevation of 50m between top and bottom of the course creates different microclimates during the different seasons.

The course is built on the side of a hill which is predominately Hawkesbury sandstone with a minimal amount of topsoil and Moore's Creek running through the lower section. Moore's Creek has 1.8km² of catchment and the golf course is the last developed area before water is lost to Middle Harbour just 1km downstream.

This made the course a perfect site for stormwater harvesting and a gross pollutant trap that collects debris before it enters the waterways. Sewer mining was not explored further at the time because of unknown costs and also technology was still undergoing trials both in NSW and Victoria.

Once the concept of a Master Plan was agreed upon the fun started. The club had just spent \$2.6 million on clubhouse improvements and so was not flush with cash. The lease only had a few years to run and needed to be renewed before we could proceed. We needed to get a Development Application (DA) approved but before doing so approval had to be sought from The Lands Department as well.

Our aims were to harvest the stormwater, pump it up to our dam, continue to maintain 18 holes at all times without the need for temporary greens, maintain the support of the members and fund the project from trading profits without the need to raise subscriptions significantly. A tall ask indeed! From seeking and obtaining approval of the members to where we are now has taken six years and the entire project is due for completion at the end of 2010.

After two years the Master Plan was complete, approved by the board and presented to the members at a specially convened meeting. A few members were a little skeptical but clearly the board had the support of the members and was comfortable to move forward.

The next two years were taken up preparing the DA mainly with Martens & Associates, the engineering company given the contract to design the dam, stormwater harvesting system, rising main and access









Dam construction began in August 2008 and was handed over in mid-January 2009. With Sydney having good rains in February the club was able to fill the dam to capacity by March

roads. During this time test holes were dug in various locations around the proposed dam site down to bedrock to determine depth of rock and to identify any soil contamination.

Along with this information came all the other plans and studies including flora and fauna, land contamination assessments, traffic management, remediation action plan, and environment management. At the same time the club was in negotiation with council about the lease as they represented The Lands

Department in this matter and also The Lands Department direct seeking owners consent without which our efforts would be to no avail. Because of the complexity of the DA the club engaged consultants to compile the documentation and arrange the presentation in a manner suitable to the council.

After some time the DA was issued containing 95 conditions that had to be met before a construction certificate would be granted. Several more months passed with more money spent to meet these conditions before such approval was forthcoming. Tender documents were then prepared and civil contactors were asked for submissions. After much deliberation and price negotiation Ford Civil were contracted for the water storage and associated works.

At the same time of the tendering process the club received a grant for the project from both federal and state governments through the Community Water Grant Scheme and Water Saving Fund.

BREAKING NEW GROUND

Ford Civil started work in April 2008 on the 2nd and 3rd holes to construct the stormwater harvesting system. This included an access road, a gross pollutant trap, wet well and 45 kilowatt pump installation, creek diversion and rising main. Power supply and control panel was done in-house by the club's electrician.

The club had already made the par 4 16th into two par 3s with new green and tees so the members were able to play an 18 hole course. The 2nd hole was taken out of play and the 3rd was shortened for four months while work was completed.

When work was finished on Stage 1 Ford demobilised from this site and set up on the 12th hole where the dam was to be constructed. The 2nd and 3rd holes were brought back into play and the 12th hole was then taken out of play. Again the members were still playing 18 holes with bentgrass greens.

This stage was definitely the most difficult as Ford Civil had to source the correct clay to met the engineer's specifications. The design of the dam called for a clay core 15m at the base tapering to 3m at the peak. Fortunately for both the club and contractor a major development had started at Chatswood, only a few kilometers away, where we could get both the 10,000 cubic metres of clay and 28,000 cubic metres of fill. After several unsuccessful sample testings from all over Sydney, to find a source so close to the course was a major windfall.

This stage started in August and was due to be completed by the end of November but due

to some inclement weather during the earlier stage and the aforementioned difficulties in sourcing the clay, the project wasn't handed over until mid-January 2009.

With Sydney having had one of its driest January's on record we were unable to test any of our newly completed works but with good rains in February we were able to fill it to 80 per cent and completely fill the dam by the end of March. The club's future is now very secure by being able to store and use 26.3 megalitres of recycled stormwater which would have normally been lost to Middle Harbour.

COURSE CHANGES

During this time different areas were signed off and handed back to the club so we could start construction of new greens and tees. We started construction of the new 12th green complex a week before Christmas 2008 and the green was seeded the last week in January.

Construction was done in-house with assistance from Mick Donohue and his son from MD Construction for the shaping. This hole was brought into play early May just before the official opening of the dam. Construction of the new 15th hole was completed end of March. This was again done in-house with Links Golf Construction assisting with shaping. Work is still continuing with the construction of the new 9th/15th tee complex but again has stopped due to poor weather. The 15th hole is due to be in play by end of July and reconstruction of the 8th and 14th holes will commence soon after.

No doubt this is the largest project I've been involved in at Roseville Golf Club and if we can keep to schedule the new longer course will be in play by the end of 2010. The support of our members has been great, while the board has managed to finance the work to date without an increase in fees which in itself is a remarkable feat.

To realise we are well down the path to achieving our goals for Roseville Golf Club is a very satisfying feeling. The co-operation, hard work, understanding and involvement of all concerned has been outstanding. Our general manager Jason Seagg has stood tall throughout, as has Jim Wilcher and his team. The board has been fully supportive as well along with the greenkeeping staff who have worked tirelessly to maintain the golf course in addition to assisting with construction and landscaping activities.

Editor's Note: The 'news and events' section of the Roseville Golf Club website (www.rosevillegolf.com.au) contains an excellent account of the major works being undertaken at the club, including a heap of photos. Check it out. 44

The construction of a new recycled water storage facility at East Leisure and Golf in Maitland, NSW has provided a sustainable method of securing water needs and allowed the club to better manage its water resources in a controlled environment

Easts and Leisure Golf in Maitland
was one of the first clubs in the
country to take advantage of the
Federal Government's former
Community Water Grants Scheme,
receiving over \$200,000 in grants.
Rod Waite, who has been course
superintendent for the past 13
years, looks back at the project to
construct a recycled water storage
facility which has improved water
management practices out of sight.





t Easts Leisure and Golf in Maitland, NSW the golf course is no different to any other golf course in Australia in that it is totally reliant on water. Fortunately, since the 1960's, Maitland Golf Club (which amalgamated with East Maitland Bowling Club to form Easts Leisure and Golf in 2003) has used recycled effluent water for irrigation purposes.

An old eight-stage centrifugal pump was located 3.3km north east of the course at Morpeth Waste Water Treatment Plant and from here water was pumped up an old 150mm asbestos main directly onto the course. Over the years this had become very fragile.

Where the main enters the course, it branches out to 100mm and 80mm asbestos sub mains which extend throughout the golf course. Hydrants were located on the mains and spread out over different locations, adjacent to greens, tees and fairways. Lay flat hoses connected to hydrants delivered water to perforan pipes which were used to irrigate fairways. Using this system it took approximately three weeks to irrigate the fairways!

In 1975, through the government of that time, funding was sort under The Red Scheme and an automatic irrigation system using hydraulically operated valves was installed. The hydraulic system is still used today and since its installation has been upgraded with Hardie Micromaster controllers while impact and gear driven sprinklers have been used to replace the old cam driven Buckners. The existing asbestos and PVC pipes still remain while kilometres of 8mm hydraulic tubing has been installed to further upgrade and extend the system.

At the point where the main enters the course, a sand filter system was installed in the 1980s. This was to further filter the water, which at the time was of poor quality. This is how the system operated for another 30 years.

LOOKING TO THE FUTURE

It had been a long-term goal of the club to construct an on-course water storage facility. Previous investigations over the years had failed to find a suitable site but in July 2004 the dam proposal was back on the table. The club saw the importance of securing the course's future water needs as well as a more environmentally sustainable alternative to current water usage.

A site was selected and a consultant engaged. A test hole was dug for site suitability and a Development Application (DA) was submitted to council. The dam was located on the right hand side of the 3rd hole and would hold 8 megalitres of recycled effluent water.

The DA was approved in July 2005 but unfortunately funds where not available to construct the dam so the project was put on hold. Fortunately, the Australian Federal Government's Community Water Grants Scheme became available and the club was successful in receiving \$50,000 in the first round of funding, one of the few golf clubs to do so.

The project was back on the agenda, however, further soil testing found that site material was unsuitable for dam construction. The original test hole dug was not consistent with the entire site and an alternative site had to be found. A site between the 2nd and 3rd was selected and eight test holes were dug.



The site was found to be suitable and the DA was approved in March 2007. A stipulation of the approval was that no surface or stormwater was to enter the dam so walls where designed to be 500mm above the existing ground level.

The dam was to now hold 10M but unfortunately the cost to construct the dam had doubled due to saline water found at varying depths throughout the site. A cut off trench had to be dug underneath the perimeters of the dam walls to stop this from entering.

In June 2007 dam construction started. For all the wrong reasons, Maitland made the national news with serve flooding, the worst in 30 years, hitting the region. The golf course flooded and six greens were covered with 5 feet of water. The project was eventually finished by the end of October and on completion the dam's capacity was 12M with a surface area of 5000m² and depth of 3.7m at its deepest point.

PUMPED

During the waiting period for the dam's approval and construction, we still had no means of extracting water from the dam. A strategic plan was drawn up but once again funds had to be obtained. The Federal Government had opened a secondary scheme which allowed for larger projects to be funded and the club applied for funding which would be matched dollar for dollar.

The club submitted its application to install an on-site pump station and a self-cleaning filter, to be housed on the wall of the dam. An aeration fountain was also to be installed to circulate the recycled effluent water. There was to be one kilometre of 100mm PVC ring main piping to be trenched and tapped back into existing mains plus 1.1km of 150mm PVC piping to be connected into where the main enters the course. Fill pipe was to be trenched back to the dam to assist in its filling. The



The two-stage project was made possible with over \$218,000 worth of federal government grants

pressure pumps at Morpeth Water Treatment Works would be utilised to pump water to the

The application was submitted in late November 2006 and the club ended up receiving \$168,500. In November 2007 stage two of the project started and the concrete slab on the dam wall was poured and the shed erected. Pumps and the filter were placed in the shed, ready for installation and in January 2008 the installation of PVC piping commenced. This process took four months and by the end of May all piping had been installed and commissioned.

During PVC pipe installation, associated work inside the pump shed was carried out. This included 200mm poly pipe and fittings being connected to the suction line and pumps, through to the inline filter and out to the delivery pipes. At this point the installation of a Davey 18.5hp multi-stage VFD controlled pump system was completed. All electrical wiring to the pumps and filter was finished, including the supply of power cable from the pillar to the main switchboard located in the shed

Once power to the pump shed was supplied, the pumps were given their first run and on 16 July the pumps were commissioned. This process went smoother than expected with no major problems associated with the existing system. By the end of July the aeration fountain was installed signalling the end of the

project. A community open day and project launch with media coverage was staged in August.

The length of time it took to undertake all the associated works was longer than expected. Each week seemed to flow into the next and it was good to see the project finally completed. From the initial investigations through to project completion, it took four years at a total cost of \$480,000, \$218,500 of which came from government grants.

EFFICIENT FUTURE

So what has the project meant for Easts and Leisure Golf? The project has provided a sustainable method of securing our water needs and allowed the club to better manage its water resources in a controlled environment.

Being able to fill the dam to store the recycled effluent water has given the club more flexibility with our water management programmes. Water can be supplied at times of high demand and saved when demands are low. During peak summer periods, such as January, we used 23M of water. When demand is lower we have used as little as 1.8M. This will be even less as the winter months approach.

Water quality has also improved. Water supplied is classed as high Class C recycled effluent. The ability to store this water has reduced odour to a minimum, improved water clarity and reduced filter blockages in sprinklers. Sunlight further treats the water while stored in the dam and the aeration fountain and clarifier tablets have helped to manage the outbreak of algae blooms.

Aesthetically and playability wise, the location of the dam has made the 2nd and 3rd holes far more challenging. The project has been a great success and has benefited the environment through better water efficiency. The members have also benefited through a better golf course, which can be maintained to a much higher standard.



Topdressing and dusting can quickly dull cutting edges which means plenty of extra work for turf technicians during renovation periods. On the market today is a variety of bedknife facing equipment such as this Rapid Facer unit which uses a guide rail to achieve a high degree of accuracy when restoring a sharp edge to the bedknife

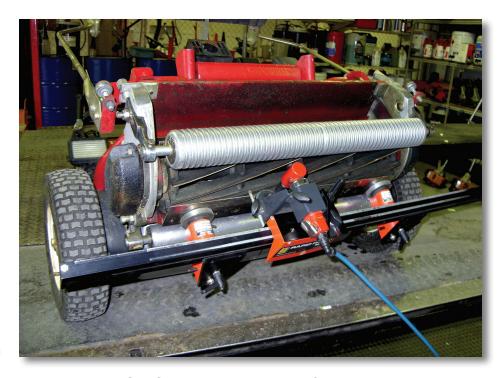
Finding an **edge**

Renovations, topdressing or dusting are terms which generally fill every turf equipment technician with just a little angst. The ensuing weeks are generally full of numerous height changes along with the challenge of getting a dull reel to cut, so it's not surprising that many entertain the thought of taking a vacation about this time. However, with a little forward planning the whole process can be hassle-free and just another part of your workshop routine.

With the start date for greens renovations added to your calendar, it's time to start thinking about the type of renovations about to take place and the machinery which is going to be required. If verti-cutting is going to be the first process, obviously making sure the units are in tip-top condition is a priority. Checking the blades for bent or broken teeth and missing carbide inserts, if fitted, is done at this time. It's probably also a good idea to have a few spare blades on the shelf just in case of a mishap during operation.

Checking shaft bearings for play or noise should be performed by spinning the shaft by hand. If greasing a noisy bearing doesn't silence it, replacement should be the next step. Checking over any drive belts is also a must and, again, having spares on hand will save any unnecessary downtime. Cleaning any build up of cemented soil from the blade is also necessary as is the setting of the required spacing and depth.

The next machine to get the once over is the coring machine. Once the use of either hollow or solid tines has been established and an adequate supply ordered, the machine itself needs to be inspected for any signs of damage or fatigue. As we know, the process of coring can be quite taxing on the machine itself so attention should be paid to bearings, welds and covers or safety shields.



Royal Melbourne Golf Club turf technician Luke Spartalis sharpens his pen (or should that be bedknife) and bravely delves into every tech's favourite time of year – renovations.

Topdressing is generally carried out with either a disc or drop type spreader with each having individual benefits. These are relied on heavily and reliability is of the utmost importance. If the unit is a small engine-driven arrangement obviously servicing is on the list, but checks also need to be made to the conveyor belt and spinners/brush to ensure maximum accuracy.

Regardless of which type is used, they will need to be supplied with a constant source of material so front-end loaders, trucks and or trailers should be serviced and made ready for the task

This material will need to be matted in and this too can also be achieved through numerous methods. If a drag mat is used behind a modified bunker raker or greens mower for example, the usual checks should be made with particular attention paid to air cleaners as matting in can produce quite dusty conditions and easily suffocate an already compromised air filter.

SLAVE TO THE GRIND

Once the dust has settled after a week or so, it's time to begin mowing again. If your workshop is equipped with cylinder grinding equipment it's a fairly straight forward proposition – mow then grind as required. If you're lucky enough to have a spare set of 'sand' reels then it's a pretty straight forward rotation. If, however,

you aren't so fortunate or perhaps multiple mowers are being used, a different approach must be taken.

Generally the reels which are most in need of a grind are sacrificed for the first one or two cuts on a newly renovated surface. This is probably a good idea if the surface has just undergone a heavy topdress, however, for routine dusting I personally find that the use of cutting units in good condition enables them to be restored between cuts to a suitable standard with a minimum of fuss.

Backlapping with a 50- or 80-grit paste can be used to restore some sort of a cutting edge to the cylinder although the bedknife probably won't fare so well. Through the continuous abrasive action of both the topdressing medium and the lapping compound the bedknife top relief angle is soon diminished. This is obviously undesirable and will result in a poor quality of cut.

One method of achieving a satisfactory cutting edge is through a combination of lapping and facing. On the market today is a variety of bedknife facing equipment ranging from large fully automatic type bedknife grinders down to a small handheld block with a replaceable file fitted.

Some of the most suitable for maintaining mowers during topdressing or dusting periods are either a small 90 degree pneumatic die grinder or a rail guided air operated grinder,





As well as large fully automatic type bedknife grinders there are also smaller less expensive options such as this handheld Bedknife Buddy which has a replaceable file

A pneumatic right angle die grinder – quick and easy to use

which is preferable because of its accuracy, such as the Rapid Facer from Bernhard & Co.

Of course these grinders can only restore the front face but quite often this is all that's required to bring the cutting unit up to an acceptable standard. This, coupled with the fact that the bed bar need not be removed for sharpening, makes it a most time effective method for the technician. If the bedknife was in reasonable condition initially, regular facing combined with light lapping will produce a quality cut. Caution should be exercised with the use of bedknife facers as if overused the service limit will be exceeded which in turn alters the geometry of the cutting unit.

Bedknife facing also allows for a finer grade of lapping compound to be used thus reducing

wear to the top ejection angle, prolonging the life of the blade and assists in obtaining a clean sharp edge.

Editor's Note: If there are any specific topics you would like to see covered in the turf technicians section of ATM, please email Brett Robinson brett@agcsa.com.au or call the AGCSA office on (03) 9548 8600. w

Invitation and complimentary entry to The Australian Turfgrass Conference and Trade Exhibition

The Australian Turfgrass

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This is your personal invitation to attend the 25th Australian Turfgrass Conference and Trade Exhibition. The exhibition will be held in the Tasman Room at Wrest Point Convention Centre from Wednesday 15 July until Thursday 16 July. Come and converse with turf industry experts including machinery, irrigation, pesticide, course signage, instant turf and seed supply companies.

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For information on the conference call the AGCSA on (03) 9548 8600 or see our website at www.agcsa.com.au

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FREE ENTRY NAME TAG



Full Name: Robin William Doodson.

Nickname: Haggis.

Age: 35.

Family: Wife Kerry, twin girls Amy and Emma (2)

Years as a superintendent: Seven. Years as an AGCSA member: Five.

Previous clubs: The Links, Port Douglas (superintendent, 6 years); Wentworth Club, UK (assistant greenkeeper 4.5 years); Turnberry Hotel, Scotland (intern, 1 year); Whitecraigs Golf Club, Scotland (greenkeeper, 2 years); Rouken Glen Golf Club (apprentice, 4 years). Number of staff: 28.

Course specs: 36 holes. The Pines – 6681m with 328 greens and Greenlees Park tees and fairways. The Palms is currently being reconstructed by Ross Watson and due to re-open in late 2010.

Turf qualifications: Higher National Diploma in Golf Course Management. National Certificate in Greenkeeping.

Congratulations on your recent appointment as superintendent at Sanctuary Cove. Tell us a bit about your background in turf management and how you ended up as a Scottish superintendent Down Under?

I guess I kind of fell into it as many do. Having played golf from an early age my goal was always to play the game for a living but it was clear that I was never going to make it. While at school I worked part-time at a local golf club picking up balls on the driving range at nights and weekends. The owner of the club offered me an apprenticeship when I left school and

Robin Doodson – Sanctuary Cove Golf and Country Club

After less than a year at Sanctuary Cove, Scottish born Robin Doodson was recently elevated to superintendent following the departure of Dean Henderson. The Gold Coast facility is set to undergo some dramatic changes in the coming years and ATM catches up with the canny Scot to look at the challenging times ahead.

having not too many other options I duly accepted.

After completing my apprenticeship I realised that greenkeeping was what I wanted to do and I decided if I was going to do it I would do it well. As a result I enrolled at Reaseheath College to study for a Higher National Diploma in Golf Course Management. The course was three years' full-time which included a one year placement in the middle year. It really was the best decision I ever made as I got the opportunity to spend my placement year at Turnberry working under George Brown.

George was an amazing mentor and always took time to pass on his knowledge and experience to myself and my fellow intern. He is also an extremely handy golfer and I'll never forget the evening rounds we had talking golf and greenkeeping around the magnificent Ailsa course. (See this edition's preview on the 2009 Open, page 20-21 - Ed)

After graduating from college I moved to London where I had been offered a position at The Wentworth Club. Wentworth has 63 holes including the famous West Course which hosts the PGA Championships and World Matchplay Championships each year. Again I was very lucky to work under another great course manager in Chris Kennedy.

It was while working at Wentworth that I met my wife Kerry who was on a working holiday. We dated for a couple of years and once it came time for Kerry to return to Australia we decided that I would tag along for the ride. We arrived in Cairns, where Kerry's parents lived, and I was soon offered a job by Darren Flanagan who was superintendent at The Links, Port Douglas.

After a few months Darren decided he was going to head off to the US so I stepped up into the super's position. I went on to spend five-and-a-half wonderful years at The Links. It really was a world away from Glasgow with the resident crocodiles, 14-foot snakes, bird-eating spiders and monsoonal rains.

In 2008 I decided that if I was going to further my career I would have to move to where the action was as there were limited opportunities in Far North Queensland. In May 2008 I accepted the position of assistant superintendent here at Sanctuary Cove under Dean Henderson. My role concentrated on looking after the members-only Pines course. In February this year Dean left to take over at Hyatt Regency Coolum allowing me to step up into the top job here at Sanctuary Cove.

What have been some of the main challenges in making the move to Australia from Scotland, both from a personal and professional point of view?

The biggest challenge was adjusting to the climate. My first day at The Links, Port Douglas was the beginning of January and my first job was edging bunkers. Fresh off the plane from the UK I felt like I had been dropped into a sauna. By 8am I asked the guy working with me if it got any hotter? "Are you kidding mate, wait till midday!" was his reply. After my second day I was suffering pretty serious heat stroke but I kept at it and acclimatised pretty quickly. After seven years in the Far North I'm actually finding the Gold Coast a little bit chilly.

What are the major differences in greenkeeping philosophies between UK and Australian superintendents?

There is a slightly different culture in Australia with more emphasis on efficiency than attention to detail. Having said that, I do think Australian supers have a far more modern approach to their role. This is most evident in the attitude towards environmental management and it is quite obvious that we are way ahead of the rest of the world in this area.

What was the most important thing you learned during your formative years as a greenkeeper in Scotland that you have been able to translate to your time here?

I'm a firm believer in the traditions of the game

and I really try and keep that in mind when managing a golf course. In my opinion less is always more. Less gardens, less course furniture and less signage on a golf course mean better presentation. You see so many golf courses these days that are just full of unnecessary clutter. Golf courses are beautiful open spaces in their own right.

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

I have arrived at Sanctuary Cove at a very exciting time as we are currently fully re-constructing the Palms Course with Ross Watson and have recently engaged the Palmer Corporation to furnish us with a Master Plan to upgrade the Pines Course. On top of this the club is also constructing a brand new clubhouse which is due to open in September.

My short-term goal will be to see the construction of the Palms Course through to its completion and begin working on upgrading the Pines to a more modern championship layout. Within a couple of years we will have two top class championship golf courses. I am also about to start a four-year BSc in Applied Science at the University of Queensland. My biggest challenge over the next few years is going to be achieving the balance between work and home life.

What are some of your major turf management issues at Sanctuary Cove?

There are a number of issues on the Pines Course that we are currently looking in to. Some are agronomic, some are design and some are both, hence the reason the club engaged the Palmer Corporation to help us map the road ahead. Some of the recommendations put forward included possibly re-grassing the whole golf course with seashore paspalum to try and deal with some of the issues regarding poor water quality and shade.

Traditionally a number of the greens have struggled over winter due to heavy shade issues so this year the decision was made to oversow all greens with *Poa trivialis* and all tees with *Poa trivialis* and ryegrass. This has been very successful and the feedback from the membership has been positive. We are currently in the process of upgrading the bunkers on the golf course which involves removing all the badly contaminated sand and replacing drainage. Fairway drainage is also a big issue and we are continuing work that we started last winter.

The Palms course is currently being redeveloped. Take us through what is being done and why?

The Palms reconstruction began last year with



the new 1st and 2nd holes which have been built on a parcel of residential land separate to the existing golf course. These holes were completed early this year and the second stage of the project began in May which required the closure of the Palms Course to allow reconstruction of the balance of the holes.

Despite the wet weather, construction is well under way and the new Palms Course, designed by Ross Watson, is due to open in mid-2010. The golf course will contrast in style from the Pines Course and will have a more natural and open feel to it. TifEagle will be used on the greens with Wintergreen on the tees and fairways. The decision to re-build the Palms was obviously a massive commitment by the club but is consistent with its goal of becoming the best facility in the country.

On the Pines Course we have a number of proposed projects within our new Palmer

Master Plan which will be programmed in over the coming years. These could include moving and re-building a couple of greens, construction of additional tees, removal and addition of bunkers and obviously if we decide to re-grass the golf course that will be a massive project in itself.

Any other management issues which the club is actively addressing?

Environmental management is a huge issue here at Sanctuary Cove. Thankfully we have our e-par system in place which has helped us in dealing with a number of issues including noise complaints, vegetation issues and stormwater management. We have recently signed up for the upcoming sustainability cluster run by the Queensland Department of Environment and Resource Management which will help us be more proactive with our management of resources such as power and water. We also manage a population of about 200 Eastern grey kangaroos under licence from the EPA which involves carrying out a census every year, population control and constant monitoring.

OFF THE COURSE

Claims to fame outside turf management?

My biggest sporting success was probably completing the London Marathon in 2000. I used to caddy for a fair few celebrities at Wentworth including Hugh Grant and Michael Parkinson.

Favourite movie? Jerry Maguire.

Name 3 CDs you could not live without.

Jeff Buckley - Grace; The Stone Roses The Stone Roses; Pete Murray - Feeler.

Food you could not live without? Coriander chicken (my wife's speciality).

Favourite sporting team? Glasgow Celtic and anyone who plays England.

What book are you reading now? Caddy for Life by John Feinstein (it's about Tom Watson's caddy Bruce Edwards who died from Lou Gehrig's Disease).

Any funny moments to date since your arrival in Australia? Mainly due to my rather broad Scottish accent. I get a lot of funny looks when I ask for a Coke.

What do you do to get away from it all? Play golf or take the family to one of the many theme parks on the Gold Coast.

Most embarrassing moment as a superintendent/assistant?

In my first week here at Sanctuary Cove I was out painting hazard lines and managed to slip into the lake up to my armpits. Somehow my 2-way and phone managed to survive but unfortunately my pride didn't as one of the guys came round the corner and spotted me before I could extricate myself.

Funniest moment you have seen on course?

Rather disturbingly it was probably finding two of my staff in Port Douglas stripped down to their jocks swimming in one of our bunkers after heavy rain.

Overseas course you'd most like to visit?

I don't know if it counts as 'overseas' for me anymore but definitely Barnbougle Dunes (I'm counting the sleeps already). Otherwise I would happily go back and play The Old Course every day for the rest of my life. **

MELBOURNE CRICKET GROUND LIGHTS UP

he Melbourne Cricket Ground has joined its cross-town counterpart Etihad Stadium in employing specially designed artificial lighting rigs to improve turf quality during the winter months.

In May, the Melbourne Cricket Club (MCC) took delivery of 13 lighting rigs from Netherlands-based company SGL Concept, the same company that supplied a similar set up to the then Telstra Dome prior to the 2008 AFL season.

A shipment comprising 11 lighting rigs each measuring 12mx 2.5mx 2.5m and two smaller rigs, arrived on 4 May and were in full operation from mid-May, once installation and testing was completed.

Shade issues brought about by the completion of the new northern stand three years ago has seen the need for the new lighting system. Only 10 per cent of natural

sunlight reaches the MCG surface during the winter months because of the stand and as a result maintaining turf quality was becoming increasingly difficult.

MCC's executive manager of environment and turf development Tony Ware says the new \$2 million system would be used as required throughout the AFL season, until the end of September. "The lighting rigs... will enable us to achieve year-round quality turf in all weather conditions, and ensures that the MCG remains at the forefront of stadium management," says Ware.

Similar systems have been adopted at numerous venues around the world, including Emirates Stadium, Twickenham Stadium and Wembley Stadium in London, Millennium Stadium in Cardiff as well as Etihad Stadium.

Ware says the redeveloped northern grandstand has presented new challenges

to arenas operations manager Cameron Hodgkins and his ground staff.

"The roof on the new stand has reduced the amount of natural sunlight we have available to us," says Ware. "This leads to lack of growth on a patch of turf that, during the AFL season, is an area of high traffic around the interchange benches and changerooms. The new system will reduce the amount of turf replacement required on an annual basis."

It is estimated that the use of the lights will add about five per cent to the MCG's energy consumption levels. However, this will be offset by a number of energy-saving initiatives.

"The MCC is conscious of its community role in environmental sustainability," says Ware. "We will be installing a device on the northern stand roof to measure how much lighting is needed, so that we are using the energy as efficiently as possible."

ON THE MOVE

The South Australian and Victorian superintendent community has bid adieu to one of the real gentlemen of the turf industry following the retirement of **Wayne Dale**. Most recently superintendent of the Growling Frog Golf Course north of Melbourne, Dale is heading back to his home state of South Australia where he and wife Pam are set to enjoy the good life on their farm property in Victor Harbour.

Dale was somewhat of a late starter to the greenkeeping caper, joining the crew at Victor Harbour Golf Club at the ripe age of 34. Prior to that he was a highly regarded surfboard shaper for nearly 14 years and also won a number of state and Australian surfing titles to boot.

The move into golf came about in 1980 after Dale developed RSI from many years manufacturing surfboards. Being an active member of the local golf club and coming from a strong golfing background, the committee asked if he would be interested in joining the ground staff.

Dale duly accepted and he was quickly promoted to 2IC and inside 12 months was superintendent, a position he would hold for 10 years. During that time Dale undertook five greens reconstructions as well as the re-shaping and re-surfacing of a further 11 greens. He also oversaw the installation of a satellite controlled automatic irrigation system for recycled water use.

The SAGCSA played a crucial role in Dale's development and knowledge while being involved as a committee member, secretary, treasurer and president. He was



Wayne Dale has retired after nearly three decades in the turf management game

later nominated and elected as vice-president on the first AGCSA board at the Launceston conference in 1992.

Over the next two decades or so Dale had various construction, grow-in and maintainance roles at The McCracken Country Club (SA), Luhu Golf and Country Club (China), Fleurieu Golf Course (SA), Patawalonga (SA), Sanctuary Lakes (VIC), Hidden Valley Golf Course (VIC) and Heritage Golf and Country Club (VIC).

In May 2004 Dale was appointed superintendent of the Graham Marsh-designed Growling Frog Golf Course by Densal who operated the golf course maintenance contract with the City of

Whittlesea. When he started his first task was to prepare the golf course for opening in just four months.

The work necessary for this was to spray out all broadleaf weeds and reseed all rough areas, as well as spray out all weeds in couch areas and push for as much cover as possible. Dale and his team also brought the greens back up to a playable condition with the implementation of a sand dusting programme and the course was duly opened to the public that September.

Dale finished up at Growling Frog in June and is now looking forward to spending more time with Pam, daughters Michelle and Cindy and grandchildren Izabelle and Bodhi, as well as his aging mum and dad. More than a little time will no doubt be spent fishing and surfing as well as pulling out the sticks every now and then.

Elsewhere in Victoria, the plum Metropolitan Golf Club job has gone the way of Glenn Stuart. Stuart, the former superintendent at the highly regarded Woodlands Golf Club beat home a top field of candidates and replaces Richard Forsyth who is now at the helm of Royal Melbourne. Stuart, who started his turf management career as an apprentice at Kingswood Golf Club before spending eight years at Long Island Country Club, heads to Metropolitan having been superintendent at Woodlands for the past 14 years. Former Metropolitan assistant superintendent Adam Lamb is also on the move and was named as Peter Frewin's replacement at Barwon heads Golf Club.

TURF INDUSTRY BOOKSHOP

	AGCSA PRODUCED DVD'S	
	AGCSA PRODUCED DVD'S(DVD) Environmental Issues for Golf Course Architecture	Non-Member Member \$88.00 \$66.00
	(DVD) HR presentation and templates by Daryl Sellar	\$88.00\$66.00
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IPM Handbook for Golf Courses

By Gail Schumann, Patricia Vittum, Monica Elliott and Patricia Cobb John Wiley & Sons, 2002

ith the rise of environmental awareness round the globe over the past decade, the drive to maintain golf courses with reduced reliance on chemicals has been taken up by many within the industry. Integrated pest management techniques have found a home at many golf clubs, proving not only highly successful but also improving the environmental image of the industry.

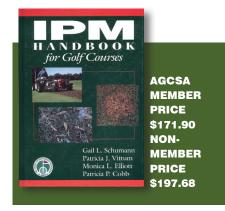
Recognising the importance of developing a culture of IPM within the industry, in the late 1980s the Golf Course Superintendents Association of America conducted a seminar titled 'Introduction to Integrated Pest Management' by Dr. Patricia Cobb and Dr. Patricia Vittum. Throughout the 1990s this seminar was held around the US with the help of fellow researchers Gail Schumann and Monica Elliot. From this it was decided to summarise the basics of the seminar in book form and the end result is the 265-page hard-cover publication 'IPM Handbook for Golf Courses' released by John Wiley and Sons in 2002.

IPM Handbook for Golf Courses provides a solid base of knowledge for superintendents and turf managers and the opening chapter defines what IPM is – the authors like to refer to it as 'intelligent plant management' – and lists the basics of what an IPM programme entails. As the authors point out in their introduction, "Experienced golf course superintendents realise that the concept of IPM is not new. Every superintendent, to some extent, practices IPM already. IPM is a commonsense process that continues to evolve over time. IPM never begins as a 'complete' programme. It generally begins with a few simple efforts and emerges over time."

Following chapters on site assessment and scouting and monitoring, the authors delve into cultural control strategies as well as biological and chemical control strategies. From there they concentrate on pest management, devoting separate chapters to insects, diseases, nematodes and weeds before looking at developing technologies for pest management.

Perhaps the most practical information in the book can be found in the final two chapters. Chapter 12, titled 'Getting Started', gives a step-by-step guide and tips on how to develop an IPM programme, looking at the critical areas of goal setting and policy statements (a handy sample policy statement is included as part of this).

Chapter 13 – IPM Regional Portraits – takes that to the next level with superintendents from



four regions of the United States providing summaries of their IPM programmes which contain both a mix of tried and tested IPM strategies as well some innovative practices they have implemented as a result of unique site characteristics. The authors pay tribute to these superintendents as well as the many others who have embraced the concept of IPM

The book is full of pictures (predominantly black and white, although there is an eight-page section of colour slides in the middle) and there is a comprehensive glossary of terms. Another handy feature is the list of recommended further reading material contained at the end of each chapter. Since the book was published there have no doubt been improvements in technologies but the basics of implementing an IPM programme have essentially remained the same and this book provides superintendents and turf managers with a solid base to help them establish such techniques at their facility.

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pologies in advance to those of you who still need rainfall, but from a Queensland point of view, particularly the coastal areas, we have had enough! I might be just over the border (Coolangatta & Tweed Heads Golf Club) into NSW, but my monthly rainfall figures since last November read:

- Nov 08 534mm;
- Dec 08 149mm:
- Jan 09 255mm;
- Feb 09 298mm;
- Mar 09 201mm;
- April 09 328mm; and
- May 09 320mm.

That is a total of 2085mm (or 83 inches) in seven months! The story is the same in many other areas along the coast and with the cyclonic winds in late May which ripped out 150 trees off my course alone I am sure you get the picture. Funnily enough it hasn't stopped the golfers with the course nearly always playable and full. Out of interest, the average yearly rainfall at Tweed is around 1650mm (66 inches).

Other courses have also suffered with many inundated on several occasions. Spare a thought for Keith Johnson at Keperra Country Golf Club in Brisbane who had almost got back on his feet from last year's hammering when the course was severely damaged once again with paths and bunkers literally washed away. I have mentioned before the great resilience that supers and their staff have when responding to such catastrophes, but enough is enough!

The 4th David Golf & Engineering (DGE) State of Origin final was played at Thirteenth Beach Golf Club at Barwon Heads in May following the Queensland qualifying day at Indooroopilly Golf Club, which from all reports was in perfect condition. The four Maroon qualifiers were Kody Louis (Nambour GC), Jai Rochfort (Northlakes GC), Peter Ridgeway (Oxley GC) and Richard Flesser (Lakelands Golf Club).

The boys enjoyed the experience and played reasonably well with Kody scoring 37 points, Jai 35 points and Richard and Peter 31 points each. The morning after the final DGE arranged a tour of the MCG, which obviously impressed them, and then topped it off with a visit to DGE HQ to view their operations. Congratulations to DGE for looking after the often unsung heroes of our course maintenance operations with a terrific event.

A full field of 35 teams from as far as Bonville to the south, Bundaberg to the north and Toowoomba to the west made the journey to Royal Queensland for the John Deere Teams Event. There was a great mix of clubs and a very enjoyable day was had on a surprisingly dry course that was expertly presented by Danny Brown and his crew, especially considering the 10 inches of rain the week before!

The Royal Pines Resort team comprising superintendent Paul McLean, golf operations manager Paul Sanders and membership coordinator Janine Barney ran out winners on the day, with the Headland Golf Club team of assistant superintendent Brad Beetson, secretary manager Ben Dobson and club president John Ruscoe finishing second.

Both teams will now do battle in the trans-Tasman final to be played at the Paradise Palms Golf Club from 26-29 August. I dare say the weather will be a bit warmer than last year's event across The Ditch!

The Globe Australia Educational Training and Field Day was held at Peregian Springs Golf Club in late May, hosted by superintendent Warren Green. The Sunshine Coast boys have received a lot of rain this year as well and it continued during the day but it didn't stop an excellent attendance.

Jyri Kaapro gave a presentation on the pre-launch of Dedicate, which is Bayer's new fungicide for control of the potentially devastating disease complex ERI. Bayer has been doing a lot of trial work with Dedicate on southeast Queensland courses and has had very good results on ERI, among other diseases. Bayer is looking to release Dedicate in July.

Barmac Industries' prize recruit Paul Jackson informed us on some new management tools that will soon be available for nutrient management. Peter Kirby from Nufarm passed on some herbicide mixes that have been successful on weeds and Matthew Holmes from Syngenta explained the application rates for the new liquid Monument.

Due to the inclement weather Stan Wells couldn't demonstrate his lethal weapon 'Earthquake', a new hard ground aeration machine, however, he was able to show other attachments useful for the relief of ground compaction. Once again we had a very successful day and I would like to thank Globe as well as all those who attended.

PETER LONERGAN PRESIDENT, GCSAQ

SAGCSA

hanks go to Paul Cameron and the crew at Willunga Golf Club for hosting our autumn members meeting which had the theme 'water and environment'. The course was in great condition and the day was relaxed and informative culminating with a BBQ lunch.

Guest speakers included Cameron Baldock (SA Water) and John Geary (AGCSA). John bravely battled through a few technical hitches and gave a very informative presentation on the AGCSA's environmental and water initiatives while Cameron explained current water restrictions and the methodology used to issue exemption permits.

With the colder months upon us it is nice to be able to report some decent rainfall

in Adelaide. March through to the end of May saw 152mm fall on the CBD with many locations about the hills receiving much more. This is 29mm up on long-term averages for this period and Adelaide is green once more! Year to date rainfall is 154mm which is 4mm below long term averages. Hopefully the rains continue and clubs reliant on stormwater capture get their dams full.

Congratulations to Ivan Swinstead and his crew on the condition of Tea Tree Gully Golf Club which recently played host to the Globe/Toro Cup (industry golf day). The course was in near faultless condition and it was enjoyed by a large field of perhaps some of the worst golfers ever assembled.

Best of the worst on the day were Ivan Swinstead, who used his local knowledge beautifully to win the Toro Superintendent's Trophy, and the team of Matt Hobbs, Gary Reynolds, Rob Miller and Jeff Gillies from Mt Osmond Golf Club who won the Globe Cup.

I would like to welcome our newest sponsorship partner Glenelg Turf Ace (David Rogers). Those who were at Willunga met David who gave an overview of his business. I would also like to thank all of our sponsorship partners who contribute to our association year in year out.

ANDREW BLACKER PRESIDENT, SAGCSA

GCSAWA 📀

ain, rain... where is it? Uncommon for us in the west with only 70mm since 1 January which is well below the 250mm year to date average. It is time to adapt and get water smart and be hopeful for a wetter than normal winter.

The GCSAWA committee is more than happy with the 2009 Margaret River Conference held in early May with 29 superintendents and assistants representing 22 golf clubs. The start of the conference went well with a team building event at Xanadu winery a hit. The happy hour to follow, as well as a few more, had some feeling the effects (not mentioning any names, except they may be from the AGCSA) and for those who could handle the big day the poker night was great entertainment and for others a charitable donation.

The Monday seminars went really well with some entertaining talks from superintendents, assistants and apprentices as well as the AGCSA's Andrew Peart and Richard Chamberlain from Ross Watson Golf Design. Of special interest were the presentations from Adam Strachan and Chris Langford about their Ohio State Program internship experiences.



The golf at Margaret River Golf Club was fantastic as we were greeted with our warmish than normal autumn and fine weather. Jeff Lane, who journeyed all the way from Paradise Palms in Cairns for the conference, won the stroke event and John Mansfield again won the stableford event.

The networking, practical jokes (note Callum Hitching's fine work on Des Russell's ute pictured above) and the way everyone gets on is unique to WA and only adds to the camaraderie associated with the west.

It was very rewarding to see the committee's hard work being supported by both trade and supers with nothing other than positive feedback given on the event which allows us to move ahead with planning for the next gathering in two years' time. A special thank you must go out our events coordinator Glenn Cross for organising the conference and events.

Good luck to our WA nominees in the upcoming 2009 AGCSA Awards - Graduate of the Year finalist Daniel Zoccoli (Mt Lawley) and Excellence in Golf Course Management Award finalist Craig New (Lakelands Golf Club). I'm sure both will acquit themselves well on the national stage.

WorkSafe are active again with regular work orders being given out. Don't be too alarmed as the work orders are only minor. Treat the visits as a free safety audit and quickly rectify the faults. A list has been circulated via email which should give you a head start. If you have been audited please email through the faults so it can be then passed on to other superintendents.

The GCSAWA committee looks forward to catching up with all members in Tasmania for the Australian Turfgrass Conference and at various functions throughout the year. We have again secured The Vines Resort for our AGM which will be held on 4 August so make sure you come along.

DARREN WILSON PRESIDENT. GCSAWA

TGCSA®

he TGCSA would like to welcome all interstate colleagues and partners who will be attending the 25th Australian Turfgrass Conference and Trade Exhibition. We hope you all have a great week in Hobart, enjoy the invigorating fresh air and trust you don't freeze!

Consistent rain fell for our winter meeting at Riverside Golf Club on 3 June. The theme of the day was renovation and Dave Westall from Scotts gave an interesting presentation on soil sampling and how to interpret soil analysis reports. He also told us about some new products about to hit the market.

Riverside superintendent Tom Crawford then showed attendees how he had gone about oversowing the 15th fairway. He demonstrated the process he followed, from spraying out the existing grass through to germination of the current ryegrass/fescue surface. He also demonstrated the Toro Rake-O-Vac and how the machine scarifies and vacuums in one pass. We all enjoyed a hearty lunch with hot pies and sandwiches which was to build everyone's energy up for nine holes of golf in the afternoon. Unfortunately, the weather got worse and nobody was game to battle the conditions.

After the national conference, the TGCSA AGM will be held at Barnbougle Dunes on 4-5 August. We have been fortunate enough to be allowed to view the final stages of construction of the new Lost Farm course. This will be a great chance to examine construction techniques on one of Australia's best designed courses.

The meeting will begin with a game of golf on the original course on Tuesday for the Reg Roberts Trophy. The AGM will be held prior to dinner in the clubhouse that evening. The next morning will start with breakfast and then a tour of the new course with superintendent Phil Hill. To avoid disappointment please mark this date in your diaries and book in as soon as you receive the invitation. Numbers will be limited. The invitation will give all the relevant details.

The AGM will bring to an end Barrie Brtevniks' position as TGCSA treasurer. Barrie has held this position for the past four years and the board would like to thank him for the time he has put in balancing the books and making sure everything runs smoothly.

STEPHEN LEWIS PRESIDENT, TGCSA.

STA NSW STACKET

t was great to be involved in the first meeting of STA Queensland on 28 May in Brisbane. The day went really well and I have no doubt that the Queensland group will be very successful in providing a great association.

In NSW we are preparing for our annual Regional Seminar at Kurri Kurri TAFE on 18 August. The day will include discussions on the new water management system at the TAFE, including the new washdown bay.

Other topics on the day will include a presentation by Adam Ayre of Muswellbrook Racetrack about the Steriline Racing and Australian Racecourse Managers Scholarship and his experiences in Hong Kong. There will also be discussions on irrigation water suitability, recycling topsoil as well as other up-to-date industry product discussions.

This seminar will include a variety of machinery demonstrations on the oval at the TAFE as well as a fertiliser trial plot. For all the details on this seminar please check out our website www.sportsturf.asn.au

GRAEME LOGAN PRESIDENT, STA NSW

NSWGCSA •

recently had the opportunity to visit the bushfire-affected areas of Whittlesea, Kinglake and Marysville. I was totally amazed at the devastation that occurred to these areas over those fateful days in February which has now unfortunately become a part of our great country's history.

The reason for the visit was to fulfil a NSWGCSA commitment to make a donation to those affected. It is a pleasure that I can announce that a joint donation by the NSWGCSA (\$2000) and the NSW Turf Equipment Technician's Association (\$1000) has been made to two individuals and members of our industry who were affected more than most by the terrible events of Black Saturday.

Young Marysville Community Golf and Bowls Club apprentice Kellan Fiske tragically lost his mother and brother along with his family home in the firestorm, while Whittlesea Golf Club apprentice Daniel Shaw lost all his possessions after the house he was living in was destroyed.

The donated funds were divided evenly between both Kellan and Daniel to assist



them in their rebuilding process. It was great to surprise both gentlemen with the visit and present them with the donation. I would like to congratulate everyone within our industry who has helped out either by volunteering their time or donating products and equipment to help these guys and their clubs rebuild.

Elsewhere, the NSWGCSA board has been fairly active through the last few months with planning of events and improving the image of our association within the community. Our last meeting was at Carnarvon Golf Club on 11 May where a decision was made to commit to some regular advertising in the national edition of Pacific Golfer.

We feel that this will give us, as an association and industry, the opportunity to have some articles relating to events and good news stories from within our industry in promoting both the great work that we are all doing and the club-employed golf course superintendent.

The lovely Monash Country Club played host to our Rube Walkerden Trophy day on the 23 April. Congratulations to our winners of the day, especially Scott Hinwood (Bayview GC) for taking out the Rube Walkerden Trophy. Numbers were down slightly which was unfortunate, but big thanks go to our sponsors Bayer Crop Science, Dad & Dave's Turf Supplies, Maxwell & Kemp and Paton Fertilizers. Your ongoing support of the NSWGCSA is greatly appreciated. A highlight of the evening was the presentation of a \$5000 donation to the Cancer Council and special guest, Manly great and former Australian rugby league captain Max Krilich.

At the time of writing our next event is the Annual Ambrose Event at The Vintage GC on 15 June (more on that in the next edition) and our AGM will be held at Pennant Hills GC on 25 August. Our Education Day will be a combined event with the AGCSA's Spring Workshop on 10 September. Look forward to seeing you all in Tassie. Take your thermals!

CRAIG WRIGHT PRESIDENT, NSWGCSA

STA QLD

e are off like a cane toad in a sock! Thursday 28 May saw Sports Turf Association (STA) - QLD take the next step to becoming a formal entity. STA is proudly associated with the Turf Grass Association of Australia (TGAA). Over 50 turf professionals attended the first (informal) meeting held at the Queensland Department of Employment, Economic Development and Innovation (DEEDI) Redlands Research Station.

The day kicked off with an afternoon BBQ provided by Nuturf. A generous feast was exactly what was required to get chins wagging in more ways than one. Some of the industry personnel that attended on the day would have only had the opportunity to meet and greet some of the other industry members for the first time. Thanks must be given to Andrew Kolbee for cooking up a storm on what turned out to be a warm autumn day.

Attendees heard presentations from Graeme Logan, president of STA NSW, on their activities and how the association operates in conjunction with other TGAA states and territories. This provided the Queenslanders with an excellent opportunity to hear how the southerners operate and ask questions.

The model presented by Graeme is likely to be similar to the one Queensland uses to undertake its activities.

A presentation was made by Keith McAuliffe, chief executive of the Sports Turf Institute (Aust.) on its business activities and progress on the Horticulture Australia funded Best Use Modelling for Sustainable Sports Field Surfaces project with collaborators DEEDI and Parks and Leisure Australia (PLA).

DEEDI senior scientist Matt Roche provided attendees with an update of the turf team's research activities and recent changes in staffing. Attendees were also shown the turf demonstration plots containing a living library of 138 different warm-season turfgrass cultivars which is one of the highlights of the 66 hectare research facility.

Advice was also given by Peter Semos, one of the founding members of TGAA Victoria, and Bob Cray, former president of the disbanded Gold Coast Groundstaff Association. Their opinions and questions were critical in further motivating attendees to progress with the development of STA QLD.

Attendees were provided with a membership application form so the committee could organise numbers, mailout lists and seek

volunteers interested in becoming involved in the STA QLD steering committee.

It was decided that a steering committee be immediately formed to assist with the development and organisation of the Queensland branch. Following this, a formal committee will be established to run the association.

STA QLD would like to thank Graeme Logan and Jenny Zadro from STA NSW and Sue Bailey from TGAA VIC for their commitment and assistance in developing STA QLD, working together to provide knowledge, resources, ongoing education and networking opportunities and support for the turf industry.

The association would also like to thank the wider turf industry, including the many companies who have already expressed an interest in financially assisting or supporting STA QLD activities.

For further information on STA QLD please contact either Malcolm Caddies (mcaddies@ suncorpstadium.com.au) or Matt Roche (Matt. Roche@dpi.qld.gov.au) by email or view the STA (www.sportsturf.asn.au) or TGAA websites (www.tgaa.asn.au).

STA QLD COMMITTEE

TGAA ACT

ith winter now upon us we are finally seeing some much needed rain around the region. In the first week of June we have already recorded more rainfall than the entire month of May! This rain will hopefully spark a green up of the ACT and surrounding areas and give our dam levels a much-needed boost.

The annual TGAA Golf Day has come and gone for another year and as was the case last year a cold and windy day ensured punters had a not so enjoyable round of golf. The day was well supported with 85 members hitting the Gold Creek Country Club course, boasting the usual broad range of golfers from onceayear hackers to your win-at-all-costs diehards. Winners were:

Net: Mathew Wathen, Mick Nash and Gary Roberson (66 OCB)

Scratch: Gary Urquhart, Glen Lloyd and Keith Lewis (62)

There were a number of highlights in the longest drive and nearest the pin competitions but none greater than a spectacular hole-in-one by Dale Blayden on the 5th. Congratulations to all winners, sponsors and course superintendent Scott Harris on another successful event.

Speakers for the TGAA seminar have been confirmed and the 'Diversity in Turf Management' theme will cover a range of issues by some very accomplished industry professionals. Speakers and topics include:

- Terry Muir Turfgrass in our urban environment;
- Tony Ware Cricket wicket preparation;
- Ernie Gmehling and Keith McIntyre -Choosing the correct cricket wicket soil;
- Dr Percy Wong New disease in couch sports turf;
- Phillip Ford Early nutrition while establishing couch;
- Dr Greg Moore Tree root control in sports turf; and
- Peter McCarthy Bird control for sportsturf and mosquito control.

The pre-seminar workshop to be held on Tuesday 28 July at CIT Horticultural Campus in Weston Creek will include a practical irrigation workshop to be presented by Austin Goodfellow and a disease identification workshop by Dr Percy Wong. The irrigation workshop will cover topics such as sprinkler replacement, wiring diagnostics and pipe repair and replacement. See you there.

BROCK WESTON COMMITTEE, TGAA ACT

VGCSA 🝮

irst, I would like to take this opportunity to thank all the members of the association for allowing me to step into the position of president. It is certainly an interesting and quite challenging time for all involved in the golf community. The drought seems to just keep continuing and now the financial crisis throughout the world has placed more pressure on superintendents to achieve high standards and expectations with limited resources.

The VGCSA Annual General Meeting was held on the sandbelt at Yarra Yarra Golf Club in late May. The weather could not have been better as 72 members hit off at 7.45am for the chance to win the Toro Cup, Powell Trophy and the Presidents Shield. Credit goes to superintendent Paul Holmes on the condition of the golf course, especially the quality and speed of the greens. Congratulations to Steve Hewitt on winning the Powell Trophy, Matt McLeod on winning the Toro Cup and Michael Grant on taking home the Presidents Shield.

After golf we moved into the newly rebuilt clubhouse for a wonderful meal. Grant Thomas, former St. Kilda coach, was guest speaker and spoke about communication. He gave the listening audience an insight into what he has done over the years and how sometimes it worked and other times blew up in his face. After lunch the AGM was conducted and election of the new committee:

President: Brett Chivers (Keysborough GC)
Vice-president: Trevor U'ren (Devilbend GC)
Secretary: Jeremy Cutajar (Ringwood and
Dorset GCs)

Treasurer: Nathan Bennett (The Sands, Torquay)

Committee: Colin Morrison (Flinders GC), Steve Hewitt (Thirteenth Beach), Matt McLeod (Tocumwal GC), Mark Jennings (Box Hill GC)

On the day Peter Frewin, former VGCSA and AGCSA president, was bestowed life membership of the VGCSA. Peter is one of only a small number of superintendents to be given life membership and it is a credit to his commitment to this industry over many years. Congratulations Peter.

It would be remiss of me not to thank the outgoing members of the committee – Michael Freeman, Peter Jans and Colin Foster. After the past two years as president, Michael decided that it was time to step down and I must commend him on his commitment over the years he has been on committee.

Michael came on committee after he thought that if he was going to complain about something, the only way to change it was to step up, have a say and do something about

it. Michael has certainly stayed true to that motto and has been a driving force behind the committee during his time.

Peter Jans has served on committee for a number of years including the past two years as treasurer. Peter was able to negotiate some very good bank opportunities and invested and managed the associations' money wisely. It can't be forgotten that during Peter's time on committee his golf course work load increased to where he is now responsible for two different golf complexes and overseeing construction of a third course.

Colin Foster has only served on the committee for a short period of time but due to factors out of his control had to step down from the committee reluctantly. Colin was responsible for membership and golf and was an active member of the committee. I wish Colin all the best for the future.

Now to the new members of committee. With the abovementioned stepping down the new committee members are Mark Jennings, Matt McLeod and Steve Hewitt. I look forward to the new faces on the committee which will give a fresh look and approach to the running of the association.

It has now been five months since the disastrous Black Saturday bushfires and golf clubs like Horsham and Marysville are slowly returning to normal. Marysville opened nine holes a couple of weeks ago and hopefully will have the other nine open once the bridges are rebuilt over the river. A big thanks must go out to all the golf clubs, companies, organisations and members who offered support and products after the fires.

Congratulations to Nathan Bennett for organising the working bee at Horsham Golf Club. Superintendent Tim Warren has expressed his gratitude to all involved and all who offered support and products to the club. The AGCSA and Trevor U'ren must also be congratulated for the work and organisation at Marysville. This golf club was severely damaged by the fires and it has taken a considerable amount of manpower and materials to get the club operational again.

On Monday 24 August VGCSA life member Colin Winterton will host our education meeting at Medway Golf Club. The day will include an informal panel discussion with all VGCSA life members. It will certainly be interesting listening to some legends of the industry talk so I encourage all members to attend.

BRETT CHIVERS PRESIDENT, VGCSA

One great result







no matter what challenges they face.





(CLOWARA



"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.

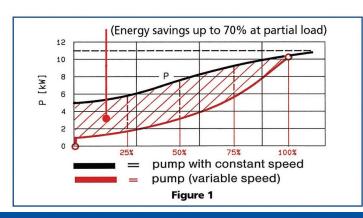
The Settlers Run pump installation incorporates 4 variable speed Hydrovars which are uniquely linked to Toro Irrigations' Sitepro software which delivers to the Superintendent precise information on the performance of the total pumping system, which is absolutely critical to the grow-in phase.

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 Zealands 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



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