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Turfgrass



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MANAGEMENT JOURNAL

2011 Open Championship

Royal St George's flies the flag

Baja beauty

Mexico's El Dorado
Golf and Beach Club

2011 AGCSA and Sports Turf Awards

Frank Dempsey, Phil Ford, Colin Morrison, Troy MacLaren,
Tim Fankhauser, Dan Oswin and Rebecca Dynon

Metricon measures up

Gold Coast Suns' home turf shines



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COVER:

Metricon Stadium: Metricon Stadium, the new home turf of the AFL's newest club Gold Coast, was officially christened on 28 May 2011 when the Suns entertained Geelong in front of a sell-out crowd. **Photo:** Brett Robinson



COVER STORY: Metricon measures up

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On 28 May 2011 the Gold Coast Suns ran out onto Metricon Stadium for the first time in their debut AFL season. The new 25,000 seat arena is a far cry from the old Carrara Stadium complex and as well as being the AFL's newest facility it has been designed to host a range of other sports and events and is the principal venue in the Gold Coast's bid to host the 2018 Commonwealth Games. Gold Coast Suns horticulture and operations manager Nick Jeffrey looks at the development of the stadium and management of the arena surface.

FEATURES

The Royal treatment

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The 2011 Open Championship recently headed back to Royal St George's in Kent, the fourteenth occasion it has hosted the prestigious major. Steve Symmons was fortunate to visit the course late last year to get an insight into what it takes to prepare the course for such an event.

Peninsula paradise

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Originally hailing from Toowoomba, Darren Flanagan's career in turf management has literally taken him around Australia and the world. Since 2008 Flanagan has been in charge of operations at El Dorado Golf and Beach Club at the southernmost tip of Mexico's Baja Peninsula. Flanagan provides an insight into the unique management requirements of this Jack Nicklaus signature course which forms part of an exclusive resort.



In a class of their own

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Two of Australia's leading turf management educators were bestowed the AGCSA's highest accolade at the recent Adelaide conference. ATM editor Brett Robinson interviews joint 2011 AGCSA Distinguished Service Award winners Frank Dempsey and Phil Ford and looks at some of the challenges facing the delivery of turf management education in Australia.



Adelaide 2011 – The week that was

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From the start to the end of the week, the 27th Australian Turfgrass Conference and Trade Exhibition had its fair share of drama, intrigue and innovation. ATM provides a comprehensive wrap of the Adelaide gathering and profiles this year's 2011 AGCSA Award winners.

OPINION

Punching holes... and other things

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The Pulse asks superintendents whether they are feeling the pressure more than ever to reduce the number of greens renovations.



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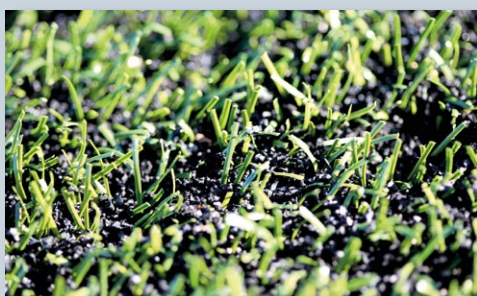
With a combination of unrealistic hours of use, dormant grasses and wet weather, managing wear on winter sportsfields is potentially one of the most challenging tasks in turf management. John Neylan looks at strategies for preparing and managing wear on winter sports surfaces to help reduce those curator stress levels.

RESEARCH

Artificial turf literature review

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University of NSW researcher Dr Gavin Edwards summarises the main findings from a Horticulture Australia Limited funded project which examines peer-reviewed literature on the development, use and issues surrounding artificial turf playing surfaces.



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Contributors to Australian Turfgrass Management Journal Volume 13.4 (July-August 2011)

Nathan Ball (Springwood CC); Ben Baumann (The Glades GC); Brad Beeton (Headland GC); Tim Bilston (Heidelberg GC); Martyn Black (Castle Hill CC); Grant Bunting (NZGCSA); Chris Chapman (STA NSW); Frank Dempsey (NSI Ryde College); Dr Gavin Edwards (University of NSW); Darren Flanagan (El Dorado Golf & Beach Club); Tony Fogarty (Club Catalina CC); Phil Ford (University of Ballarat); Tim Gall (Club Pelican); John Geary (AGCSATech); Getty Images; Mal Grundy (Murray Bridge GC); Danny Hack (Bairnsdale GC); Mark Haufl (The Colonial GC); Steven Hewitt (VGCSA); Glenn Huender (TGAA ACT); Richard James (The Grange GC); Nick Jeffrey (Mettricon Stadium/Gold Coast Suns); Peter Loneragan (GCSAQ); Nick Launer (Murray Downs G&CC); Rob Millington (The Vines GC of Reynella); Craig Molloy (NSWGCSA); John Neylan (AGCSA); Sam Sherriff (SAGCSA); Peter Smith (Tewantin Noosa GC); (Tony Smith (TGCSA); Simone Staples (AGCSA); Peter Svenne (Eastlake GC); Steve Symmons; Nathan Tovey (TGAA VIC); Brad Tucker (Whittlesea GC)

The end of an era

I've been fortunate throughout my career as a hack to work with and for some influential bosses and upon reflection two stand out, albeit for very contrasting reasons.

The first was editor for a local Auckland suburban newspaper of which I was the sports editor of back in the late 1990s. A frustrated rugby nut who fervently supported a rival team (Waikato) in foreign territory (Auckland) – think supporting Carlton while living in the heartland of Collingwood – he would regularly bubble and froth at the mouth and slam his fists on the boardroom table if your articles didn't live up to expectations or, as mine often were at that fledgling stage, just plain rubbish.

As sole sports writer I was frequently the target of his relentless tirades, especially during rugby season where if there wasn't at least one rugby-related article a week on the front page he would start to question my manliness. Combined with a rapier-sharp wit and the work ethic of a man who had grown up in the rural backblocks, he inspired you to write for his newspaper and to constantly think outside the square when writing.

He was a master storyteller too – he would give Martyn Black a run for his money – and would regale us for hours with tales of when he was a hapless cadet reporter. The most memorable fable came after he had been reporting on a function and turned up for work the following morning still three sheets to the wind. He proceeded to strip off and lie completely naked on the freezing tile floor in the office bathroom in a desperate bid to sober up before deadline. Problem was he fell asleep and was subsequently discovered by the editor!

Now, the other boss I make mention of, sadly, hasn't reached such heights (or not that he's willing to divulge anyway) but has had an equally profound effect. I refer of course to John Neylan who as I am sure you will all know by now tendered his resignation as general manager of the AGCSA, effective from the end of July.

For someone who only had a skerrick of knowledge about the technical side of the turf maintenance game when I started as ATM editor in 2003, I naturally gravitated towards John whose status among the turf management community was quite clearly unrivalled. To have a man of the integrity, knowledge and providence of John to work alongside has certainly made me better in what I do and I'm sure many of those who have had dealings with John over the years, whether during his time with the AGCSA or in his many capacities prior, would be in agreement. Certainly the sheer volume of correspondence he and the AGCSA office received following his announcement is a testament to the calibre of the man.

As John comments in his final Foreword Thinking column, he was put on the spot by outgoing AGCSA Board member Pat Pauli during the performance assessment session at the Adelaide conference. Pat put it to John that the AGCSA ship seemed to be expertly steered and inquired as to what measures John had put in place to achieve this.

With his GM hat firmly on, John proceeded to rattle off a number of salient arguments, but in doing so he modestly neglected to mention one crucial and overriding point. The principal reason why we have such a good team at the AGCSA is that the boss is, quite simply, a top bloke. Putting aside the vast years of knowledge and experience, first and foremost John is a true gentleman who we have all enjoyed working with and have the utmost respect for.

So as we consign another edition to the annals, the 'scribbler' salutes you John. I'm sure I can speak on behalf of the AGCSA staff and readers of this publication, to which you have contributed to so willingly and unstintingly over the years, you will be sorely missed and we wish you the very best in your future endeavours. Enjoy the read, mate.



Brett Robinson
Editor



The board and staff of the AGCSA would like to thank everyone who made it to the **27th Australian Turfgrass Conference and Trade Exhibition**. The continued support from the turfgrass industry for this annual event is very much appreciated and has contributed greatly to its ongoing success.

We look forward to seeing everyone in **Melbourne** next year.

THANK YOU

The Australian Turfgrass Management Journal

An extremely difficult decision, but an easy one too



By now many of you would have heard that I have resigned as general manager of the AGCSA and this will therefore be my last Foreword Thinking. While it is only about 800 words, it has always been a challenging exercise to think through what has been happening in the industry and how it is affecting members. On this occasion it is different for many reasons albeit that it is my last chance to pontificate on a particular issue.

The AGCSA is a great organisation and the strength of the association is first and foremost the members, the board directors that represent you and the staff. In my 11 years the association has grown in stature and has always fought well above its weight. Over the past five years in particular the AGCSA has been well recognised by the other major golfing bodies as an organisation that contributes strongly to the golf industry. It has been the leader in initiating research and driven the causes of environmental management, water management, education and most recently workplace safety.

The fact that members and trade representatives jumped in their cars and drove across to Adelaide, and for some it was for less than two days, reinforces the strength of an organisation that brings people together with a common interest. This is our strength. This fact also reflects the very early belief that a national association like ours should be fraternal. Only other superintendents/greenkeepers can understand the daily challenges of producing a golf course.

The various boards that I have worked with over the years have been extraordinarily supportive, in particular the board members that first showed faith in me to establish AGCSATech (Peter Frewin, Mark Couchman, Jeff Gambin and Peter Schumacher) and those that encouraged me to take on the position as general manager back in 2009.

In most recent times it has been Allan Devlin, Jeff Gambin, John Odell, Bryce Strachan and Pat Pauli who have provided the foresight and direction for the AGCSA and kept me focused. I must also

“It is a good time for me to move on knowing that the AGCSA is in a strong position and is able to continue to invest in member services.” John Neylan

At times it has been a bit frustrating that we have not always been able to get our way, however, that is life and every organisation has a set of priorities of most concern to them. What it has done though is to establish a confidence that the AGCSA can play a very active role in the future of the golf industry.

The AGCSA is very much about its members, the board and the people that work in the organisation. This was brought home very strongly at the recent 27th Australian Turfgrass Conference and Trade Exhibition in Adelaide where the show was always going to go on despite the disruptions to air travel.

thank inaugural chief executive Euan Laird for all his support and the incredible ground work he did in getting the AGCSA up and going.

The AGCSA staff are individually and collectively the best group of people that you could work with. The inimitable Pat Pauli, who always thinks outside the box, asked the question of me during the performance panel discussion during the final conference session in Adelaide - “Your staff are pretty motivated, what do you do to keep them motivated?” It was food for thought, even though it was on the spot.



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My reply at that time, and having had the chance to think about it further, was that the staff at the AGCSA have autonomy in what they do and therefore responsibility for their job. They take enormous pride in what they do. There is minimal interference, support when they need it, an annual performance and salary review, a salary structure that is somewhere close to what they could get elsewhere and opportunities for further training through conferences, workshops and study tours. They are also an incredibly loyal lot.

I have always reviewed and been very critical of my own performance over the years and ultimately I had come to the conclusion in recent times that I could no longer do the job of general manager to the level that was required. It was a very difficult decision on the one hand but also a very easy one. It was difficult because of the great relationship I have with the staff, the board and the members, but it was easy when I came to grips with the fact that I needed to start thinking outside the job more and looking after myself better.

It is a good time for me to move on knowing that the AGCSA is in a strong position and is able to continue to invest in member services. If the organisation is to continue to progress there will always be many new challenges on the horizon and the organisation must always be looking to meet these head on.

I sincerely thank everyone who has supported me during my time with the AGCSA and to all those who have made contact with me since the announcement was made on 1 July. By no means will this signal the end of my involvement in the industry and although there is nothing concrete yet I am hoping to embark on some consultancy and research work as well as continue my role as a lecturer in turf management. I will also be assisting AGCSATech when needed so I am sure that we will cross paths from time to time. 🌱



John Neylan made the shock announcement that he will be stepping down as AGCSA general manager, effective from 29 July



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On 28 May 2011 the Gold Coast Suns ran out onto their home ground Metricon Stadium for the first time in their debut AFL season. The new 25,000 seat arena is a far cry from the old Carrara complex which was once home to the Brisbane Bears, and contains a host of design innovations as well as a USGA-spec playing surface equipped to meet the modern demands of AFL football. Gold Coast Suns horticulture and operations manager Nick Jeffrey tracks the reconstruction and rise of the AFL's newest facility.



During 2009, the decision by the AFL to grant a licence to a club based on the Gold Coast allowed for the reconstruction of the old and tired Carrara sports complex into what is now the AFL's finest boutique stadium in the country. The state-of-the-art \$144 million Metricon Stadium is home to the Gold Coast Suns and is a Stadiums Queensland facility that is leased to the AFL under a managing agreement with Gold Coast Suns Ltd.

The stadium was officially opened on 22 May 2011 by Queensland Premier Anna Bligh in front of thousands of local fans. As well as being home turf for the AFL's newest club, Metricon Stadium is also designed to be suitable to host cricket matches, concerts and festivals, and should the Gold Coast be successful in its bid to host the 2018 Commonwealth Games it will become the principal venue for the sporting festival.

Designed by Populous and constructed by managing contractor Watpac, Metricon Stadium has several innovative aspects included in its construction. The 25,000 seat arena boasts a solar halo unseen within Australian sporting facilities, water catchment through a unique plumbing system from the canvas roof, water storage of nearly 700,000 litres and a brand new USGA-spec playing surface. The design of the stadium also takes full advantage of the magnificent weather enjoyed on the Gold Coast, with large open air areas for spectators to mix in and enjoy the event on the field.

The solar halo surrounding the inner five metres of the stadium roof allows the capture of sunlight to generate 20 per cent of the stadium's energy requirements. This energy is stored in numerous inverters with any excess energy being added back into the local grid.

The capture and storage of water is completed through a syphonic plumbing system off the roof. Once the wells that are contained within the design of the roof are full, the movement of water off the roof and down into the tanks is quicker than gravity can draw water down. The water movement speed is due to a complex sizing and placement design of HDPE pipe to extricate water down the pipe and to minimise run off and to maximise collection.

The storage capacity of 675,000 litres is beneficial in an area continually on water restrictions through the early 2000s. Water is reused within the toilets, urinals and the washing down of seats.

The function rooms within the main grandstand along the western wing also have some unique touches within their design. Among these is the bar which is in the shape and colour of a Sherrin football, while the Coaches Field Club, located directly behind the home team interchange bench, gives unprecedented access to the players. The room has a basement accessed through a lift that takes you directly down to the players' warm-up area where the spectator can watch the warm-up from behind a one-way mirror.



PHOTOS: BRETT ROBINSON

TURF PROFILE

The natural turf playing surface measures 171m x 144m fence-to-fence with the field running north-south. The field also includes a 40m long x 3m wide synthetic grass strip running between the two interchange benches on the western side of the field. This area has higher than normal pedestrian traffic due to the rotation of players, match management officials and some minor shade issues caused by the main grandstand.

The shape of the field is a slight turtleback with the centre being the highest point. The gradient of the field is then 1:120 north-south changing to 1:125 running east-west. The subsurface is a mirror image of the turf surface to allow the drainage system to work to its full potential.

The growing medium is made up of a 300mm rootzone sand layer with the top 125mm blended with a new organic based amendment called Sanoplant. It is hoped that Sanoplant will help reduce water requirements by up to 50 per cent while also holding nutrient within the sand layer for longer periods than other amendments to enable the use by the turf prior to leaching.

The profile also includes a 100mm gravel blanket to enable a perched water table to be created. Below this sits the herringbone pattern drainage system that removes water from the playing surface at a rate of up to 800mm per hour. The automatic pop up irrigation system sits within this area also.

The Mettricon Stadium profile is a loose sand profile with no reinforcement at all. The stability of the surface relies on the solid, deep rootzone that will be established through the maturing of the turf, a consistent aeration programme to reduce compaction initially from construction machinery and a nutrient programme that includes light but frequent usage of chemical and organic based fertilisers.

The turf consists of Greenlees Park couchgrass with an oversow through the winter months of a perennial ryegrass blend to improve the colour of the couch when dormant (PGG Wrightson's Sports Oval is used which contains a mix of Arena 1, Colosseum and Tambour ryes at a rate of 3kg/100m²). Greenlees Park was chosen due to its high vigour, rapid recovery from wear, minimal water and nutrient requirements and good colour retention through winter. Ryegrass also transitions in and out of Greenlees Park extremely well.

The construction of the growing surface was under the management of Joe McCullough from Strathayr. Along with Morris Terzio and staff, the construction was consistently delayed through inclement weather and then the mandatory drying out period. The main field was held up through the subsurface construction and compaction phase, however, once the drainage system and 100mm drainage layer were imported and installed, construction went smoothly.

The facility also has a 160m x 120m training field alongside the main stadium. The construction of this field was significantly held up by the rain and drying out phases. The soil for this field was sourced from the previous main field that had been in place for over 25 years when the Brisbane Bears were initially established on the Gold Coast.

The field was stripped with every component still within the soil. The turf layer had been removed and sold off, however, most of the sprinklers, all the PVC pipe, hydraulic hose and poor soil was dumped in two large storage piles to be screened and used as the growing medium for the training field. Approximately 1000m³ of imported sand and amendments were blended in to improve the soil.

For the Gold Coast Suns to have access to a training field of this calibre alongside their main field is a great asset to the club. To be able to take some of the usage load off the main stadium turf is also of great benefit to the presentation of Mettricon Stadium.

The turf for both fields was supplied by Twin View Turf as washed maxi-rolls. During the construction of the training field through December 2010-January 2011, at times the turf farm was inundated with rain and was unable to cut turf. In the time it took for the farm to dry out, the construction site had received too much rain and was unable to be accessed.

Finally, all the turf was laid and the training field was finished. When the main field was ready to be turfed, the weather had turned hot and the turf had

The 25,000 seat Mettricon Stadium was officially christened on 28 May when the Gold Coast Suns hosted Geelong in round 10 of the 2011 AFL season. Mettricon boasts a number of unique design elements as well as a brand new USGA-spec playing surface

The main Mettricon Stadium arena and adjacent training facility is managed by horticulture and operations manager Nick Jeffrey (pictured) and assistant Tim Murphy



The capture of rainwater is completed through a unique syphonic plumbing system off the roof (right) with water storage tanks providing a capacity of 675,000 litres (far right)

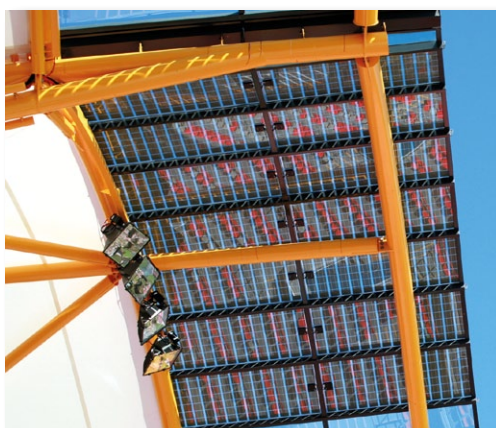


to be cut and washed at the farm, transported to site and laid all on the same day to minimise hot spots forming. Due to the hot and humid weather, good irrigation application and good soil amendments, the field was stable enough to start mowing after 10 days and aerating to reduce compaction from construction machinery after four weeks.

IRRIGATION

The irrigation system was installed by Turf Irrigation Services as subcontractors to Strathayr. The system includes twin Grundfos multi-stage pumps running through medium density polyethylene pipe measuring 110mm down to 40mm laterals with a pressure rating of 12.5MP. This enables one four sprinkler station to be run simultaneously on both fields without any drop in uniformity or performance.

All sprinklers are Hunter I35s with stainless steel risers and brown nozzles. These sprinklers have a five inch riser that enables the sprinklers to rise above the turf to ensure no scalloping at low installation depths within the soil. The system is controlled by a Hunter ACC controller with a mini weather station and wind capabilities. This arrangement gives us great control when watering as the area is quite open and the training ground is in close proximity to a residential estate.



The solar halo surrounding the inner five metres of the stadium roof allows the capture of sunlight to generate 20 per cent of the stadium's energy requirements

Due to the use of the weather station, all watering is essentially controlled by the ET requirements of the turf and reduces overwatering. The wind and rain sensors cut the system off if the preset parameters are overstepped. The controller also has the ability to be controlled remotely through a hardwired landline that can be dialled in to change sprinkler run times, start times or to simply turn off.

The system design on both fields is a triangular design with 360 degree adjustable sprinklers used around the extreme perimeter to ensure complete coverage and full circle used through the main body of the fields. An independent audit of the irrigation system once installed confirmed a distribution uniformity at 87 per cent, Christiansen uniformity coefficient at 90 per cent and the scheduling coefficient at 1.1.

Lynne Watts from Hunter Australia gave great assistance and advice throughout the design and installation process. The irrigation system also has a fertiliser injection unit to enable the application of liquid fertilisers and amendments.

TURF MANAGEMENT

The Metricon Stadium maintenance department comprises myself and assistant Tim Murphy who comes from a golf course construction background with experience at many of the top golf courses on the Gold Coast Coast. Together we oversee every facet of the horticultural management of the 15 hectare site.

The weekly management of the two playing fields is a consistent challenge with each requiring its own unique turf maintenance programme. The main field, being constructed to USGA greens specifications, has drainage rates running between 600-800mm/hr with a full subsurface drainage system, whereas the training field has been constructed from the previous stadium's main field growing medium and has no subsurface drainage, meaning it is significantly slower in removing water.

The stadium has weekly applications of organic based liquid fertilisers to keep up the nutrients required on the free-draining sand. The training field, by contrast, has a monthly nutrient programme due to the lack of leaching.

Regular aeration is undertaken on both fields with each field again requiring different settings. The stadium is aerated regularly at quite shallow depths with thin, solid tines to maintain high drainage rates and to minimise any layers forming. The training field is aerated with thicker, solid tines at greater depths to enable water to get away from the surface and to allow drying of the surface. Light topdressing occurs on the stadium to minimise thatch build up and to assist in the divoting process.

The upcoming summer will see regular hollow tining of the training field to gradually replace the fine soil with a more suitable free-draining sand. The larger size of the sand granule will assist in improving the infiltration rate of this field and allow the flow of water away from the surface.

The stadium field will have multiple applications of the recommended soil amendments once soil and leaf tissue test results have come back. Given the field was finished at the end of March 2011 and minimal amendments added, this will be an important addition to the sand for the first full season of use in 2012.

The spring will also see the removal of the ryegrass seed via a carefully managed chemical programme and a consistent scarifying programme to remove any excess thatch and to lower the height of cut down to 15-18mm. This will encourage lateral growth and a new and healthy sward of turf to develop.

SELL-OUT

A sold out stadium greeted the Gold Coast Suns for their first game at home on 28 May. Playing top



of the table Geelong, the expectation was that they had to be at their best to challenge the Cats if they were to win. The Suns did exceptionally well to be in front at half-time, although the second half saw the stronger bodies of the more experienced Geelong players draw away for the win.

Mettricon Stadium looked fantastic from the ground up and the turf performed well. At the time of the game the turf had been down for 10 weeks and although quite immature handled the stresses of its first AFL game quite well.

Positive comments were also forthcoming from both teams which was fantastic and the turf will only get better as it matures and a better organic base is built over time.

The regular post match divoting programme started afterwards with a blend of sand and seed. This will be an ongoing process to alleviate any undulations and will work in with the aeration, nutrient and topdressing programmes currently in practice. As this edition goes to print we have had a further three home games and we have five more scheduled at before the end of the season.

The Mettricon Stadium growing medium is made up of a 300mm rootzone sand layer with the top 125mm blended with organic based amendment Sanoplant





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Over the past decade Nick Jeffrey has played a major role in the management and development of AFL grounds in Queensland and it was a natural progression that he was appointed horticulture and operations manager for the Gold Coast Suns



The irrigation system includes two Grundfos multi-stage pumps with Hunter ACC controller

Stadiums Queensland has fitted out Metricon with brand new maintenance equipment including a full range of Wiedenmann turf renovation equipment



SUNS DEBUT SEASON A NEW DAWN FOR JEFFREY

While there would have been a few nerves among the young Gold Coast Suns playing group ahead of their first home game at Metricon Stadium in late May, there was one other integral member of the club who would have been equally on edge.

For Gold Coast Suns horticulture and operations manager Nick Jeffrey, the Suns v Cats marked his first official match as curator of an AFL ground, yet while a novice in terms of games, Jeffrey is by no means a stranger to the game having played a key role in the management and development of AFL grounds in southeast Queensland.

Jeffrey's career in turf management began in golf after joining Sanctuary Cove Golf and Country Club under superintendent Doug Robinson, before securing an apprenticeship at Carina Bowls Club where he eventually rose to be head greenkeeper. After a brief three month stint overseas, Jeffrey returned home and spent two and a half enjoyable years working under superintendent Vern Jepson at Brisbane Golf Club.

Through his football connections - he played semi-professional football for Morningside where he kitted up alongside the likes of Brisbane regulars Michael Voss and Mal Michael - Jeffrey was then offered the curator's position at the Lions' training facility at Coorparoo. Built on an old tip site, the field had many unique management issues and Jeffrey put in place a number of measures to get the surface up to a state befitting an AFL training venue. The opportunity to work with AFL Queensland then came up when he was asked to be involved with some reconstruction work at the old Carrara Stadium complex in 2005.

Jeffrey then developed a ground maintenance business arm within AFL Queensland which provided maintenance and management assistance to a multitude of sporting clubs and grounds from Coolangatta to Noosa. Among them were 90 football grounds and Jeffrey undertook regular assessments and, in conjunction with the clubs, managed them during the season.

As well as undertaking regular assessments of the state's major AFL venues such as The Gabba, Cazaly Stadium (Cairns) and Carrara, throughout this time Jeffrey also did some consultancy with the Queensland Water Commission and toured many areas talking to curators about managing their playing surfaces in times of drought.

"During that time we developed the community level grounds to a much greater standard," says Jeffrey. "Initially we put in irrigation to all of those grounds and developed dedicated aeration, fertilising and nutrient regimes. We also negotiated with councils a topdressing programme which they have now adopted and continue to maintain."

"It was something that we expanded on from when I was with the Lions at Coorparoo. We could



see that by undertaking these small adjustments in management practices, combined with better irrigation, that we could improve these grounds."

When it was announced in 2009 that the AFL would be expanding the competition to 17 teams in 2011, it was a natural progression for Jeffrey to be involved with the redevelopment of the Carrara complex. Involved right from the start of the project, Jeffrey has played a key role in the development of the new playing surface and as of 1 December 2010 he officially started as the Suns' horticulture and operations manager.

"Looking at it now and seeing how it has transformed from what was initially here is quite amazing," reflects Jeffrey. "It has been a great project to be involved with and the stadium surface will only get better over time as it matures. There were a lot of initial meetings on all aspects of the surface and it was fantastic to be involved to the degree where I had the opportunity to pick sprinkler types, pump types and turf type."

"We have also been blessed that Stadiums Queensland has fitted the facility out with the best of everything. As well as a new maintenance facility and irrigation system, we have a brand new John Deere 7700 fairway mower, two Kubota tractors (30hp and 50hp) and a full range of Wiedenmann turf renovation equipment."

"I have never been involved as a curator of a national stadium before so it has been a very exciting time for me. Obviously there are a lot of people watching every time the Suns play at home and every game is a test of your skill, knowledge and your work ethic. As curators we thrive on that excitement and it certainly gets the best out of me because I want to provide the best surface that I can for the players to showcase their skills on."

— Brett Robinson

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The Royal treatment

The 2011 Open Championship recently headed back to Royal St George's in Kent, the first course outside of Scotland to host the prestigious major way back in 1894. 2011 marked the fourteenth occasion the club has successfully hosted the Open and Steve Symmons was fortunate to visit the course late last year to get an insight into what it takes to prepare for such an event.



The English took a while to take to golf. While the Scots had been hitting little white balls along grassy paddocks since the middle ages, the English remained largely impervious to the game's appeal. King James VI of Scotland brought his clubs down with him when he became James I of England and is believed to have played on the hills behind Greenwich Palace in what is now southeast London. This led to what became Royal Blackheath Golf Club, 'instituted' in 1608 and arguably the oldest golf club in the world.

However, golf remained largely the preserve of ex-pat Scotsmen who had relocated to England. One such individual was Dr William Laidlaw Purves, a renowned ophthalmologist who played off scratch. After migrating to England via Australia, he found golf on the primitive parkland courses surrounding London was not to his satisfaction. Purves pined for the links golf of his native Scottish east coast. So he set about locating something similar, within what he felt would be a reasonable distance of London.

Thus he is reputed to have found himself standing at the top of St Clement's church tower in the ancient Cinque Port of Sandwich, from where he saw spread before him the vast natural linksland that was to become Royal St George's.

The club was founded in 1887 and the course laid out soon after. At that time 'blind' holes were considered a large part of the fun and the course incorporated several, including a par three that required a carry over a huge dune called The Maiden. Although the course has been altered in the ensuing 120 years, today's routing still broadly follows that of the original layout, with no two holes in the same direction. This feature has contributed to the course's formidable reputation.

Over its journey the course has played host to no less than 14 Open Championships and was the



first course outside of Scotland to host the event. The last time the Open visited was in 2003 where only one player broke par for the tournament – winner Ben Curtis! Only Greg Norman in his pomp has taken the course apart and he achieved that feat when he won his second Open Championship in 1993 at 13-under. Par is not an ambit claim here; par really means something at Royal St George's.

SUPER SCOT

Finding Scottish accents at a golf course founded by a Scotsman is no surprise. Course superintendent Neil Metcalf was first introduced to the game by his father as a five-year-old. His interest was such that it seemed natural for him to take up an apprenticeship with Cruden Bay Golf Club near Aberdeen in northeast Scotland in 1982.

Eight years later he took up the position of deputy superintendent at Crieff Golf Club about 20 kilometres west of Perth in the centre of Scotland for two years before being appointed deputy superintendent at Royal St George's in 1992. Metcalf was then appointed Royal St George's course superintendent in 1996.

It was a rapid elevation to one of the most prestigious positions in golf course maintenance and testimony to Metcalf's professionalism. Today he heads a team of 12, including a full-time mechanic and his deputy Graham Royden. All greenkeepers have a minimum UK National Vocation Qualification II level in turf management (NVQ II approximates to Australia's Certificate III).

Because the earliest tee-time at Royal St George's is 8am, the groundstaff begin work at 6am. With play regularly off tees 1 and 10, it gives them two hours to mow the greens ahead of the first groups of players. Experience has created a routing that is not sequential but means that the team gets to cut the 10th green with about 10 minutes to spare.

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- John Deere Gators
- Verti-Drain and John Deere 4720 tractor
- Hardi 800l, Gambetti 350l and John Deere 750l sprayers



Under normal circumstances holes are relocated every Friday ahead of the weekend's play.

Greens are cut to 3.6mm, tees and surrounds 6mm, and fairways mown at 9mm. The rough is left pretty much to its own devices, however, the club has instituted a programme of annual rough mowing in early November followed by some topdressing, progressively to promote the growth of meadowgrass and remove the biggest surface irregularities where players could easily badly twist an ankle. To date it appears to be working.

LEAN AND MEAN

The turfgrasses at Royal St George's are basically the local native species, with greens simply cut lower than the fairways. The fescue component of the natural fescue/meadowgrass/bentgrass/Yorkshire Fog mix has been encouraged by a programme of annual oversowing.

"The local native grasses are naturally the best suited to this region," Metcalf explains. "This is a 'natural' links course and our maintenance programme is designed to keep it that way."

As a result Metcalf oversees a minimalist fertilisation regime. There is a monthly application of liquid seaweed throughout the year and an annual application of an 8:0:0 on tees and greens in early May, at the onset of growth.

The use of pesticides is likewise minimised to a twice yearly application of broadleaf weedkiller to fairways. Metcalf uses an 800-litre Hardi sprayer with shrouded booms on the fairways because it provides a good balance of coverage while minimising drift, especially round the greens and tees. The remainder of the course is covered with either a 750-litre John Deere unit or a 350-litre Gambetti sprayer depending on the area and its topography.

Metcalf hasn't used pesticides on greens or tees for six years and this has been made possible by switching to kiln-dried topdressing material. By thus eliminating most unwanted plant matter at source, Royal St George's is able to remove what weeds still manage to invade these areas by hand.

Neil describes Royal St George's greens as "old style". Originally constructed in the 19th Century, long before the advent of irrigation, the growth medium is 80 per cent local sand and 20 per cent 'topsoil' (a 2 per cent clay loam mixed with organic

Royal St George's 3rd is the only Par 3 on the Open Championship roster without bunkering

Scottish-born course superintendent Neil Metcalf has been in charge at Royal St George's since 1996



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The wild panorama of Royal St George's from the top of The Maiden, a huge dune which forms a prominent part of the landscape. The course recent hosted its 14th Open Championship in July



material) on top of a thin clay base. The combination of clay base and humus allows the otherwise free-draining local links sand to better retain moisture. Plugs from any green show healthy root growth of 60-90cm down to the level of the clay base. This allows the turfgrass plants to remain healthy through what is often a quite dry summer.

The summer of 2010 was particularly dry with the links browning off after three months of very low rainfall coupled with some very warm weather. As a result the Rain Bird irrigation system was working overtime.

The club has permission to draw up to 24 megalitres from the North Stream that runs through the north of the course. Normal use is about 21.6ML. The stream is a tributary of the River Stour that flows into the sea at nearby Pegwell Bay. Because it is so close to the ocean a semi-submersible pump has been set to a depth to ensure that salinity issues are minimised.

In the free-draining links sand it is almost impossible to over-irrigate the course. A full summer session can use up to 320 kilolitres. Irrigation is a relatively recent addition to the course, with the first impact system only installed as recently as 1977. The current Rain Bird set up was commissioned in 1999 and Metcalf has only just introduced probe moisture sensor use to the course.

The system is set to run between 10pm and 5am. With the first players not on the course until 8am there is no problem with players encountering overly damp grass on the greens when they play. However, there was one time. Metcalf takes up the story:

"Until we installed the fully automated system I had to manually set the sprinkler times in the evening. I made a mistake once and set the tee sets to start at 2pm instead of 2am. And they all went off right in the middle of the club's Monthly Medal tournament! Suffice it to say that we immediately moved across to the 24-hour clock!"

LITTLE AND OFTEN

Contrary to normal maintenance practice, Metcalf does not use a corer on the greens or tees at Royal St George's. Any compaction is relieved by the annual use of the club's Verti-Drain at the onset of turf dormancy (early November).

On the other hand, the club's verti-cutting policy is far more rigorous and rather than the normal twice-yearly deep practice that you could find employed at most other golf clubs, the Royal St George's team set the cutting blades level with the surface and run over the course once a fortnight. Fairways are also verti-cut along with the tees and greens.

A 220m carry is required to pass the top of these dunes-cum-bunkers on the 4th hole



DID YOU KNOW...

Famous Scottish actor **Sean Connery** and English author **Ian Fleming** were keen golfers, so it is no surprise that James Bond, the character most closely associated with them, also played the game. Fleming was a member at Royal St George's and he set Bond's high-stakes golf match with archetype villain Auric Goldfinger at 'Royal St Mark's'. While the movie footage was shot at the Stoke Park Club (formerly Stoke Poges Golf Club) about 10km from London's Heathrow Airport, the events in Fleming's novel quite clearly describe a round of golf at St George's.



"This is a 'natural' links course and our programme is designed to keep it that way" – Superintendent Neil Metcalf

"I believe that 'little-and-often' is the way to go with verti-cutting," Metcalf explains. "This cuts the rhizomes, promotes vertical growth and prevents the build-up of thatch."

OPEN ALTERATIONS

As with most older golf courses, the advent of modern equipment has meant that the original design strategy at Royal St George's had become compromised – at least for the Tour pros. Combined with the distaste for 'blind' shots, this has meant that holes have been changed several times – the most recent being in preparation for the 2011 Open.



Greenkeepers Dan Clark (top) and Allan Sheppard maintaining the cascade of deep pot bunkers near the 9th green. All bunkers are raked by hand



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Above: Hole locations for the 2011 Open Championship received additional topdressing ahead of the tournament to ensure they were as smooth as possible

Above right: Little and often – fairways and greens are verti-cut fortnightly with blades set at surface level

Metcalf and his team have built some new tees that have lengthened a number of holes to retain their original design integrity. While the new tees on holes 6, 9 and 15 have been regularly used, the new 7th tee has only been used once (for the 2010 Junior Open) due to its massive carry, especially when there is a howling headwind.

Other changes for the tournament included removing bunkers on 16 and 18 that had become redundant. New bunkering on 18 has subsequently shifted the fairway to the right. Other work around the par five 14th green has made it a little easier for a player to run their ball on to it. Because of the deep, wide ditch (affectionately dubbed The Suez Canal) that cuts completely across the 14th fairway, that second shot is likely to be very long.

With the Open roster being confirmed years in advance, The R&A was in constant liaison with Royal St George's team in the lead up to the tournament. For Metcalf that meant regular visits from turf agronomists and about a month out from the tournament the course was closed.

Aside from obvious differences, like preparing for broadcasters and other media, Metcalf wasn't anticipating that his maintenance programme would differ much from any other year. This year, however, The R&A requested that all fairways were mown using massed mower formations, in the same direction, apparently to deliver a uniform appearance for television audiences.

Claiming not to be the sort of man who stresses about things – he oversaw the 2003 tournament and was deputy superintendent for the 1992 Open – a key part of Metcalf's preparation was planning major works well in advance of the tournament.

Greenside bunker revetting was finalised over a year ago, while fairway bunkering was attended to in the latter part of 2010 as were the couple of greenside bunker areas that needed attention following weather damage. Bare patches were also re-seeded throughout 2010 with the odd major surface irregularity removed, particularly around greens.

It also appears that Metcalf already had the tournament pin positions planned six months ahead of the tournament. These areas of the greens received particular topdressing attention throughout 2010 to ensure they were as smooth as possible for The Open.

Metcalf normally has the greens running between 9-9.5 on the Stimpmeter, and they were to increase to 10-10.5 for the tournament. While this is quite sedate by normal competition standards, given the elements which can buffet Royal St George's, those speeds are more than reasonable. As Metcalf says, St George's does not need its greens to be "tricked-up"; it's hard enough as it is! 🏌️

Right: The unique starter's boxes at Royal St George's

Below: Although Royal St George's has been altered during its 120-year history, today's routing still broadly follows the original layout, with no two holes in the same direction



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TM

A Jack Nicklaus signature course, El Dorado is carved into the dramatic, cactus-studded desert terrain of Los Cabos at the tip of Mexico's Baja Peninsula

Peninsula paradise

It's not uncommon to see Australian course superintendents plying their trade in far flung corners of the globe and former Toowoomba native Darren Flanagan is no exception. After working his way around Australia, his career in turf took him to the US and the Caribbean and for the past three years he has been responsible for revitalising the El Dorado golf course on the southern tip of Mexico's Baja Peninsula.



Some 1800 kilometres south of Los Angeles, California, at the southernmost tip of the Baja Peninsula, sit the Mexican resort towns of Cabo San Lucas and San Jose del Cabo. Once the home of Spanish pirates, the Los Cabos area is now a vibrant tourist destination featuring miles of pristine white-sand beaches, world-class sport fishing, a multitude of outdoor activities and a very colourful nightlife.

Carved into the dramatic, cactus-studded desert terrain of Los Cabos are nine golf courses, none more spectacular than the El Dorado Golf and Beach Club. The Jack Nicklaus signature designed course opened in 1998 and was a popular public course featuring seven holes along the Sea of Cortez. In 2005 El Dorado was acquired by the Discovery Land Company and converted into an exclusive private resort community. The crown jewel of El Dorado is the golf course which is frequented by both PGA Tour players and Hollywood's elite.

Since the change in ownership El Dorado has undergone a renewal and I was appointed to oversee course maintenance and landscape operations in 2008. Several holes were re-routed to

make way for extravagant, multi-million dollar ocean front homes. Additional landscape plants, including cactus, bougainvilleas, palm trees, agave and other native desert plants have been strategically added and removed to intensify the beauty of the golf course and to make play more interesting.

A stunningly beautiful course, El Dorado winds through arid desert valleys and over steep rocky hills, all with spectacular views of the aquamarine Sea of Cortez. Many golf holes feature a dramatic desert edge where the irrigated turf surface meets the parched desert. Richly colored bougainvilleas frame the golfer's view of green complexes and line the cart path between holes. Two holes, including the memorable beach-front par three 16th, take the golfer back down to the beach where during the winter months it is not uncommon to see Humpback whales offshore.

Due to the exclusive nature of the club, El Dorado has only 5000 to 6000 rounds per year, and as such course maintenance requirements are extremely exacting in order to have the facility in top notch condition. A zealous attention to detail, a hallmark of the Discovery Land Company, was



brought to the golf course, with patterns raked into bunkers and desert sand, divots and broken tees continually picked up, and cart paths hand blown daily.

The 80 acres (32 hectares) of turfgrass at El Dorado is comprised of 419 bermudagrass on tees, fairways and roughs with TifEagle ultradwarf bermudagrass covering the greens. Golf maintenance also tends to 75 acres (30ha) of landscape vegetation, plus an additional 15 acres (6ha) of landscape in the club's common area. Greens are cut between 1.8mm-2.5mm, while fairways are shaved anywhere from 10mm-12mm and roughs 30mm-50mm. Tees are cut between 8mm-10 mm.

Goosegrass, crabgrass, and nutsedge are the most common weeds at El Dorado, but as pre-emergent herbicides are not available in Mexico, weeds are spot sprayed with post-emergents. The weed pressure at El Dorado is not very strong due to the minimal amount of rainfall and the strong, healthy stand of 419.

The course's irrigation system is powered by two Flowtronex pump stations that have Amiad filtration

systems. Each pump station has a capacity to pump 1700 gallons per minute (107l/s). The irrigation system at El Dorado is Toro, with a Site Pro 3.0 central control system. All 60 controllers on the golf course are VP and network handheld capabilities are in place. The golf course landscape irrigation alone is comprised of more than 8000 Hunter I-20 sprinklers and a project is currently underway to replace some spray heads with bubblers in order to reduce labour, power and water usage.

LOCAL CHALLENGES

Los Cabos is a very challenging location in which to maintain a golf course. Perhaps no challenge is greater than overcoming the extremely dry, arid climate. Averaging only 4-6 inches of rain (100mm-150mm) for the entire year, almost all of the annual precipitation is concentrated into a period of two or three months between September and November – the cyclone season. In the past 14 months the golf course has only recorded 2.9 inches (73mm) of rainfall!

With little or no natural water to speak of, the golf course is almost completely maintained with secondary treated municipal water. The water quality is extremely inconsistent and harsh, frequently causing a build-up of calcium, magnesium carbonate and solid matter in sprinkler nozzles. Filters and equipment also corrode quickly due to the poor water quality.

The substandard water also affects turf management because it routinely contains a lot of nitrogen, anywhere from 35 lbs to 65 lbs of actual nitrates per acre foot of water (13g-24g/m³). Excess nitrogen causes the turf to experience a surge in growth and increases leaf tissue, thereby producing inconsistent green speeds. During the summer months, weekly applications of Primo Maxx, at a rate of 3 fluid ounces per acre (0.22l/ha), have greatly assisted in normalising the nitrogen-induced growth surges. Due to the inconsistent nature of the water composition, daily assessment of surface conditions is critical.

Opened in 1998, El Dorado was a popular public course before it was acquired by the Discovery Land Company in 2005 and converted into an exclusive private resort community





El Dorado was built without sand capping and with very minimal topsoil. Flanagan relies on wetting agents and deep tining to combat localised dry spot and water infiltration. Deep tining of the fairways is done three or four times per year, especially in summer

Due to the exclusive nature of the club, El Dorado has only 5000 to 6000 rounds per year

Many greens at El Dorado have inconsistent greens mix depths and poor sub-surface drainage which cause some areas of turf to thin out in the winter. During the summer it is important to treat these areas with extra care and attention so as to go into winter with the turf as strong as possible. New smile drains (perimeter drains) are currently being installed in greens to alleviate the problem.

Anyone who has experienced maintaining a golf course in the developing world knows that staffing issues can be very difficult and El Dorado is no exception. Very few members of the golf maintenance crew speak any English and prior to working at El Dorado virtually none of them had familiarity with the game of golf or golf course maintenance.

All greenkeepers, mechanics, spray technicians and general labourers are unionised and require the club to provide transportation, meals and uniforms. Another hurdle has been overcoming the lack of safety training as there are no equivalent OH&S

standards or agencies in Mexico. A final problem results from a quirky Mexican law which allows employees several unexplained absences per month. During my first year here there were over 4000 man-hours lost due to no-show employees. That number has been reduced to just 200 hours this year.

CULTURAL AND AGRONOMIC PRACTICES

To produce superior putting surfaces, during the summer months carbide-tipped groomers are used as needed in conjunction with spiral wire brushes to eliminate grain and to manage leaf tissue. Occasionally, a triplex with standard blades, set even to cutting height, is used to assist in surface management. In the winter, greens are groomed with standard grooming blades as needed as the carbide tips are too aggressive.

Throughout the cooler months greens are sprayed with a foliar mix each week and micro-nutrients are applied monthly. If the greens begin to get too leafy due to temperature fluctuations or nitrate levels in the water, brushes in front of the walk mowers are used.

Fairways, tees and roughs are aggressively verti-cut twice annually. After verti-cutting, these areas are scalped, core-aerified and topdressed heavily. Additional topdressing is done monthly on tees, approaches and greens during the warmer summer months and as needed during the winter. Depending on surface conditions during the winter, greens are occasionally dusted with bagged sand.

El Dorado was built without sand capping and with very minimal topsoil and as a result we rely on wetting agents and deep tining to combat localised dry spot and water infiltration. Deep tining of the fairways is done three or four times per year,



especially in the summer months when the plant is working harder and needs more oxygen.

The greens are deep tined every three-to-five weeks to a depth of 8-10 inches, followed by a roll and double cut. The following day, greens are typically treated with an application of Agriox, an aerobic conditioning product, and Penterra, a strong anionic wetting agent. Getting the correct balance of oxygen and CO₂ is critical with any maintenance regime.

Deep tining creates a cavity which assists in root development and depth. At El Dorado, roots average 6-9 inches (150mm-225mm) in length during the summer and 5-7 inches (125mm-175mm) in the winter. Deep tining helps to optimise water movement into the rootzone and to improve gaseous exchange.

On the greens, root depth is further accentuated by irrigation management. Greens are irrigated once every 7-10 days with the large overhead rotors for between 30-45 minutes. In between these heavy watering cycles, greens are probed daily by groundstaff and hand-watered as needed with wetting agent tablets.

Depending on sodium levels, greens may be flushed once per year. This requires about 140 minutes of irrigation on the greens over a 24 hour period. With the particular greens mix at El Dorado, this provides a total flush of the profile and a calcium chloride or gypsum application is usually done in conjunction with a greens flush.



An interesting aspect to maintaining a world-class golf course in Mexico has to do with the availability of commonly used golf course pesticides and fertilisers. Very few products are available locally and many common pesticides cannot legally be imported into Mexico. Instead, we use agricultural grade soluble minerals and chemicals that are readily available in Mexico. The main products used are urea 21-0-0, ferrous sulphate, magnesium sulphate, manganese sulphate, potassium sulphate and seaweed. Two wall-to-wall granular applications are also made each year.

An important aspect of the agronomic program at El Dorado is seaweed. Seaweed combats heat stress, helps the plant retain nutrients, acts as a soil

Overcoming the extremely dry, arid climate is just one challenging aspect of managing a golf course in the Los Cabos region of Mexico. Annual rainfall averages between just 4-6 inches and the club relies on secondary treated municipal water for irrigation

... and the winners are

At this year's AGCSA conference, **Simplot Proline** once again ran two competitions for their customers. **WIN A TRIP TO LAS VEGAS** and the **GREENMAXX CLUB**.

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Lakelands Golf Club

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Jason Bushel
Rowes Bay Golf Course



Ben Tilley
Headlands Golf Club



Brad van Dam
Manuka Oval, Canberra





◀ **El Dorado's greens are deep tined every three-to-five weeks to a depth of 8-10 inches, followed by a roll and double cut. The following day, greens are typically treated with an aerobic conditioning product and strong anionic wetting agent**

Right: Due to high soil pH levels, in recent times Flanagan has been successfully trialling high rates of iron on El Dorado's 419 bermudagrass fairways and tees

conditioner and is a source of carbohydrates and amino acids for the grass. Year-round, AlgaeGreen cold extract seaweed, imported from Ireland, is applied each month to the greens at 1 gallon per acre (0.09l/100m²) and to fairways and tees at 1/4 gallon per acre (2.3l/ha).

ONGOING WORK

Over the past couple of years at El Dorado, in conjunction with Marc Logan of Greenway Golf, a fellow Australian and former course superintendent at Mt Lawley Golf Club in Perth, we have been doing trial work with high rates of iron.

We are finding that iron, which is essential for chlorophyll synthesis, is directly contributing to disease resistance in the turf. Because there is a high soil pH at El Dorado (7.9-8.3), iron is less available to the plant. Hence, there are weekly applications of iron, specifically ferrous sulphate heptahydrate, at a rate of 3/4lb-1.4lbs per 1000 square feet in 8-10

gallons of water (340g-640g/100m² in 30-35 litres of water) to maximise the benefit to the plant. The iron is applied with a tank and hose fitted with a brass fish-eye nozzle.

This trial work has been successful on the 419 bermudagrass as well as the TifEagle. Similar testing, but at higher rates, has been proven successful on bentgrass greens as well. Marc has successfully implemented this strategy at other golf courses including San Francisco Golf Club and Monterrey Peninsula Country Club where he works closely with the superintendents there.

As well as these ongoing trials and general course maintenance, we are also pressing ahead with works on course which will ultimately help improve its playability and conditioning. In the coming year we will be concentrating on cleaning out a lot of the landscaped areas and making adjustments to the irrigation set up in these areas. We will also focus on removing 419 contamination out of the greens and removing Salam paspalum that was brought in after grassing. Future projects include rebuilding the 9th green, building an additional TifEagle nursery and regrassing the driving range. 🌱



Darren Flanagan (pictured left) with crew members Morgan Spraul (assistant), Dagoberto Rodriguez (foreman) and Santos Guzman (senior assistant)

FUN IN THE SUN

Originally hailing from Toowoomba in Queensland, Darren Flanagan has worked in the turf industry since the age of 14. He worked on golf courses in Melbourne, the Gold Coast, far north Queensland and in the Caribbean. For five years, Flanagan owned a golf course construction and project management business based out of Colorado, where he had the opportunity

to work with many top designers including Jack Nicklaus, Tom Doak, Tom Fazio and Pete Dye, before taking up his current posting in Mexico.

Having been based at El Dorado for the past three years with wife Tammy and their two children, Flanagan has been fortunate to rub shoulders with some well known sorts and each April the club hosts an annual member/guest tournament called Pins & Fins. This three-day competition is a mix of deep sea fishing and golf, where teams accumulate points based on their golf scores and fishing prowess. Often attracting some of Hollywood's elite and PGA Tour players alike, Pins & Fins is the biggest affair of the year and planning begins an entire year in advance to ensure the course and club is in top condition.

In 2011, El Dorado was also featured on The Hank Haney Project, a television show on the Golf Channel where world-renowned golf coach Hank Haney reforms the golf game of a celebrity over a period of several months. Haney happens to be a member at El Dorado and has been an asset to Flanagan and the golf maintenance team in discussions about course set up and agronomy.

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Allan Shorland

Secretary Manager

The Metropolitan Golf Club



Phil Ford (left) and Frank Dempsey (right) were recognised by the AGCSA and award sponsors Everris (David Westall, centre) with the AGCSA Distinguished Service Award for their many years of service as turf management educators

Frank Dempsey and Phil Ford joined a unique group when they were bestowed the AGCSA's highest honour – the Distinguished Service Award, presented in partnership with Everris – at the recent 27th Australian Turfgrass Conference in Adelaide. ATM editor Brett Robinson looks back on their respective careers as educators and their unstinting efforts to mould and shape the development of up and coming superintendents and turf managers over the past 30 years.



In a class of their own

There wouldn't have been many people who attended the Syngenta President's Dinner on the final night of the recent 27th Australian Turfgrass Conference in Adelaide who haven't been influenced by Frank Dempsey and Phil Ford over the past three decades.

Joint winners of the 2011 AGCSA Distinguished Service Award, presented in partnership with Everris (formerly Scotts Professional), both Dempsey and Ford have taught the art of greenkeeping to fledgling superintendents and turf managers in NSW and Victoria for a combined period of almost 60 years.

Their steadfast dedication to perhaps one of the most demanding and unforgiving jobs within the industry meant the AGCSA Board, which bestows the award annually, had little hesitation in recognising the duo for their efforts and in doing so elevating them alongside the likes of fellow educator Dr Peter Martin who won the award back in 2001.

"When you have been in the industry for as long as I have and you see the recipients of the AGCSA Distinguished Service Award who have gone before, you sort of put them on a pedestal," comments Dempsey, who started full-time teaching at Ryde College in Sydney back in 1980 after more than a decade as a bowling greenkeeper. "To have the privilege of joining them makes me feel very proud and humble."

For Ford, who in many ways pioneered post apprenticeship training courses by starting up the Advanced Certificate and Diploma courses through Northern Melbourne Institute of TAFE, it was the ultimate recognition from an industry which he instantly took to after starting with the Australian Turf Research Institute back in 1981. "To me the most important recognition you can get is from peers and colleagues in your own industry and quite frankly I am thrilled and also humbled that the AGCSA has recognised education in this manner," says Ford.

Adelaide proved to be a fitting location for Dempsey and Ford to receive the ultimate recognition for the many years of service at the education coalface. Back in 2003, at the 19th Australian Turfgrass Conference held in the South Australian capital, both men were part of the very first meeting of the National Turf Education Working Group (NTEWG) which had been formed to address concerns about the Federal Government's horticulture training packages which had been introduced in 1998.

Led by the AGCSA and formed in conjunction with the wider turf industry, the NTEWG's primary focus was to review the education pathway for turf management students and establish an industry supported standard. Including the likes of Dempsey, Ford and then AGCSA chief executive Steven Potts, the group contained representatives encompassing all sectors of the turf industry including golf, bowls and sportsfields as well as association bodies such as the AGCSA and TGAA.

While some of the initial members have moved on, today the NTEWG is as active as ever and over the past eight years has fought doggedly to address industry concerns about the provision of turf education and to ultimately improve the quality of the delivery to students coming through.

Along the way the NTEWG has reached a number of milestones, including the creation of the Certificate II and III Horticulture (Turf) delivery and assessment guides between 2003 and 2006. From these, the first national Resource Workbook for Certificate II Sports Turf Management was unveiled earlier this year (see page 28 for more on this) which provides a uniform set of resource notes for students undertaking the course.

Perhaps the most significant achievement, however, came with the revision of the latest training package which was endorsed at the start of 2011. With the backing of industry, the NTEWG not only had input into the creation of the units which make up the training package for the very first time, but also successfully had the qualification titles changed from Horticulture (Turf) to Sports Turf Management, thus achieving recognition that turf is not just part of horticulture but a discipline within its own right.

At the front and centre of the NTEWG have been Dempsey and Ford and while not always seeing eye to eye on everything over the years, their shared passion to ensure that the future delivery of education is the best it can be has always been foremost in their hearts.

Shortly before receiving the Distinguished Service Award, ATM caught up with both gentlemen to reflect on some of the major changes they have seen over the years, their thoughts on the current state of the turf management education system and what they will ultimately take away from their many years of distinguished service.

What have been the key changes during your time in the turf management education sector?

Frank Dempsey: "There have been so many changes over the years and that has been one of the great aspects about being in education. The principles of greenkeeping remain pretty much

NATIONAL TURF EDUCATION WORKING GROUP COMMITTEE

Simone Staples (Secretariat/AGCSA)
John Odell (Royal Sydney GC/AGCSA)
Frank Dempsey (NSI Ryde College)
Wade Turner (Queanbeyan BC)
John Forrest (Challenger TAFE, WA)
Peter Le Riche (TAFE SA)
Tony Apthorpe (Edgeworth BC)

Brian Dale (Brisbane TAFE)
Bruce Davies (CIT, ACT)
Mal Harris (Northbridge GC/NSWGC SA)
Gary Lee (Brisbane TAFE)
Garry Dawson (CIT, ACT)
Bruce McPhee (Chisholm TAFE, VIC)
Mike Walker (TGAA VIC)

the same, but technology has changed incredibly, whether it has been the advent of safer chemicals through to how we as teachers actually deliver education. I remember having to create stencils by hand and put them through a Roneo duplicator if we wanted to give students handouts! Nowadays we're sending students SMS reminding them about excursions and assignments.

The biggest change, however, is the number of courses now on offer. When I went through Ryde in the 1970s there was just one – the trade course. Now you have the likes of Cert IV and the Diploma which is fantastic."

Phil, you were one of the pioneers of post-apprenticeship turf management training in Australia. Tell us how this came about and why?

Phil Ford: "Ian Lee, who was a great influence on my teaching career and who always had the best interests of education at heart, was one of the key drivers behind the development of post-apprenticeship training.

We both recognised for a long time that there needed to be something more to offer people than just an apprenticeship, so in 1985 we developed the first post-apprenticeship course in turf – the Advanced Certificate.



CONTINUED ON PAGE 27



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DIFFERENT ROADS BUT A SHARED PASSION FOR TEACHING AND NURTURING TOMORROW'S TURFIES

Despite sharing an immense enthusiasm for the art of teaching and developing Australia's superintendents and turf managers of the future for the past three decades, the manner in which both Frank Dempsey and Phil Ford entered the TAFE system was markedly different.

Dempsey's career began as a bowling greenkeeper apprentice at Gordon Bowling Club in Sydney during which time he attended Ryde School of Horticulture, the very same institute he would end up spending over three decades teaching at. Leaving Gordon, he then had a brief stint as head greenkeeper at Ashfield Bowling Club before returning to Gordon in 1973 to take over from his old boss and remained there until 1979.

During this time Dempsey was on the committee of the NSW Bowling Greenkeepers Association and in 1975 formed the North Shore Bowling Greenkeepers Group which involved 21 local clubs who met on a regular basis. From his many contacts within the industry and through the work he was doing with the North Shore group, he was invited

to apply for a teaching position at Ryde and in 1980 became a full-time teacher of greenkeeping.

Thirty years later and Dempsey has taught all facets of turf management at what is now NSI Ryde College TAFE, from the trade course right up to the Diploma course which he has organised and taught since 2000. During that time Dempsey also managed to better himself by achieving a Diploma of Teaching as well as a Bachelor in Adult Education.

As well as his passion for teaching, Dempsey's influence has also extended into a number of industry associations and bodies, none more so than what is now STA NSW. In 2000 Dempsey was a foundation member and secretary of what was then the TGAA NSW and has remained on the committee ever since. In fact, looking back over his career Dempsey has spent 33 out of his 44 years involved with some form of industry body, something which doesn't look like stopping any time soon.

By contrast, Ford entered the turf industry after completing a degree in agriculture through Melbourne University. After briefly working for the Department of Agriculture in Shepparton, Ford packed his ute and headed to Sydney in 1981 where he joined the Australian Turf Research Institute (ATRI). He was there until 1984 at which time he was encouraged to apply for a job back in Melbourne at then Collingwood TAFE (later NMIT) which would end up being home for the next 25 years.

"I had no ambitions to work in the turf industry, but after starting with ATRI immediately became hooked on turf and embarked on a pretty steep learning curve," recalls Ford. "The one thing that I appreciated very early on was that you were either a turfie or not. Turf was and still is not some subsection of agriculture or horticulture, it is a field all its own and one that is extremely complex."

"I took to teaching like a duck to water I guess and found it to be a terrific mix of theory and practical and dealing with young people who were all pretty motivated to learn. I found I was able to communicate well with the students and as a result I did everything I could for the next 25 years to stay in the classroom. I have had no desire to get out of the classroom and go into admin or become a head of department. I have only ever wanted to teach and looking back I have absolutely no regrets."

While winding down his involvement in teaching – he currently takes a small group of 10 turf students part-time at the University of Ballarat – Ford is certainly living by his own philosophy of lifelong learning and since leaving NMIT has undertaken a PhD through Ballarat University. Ford's thesis is looking at the agronomic conditions of AFL grounds and the links to player injury, with particular emphasis on hardness and traction, which is due for completion at the end of 2012.

Phil Ford doing what he does best at the recent 27th Australian Turfgrass Conference in Adelaide – "I'm a big believer in lifelong learning."



From there we started down the long path to get the Diploma course accredited which we eventually did in 1990. In those days to get something accredited and then to get the authority to conduct it was a huge process.

Getting those courses up and running was certainly a career highlight. Speaking from a Victorian point of view, you could see that they were just what the industry needed. There was obviously an unmet demand out there and for the first eight years we were knocking people back because we could only fit so many in a room. A lot of the guys doing the course back then were superintendents who wanted to further their education because in the past they simply had nothing formal to go on with once they had completed an apprenticeship.

John Neylan was right on the money in his last column in Australian Turfgrass Management (*Foreword Thinking, ATM Volume 13.3, pg 6*) about the breadth of skills that a superintendent needs today. Back when we started these post-apprenticeship courses, it was those non-turf management skills, like financial management, OH&S, environmental management and HR management which were starting to come to the fore, so something was desperately needed."

Does the current system of turf management education provide the best start for our up and coming turf managers?

PF: "Apprenticeships form the basis of our system



and it is an excellent system when you compare it say to the US. An apprenticeship is really a partnership between the apprentice, the superintendent/turf manager and the TAFE college. When it is done well (i.e.: taught well and taught by turf people) the apprentice has the potential to develop a solid combination of practical skills and classroom education which turns out people who are not only work-ready but can think for themselves and are able to tackle the challenges of what is a complex profession.

That is the underlying strength of the Australian system and I would hate to see that change to one where you go straight from school, get a degree and then get a job on a golf course and learn greenkeeping that way, which is how they do it in the

"An apprenticeship is really a partnership between the apprentice, the superintendent/turf manager and the TAFE college. When it is done well, the system turns out people who are not only work-ready but can tackle the challenges of what is a complex profession." – Phil Ford



ONE OF THE TRULY GOOD GUYS OF OUR INDUSTRY

"It is a great acknowledgement of Frank's contribution to the turf industry to receive the AGCSA Distinguished Service Award. In his own right Frank was a very good greenkeeper and well respected by his peers, but got out of the game early to go teaching. Maybe he was smarter than the rest of us!

He has a very calm, cheerful persona and an organised and analytical mind. He tackles issues thoroughly and due to his pleasant and quietly engaging nature draws people to him. I didn't have Frank as a teacher but all the boys that I have put through Ryde over the years have the highest regard for Frank and I think that he has got results with his style of teaching. He ensures that his students get out and see what turf management is all about, visiting all manner of turf care establishments and encouraging his pupils to ask questions and observe which is the essence of greenkeeping.

His work with the National Turf Education Working Group since 2003 has been outstanding and if it wasn't for Frank's and the group's steadfast doggedness one could now get a greenkeeping qualification from the back of a cornflakes packet.

Frank is one of the truly 'good guys' of our industry. He is hard working, intelligent, depressingly cheerful and optimistic and this chakra rubs off on you. He is the sort of bloke who if he rings, you feel special. You can't say no even though he never asks much. He is a leader, an achiever and someone to aspire to be like and I am lucky to have him as a friend."

- John Odell, Royal Sydney Golf Club

"You put the past recipients of the Distinguished Service Award up on a pedestal, so to have the privilege of joining those makes me feel very proud and humble." – Frank Dempsey

“One of the truly rewarding aspects of being an educator is to see your students go on and do good things and your hope is that you have played a small part in helping them achieve that success.” – Frank Dempsey



US. To me that type of system trains robots and you don't get that sound, underlying experience which can only be gained during an apprenticeship.

And for proof that the apprenticeship system works, you only have to look at the superb results our superintendents and turf managers are now producing and the fact that Australian trained greenkeepers are in demand no matter where you go overseas.”

Has the calibre of the students and teachers changed during your time in the system?

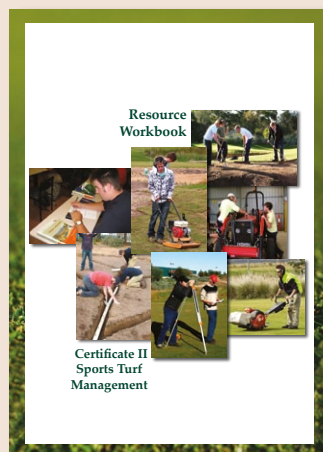
FD: “When I first started teaching I guess I thought everyone was there to learn, but I soon found out

that wasn't always the case. You are always going to get those students who are really motivated and those who are there just there because they have to. But that's one of the challenging aspects of being a teacher and it has been very satisfying to see those guys, who may not have been the most enthusiastic in the beginning, start to achieve and by the end have a real interest in the industry and have gone on to do good things.

As for the teachers, quality is very important. You may have all the experience in the world preparing golf courses for major tournaments or cricket wickets for international Tests, but you may not necessarily be a good teacher. Teaching is a skill that you are born with and you must have a number of character traits in order to succeed. First and foremost you need to be a caring person and care about the people you are trying to educate, and second you must have a very strong work ethic.”

PF: “When I started teaching, the kids who took the course were often only educated to Year 10, whereas nowadays 90 per cent have completed Year 12. Even though most have gone through to their final year, one thing that hasn't changed and is still a limiting factor for a lot of them is their lack of math skills. Math at school is all x, y, and z. When you're doing an apprenticeship in turf there is a lot of math involved, it's just not the sort that they were taught at school! There is also a big difference between the country students and the city students. The country guys are usually more mature – and they certainly don't have as many tattoos and earrings!”

CERT II SPORTS TURF MANAGEMENT RESOURCE WORKBOOK RELEASED



Earlier this year the National Turf Education Working Group published the Certificate II Sports Turf Management Resource Workbook (pictured). Sponsored by the AGCSA and Toro, the workbook contains full notes, worksheets and resources for the 10 core units of the Cert II in Sports Turf Management. The units are:

- Participate in OH&S process;
- Participate in environmentally sustainable work practices;
- Operate basic machinery and equipment;
- Prepare turf surfaces for play;
- Plant trees and shrubs;
- Maintain pressurised irrigation systems;
- Treat weeds;
- Support turf establishment;
- Apply chemicals under supervision; and
- Treat plant pests, disease and disorders.

The Certificate II Sports Turf Management Resource Workbook has been delivered to all TAFE institutions around Australia and money derived from their sale will be used to produce further learning material and assisting TAFE teachers. The working group is in the process of developing a similar resource across two volumes for the Cert III course which it aims to complete by the end of 2012. For more information about the workbook or the NTEWG in general, contact Simone Staples on (03) 9548 8600 or email simone@agcsa.com.au

Aside from the everyday rigours of being a teacher, looking at the wider picture what have been some of the major challenges faced in the provision of turf management education during your time?

PF: “Education is always under threat and one of the toughest fights we have had was the introduction of the horticulture training packages in 1998 and the move towards private education providers. The training package was a good concept, but the underlying thread was money and once you mix education and money there are always going to be shortcuts and sure enough that's what happened.

The problem was that the training package was not only badly written, it was written by non-turf people. From my perspective it dumbed-down education, especially at a time when turf management was becoming a more complex profession. The other thing I really disliked about the training package was that it was a Diploma of Horticulture (Turf) – that really got my back up. So it has been really pleasing to see the AGCSA, through the hard work of Simone Staples and the rest of the NTEWG, fix those problems in the most recent revision of the training package.”

FD: “Where you have a government funded system there are always going to be economic pressures – funding cuts, class sizes, the ability to buy new

"To me the most important recognition you can get is from peers and colleagues in your own industry and quite frankly I am thrilled and also humbled."
- Phil Ford

equipment etc. The introduction of the training packages was certainly one of the big developments and they caused plenty of controversy.

The initial packages were handed down from government with little input from the industry and we had to run with it. Unfortunately that meant a lot of TAFE teachers got a pasting from the industry because of what they were delivering, but they were only delivering what had been handed down by government. I guess we were the meat in the sandwich in some respects, but now with the strong industry involvement through the NTEWG we have managed to have a much greater input.

As you have both just mentioned, the formation of the National Turf Education Working Group in 2003 was a key development for the industry. What has this group managed to achieve?

PF: "The NTEWG was formed in response to the twin issues of the training packages and private education providers. The AGCSA, through then chief executive Steven Potts, was the driver behind that. The only way for the industry to move forward was to have fair dinkum training and the NTEWG, initially through Steve and now through the ongoing



A PIONEER WHO HAS ALWAYS RAISED THE BAR

"When it comes to the AGCSA Distinguished Service Award you only have to look at the list of past winners to realise what an enduring mark these gentlemen have left on the turf industry, and this year's joint winner Phil Ford is no exception.

I first met Phil in the late '80s when I enrolled in the Advanced Certificate/Diploma classes in sportsturf management. Through NMIT, Phil pioneered the introduction of post-apprenticeship training and he was and probably still is a hard taskmaster. He is passionate about the turf industry and demands the same from his students.

Phil has a sharp intellect but as with all good educators he has the unique ability to communicate across all levels, breaking down the complex into a series of practical steps. As part of his teaching diploma classes, Phil has also established a series of detailed written notes on each subject taught which has become an invaluable source of reference material for teachers and students alike.

Apart from being an educator, Phil's greatest legacy is possibly the role he has played in shaping the way turf management is taught throughout Australia. He has been passionate about raising the standards of teaching together with broadening the subjects taught and has been outspoken in his criticism of sections of the industry he has seen as wanting to dumb down the education sector.

I'm sure I speak on behalf of countless Victorian turf practitioners who have had their careers and lives shaped by Phil over the past 25 years that the AGCSA could not have chosen a more worthy winner."

- John Geary, AGCSATech



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work of Simone Staples, has been very successful. It shows that government does listen to the industry when it speaks as one. The new training package will be pretty good and the industry has got what it wants with the Diploma of Sports Turf Management rather than Diploma of Horticulture (Turf)."

FD: "Being a part of the NTEWG for the past eight years has been one of the most rewarding aspects in my career as an educator and I am really proud of what we have achieved. The latest revision of the training package was endorsed at the start of 2011 and it is the first occasion that the industry has had actual input into the units being taught and is a testimony to the work put in by the AGCSA which pushed hard for it."

Since 2003, the NTEWG has formulated learning and assessment guides across all units which culminated recently in the creation of the first ever Resource Workbook for Certificate II and by the end of 2012 we will have done the same for Certificate III. These national notes, which have been produced with the sponsorship of Toro Australia, will be used by all students across the country and means we now have standardised delivery of the units and uniform assessment. We also now, through the NTEWG, have a national validation meeting every year where all TAFE turf teachers in Australia come together to validate the units that are being taught."

Given those recent challenges, how would you rate the current health of the system.

PF: It's very healthy and the current training package is good, but the system itself is still bogged down in administrative paper work. It is unbelievable how it has multiplied over the years and I'm sure it is the same for superintendents and turf managers as well. I guess it's just part of modern society, but in a lot of respects it is killing the enjoyment of being a TAFE teacher. But on the other hand, there is a terrific quality of people going into teaching at the moment which is very encouraging.

What changes, if any, would you like to see in the future provision of turf management education in Australia?

PF: "I would like to see the industry itself promote lifelong learning. There is a problem in that for the guys who do have the Diploma there is not a lot to go on with, unless they do something like a business course. It just seems a shame that you hit the wall once you have finished the Diploma. The next step is a tertiary course which involves a lot of expense and is often impractical to do part-time."

There is the concept around of an applied degree which if it took full account of Diploma studies, which meant you weren't starting from year one, and could be set up so that it could be done on a part-time basis so that a superintendent could stay in their job, would be terrific.

As far as the NTEWG is concerned, there will always be challenges and you can guarantee it will have something to do with money. We have avoided the worst of the dumbing down that the training packages initially brought in, but the industry now has to be vigilant in maintaining quality."

To finish, when you look back on your time, what will be the one thing you will take away with you from your involvement as a turf educator?

PF: The most rewarding aspect is being part of an industry as it has grown. When I think back to 1981 things were pretty basic. Right through that period it has been terrific to be in education because things have changed so quickly with new products, turf varieties, management techniques and research.

There must be some pretty good reasons why you would do the same job for 25 years and for me it's simple. I love to learn new things and believe in lifelong learning. I also believe we have a very good system which is turning out superintendents and turf managers who are recognised the world over.

One of the main reasons I have lasted so long as a teacher is the people. All the teachers – particularly Gary Thomas and Peter Fitzgerald who have kept me somewhat sane over the years – the students, superintendents, greenkeepers, groundsman, curators, turf farmers; as individuals and as part of organisations they have all contributed and influenced me throughout my career. I couldn't have wished to be involved with a better group of people."

FD: "I'm the sort of person who likes to help people and I got into teaching because I saw it as a way of helping young guys coming through. One of the great things about being in the industry for the length of time that I have is that you get to work with such a large number of people. To see them come through the system, grow and develop and then remain your friend is really satisfying."

One of the truly rewarding aspects of being an educator is to see your students go on and do good things and your hope is that somehow you have managed to play a small part in helping them achieve that success." 🌱

CHIVERS JOINS HOLMESGLEN TAFE TEAM



Former Keysborough Golf Club superintendent and VGCSA president Brett Chivers (pictured left) has been appointed by Holmesglen Institute of TAFE in Melbourne to head up its turf section. Chivers brings more than 24 years' experience to the role and he has been given the brief to ensure that the Holmesglen horticulture department meets current industry standards and expectations in the delivery of its turf management courses.

Chivers is currently looking at different delivery methods to better fit both employers' needs and apprentices, including some options such as workplace assessment and competency based training which may include a blended delivery approach (i.e.: classes both off and onsite).

Holmesglen is embracing Chivers' enthusiastic approach to his new role to make the horticulture department and especially the turf section a vibrant, workable and innovative area which meets the demands of the ever-changing expectations in industry. For more information about the turf related programmes offered at Holmesglen, call (03) 9564 6391 or email hortfloristry@holmesglen.edu.au.



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Punching holes ...and other things

At the 27th Australian Turfgrass Conference, Coolangatta & Tweed Heads superintendent Peter Lonergan eloquently proclaimed that 'reno' was turf's 'four letter word'. It was interesting to note the comments from many superintendents in Adelaide that they were under more pressure than ever before to reduce renovations. The Pulse asks superintendents whether this is the case and what compromises they have had to make.

“Recently we had to postpone our autumn renovations at Eastlake by six weeks (into early May). I did not see this as a problem and was happy to compromise the timing and facilitate. On the scheduled day the weather was very poor and the general manager and club captain were putting a lot of pressure on me not to renovate, as they were concerned about the possible poor results. I was left with no other window of opportunity and emphasised the need to complete the exercise and to trust me. In the wash-up, the end results were as expected, but it has made me explore alternatives that could allow reduced hollow tining renovation practices.

Everything comes at a cost, and my club has limited funds, which does not allow for purchase or hire of alternative renovation equipment. There are some excellent products on the market these days, and there is viability in some alternative methods, but at the end of the day, for courses like mine, I believe hollow tining is an essential process.” **Pete Svenne, Eastlake GC, NSW**

“At Heidelberg, the club recently wanted something concrete. We now run a major renovation in September each year and a minor one in March. We advertise this in the members' handbook and fortunately we now close the course on this day. We recently changed to a subcontractor so as to take advantage of the latest equipment and renovating our 20 greens now takes one day rather than two with great results.

Yes, there has been pressure to improve but not reduce which is positive for the course. The two renovations per year are supplemented by

regular verti-draining, verti-cutting and dusting which are sold as 'turf maintenance' and we are able to perform these tasks in-house with minimal disruption to play. That 'four letter word' is now something to look forward to rather than dread and is certainly a happy medium from my perspective.”

Tim Bilston, Heidelberg GC, VIC

“The need for greens to be renovated and the methods used is unique to each club's site and the resources available will also influence strategies implemented. At Club Catalina Country Club, we have now moved away from the 'two' renovation practices each year, with only a major renovation taking place in spring. This has come about for a number of reasons, purely agronomic and not due to member complaints.

With the purchase of improved equipment that allows for greater efficiency, we now find that we carry out lighter renovation practices on a more frequent basis during the year. This has been necessary due to the use of recycled water for all irrigation. I tend to lightly aerate the greens using needle tines to 150mm on a monthly basis to allow for the flushing of salts etc out of the profile and to increase root length, health and mass. In addition, a light dethatching programme is also in place.

As with any maintenance programme, communication is the key. Letting all the relevant stakeholders know well in advance your reasons behind your planned activities and backing that up with the necessary reports and test results gives all concerned a complete picture and hopefully this reduces negativity towards renovation practices and maintenance activities in general.” **Tony Fogarty, Club Catalina CC, NSW**

“At Headland we are in a fortunate position as the committee understands the need for regular renovations and I think will continue to do so if the end result and finished surface remains at a high standard. In our case it has been shown that regular renovations removing unwanted thatch and replacing carbon sources has led to a decreased use in fungicides and fertilisers.



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We work closely with the match committee and pro shop in planning our two major renovations. I think as long as we can be seen to be flexible and are willing to work with them then, if the end results are viewed to be satisfactory by the members, there will be less pressure to decrease renovation practices. I think a lot of us also forget that it is the members' golf course after all." **Brad Beetson, Headland GC, QLD**

I agree there is more pressure to cut back on renovations and it seems that the same period which provides the best opportunity for such practices (spring and autumn) is becoming more desirable from a golfing viewpoint.

Recently the ladies championships at our club was shifted from the middle of winter (understandably) to early April. That was closely followed by two Pro-Ams. We had set our autumn renovation date based on a recovery time toward the first Pro-Am. We chose to solid tine using a Vertidrain, needle tine to close the holes and dust, rather than the coring and topdressing originally planned. The greens were in good condition for the events but I feel we are suffering slightly now in the wet conditions.

We are being progressively pushed into times for greens renovations that limit our options. If we go earlier than autumn we risk extreme heat and if we wait until the golf programme allows we risk slow recovery from the cold, the inverse in spring.

I guess we only have ourselves to blame. We have a wide range of technologies available that allow compromises to be made. Then there's the competition between clubs, who want no 'down time' in such a cut-throat operating environment." **Rob Millington, The Vines GC of Reynella, SA**

"When I first started at Whittlesea GC some 20 years ago we always renovated greens twice a year. Over the last decade, however, we have only renovated greens once a year due to financial pressures. When I took over as superintendent five years ago, the pressure to reduce the amount of renos due to cost became more demanding. After the first 16 months

"With a volatile economy and the competitive nature of the golf market on the Gold Coast, the pressure to capture all revenue is at its peak. The Colonial is built on a flood plain which experiences one flood per year on average but over the past 12 months with 1.7 metres of rainfall the course has flooded five times which closed the course for 30 days in total.

At the time course renovations were due to be carried out we had been closed for 19 days in six months and the decision was made to cancel renovations to ensure the club could capture much-needed lost revenue and restore cash flow concerns. When the general manager first mentioned the idea, my natural greenkeeping instinct said 'no way', but knowing how tough the club was doing financially and the concern for its future, I thought the decision might be enough to save the club from having to cut staff and ultimately strengthen its future. By cancelling renovations the club would increase revenue by \$30,000 and save \$8000 on fertiliser, fuel, tines etc. Within the four weeks renovations were scheduled we had a terrific operating month and the decision soothed cash flow concerns.

Although the club went into receivership four months later, it shows courses are experiencing their toughest period for some time and pressure is mounting to capture all revenue and decrease costs. With most courses already slashing overtime, material costs and capital, renovations might not be as protected as they once were." **Mark Hauff, The Colonial Golf Course, QLD**

without any renos the greens were starting to suffer badly due to compaction and drainage issues and we were spending more on fertiliser. In my opinion the reduction of renovations is false economy because in the long run, the amount of time and money we spent to keep the greens playable was just as expensive as regular renovations.

After many discussions with my committee we have come to a compromise where we do a full reno around August, then a part reno around March/April. For the latter we verti-cut and seed as well as topdress, and although not ideal it is better than no reno at all." **Brad Tucker, Whittlesea GC, VIC**

"At Castle Hill we have only been doing one major renovation per year for over a decade, with the autumn reno dropped once all greens, bar one, had been rebuilt with a USGA profile. There is no doubt in my mind that this would not be possible without our Vertidrain which we use regularly throughout the hot summer with needle tines.

The major spring reno is done with the course closed for one day. The pressure is then on to have

superintendents and golf clubs course maintenance standards



the greens back perfect the next week (surprise, surprise we have not achieved that so far!) I always tell any inquisitive members that the greens will be rubbish for a month and they probably should consider playing elsewhere for a while! Of course they don't and within two weeks they usually look pretty good and everyone is happy! The pressure is always on because as they say in this game, 'you are only as good as your last renovation'." **Martyn Black, Castle Hill CC, NSW**

"We are very lucky at the moment with our owner and current management. With our bent greens we verti-cut at -2mm once over whenever we need to. Sometimes we go twice over depending on the time of year and desired effect we are trying to get. After a double cut and groom to clean them up it doesn't affect the putting surface at all.

This, along with our various programmes, in particular a foliar nutrient regime and continual grooming accompanied with fortnightly dusting, keeps our thatch to a minimum. We core once a year with 12mm hollow tines at 1x1 spacings. By doing just the coring, topdressing etc at reno time we have full recovery and back to full green fee rates in one to two weeks at the most." **Ben Baumann, The Glades GC, QLD**

"The club has a great understanding of the need for regular improvements and disruption to a playing surface for the overall health of the turf. From the club's and our needs, we have agreed to a programme that course and surface disruption will occur on Mondays and Tuesdays if needed and that will range from aeration, mini and hollow tining and a range of dusting and sand applications followed by rolling and rubbing in of amendments.

Applications of granular and large sized prills can be applied at this time so it doesn't disrupt competitions held later in the week. We make the most of any opportunity on those days to improve the turf's health and with a major renovation scheduled in September for both couch scarifying and coring of greens every year, we think we have a good balance." **Nick Launer, Murray Downs G&CC, VIC**

"I place a high importance on the need to renovate twice annually in a moderate way. At Tewantin Noosa we do so in late September and late February which is supported by the committee presently. In general the members are accepting as we have explained to them the need for such works and we carry them out with the course still open for play. Local rules during renos are put in place to minimise interruptions to the staff and while ideally I would prefer to have the course closed for safety reasons, the club prefers the course to be playable. To accommodate, golfers receive discounted green fees which is well received.

Apart from these two renos which incorporate hollow tining, we also solid tine the greens in between these renos which most members are not aware of due to the lack of visible disturbance. I have seen where other clubs locally have reduced renos, and while in the short term there appears to be no issue, as time goes on turf quality begins to deteriorate." **Peter Smith, Tewantin Noosa GC, QLD**

"When I arrived at Springwood over six years ago we did two renovations a year (March and September). Being a small mountain club it was becoming very expensive to do this twice a year so around four years ago the Board came to me and asked for my professional opinion on cutting back to just one greens reno a year. Initially my response was no, but with the club under increasing financial pressure, every department had to reduce costs.

With this in mind I came to a compromise with the club that we do a two-year trial with a minor 10mm solid tine renovation in February, and a major hollow tine renovation in September. The two years passed very quickly and the greens responded to the one major reno quite well, except for late July-early August when they looked tired and hungry. After the trial we decided that we would continue this programme and today we still do just the one major renovation. While it's not the perfect situation agronomically, it comes down to the bottom line at our club and for our survival." **Nathan Ball, Springwood CC, NSW**



The need for greens to be renovated and the methods used is unique to each club's site. The resources available also influence strategies implemented



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With a combination of unrealistic hours of use, dormant grasses and wet weather, managing wear on winter sportsfields is enough to give any curator a serious headache

Managing sportsfields through the demands of winter is without doubt one of the most challenging tasks in turf management. In this instalment of AGCSATech update John Neylan looks at strategies for preparing and managing wear on winter sports surfaces.



Winters in southern Australia are generally cool and relatively wet and this coincides with the major football codes of rugby, rugby league, soccer and Australian Rules. These sports all impose a high level of wear and turf damage at a time when grass growth is slow. Municipal sportsfields are used most days of the week for training and competition, with the former causing the greatest amount of turf damage.

Following many years of low rainfall winters, the winter of 2010 saw back to normal rainfall patterns with 2011 looking similar. A combination of traffic and wet soils can cause a dramatic deterioration in the quality of turf surfaces. As soils become wet there is a redistribution of the silt and clay particles which clog the larger pore spaces which in turn reduces the infiltration rate and aeration porosity.

When soils become saturated and muddy the turfgrass becomes coated with soil and partially buried, which accelerates the deterioration process. Concentrated traffic is experienced during training and on wet soils significant and irreparable damage can be caused in a very short time period.

How can wear and the damage it causes be managed at a time when growth is slow and soils are wet? Minimising turf damage involves a combination of factors including good soil permeability and drainage, a strong turf sward going into winter, good fertility, a programme of regular aeration and managing traffic.

CONSTRUCTION

There is no substitute for having a well-constructed field using sandy soils with a good drainage rate. Good drainage ensures that excess water drains quickly out of the rootzone and will have little adverse effect on turf health. Sportsfields constructed from

poor draining soils quickly become saturated and compacted resulting in accelerated turf deterioration.

SOIL MANAGEMENT

All soils will suffer from some form of compaction. As the silt and clay fractions increase the more the soil becomes compacted, reducing the drainage rate and aeration porosity. The effects of compaction must be alleviated through deep tine aeration, hollow coring and slicing. While fine textured soils are the most prone to compaction, sandy soils can also become compacted at or near the surface and sand profiles will benefit from a programme of regular aeration.

Aldous et.al. (2002) evaluated the performance of the Vertidrain 7117 Mustang subsurface aeration machine. The trial was conducted on two sportsfields – a medium-fine sand profile and a duplex red friable clay profile. The study incorporated treatments at different tine spacings (55x75mm, 55x55mm and 55x35mm), tine diameters (5mm and 8mm) and degrees of kick (5 and 10 degrees) applied weekly.

Results showed that subsurface aeration using the 8mm tine can reduce surface hardness and soil strength, improve infiltration rate, root dry weight and turfgrass quality. In sand profiles, the larger needle diameter (8mm) can advance measurable reductions in surface hardness to one month, whereas the effects of narrow diameter needles (5mm) were not observed for two to three months.

Penetrometer resistance could be reduced, while infiltration rate increased within one month using treatments of either 5mm or 8mm needles on sand profiles and 8mm diameter needles on clay loam profiles. Increasing needle diameter significantly increased root dry weight in the sand profile.



THATCH MANAGEMENT

The quality of turf playing surfaces is dependent on the quality of its foundation (the soil conditions) and how it is managed from year to year. Turfgrasses by their nature produce organic matter through the production and die back of stems and leaves. Depending on the grass species, cultivar and growing conditions, large amounts of organic matter can be produced in a growing season which has a profound effect on the characteristics of the playing surface.

Excessive thatch accumulation can cause the following problems;

- Restricts water and air movement into the soil;
- Results in reduced root growth and more frequent irrigation;
- Creates an ideal environment for turf insects and disease organisms;

- Makes mowing difficult because the turf becomes spongy;
- Raises the growing points that are then exposed to greater extremes in temperature; and
- Restricts downward movement of pesticides and fertilisers in the soil.

Excessive thatch during the winter months can retain excess water at the surface which aggravates the impact of traffic by accelerating wear and turf deterioration. On sportsfields, excessive organic matter will also result in excessively soft surfaces of poor playability.

In preparation for winter play, an effective thatch management programme is essential. Scarifying and hollow tining in the spring is a critical process in effective thatch control with additional corings as a preparation for wet weather.

GRASS TYPE AND WEAR CHARACTERISTICS

Turfgrasses vary in their ability to tolerate wear. Roche et.al. (2009) studied the effects of traffic on the wear tolerance of eight warm-season grasses (Table 1).

There were substantial differences in wear tolerance among the eight cultivars investigated and the rankings of some cultivars changed between years. Wear tolerance was associated with high shoot density and a dense stolon mat strongly rooted to the ground surface. Wear tolerance was also affected by turf age, planting sod quality and wet weather.

In other research being undertaken by Roche (2011) results to date indicate that there are considerable wear tolerance (e.g.: 87 per cent) and wear recovery differences between *Cynodon*, kikuyu and *Digitaria* species and cultivars. As these cultivars are commonly used for sports and recreational purposes, this means that if a less suitable cultivar is chosen, a sportsfield could be closed up to 85 per cent more often than is necessary, as it is unfit for play.

TABLE 1: CYNODON CULTIVAR TURF QUALITY RATINGS¹

Cultivar	2006				2007			
	Control (no wear)	7-day wear	14-day wear	Wear tolerance ranking*	Control (no wear)	7-day wear	14-day wear	Wear tolerance ranking*
Group 1 (2006)								
Tifsport	8.5 (0)	3.8 (35)	4.6 (16)	=1	8.3 (0)	4.0 (33)	5.8 (6)	4
Grand Prix	8.5 (0)	3.0 (40)	4.4 (23)	=1	8.2 (0)	5.3 (13)	6.5 (3)	1
Legend	7.5 (0)	3.4 (43)	3.8 (26)	3	6.9 (0)	3.8 (41)	5.6 (12)	=5
Conquest	7.5 (0)	3.1 (48)	3.9 (31)	4	7.1 (0)	4.8 (20)	5.9 (5)	3
Group 2								
Wintergreen	7.6 (0)	1.1 (89)	2.3 (65)	5	7.6 (0)	3.8 (44)	6.4 (2)	=5
Princess 77	8.3 (0)	0.5 (95)	1.4 (84)	6	7.9 (0)	2.0 (77)	5.8 (8)	7
Hatfield	7.9 (0)	0.5 (95)	1.4 (78)	7	7.9 (0)	4.9 (21)	6.9 (0)	2
Harditurf	6.8 (0)	0.3 (98)	0.8 (93)	8	7.3 (0)	1.9 (81)	4.7 (15)	8
LSD (P=0.05)	0.4 (-)	0.6 (10)	1.0 (20)	-	0.4 (-)	1.0 (21)	1.0 (19)	-

¹ Turf quality ratings (with percentages of bare ground shown in brackets) for individual *Cynodon* cultivars at the end of the winter-spring wear period in 2006 and 2007 (trials 1 and 3). In both years, there was no bare ground in the control (no wear) treatment. Source: Roche et.al. (2009)

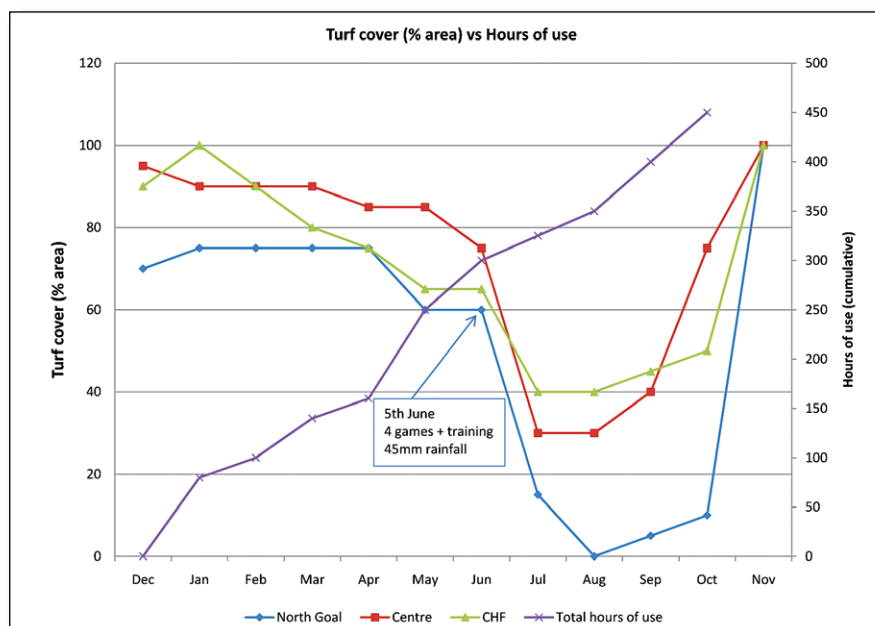


Figure 1: Turf cover on an AFL ground as affected by hours of use and rainfall

FERTILITY

Couchgrass begins to go dormant when day lengths get shorter and air temperatures drop below 10-15°C. The majority of the fertiliser should be applied in the summer when the couchgrass is actively growing. The purpose is to build up a strong and healthy turf mat with the aim of providing improved wear tolerance over winter. A fertiliser high in phosphorus and potassium and moderate in nitrogen in early autumn will provide improved root, stolon and rhizome strength before going into dormancy.

On sportsfields with limited or no irrigation, an important strategy is to be flexible in the turf management programme where fertiliser can be applied when summer rain is forecast. If there is some water available, strategic irrigations in conjunction with fertiliser applications will optimise growth and turf strength prior to winter dormancy.

In developing a fertility programme it must be:

- Based on soil test results. It is especially important to have optimum levels of potassium prior to winter dormancy;
- Reduce, but do not eliminate, nitrogen applications in the autumn. Excessive amounts of nitrogen can lead to leaching because plant growth and nitrogen uptake is slowed in the cooler autumn weather;
- On areas prone to spring dead spot, reduce nitrogen rates and increase phosphorus and potassium in the autumn;
- In frost prone areas make final nitrogen application 30 days prior to the first expected frost; and

TABLE 2: SPORTSFIELD USE AS AFFECTED BY CONSTRUCTION TYPE

Construction	Use (hours/week)	Total hours/season
Soil field ± drainage	2 – 3.7	105
Sand profile with drainage	5.3 – 11 (7.8 hrs/week over 35 week soccer season)	273
AFL sand fields	12 - 13	440

Source: Baker and Gibbs (1989)

- Consider foliar-applied iron and magnesium to help maintain green colour without a flush of growth late in the season.

PEST CONTROL

Insect pests can cause extensive damage to turf which weakens it and reduces its ability to tolerate wear during the dormant months. Scarab beetle larvae and Argentine scarabs can cause degradation to the root systems which reduces surface stability and traction. An insect-infested field, subjected to moderate to heavy traffic, will result in extensive surface disruption and poor playability.

Couch mites can also significantly reduce the growth and vigour of couchgrass. Most mite damage occurs in the spring/summer and can reduce the recovery from winter wear.

If insect pests are a regular occurrence it is important to have a strategy in place where they are preventatively controlled. If irrigation is limited, as with the fertility programme, it is important to undertake pest control either when rainfall is imminent or to use what water is available to irrigate after a pesticide application.

As with any successful pest control programme you must understand the pest and its lifecycle, the most appropriate control measures and the optimum timing for pesticide applications.

TRAFFIC MANAGEMENT

Managing sportsfields requires a great deal of coordination among administrators, coaches and turf managers. The first step in controlling traffic on a sportsfield is to educate the facility users about the advantages of distributing wear rather than concentrating it – especially in late autumn and early winter when turfgrass growth is reduced.

Even when employing the strategies detailed here, the ideal programme for protecting and/or restoring desirable field playing conditions is to control traffic and to maintain acceptable turf density. Ideally there would be fields dedicated to training and fields dedicated to match day!

As a general rule, the industry standard for hours of use for a natural turf field is between 14 and 18 hours per week, but only where the field is a well-drained sand-based construction that is well maintained and in good condition (MCC, 2010). Winter use is the most damaging, particularly when there is wet weather and growth and recovery is relatively slow. During the winter sports season we observe fields that average up to about 18 hours per week of scheduled use, peaking at 26 hours per week in mid-winter.

Work that has been done by the Sports Turf Research Institute in the UK has given the best insight to construction type and the expected hours of use (Table 2). The studies undertaken were based on assessing how long the turf cover persisted on key sections of the field during a soccer field. While the data comes out of the UK, it provides an

indication of the level of wear that can be expected for different sportsfield construction types.

In a study on an AFL field used for both training and matches, the use and wear was monitored over a 24-week period and the results are detailed in Figure 1. The most compelling outcome of the study was the rapid deterioration of the surface with a combination of high use and high rainfall.

A few practical notes to be aware of in terms of managing wear include:

- Rotate training activities;
- Do not train in the high wear areas (e.g.: goal mouths and centre);
- Intensive and repetitive drills should be confined to an 'out of play' area;
- If a hole begins to develop, fix it. Allowing holes to remain unattended will result in a much larger area to repair at the end of the season and increases the risk of injury;
- If the field is wet, avoid using heavy machinery even if mowing is scheduled;
- At the end of the winter replace heavily worn areas with turf. Trying to grow grass back in rarely works; and
- Maintain a programme of regular aeration to relieve compaction and to improve drainage.

BE PREPARED

Managing wear on winter sportsfields is potentially the most challenging task in turf management. With

a combination of unrealistic hours of use, dormant grasses and wet weather, turf damage is inevitable.

Planning out a 12 month maintenance programme around the schedule of field use is critical. Look for extended periods of little or no play and perform the most disruptive cultural practices, such as aerification, during this time. Flexibility is very important and be ready to adapt the plan if needed. Weather conditions, changes in schedules and make-up games can alter the plan; always have a back-up plan and don't skip part of the programme. Be sure to have all equipment, pesticides and fertilisers on hand before they are needed.

Managing wear involves a number of strategies over the entire 12 months including;

- Optimising plant health through good fertility and pest control;
- Controlling soil compaction and surface sealing through regular aeration including hollow coring, verti-draining and slicing. During the winter months some form of aeration should be undertaken every 2-4 weeks;
- Spring renovations including scarifying, hollow coring and topdressing.
- Autumn aeration and fertilising;
- Repair damaged areas before they become too large; and
- At the end of winter, repair the high wear areas such as goal mouths and the centre of the field with solid turf. 🌱



Managing sportsfields requires a great deal of coordination among administrators, coaches and turf managers. The first is to educate users about the advantages of distributing wear rather than concentrating it



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Eastern Golf Course



Warm Season Turf Conversion - line planting with Grand Prix Couch earlier this year.



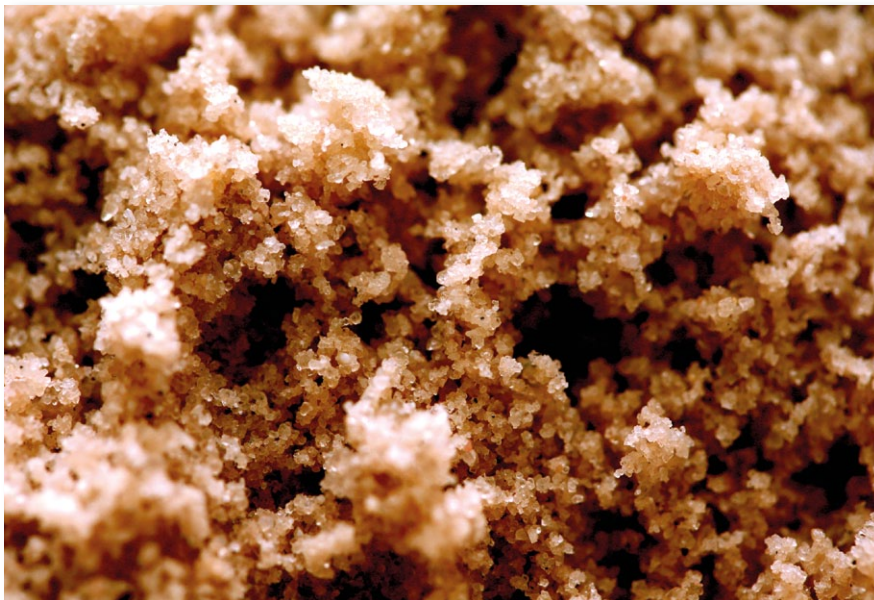
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Putting soils to the test

In this instalment of Tech Talk, AGCSA environmental agronomist John Geary looks at the integral role soil nutrient testing plays in the development of high quality turf surfaces and the science behind conducting these tests.

Above: Soil nutrient tests play an integral role in assessing the quality of soils to support plant growth while also identifying nutritional deficiencies and providing guidance on fertiliser and amendment needs

Talk to any turf professional or agronomist and all but the most ardent will suggest that soil fertility and identifying the nutritional needs of turf is at the heart of producing a high quality playing surface. The level of fertility affects most, if not all, aspects of the playing surface such as vigour, thatch accumulation, wear tolerance, disease tolerance as well as the ability of turfgrasses to cope with weed and insect invasion.

To help determine the nutritional status, soil nutrient tests play an integral role in assessing the quality of soils to support plant growth while also identifying nutritional deficiencies and providing guidance on fertiliser and amendment needs. Soil nutrient tests also play an important role in providing ongoing environmental monitoring and quality control.

To many practitioners, however, one of the more confusing areas of turf management is the interpretation of soil test results. The AGCSA, through its technical division AGCSATech, provides the Australian golf and greater sportsturf industry with a range of independent diagnostic and analytical services which includes a range of soil nutrient and plant tissue tests.

The analysis of all soil samples sent to AGCSATech is undertaken by Incitec Pivot laboratories with the interpretation of the results carried out by the AGCSATech team. To help gain a better understanding of soil nutrient testing, let's examine the various components that make up a standard AGCSATech soil nutrient report.

SOIL pH

pH is a scale that measures the concentration of hydrogen ions within the soil solution and is used to determine whether a soil is acid or alkaline. The pH of a soil is one of the most important aspects of soil chemistry and it can dramatically influence the performance of a turfgrass species being grown. pH affects the following aspects of a soil;

- Nutrient availability and balances;
- The potential for Al and Mn toxicities;
- The activity of specific microbial populations;
- The quantity of lime or sulphur to alter pH; and
- Turfgrass vigour and persistence.

When undertaking a standard AGCSATech soil nutrient analysis, two pH tests are performed using the saturated paste method. This involves one part soil being mixed with five parts distilled water. This solution is tumbled for one hour followed by about 30 minutes standing/settling time before analysis is undertaken using a radiometer. The results at this point are recorded under the pH (1:5 water) column with readings below 7 classed as acid and reading above 7 classed as alkaline. The same procedure is followed for the pH (1:5 CaCl₂) test with the only variation being .001m of calcium chloride is added to the sample upon completion of the initial test which is then re-analysed.

ELECTRICAL CONDUCTIVITY

The salinity of soil, or alternatively water, is measured by determining its ability to conduct electricity which is known as its Electrical Conductivity (EC). The methodology used to undertake the soil EC test is the same as described above for the pH test.

Part of the confusion surrounding the interpretation of EC results is the multiple units which EC can be recorded as, including milliSiemens (mS), microSiemens (μS) and millimhos (mhos), along with deciSiemens (dS) which is generally considered the standard term internationally. It is worth noting that;

$$1\text{dS/m} = 1\text{mS/cm} = 1000\text{ }\mu\text{S/cm} = 1\text{mhos/cm}$$

Salinity can also be measured as total soluble salts otherwise known as Total Dissolved Solids (TDS) which is measured in units of mg/L which is the equivalent to parts per million (ppm). It is possible to estimate the TDS from the EC reading using the following formula;

$$\text{EC (in dS/m)} \times 640 = \text{TDS (in ppm)}$$

AVAILABLE PHOSPHORUS

Testing soil phosphorus levels can be a contentious issue given the multitude of tests that exist such as Mehlich, Bray, Olsen and Colwell. Each has its advantages and disadvantages and given the variability in tests and the results they can generate it is important to know which method is used and why.

AGCSATech uses the Olsen test as its preferred testing method, which was originally developed in North America in the 1950s. The optimum range of between 12 and 20 mg/kg is based on recommendations sourced from Carrow, Waddington and Rieke's publication 'Turfgrass Soil Fertility and Chemical Problems' (page 207).

The Olsen P test uses sodium bicarbonate to extract soil phosphorus. As McKie (2009) states, results should not be seen as an absolute and unequivocal determination but rather should only be used as an estimate of soil-available phosphorus levels. If, however, testing has been undertaken for several years, then the end-user can put more confidence in the results obtained (i.e.: a trend is usually of more value than one isolated individual result.)

AVAILABLE POTASSIUM

The measurement of available potassium is undertaken by a calculation based on the milliequivalent/100g result where;

Potassium (meq/100g) x 390 = Potassium (ppm)
(e.g.: 0.54 meq/100g K = 211 mg/kg K)

Similar to the available phosphorus optimum range, the available potassium optimum range is based on recommendations sourced from 'Turfgrass Soil Fertility and Chemical Problems' (page 218).

EXTRACTABLE CATIONS

The measurement of extractable cations is undertaken by mixing soil with an ammonium acetate solution at a ratio of one part soil to 10 parts solution. Suspensions are clarified by centrifugation and filtration prior to analysis for exchangeable and soluble cations using a spectrometer.

Exchangeable cations such as calcium, magnesium, sodium and potassium are measured in milliequivalents/100g. The sum of these cations can then be used as an estimate of the soil's cation exchange capacity (CEC), or in other words the ability of the soil to retain nutrients. Sand based constructions which contain little in the way of clay particles traditionally display poor nutrient holding characteristics or a low CEC.

BASE SATURATION

Hull (2008) states the theory known as 'Base cation saturation ratio', which has its origins centered on research first conducted back in the 1940's by Bear and Albrecht, suggests there is an ideal ratio or balance of exchangeable cations in the soil and recommendations of fertiliser should be made to adjust the soil to this ratio.

Table 1 outlines this ideal ratio with proponents claiming that the concept of cation balance is important to plant growth and indicate the nutrient supplying capacity of the soil. Many soil scientists however, believe the theory is nothing but a theory,

with Whitlark (2009) stating "the percentages and ratios of Ca, Mg and K are simply not important for turfgrass growth, rather it's the amount of these exchangeable cations in the soil which is important."

TABLE 1: IDEAL BASE SATURATION

Calcium	65-85%
Magnesium	10-20%
Potassium	2-7%
Sodium	0-5%
Hydrogen	0-5%
Ratios	Ca/Mg <6.5:1 Ca/K <13:1 Mg/K 2:1

CONSISTENCY THE KEY

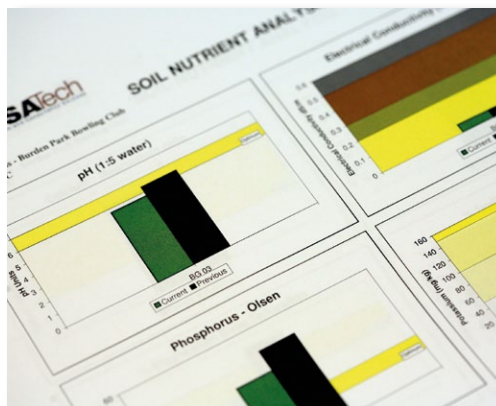
There is no doubt that regular soil nutrient testing plays an integral role in helping the turf manager understand plant nutritional requirements. It should be noted, however, that there are a number of variables which can influence soil test results.

One such variable is the sampling technique adopted. Consistency is the key and it is important soil samples are representative of the entire area being tested. It is also recommended the sampling depth be a minimum of 100mm deep with a minimum of 500 grams required per sample.

As mentioned earlier it is worth noting that sand-based constructions have poor nutrient holding capabilities and for these soils testing only provides a snapshot of the soil nutrient status. For these types of profiles a number of turf managers prefer tissue testing which has the advantage of determining nutrient levels within the turfgrass plant.

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There are many components which make up a standard soil nutrient test including soil pH, electrical conductivity, available phosphorous and potassium, extractable cations and base saturation



Above: It is important soil samples are representative of the entire area being tested and sampling depths should be a minimum of 100mm deep with minimum of 500 grams per sample

Left: Regular testing is beneficial as the turf manager can compare results from previous seasons



From the start of the week to the end, the 27th Australian Turfgrass Conference and Trade Exhibition in Adelaide had its fair share of drama, intrigue and innovation. ATM provides a comprehensive wrap of the industry's largest annual gathering and profiles this year's national award winners.



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RAIN BIRD



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"The little bloke is off the US!" Those were the excited words from Royal Canberra Golf Club assistant superintendent Andy Heskett down the phone to his boss Michael Waring shortly after a gripping conclusion to the 2011 Toro AGCSA Golf Championships held at Kooyonga Golf Club in Adelaide on 13 June.

The 'little bloke', Brent Hull from Moruya Golf Club on the NSW south coast, had just defeated Mona Vale Golf Club course superintendent Andy Hugill on the second hole of an unprecedented playoff, in what proved to be a fitting start to a 27th Australian Turfgrass Conference and Trade Exhibition which had its fair share of drama.

The tense climax to the AGCSA's premier golf tournament came about after four players finished tied on 77 following 18 holes of golf on an unrelenting Kooyonga layout which was presented in superlative condition by host superintendent and AGCSA member Steven Newell and his crew.

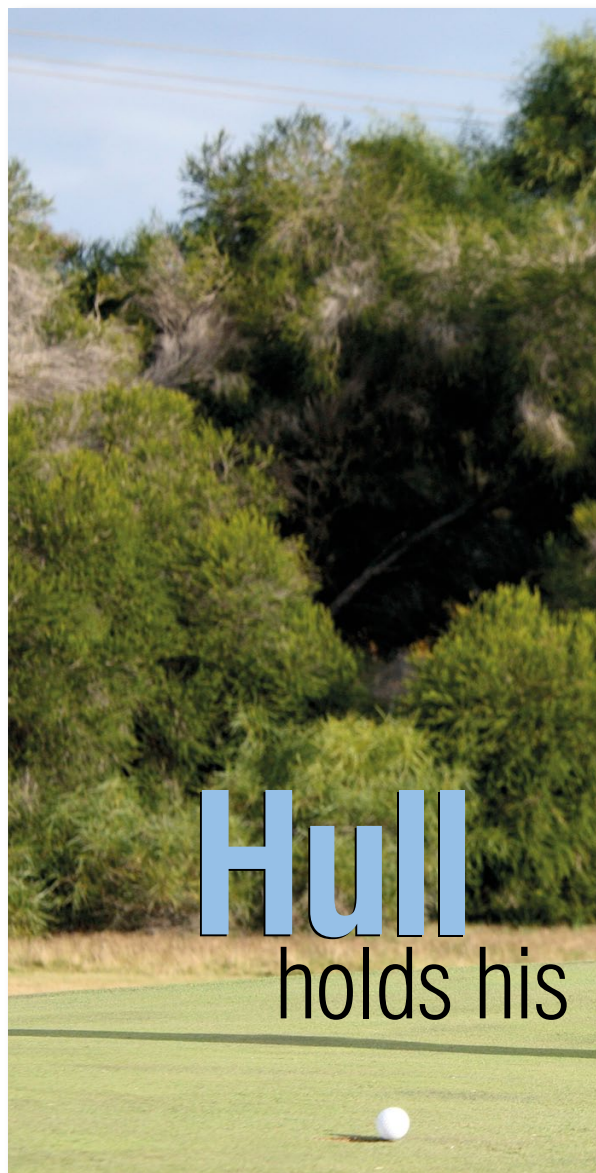
With some pin placements described by one of the playoff contenders as "pure evil", it proved to be tough going for most of the 88-strong field. The next best stroke score was an 80 from Ben Grylewicz (The Ridge Golf Club), while Matthew Robilliard's 32 points was enough to see the Silverwoods course superintendent walk away with the hard-earned stableford trophy, his total equalling the second lowest winning stableford score in AGCSA Championship history.

With a trip to the 2012 GCSAA Golf Show in Las Vegas as well as a berth in the 2012 GCSAA National Golf Championships up for grabs, there was literally everything to play for when AGCSA president Allan Devlin announced during lunch that there would be a four-way sudden death playoff, starting on Kooyonga's par five 1st.

Hull, who ironically the year before had finished runner-up at The Glades with a 77, was joined by the likes of two-time runner-up Hugill, Scott Harris (Gold Creek CC) who was gunning for a record-equalling third Toro Red Jacket, and Michael Dennis from Royal Perth Golf Club who was playing off +3 and tipped by many as favourite.

Playing in just his second AGCSA Golf Championships (he finished runner-up to Steve Jacobsen in his first tilt back in 2006 at North Lakes Golf Club in Brisbane), Dennis headed into the event with a stellar season in the Western Australian amateur ranks behind him. Indeed, in the weeks after the conference, Dennis would go on to win the prestigious Paxton Averages trophy, which is regarded by many as the holy grail of WA men's amateur golf.

Form, however, often counts for nothing when it comes to playoffs and stroke by stroke so it proved at Kooyonga. After a superb tee shot and solid second, Dennis was left in disbelief just moments later as he was eliminated after carding a six. Harris, who was out of sorts off the tee, overcooked his approach shot in a similar fashion to Dennis



and also exited the running early after posting an uncharacteristic seven.

By contrast, Hugill, who looked to be shot after his tee shot went way left into the trees, redeemed himself with a superb fourth shot that landed within a few feet of the pin for an easy tap in, while Hull managed to book his spot on the 2nd tee thanks to a timely 10-foot par putt after earlier finding himself in the rough with a nervous second shot.

Heading to the par five 2nd, Hull put his drive into a left hand side fairway bunker while Hugill creamed his drive down the right and set himself up beautifully for a long second. No doubt sitting reading this now, Hugill would give anything to have that second shot again and while his rival recovered admirably from the bunker, Hugill badly pulled his second shot left and into thick scrub about 100m out from the green. After plenty of animated discussion over the rules, Hugill was forced to take a penalty drop. That and the following duffed chip pretty much signalled the end for Hugill and Hull was able to hole out for a nervous six and claim the title.

It was Hull's first Red Jacket after having finished runner up on two previous occasions, last year



Brent Hull watches his par putt drop on the first playoff hole during the 2011 Toro AGCSA Golf Championships at Kooyonga Golf Club. A few shots later Hull would eventually claim his first Toro Red Jacket

2011 GOLF SCOREBOARD

TORO AGCSA GOLF CHAMPIONSHIPS

Kooyonga Golf Club

Stroke

77: Brent Hull (Moruya GC) defeated **Andy Hugill** (Mona Vale GC) second hole of playoff. Eliminated after first hole of sudden death playoff **Michael Dennis** (Royal Perth GC) and **Scott Harris** (Gold Creek CC)
80: Ben Grylewicz (The Ridge GC)

Stableford

32: Matthew Robilliard (Silverwoods)
29: Adam Leech (Gundagai District Services Club)

State Teams Title

1. ACT 126 (Brent Hull 35, Scott Harris 33, Adam Leech 29, David Thomson 29)
2. NSW 119 (Ben Grylewicz 32, Andy Hugill 29, Damien Murrell 29, Trevor Ridge 29)
3. VIC 115 (Matthew Robilliard 32, Brendan Brown 30, Leigh Yanner 28, Matthew McLeod 25)

TORO AGCSA SCRAMBLE

Adelaide Shores

1. Paul Sanson (Townsville City Council), **Sean Stuchbery** (Bundaberg GC), **Malcolm Caddies** (Suncorp Stadium) and **Shane Biddle** (University of Queensland – 57.875 nett)

Longest Drive (13th): James Gordon (Sanctuary Cove G&CC)
Nearest the Pin (2nd): Luke Cousins (D&D Curators)

nerve to reign in Adelaide

on the Gold Coast and in 2007 at Paradise Palms when Harris won his first title. For his efforts, Hull will now follow in the footsteps of past AGCSA Championship winners Anthony Toogood and Trevor Ridge in representing Australia and the AGCSA at the GCSAA National Golf Championships which will be held next February in Palm Springs. Hull will aim to better Ridge's strong showing earlier this year at The PGA National Resort and Spa in Florida where he finished ninth overall.

Hull's triumph capped off a day to remember for the ACT contingent at Kooyonga. While hailing from NSW, Hull has been a perennial member of the ACT team and after coming close to snaring the state teams title in recent championships, 2011 finally proved to be the territory's year.

Anchored by Hull and Harris, and with solid contributions from stableford runner-up Adam Leech (Gundagai District Services Club) and David Thomson (Bermagui CC), ACT comfortably claimed the title with 126 points, seven clear of NSW. Speaking on behalf of the ACT contingent, Harris



A new champion is crowned. Brent Hull will now play in the 2012 GCSAA National Golf Championships in Palm Springs, USA

CONTINUED ON PAGE 46



Inaugural winner of the National Sports Turf Graduate of the Year Award Rebecca Dynon



2011 AGCSA Graduate of the Year Award winner Dan Oswin representing the VGCSA

VICTORIAN GRADUATES TOP AWARDS CLASS OF 2011

Phil Ford, joint winner of the 2011 AGCSA Distinguished Service Award, rubbed it in just a little when he summed up this year's AGCSA Awards during his acceptance speech in Adelaide – "In the words of Bill Lawry, it's hard to be humble when you're a Victorian."

Victorians dominated the 2011 AGCSA Awards which were announced during the 27th Australian Turfgrass Conference in Adelaide last month, and along with Ford, Colin Morrison (AGCSA Excellence in Golf Course Management Award, see page 46) and Tim Fankhauser (AGCSA Award for Academic Achievement, see page 48), both the AGCSA Graduate of the Year and TGAA/STA National Sports Turf Graduate Award also went the way of two impressive up and coming Victorian turf managers.

For Racing Victoria's Rebecca Dynon it was a conference to remember after she became the inaugural recipient of the TGAA/STA National Sports Turf Graduate Award, while VGCSA Apprentice of the Year winner Dan Oswin became the first Victorian since the Adelaide conference back in 2003 to collect the AGCSA Graduate of the Year Award.

Both Dynon and Oswin are no stranger to awards and in being bestowed their latest honours add to an impressive array of accolades which they have each picked up during their fledgling careers.

Dynon edged ahead of a strong field which included Shaun Patterson (The Australian Turf Club), Danny Hull (Queanbeyan Bowling Club), Luke Cousins (D&D Curators) and Brendan Ott (Toowoomba Grammar), while Oswin beat home a quality field of fellow golf apprentices that included Dane Robertson (Indooroopilly Golf Club), Tyson Dickinson (The Grange Golf Club), Roger Chaffey (Manly Golf Club), Ben Callaghan (Royal Canberra Golf Club) and Tom Purser (Meadow Springs Golf Club).

The daughter of a racehorse trainer, Dynon was always destined to work within the racing industry and after spending some 20 years as a track rider discovered she had an interest in sports turf management and how it affected the performance of racehorses. Taking up an apprenticeship at Tatura & Shepparton Racing Club, Dynon attended Northern Melbourne Institute of TAFE, Fairfield where she completed a Certificate III in Horticulture (Turf) and is currently undertaking the Diploma course.

The National Sports Turf Graduate award caps off a remarkable 12 months for Dynon which began at last year's Australian Racecourse Managers Association conference in Canberra. There she was named winner of the prestigious Steriline Racing ARMA Scholarship for her initiative, dedication and strong passion for the racing industry. Valued at \$10,000, the scholarship afforded Dynon the opportunity to study all aspects of racecourse management at the Hong Kong Jockey Club

and Singapore Turf Club over a two week period in January 2011. Shortly before the Adelaide conference Dynon was also named Best Third Year Apprentice at the NMIT's Horticulture Awards evening.

"Rebecca has a great understanding of the racing industry, is extremely driven and is a very deserving recipient of the inaugural National Sports Turf Graduate Award," says STA NSW's Jenny Zadro, who oversaw the award judging process. "The judges were impressed with her great ambassadorial skills and ability to think outside the square. During her studies and in her work Rebecca has displayed a great passion for the industry and a determination to learn more and improve her skills."

Sharing a passion for turf, but on the golf course, AGCSA Graduate of the Year winner Dan Oswin hails from Novotel Forest Resort in Creswick, just north of Ballarat. Completing his apprenticeship through Geelong-based Gordon TAFE, Oswin has already experienced more than most over the past five years having been involved in the redevelopment and construction of the Tony Cashmore-designed course between 2006 and 2008. He is now part of the course maintenance crew which is headed by his father Kel Oswin, and during an at times emotional acceptance speech in Adelaide, Oswin paid particular tribute to his father who was present to witness his son's finest hour.

Like Dynon, the AGCSA Graduate of the Year Award continues an impressive run for Oswin who in the weeks leading up to Adelaide, also received the President's Medal for Outstanding Certificate Student at The Gordon TAFE's Outstanding Achievement Awards. Oswin was also named the Best Third Year Apprentice at the 2010 Geelong Regional Training Awards and in May was named the VGCSA's Apprentice of the Year.

According to his teachers at The Gordon, Oswin's passion for the trade shone through in all his work, whether in the classroom or out in the field. Consistently submitting work of a very high standard, one teacher commented that Oswin's first year assignment was the most comprehensive and detailed that he had seen in his 18 years of teaching.

Driven by a desire to become a sustainable turf manager who is committed to encouraging excellence in his trade, Oswin travelled from Creswick to Geelong once a week for three years to complete his Certificate III in Horticulture (Turf Management), and keen to extend his knowledge he started his Diploma of Sports Turf Management by correspondence while undertaking his apprenticeship.





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The 2011 AGCSA Golf Championships saw a four way playoff between (from left) Michael Dennis (Royal Perth), Andy Hugill (Mona Vale), Brent Hull (Moruya) and Scott Harris (Gold Creek)

CONTINUED FROM PAGE 43

dedicated the win to Royal Canberra superintendent and regular championship starter Michael Waring who had to pull out of this year's conference following the death of his son in the weeks leading up to it.

ASH ANGST

While the nerves were clearly on show during the playoff at Kooyonga, they were also palpable at the Adelaide Convention Centre which played host to the education sessions and trade exhibition components of the week. Stress levels on Sunday,

Monday and Tuesday were certainly elevated as the conference looked set to become a victim of the volcanic ash plume from southern Chile's Puyehue volcano which created air traffic chaos across the southern reaches of Australia.

With flights out of Melbourne and Tasmania suspended on Sunday and Monday, a number of Victorian delegates, speakers and trade representatives were left stranded, forcing some to car pool and make the eight hour road trip from Melbourne, among them three AGCSA staff members. Monday's flight disruptions also affected the Toro AGCSA Golf Championships luncheon with guest speaker Sam Kekovich unable to make it across, which in the end was rather fortuitous due to the extra time needed to conduct the playoff.

Further trouble prevailed on the opening day of the conference education sessions, when Adelaide Airport was shut down for 24 hours. That had a profound impact on a number of trade representatives who were due to set up for the following two-day trade show, while it also scuppered the plans of Avondale Golf Club course superintendent and speaker David Warwick. Presidents Cup executive tournament director Matt Kamienski was another who fell victim.

Despite the uncertain start, by the week's end another successful regional conference had come to a close with more than 300 fully registered and day delegates enjoying a wide range of presentations based around the theme 'Plan, Build, Play'. The trade show again formed the backbone of the



Colin Morrison recently became the fourth Victorian superintendent in 11 years to win the AGCSA's Excellence in Golf Course Management Award

2011 AGCSA EXCELLENCE IN GOLF COURSE MANAGEMENT AWARD

Colin Morrison, Flinders Golf Club, VIC

Flinders Golf Club course superintendent Colin Morrison joined the likes of fellow Victorian colleagues Mark Jennings, Gary Bass, Mark Gahan and John Geary after he was named winner of the 2011 AGCSA Excellence in Golf Course Management Award at the recent Adelaide conference.

Residing on the cliffs overlooking Bass Strait and Westernport Bay on Victoria's Mornington Peninsula, Flinders Golf Club is the sort of place which keeps you on your toes from a turf management perspective and while not having the resources of some of the other bigger players on peninsula, it is hard to fault the conditioning and presentation of the course which Morrison manages with precision.

During his time as Flinders superintendent, Morrison has undertaken and overseen a range of course improvement works, and perhaps one of the more significant involved the recent redesign of the club's 11th hole. Morrison was faced with many challenges during the project which saw the hole reconfigured from a relatively straight par four along the course's left hand boundary to a sharp dogleg right that requires a lay-up tee shot to get the best angle into a well-bunkered elevated green.

The newly constructed green directs play away from the housing along the boundary and has increased pin placements which demand more accuracy in approach shots. The placement of bunkers and shaping of contours surrounding the green ensures traffic is not concentrated in any one area.

The changes to the 11th at Flinders were a real 'club' effort with the new green, fairway and bunkering designed by club captain Neil Cavanagh, with significant input from Morrison in regard to construction, soil, drainage and irrigation. Morrison was well supported by assistant superintendent Robert Bell who helped direct the small team onsite.

Morrison project managed the new green from the initial design concept, construction and turfgrass selection, while daily maintaining the 18-hole course to a standard members demand. He scheduled construction and turf establishment to allow for the most efficient progress of works. Morrison's knowledge of the perched water table method importantly was utilised in constructing the new green, which was sown with Pennlinks, while the existing cool-season fairway was converted to Wintergreen couch. The changes have been very well received by the members.



**JOHN DEERE
GOLF**

week's programme with 44 companies exhibiting the latest in industry products and services.

Overall delegate numbers were well up on the last regional conference held in Hobart in 2009, and this year delegates had the opportunity to hear from international guest speakers Brian Whitlark (USGA) and Dr Micah Woods (Asian Turfgrass Centre). While their respective sessions proved popular, those given by the large contingent of local and interstate superintendents were as equally well received and among them were Peter Lonergan, Leigh Yanner, Mal Grundy, Tim Warren, Shaun Probert, Trevor Strachan and Pat Pauli as well as local turf experts Phil Ford, Terry Woodcock and John Neylan.

"One recurring piece of feedback is that superintendents like to hear from other superintendents," says AGCSA events and education manager Simone Staples. "I think this year we delivered on that, but more importantly we included superintendents from a wide range of courses which had varying levels of resources and climatic conditions.

"It's one of the hardest gigs to get up in front of your peers and deliver a presentation at an event such as this. It certainly took a few of our superintendents and turf managers out of their comfort zone, but they performed exceptionally well and all received very positive feedback from their colleagues in our post-conference survey.

"It was also very pleasing to see how those delegates and speakers affected by travel disruptions, particularly in Victoria, were able to get



Michael Dennis (pictured) along with Scott Harris were eliminated after the first playoff hole

together and car pool across to Adelaide. It shows what sort of regard the conference is held in that people would go out of their way to attend."

TOURS AND WORKSHOPS

While the three-day golf and sportsfield stream sessions were well attended, this year's conference included an expanded format on Friday. As well as the traditional turf tour, delegates had the option of attending two one-and-a-half hour workshops, one which officially launched the AGCSA's OH&S

2011 AGCSA CLAUDE CROCKFORD ENVIRONMENTAL AWARD

Troy MacLaren, Kabi Organic Golf Course, QLD

You would be hard pressed to find a more fitting winner of the AGCSA's prestigious Claude Crockford Environmental Award than Troy MacLaren. Since starting as superintendent of Kabi Organic Golf Course near Noosa back in 2001, MacLaren has helped to develop this one-of-a-kind facility which is literally at the cutting edge of environmental sustainability.

Abiding completely by organic principles, every facet of MacLaren's course maintenance operations is unique and over the past decade he has helped to promote the cause of organics and the role it can play in turf management. Through ongoing research and development at Kabi, MacLaren has proven that maintaining a golf course in such an environmentally sustainable manner is more than achievable.

Organics in its simplest form means doing everything the way it was done traditionally. In relation to golf course management, that means that no synthetic chemicals or fertilisers are used at Kabi, with groundstaff hand-weeding turf surfaces and spraying only things that are made naturally, such as daisy extracts and worm-based fertilisers.

Kabi has adopted a unique method of changing the mindset of golfer's that play the game by

educating them on how the facility is different and why they have gone down the organic path. Kabi has higher thresholds in managing pest and disease problems than equivalent 'normal' courses, but the golf course is definitely of a standard that is acceptable.

The Kabi property measures 120 hectares, with 48 hectares of forest forming a buffer zone. The whole facility is designed to be a Land for Wildlife site, providing a home for various species including black cockatoos, forest kingfishers, whistling kites, king parrots, kangaroos and wallabies which all inhabit the golf course.

Synthetic pesticides are prohibited and any major outbreaks have to be treated with organic products. The resident pest controllers – sacred ibis, magpies, plovers, butcher birds and even kookaburras – keep insect pressures at bay with some assistance from greenkeeping staff using bio-dynamic practices and various organic inputs.

Notably, disease outbreaks at Kabi are minimal which suggests that inoculating the soil with beneficial biology is helping to keep the pathogens that cause disease at bay.

Editor's Note: For the full story on Kabi Organic Golf Course, see Volume 12.4 (July-August 2010) of Australian Turfgrass Management.



2011 AGCSA Claude Crockford Environmental Award winner Troy MacLaren from Kabi Organic Golf Course

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Brian Whitlark from the USGA was one of two major international guest speakers in Adelaide

initiative 'Stop Take 5' and a second on personal wealth and financial management.

While numbers were moderate, those who attended were very positive about the content, in particular the group discussions which the workshops generated.

As it did the last time the conference was held to Adelaide, the turf tour stopped off at Glenelg Golf Club where Daryl Sellar showed delegates the \$2.4 million works to the course to accommodate the new ASR scheme. Works have included the construction of 1.4 hectares of wetlands which have been populated by more than 50,000 plants. When it is fully operational – the club is currently in the process of test injecting – the club will have the ability to inject between 300-400 megalitres per year.

Adelaide Shores was the second venue on the tour with delegates getting the opportunity to view one of the state's busiest public access golfing establishments and the many leisure facilities which also make up the wider tourist precinct.

CHANGE OF GUARD

As well as the many presentations, workshops, networking events and tours, the annual conference

also provides an opportunity for a number of 'behind the scenes' meetings for associations and interest groups. Among them was the AGCSA's VIP lunch where general manager John Neylan updated key industry stakeholders about the ongoing activities of the association and future developments.

The National Turf Education Working Group, of which the AGCSA is secretariat, also met in Adelaide. Members of the group took the opportunity to discuss the recently endorsed turf training package (read more about this on pages 24-30), as well as look ahead to formulating content for the Certificate III Sports Turf Management Resource Workbook which is set to follow on from the successful release of the Certificate II workbook earlier this year.

One of the key annual meetings at the conference is the AGCSA Annual General Meeting which this year saw a significant change of guard. With Pat Pauli (Horton Park GC) and John Odell (Royal Sydney GC) stepping down, two positions were vacant and after nominations closed three candidates had put their name forward which prompted a rare vote.

Darren Wilson (Wembley Golf Complex, WA) and Tony Fogarty (Club Catalina Country Club, ►



The Dunes assistant superintendent Tim Fankhauser made it two from two for Chisholm TAFE's Diploma of Sports Turf Management course after taking out the 2011 AGCSA Award for Academic Achievement

2011 AGCSA AWARD FOR ACADEMIC ACHIEVEMENT

Tim Fankhauser, The Dunes Golf Links, VIC

For the second year running Chisholm Institute of TAFE on Victoria's Mornington Peninsula can lay claim to producing the winner of the AGCSA Award for Academic Achievement, presented in partnership with PGG Wrightson Seeds.

Recognising an individual for their commitment to pursue further turf management studies by undertaking the Diploma of Sports Turf Management, Tim Fankhauser was bestowed the 2011 award in Adelaide, making it two from two for the institute after Chisholm's Steven Johannessen picked up the inaugural award in 2010.

Fankhauser, 41, was a late starter to the turf industry, picking up a position on the groundstaff at The Dunes Golf Links on the Mornington Peninsula in 2002 after working 16 years on his family's apple orchard.

Completing Certificate III in Sports Turf Management at Chisholm as a mature age apprentice, in 2006 Fankhauser was duly appointed assistant superintendent by The Dunes course superintendent Mark Gahan who encouraged him to undertake the Diploma of Sports Turf Management through Chisholm.

"Ever since starting at Chisholm as an existing worker apprentice in 2004, Tim showed the commitment and dedication that I find truly rewarding as an educator," comments Chisholm teacher Bruce Macphree. "It is rare to find such an individual who shows unwavering drive towards improving his knowledge and understanding within the turf industry."

As well as furthering his own understanding of turf management and golf course maintenance by undertaking the Diploma course, The Dunes has also benefited by having one of their senior staff members involved in ongoing education. As well as playing a key role in a number of major projects on course, including the recent rerouting and resurfacing of two holes, Fankhauser has also been able to have a significant impact on the way in which The Dunes approaches OH&S.

"The Dunes has always taken OH&S seriously, however, it just wasn't documented as well as it could be," comments Fankhauser. "Since completing the OH&S unit as part of the Diploma, I have been able to document many policies and procedures for our workplace. I have been able to carry out and document hazard/risk assessments on all equipment and chemicals and put in place hazard plans."

Another benefit came from Fankhauser's trial and research assignment. At the time The Dunes was experimenting with growth regulator Ethephon for the reduction of *Poa annua* seedheads on greens. Although achieving excellent results, there was concern about the possible effect of it on bentgrass roots and through Fankhauser's research project he was able to demonstrate its use was having some effect.

"I'll admit that during my time that the workload of a full-time job and part-time study did, at times, seem overwhelming, but now that I have completed the Diploma I feel extremely rewarded and proud of my achievements."

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Coolangatta superintendent Peter Lonergan holds court during the performance panel session



Dr Micah Woods brought a practical scientific perspective to the turf management with his talks on nutrition



Ryde Parramatta's Shaun Probert feels the heat

Terry Woodcock in full flight during his golf stream presentation on pests and diseases



NSW) were officially elected as the new directors and will serve a term of two years alongside incumbents, president Allan Devlin (Secret Harbour, WA) and newly appointed treasurer Bryce Strachan (Pambula-Merimbula GC, NSW).

The new-look Board, which was due to meet for the first time in mid-July, will have little time to settle in before undertaking one of its most important decisions in choosing a replacement for John Neylan who announced he would be stepping down as AGCSA general manager in the weeks following the conference.

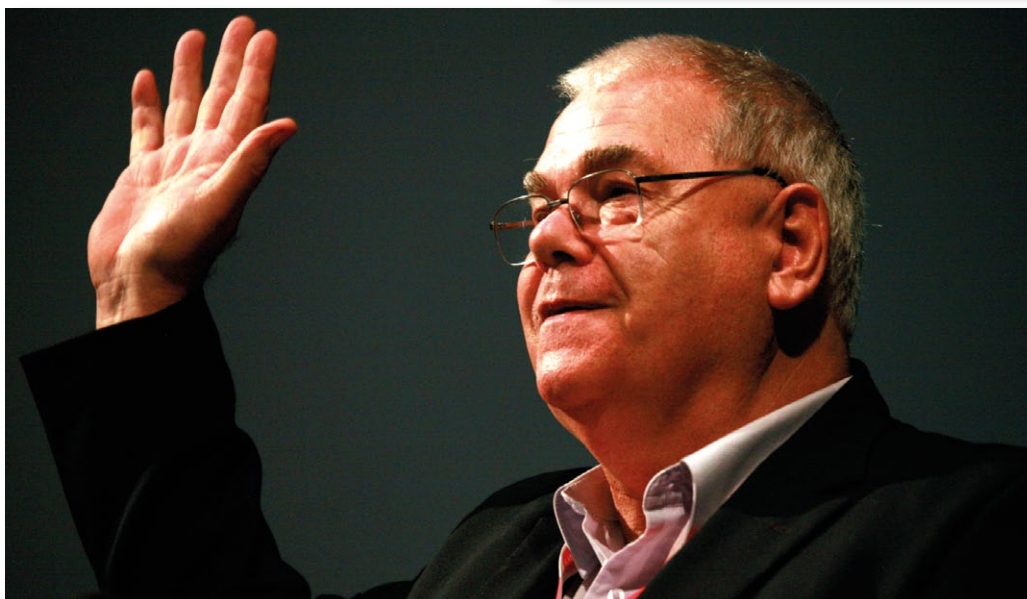
MELBOURNE 2012

With Adelaide now but a memory, the AGCSA is currently setting the wheels in motion for next year's return to Melbourne. The 28th Australian Turfgrass Conference and Trade Exhibition will be held from 4-8 June 2012 at the Melbourne Convention and Exhibition Centre.

Next year's event will have a truly international flavour with representatives from the many superintendent associations around the world heading Down Under for the International Summit which will run in conjunction with the conference.

The Melbourne event will provide a chance for the Australian turf industry to showcase itself to the world and Staples is promising something special for the international delegates, many of whom would not have been to Melbourne or Australia before.

"2012 is set to be a very big event for the AGCSA and the whole turf industry," says Staples. "We have started the process already by seeking feedback on certain aspects of next year's programme through the post conference survey sent out recently to Adelaide delegates. In the coming months we will be finalising content and venues and I can guarantee that our international guests will have the best possible opportunity to see some of the best turf facilities in the world on display." 🇦🇺



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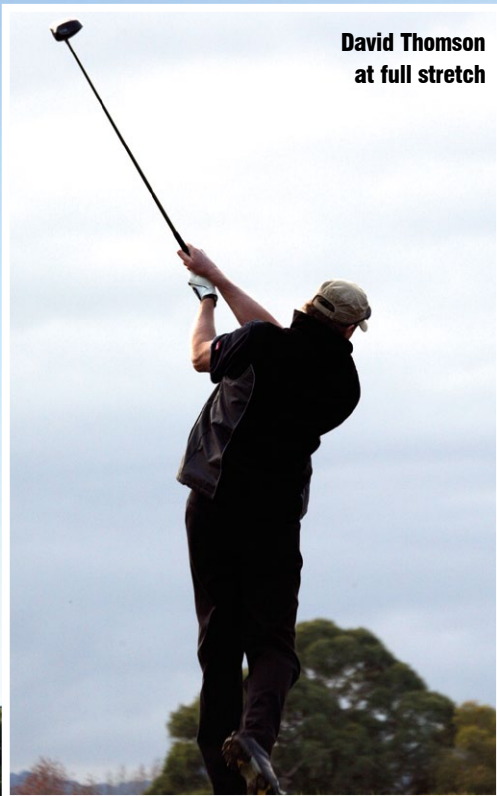
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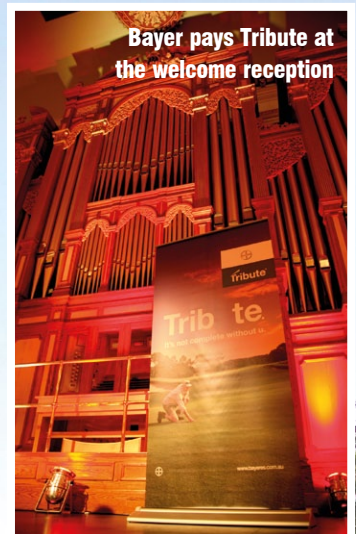




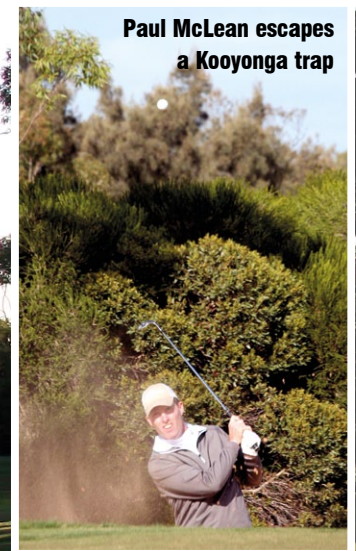
**David Thomson
at full stretch**



Pat Pauli in command



**Bayer pays Tribute at
the welcome reception**



**Paul McLean escapes
a Kooyonga trap**



**Norm Foord
gets beat up**



Black and white dynamite



**Dr Micah Woods
contemplates**

Artificial turf

literature review

Throughout 2010 the University of NSW undertook a Horticulture Australia Limited funded project examining peer-reviewed literature on the development, use and issues surrounding artificial turf playing surfaces. Research project leader Dr Gavin Edwards provides a summary of the project.



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The provision of a first class playing surface is one of the major challenges facing grounds-keepers worldwide. Imperfect climatic conditions can play havoc with preparation and maintenance, and high-demand sports such as soccer can cause a well-prepared grass surface to wear quickly, especially in high-traffic areas such as the midfield and the goal areas.

Over the past 50 years, providers of natural grass surfaces have faced increasing competition from the artificial turf industry. While the original artificial turf surfaces were often manufactured from relatively short nylon fibres and were quite unforgiving, the 'third generation' surfaces now available typically have longer fibres (>40mm) which look like longer blades of 'grass', and are manufactured from polymers that can be engineered to give a softer feel, normally polypropylene or polyethylene.

The 'third generation' surfaces also incorporate subsurface shock pads and crumb rubber or sand infill material to ensure the artificial blades stand erect; crumb rubber infill also enhances the shock absorbency of the surface. Artificial turf has now been used for sports as varied as soccer, American football, tennis, hockey, and rugby union, to name a few.

INJURY RATES

The inherently different nature of artificial turf, compared with natural grass, has raised questions about the relative merits of each surface. While for many years it was accepted that playing sports on artificial turf resulted in more injuries than equivalent

play on natural grass, advances in technology and the availability of 'third generation' synthetic surfaces are blurring the distinctions.

Some relatively long-term studies have highlighted different injury rates on artificial turf versus natural grass and there has not always been agreement between the studies, in part because of the very different demands on surfaces and athletes and the variation in surface types.

There are many variations in artificial surfaces, with even 'third generation' surfaces having considerable differences in their construction; likewise, natural grass surfaces can vary dramatically in quality. Nonetheless, while some studies have reached different conclusions, the general picture shows that a higher rate of injuries occurred on the earlier versions of artificial turf, often resulting from their more primitive construction where they had a poorer ability to absorb impact and the grass 'blades' were constructed from harder polymers.

Third generation surfaces show improved performance because of subsurface shock pads and crumb rubber infill, and this is important in reducing the risk of mild traumatic head injury; one disadvantage of excessive cushioning is that high-speed play becomes more arduous, and players either tire more quickly, or other injuries can potentially develop.

One research group suggested that the more uniform nature of artificial turf actually encourages faster play and this, combined with the higher level of cushioning in some artificial surfaces, can increase injuries resulting from fatigue and

overextension. Despite the technological advances in cushioning, compaction or loss of the infill through time can lessen the cushioning effect and result in a harder surface; in some cases, FIFA Two-Star rated soccer pitches were shown not to measure up to specifications after the passage of time, possibly due to loss of infill.

Injury patterns can vary dramatically between sports and, even within a particular sporting code, significant differences have been observed depending on skill levels or the gender of the players. Contact sports that require rapid acceleration and deceleration and turns, and also result in heavy impact with the playing surface, such as American football, have shown increases in lower limb and head and neck injuries on artificial turf. More lower limb injuries, especially ankle injuries, were also seen in soccer. Poor choice of footwear may be a significant contributing factor, with different types of footwear being developed for the different surfaces.

However, especially on more modern surfaces, the overall injury rates are quite similar even if the types of injury do differ compared with natural grass. One interesting observation is that injury rates can be significantly higher when players change frequently between surfaces because of the different biomechanical demands of the surfaces; if players regularly train and compete on a single surface type, they adapt and injury rates are lower.

While there is no consistent trend in number or type of most injuries observed on artificial turf versus natural grass, there are two unique injuries that are worthy of note. The occurrence of a type of sprain that typically occurs to the large toe (called 'turf toe') has seen a dramatic increase since the introduction of artificial surfaces.

Another injury more commonly seen on artificial turf is an abrasive burn known as a turf burn; its unique characteristics result from a combination of the abrasiveness of the artificial surface and the heat that generates from the friction. Serious turf burns have been proposed as a unique entry point for infective agents, and more stringent infection control measures are recommended. Recent advances in artificial turf construction with the introduction of softer polymers for the grass 'blades' is lessening the severity of turf burns.

The effect of the surface on a particular sport is one factor that has received some attention. The more uniform nature of artificial turf can provide for more uniform and predictable behaviour in factors such as ball roll and bounce, as well as the interaction of a player's foot with the surface.

Pressures on a player's foot can differ depending on the surface, and some artificial surfaces can provide added rotational resistance when a player turns; this could result in higher levels of ankle and knee injuries. Some studies have shown that the nature of a soccer game actually changes subtly on artificial turf, with fewer sliding tackles or long passes, for instance.

SURFACE COMPOSITION

The synthetic nature of artificial turf has given rise to concerns about possible toxic effects from some of the chemical components in the surface. Certainly, older artificial fields have faced problems with lead and chromium contamination, due to the high levels of lead chromate used to colour the artificial grass blades. This has led to intensive research to reduce or eliminate the need for lead.

One of the more ongoing sources of concern is the crumb rubber used as infill. This crumb rubber is usually manufactured from recycled car tyres, often by a cryogenic process that involves freezing, shredding and grinding of the tyres to produce small, relatively uniform granules. The origin of the crumb – old car tyres – has led to significant concern not just because of the chemical composition of the tyres, but also the potential for the tyres to have picked up other contaminants in their lifetime.

In addition to the relatively inert polymer matrix, tyres are manufactured containing metals that are used in the production process such as zinc, calcium and magnesium; crumb rubber has also been shown to contain trace amounts of more problematic heavy metals such as lead, chromium, arsenic and cadmium.

Tyres and, by extrapolation crumb rubber, can also contain vulcanisation accelerants and a range of other relatively volatile organic compounds including polycyclic aromatic hydrocarbons (PAHs). Most concern has centred on the PAHs, some of which are known carcinogens. One possible problem is that artificial turf fields, when exposed to the elements, will produce runoff containing both organic contaminants and metals, potentially having

Opposite page: Artificial turf has now been used for sports as varied as soccer, American football, tennis, hockey, and rugby union

TALKING ABOUT THE GENERATIONS

Rigid and unequivocal definitions for each 'generation' of artificial turf are often difficult to determine, as various manufacturers have developed products with quite different features. The following are broad definitions of the different generations of artificial turf surfaces since their first appearance in the 1960s.

First generation: As the name suggests, this term relates to the first styles of artificial turf, typified by the product introduced as Chemgrass and later renamed AstroTurf in the 1960s. First generation turf was constructed of short, relatively hard and stiff 'blades', often with no in-fill. While some authors claim that the first generation were made from polypropylene, it is generally accepted that the first artificial surfaces were manufactured from nylon. Interestingly, some authors do state that some first generation pitches had sand as in-fill.

Second generation: This product generally saw the introduction of infill, or material that was placed between the (still relatively short) artificial fibres. The fibres were somewhat softer than first generation fibres, manufactured from polypropylene. The infill most often used in second generation surfaces was sand, and a problem that was observed was that the infill was readily compacted.

Third generation: The currently-available artificial surfaces are frequently referred to as 'third generation'. They typically involve longer fibres (>40mm), giving the appearance of longer blades of 'grass', and they are manufactured from either polypropylene or (preferably) polyethylene, giving a softer feel. Additionally, they are carefully engineered, with subsurface shock pads and significant infill material that is either sand, or (more usually) rubber, or both.



◀ **The 'third generation' surfaces also incorporate subsurface shock pads and crumb rubber or sand infill material to ensure the artificial blades stand erect**

a negative impact on the surrounding environment if not properly managed.

The presence of potentially dangerous chemicals, while not ideal, is not necessarily an issue; to be a cause for concern, the chemicals must be absorbed into a living organism. Ordinarily, this means the chemicals must be swallowed, inhaled or absorbed through the skin. The likelihood that significant amounts of crumb rubber would be accidentally swallowed reduces any exposure via this route, minimising any bioavailability of PAHs by ingestion.

Inhalation and skin absorption were studied in football players; while slightly higher levels of a standard compound were observed in urine, the study's authors concluded that uptake of PAHs was within the range expected for normal, day-to-day activities.

One factor that complicates the picture is that many of these contaminants are lost over time, either by degradation or by loss to the environment. This suggests that any dangers of exposure are at their highest levels either soon after installation of a new artificial pitch, or immediately after periodic replenishment of the crumb rubber infill (the gradual loss of which seems to be unavoidable).

Certainly, volatile organic hydrocarbons outgas very rapidly, with levels falling dramatically within two weeks. The one exception was zinc, where

higher levels of zinc were detected in runoff from older samples; the reason for this is not known. Research is being undertaken to determine if pre-leaching contaminants from crumb rubber, or coating the granules with an inert polymer, is a viable approach to improve the safety of these materials. Nonetheless while more research is warranted, based on the available evidence fears over the toxicological safety of artificial turf appear to be unfounded.

PLAYER PERCEPTION

Players' perceptions of artificial surfaces, and their preference for one type of surface over another, are interesting. While solid research is limited, most player surveys show a definite preference for natural grass. Players believe injuries are more prevalent on artificial turf, and more effort is needed to play on artificial surfaces, both in terms of execution of skilled manoeuvres and onset of fatigue. Fear of abrasive turf burns is one factor that is believed to contribute to the preference.

These opinions are no doubt dependent on the quality of the natural grass surface; in an Italian study where soccer players compete on fields that are little more than compacted earth, a definite preference for artificial turf was noted.

One undeniable difference is that artificial surfaces, in hot weather, get much hotter than natural grass. The desire to produce rich, natural-looking dark green artificial grass means that the blades, as well as the black crumb rubber infill, absorb light energy and radiate it back as heat.

Especially on sunny days, the difference in surface temperatures between an artificial surface and a neighbouring natural grass one can be staggering: artificial turf can be up to 40°C hotter. While this heat effect does depend on the type of artificial turf, all commercial products result in elevated temperatures.

As expected, applying water to the surface can lower the temperature, but this result is temporary; within a few minutes the temperature starts to rebound, though they do not return to the original

While for years it was accepted that playing sports on artificial turf resulted in more injuries than equivalent play on natural grass, advances in synthetic turf technology is blurring the distinction



ARTIFICIAL GRASS FOR SPORT GUIDE

Sport and Recreation Victoria (SRV) has recently released a comprehensive guide for the use of artificial turf for sport. Titled Artificial Grass for Sport, SRV hopes that the guide will provide a key resource for sporting clubs, local councils, even schools set to undertake an artificial grass sports surface project.

The guide was commissioned in response to inadequate information and support for local councils, schools and their communities to plan for, select, and install new artificial grass surfaces. As a result SRV has consulted with the sports industry and has developed the 156-page report which provides an overview of artificial turf surfaces before looking at the specific issues of planning, design, project delivery, operational and maintenance issues.

The Artificial Grass for Sport guide is available for download through the Department of Planning and Community Development website www.dpcd.vic.gov.au/sport/



levels within a reasonable period of time. While watering artificial surfaces does provide a potential solution to the issue of heat, in drought-prone Australia this is problematic.

Player preferences have shown, in general, that players prefer natural grass for their sporting endeavours, believing that artificial turf provides a less forgiving surface, resulting in more injuries, or less effective play. The picture is not always clear cut: when natural grass cover is minimal, perhaps from degradation by overuse, artificial turf can become the favoured surface.

While significant research has already been carried out on artificial turf, more remains to be discovered. In particular, as the industry develops newer generations of artificial surfaces, their impacts on players will need to be evaluated. However, before artificial surfaces become more accepted in Australia, issues such as the higher temperatures that inevitably develop must be addressed. It is likely, for the foreseeable future, natural grass will remain the surface of choice for many.

Editor's Note: This research (Horticulture Australia Limited Project TU09037) was funded by the Turf Industry Levy with matching funding from the Australian Government. The full 38-page report can be obtained from Horticulture Australia Limited – www.horticulture.com.au. Full references for this research project are contained within the final report.

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WORKS INSIDE AND OUT



Bairnsdale Golf Club VIC

After leaving Bairnsdale to take up an AFL traineeship at Melbourne's Huntingdale Golf Club, little did Danny Hack think that 11 years later he would return to his home town to take up his first superintendent posting.



Superintendent: Danny Hack.

Age: 29.

Period as a superintendent: Nine months.

Association involvement: AGCSA (six months) and VGCSA.

Turf management career: AFL Traineeship (one year) and apprenticeship at Huntingdale Golf Club (three years) before staying on for a further two years; assistant grow-in manager at Royal Queensland Golf Club working for Grove Construction (one year); grounds manager Camberwell Grammar (two-and-a-half-years); assistant superintendent RACV Healesville Country Club (18 months); course superintendent Bairnsdale Golf Club (9 months).

Turf management qualifications: Cert III Horticulture (Turf) through NMIT. Diploma of Horticulture (Turf) at Holmesglen TAFE.

Tell us a bit about your background in turf management? During my final year at secondary school I applied for an AFL traineeship and was successful in gaining a position at Huntingdale Golf Club. They were very supportive in allowing me to complete my VCE and I started two weeks after my final exam. So I packed up and moved from Bairnsdale to Melbourne and started my traineeship

under John Spencer. It is fair to say I was pretty raw when I started and I still remember my first day which was spent in the bunkers.

After completing my traineeship, fortunately I was offered an apprenticeship there under Michael Freeman. That was a fantastic experience and the knowledge I gained has got me to where I am today. After six years at Huntingdale, I packed up again and headed to Brisbane and worked for Grove Construction growing in Royal Queensland. It was a move I needed to make but unfortunately the opportunities were not as forthcoming as I hoped so I moved back to Melbourne.

I managed to gain employment working for a contractor where I was managing the sports grounds at Camberwell Grammar School. That was a chance to branch out into something a little different and gain valuable management experience. From there the desire to work in the golf course industry was still there and I was successful in gaining the 2IC position at RACV Healesville Country Club under Tim Pierce. After 18 months there I was encouraged to apply for the super's position at Bairnsdale and here I am today nine months later. I certainly didn't think 11 years ago that I would end up here as superintendent.

Provide an overview of Bairnsdale Golf Club and some of its unique characteristics. Bairnsdale Golf Club has been around for over 100 years and has an increasing membership base which is largely due to the number of people retiring to East Gippsland. Bairnsdale has a very strong lady member base that I believe is one of highest in country Victoria. Some of the club's unique features are the wonderful

views of the Gippsland Lakes from the back nine, the pure couch fairways and bentgrass greens. It is a testament to previous superintendent Noel Williamson and past committees for their decisions that have created such characteristics.

Having recently taken over as superintendent, what has been the most challenging aspect of settling in? Most demanding so far has been working out the right balance of hours between working on the tools, in the office, on the bowling greens, at home and changing some members' perceptions that the course has been managed a certain way for a long period (Noel served the club for 39 years) and why change anything at all. It is pleasing to say that some of the longer serving members have offered some positive feedback so some of the changes must be working.

What are some of the unique features about Bairnsdale Golf Club from a turf management perspective? Is it an easy/hard facility to manage? Like all country golf courses the smaller staff numbers does create some issues, but having said that it is amazing how efficient a golf course can be managed with such few numbers. It is certainly a credit to all country courses how well they are presented and in some cases are as good as many city courses.

I wouldn't say it is an easy or hard course to manage, rather it is a very enjoyable facility to manage overall. This is due to decisions many years ago to install some very good infrastructure including a fully automated irrigation system and two production bores, as well as implement a couch planting programme (fairways are now 75 per cent couch) and *Poa annua* reduction programme in greens. Without these things in place then yes it would be a huge challenge to keep the course in good condition. I am very fortunate in that I have an excellent base to work with and continue to improve on.

Take us through your turf management operations there and how you have fine-tuned them since starting there as superintendent? I have been very lucky to have worked under some very good turf industry practitioners and they have taught me how to achieve a high level of expectation within myself. I believe I have introduced a lot of small changes, the 'one percenters', that have given the course a more professional look (for example, all course furniture has recently been upgraded – tee markers, cups, pins and bunker rakes).

As for turf management, I have introduced a number of preventative programmes throughout the course on greens, tees and fairways. Greens now receive monthly fungicide, wetting agent (summer) and gypsum applications. Also, all greens are verti-drained with 8mm solid tines monthly. I have also started an Oryzalin programme on all couch areas



as a preventative for winter and summer grasses. I will be introducing a gypsum programme for the fairways starting this spring to counteract the salt levels in the bore water.

What are some of the major challenges facing Bairnsdale Golf Club both from a turf management and general club management perspective? From a turf point of view the major challenges are to keep progressing with the couch programme for the tees and remaining fairways. We also need to work really hard to improve shade issues around some of the tees and greens. At a club level the past and current committees have done a superb job in getting the club out of debt and back into surplus. It will be a challenge to keep this going, increase membership at the same time and hopefully be able to increase the budgets needed on course.

Outline any major course improvement works completed in the past couple of years and highlight any ongoing or future works that the club is undertaking. From a construction point of view the 13th green surrounds and approach was redesigned and constructed two years ago. A new set of approach bunkers and undulations were built. A large number of pine and cypress trees have come out over the years as well and that process will continue each year until all pines and cypresses are

Above: Recently appointed Bairnsdale course superintendent Danny Hack (centre) with assistant David Wallace (right) and greenkeeper Brian Wallace. While Hack has been at the club for just nine months, the Wallace brothers have served the club for a combined period of 60 years

Opposite page: In operation for more than 100 years, Bairnsdale Golf Club is one of the gems of Victorian country golf. Pictured is the par three 4th

Recent course works saw the 13th green surrounds and approach redesigned with a new bunker complex and undulations added



removed. A native vegetation programme has also begun and will continue into the future.

The club is very fortunate to have a 3000m² turf nursery on site which has now been set up as a base to replace all cool-season tees on course. A number of tees were resurfaced over summer and that process will continue until all have been converted to couch.

Further to these works the club has engaged Graeme Grant to draw up a course master plan. A first draft has been completed and I am hopeful a final plan can be completed this year which can then be voted on by the members. A positive vote would see the transformation of all bunkers, green surrounds and approaches, tee blocks and surrounds. This would set up Bairnsdale Golf Club well into the future.

How is Bairnsdale Golf Club faring in the water management stakes? The club is very fortunate to have a supply of two bores that pump water into a turkey nest dam which is used to irrigate tees and fairways. The water is 1200ppm and therefore a gypsum programme will start in spring. Also we have access to town water supply that is pumped into our main dam which is used to irrigate greens. Currently that supply is unlimited with East Gippsland water supplies close to 100 per cent at the moment. It must be said that the club only pumps in what is required and as always there is a cost involved so hence the reasoning to only use what is needed.

The one product I couldn't manage my course without is...? Wettings agents, because with a small staff base every bit helps.

What are some pros and cons of being a regional superintendent? The pros include the relaxed country lifestyle and having a great membership base that are so willing to help out. The drawbacks would be the distance from the city, not being able to get to as many VGCSA meetings as I would like and the lack of opportunity to network.

Are expectations of course presentation and conditioning any less than that placed on your metropolitan counterparts? I would say yes because I think country people will play on anything and not be too worried about the standard, but that is not to say that I don't have any expectations of myself and staff because I do. I have high expectations of myself and I certainly hope we prepare the golf course week-in, week-out as good as we can and maybe as good as some city courses. It depends on the individual as to how well the course is presented and I don't think being in the country is any excuse for having lower expectations.

Do you have to be more resourceful as a regional-based superintendent? There is no doubt that a country super has to be more resourceful. They have to spend more time on the tools due to staff numbers and they have to be able to get in there

AT A GLANCE - BAIRNSDALE GOLF CLUB

Where in the world is Bairnsdale? Bairnsdale is situated along the banks of the Mitchell River, 285km east of Melbourne on the Princes Highway and is the gateway to Victoria's Gippsland Lakes region. The golf club is located south of the main township at Eagle Point, on the road to Paynesville.

Course specs: 18 holes, par 71, 6060m. Practice facilities include couch tee (0.1ha), 1ha practice fairway, chipping green and practice putter. Two full size Tifdwarf bowling greens. 3000m² turf nursery.

Greens: 0.7ha of Pennncross bentgrass greens maintained at 3mm-3.5mm.

Fairways: Nine hectares wintergreen couch, 1ha Santa ana couch and 5ha kikuyu. Maintained at 10mm during summer and 15mm in winter.

Tees: Cool season (0.6ha) and wintergreen couch (0.2ha). Tees (and surrounds) maintained at 10mm during summer and 12mm in winter.

Rough: A mixture of couch and kikuyu.

Members: 750.

Annual rounds: 25,000.

Major tournaments: Bairnsdale Pro-Am, Bairnsdale Tournament, East Gippsland Classic, East Gippsland Plate, GSI Ladies Classic.

Annual course management budget: \$300,000 (including wages).

Staff structure: Danny Hack (superintendent), David Wallace (assistant

superintendent) and Brian Wallace (greenkeeper). David and Brian are brothers and have worked for a combined 60 years at Bairnsdale Golf Club!

Climate: Average maximum temperature 20.7°C, average minimum 9.1°C, average annual rainfall 715mm.

Soil types: Generally sandy loam across all areas. Greens are primarily push ups with the 3rd and 4th sand based.

Water sources: Fresh water pumped into a main dam via the town supply from the Mitchell River (this is used on greens only to minimise costs), two bores that pump into a turkey nest dam that services fairways, tees and surrounds.

Irrigation system: Fully automated Toro hydraulic system with network LTC satellites. Sprinklers include a mix of Toro 640s (greens), Toro 650s and 690s (fairways) and Hunter I21s (tees).

Renovations: Greens were renovated for the first time in five years in December 2010 and that practice will continue annually. Greens were cored with 12mm tines, amendments added and topdressed. Greens are also verti-drained monthly using 8mm solid tines. Fairways will be scarified annually starting from next summer.

Major disease pressures: Given the fact I have just come through my first summer, the greens were very good as far as disease was concerned. The main issue I encountered was brown patch but I am confident that the monthly aeration programme will alleviate such problems. As for winter issues, well I'll let you know at the end of August!



and do all manner of jobs. We certainly do have a smaller resource base but you do with what you have and just make things work. What I have learnt since starting here is patience. Things may take longer to complete or be delivered but in the end the job will get done. The club understands that which certainly takes the pressure off.

One thing I have introduced is a 'Dad's Army' programme. I am very lucky there are a high number of retired people that are members and we now have 20 on the volunteer list. They come in once a month for four hours and work with the course staff in completing various tasks. This has been a great way to improve the course and helps to build positive relationships between members and course staff.

The other trick I have also found is where possible using as many local resources as possible. For example I have now found a local agricultural fertiliser company that supplies simple fertilisers like urea and potassium. I think it is very important to support these local companies where I can rather than the city-based guys.

If you could change one thing about your job as a regional superintendent what would it be and why? At the moment, nothing. This is my first role as superintendent and I love it!

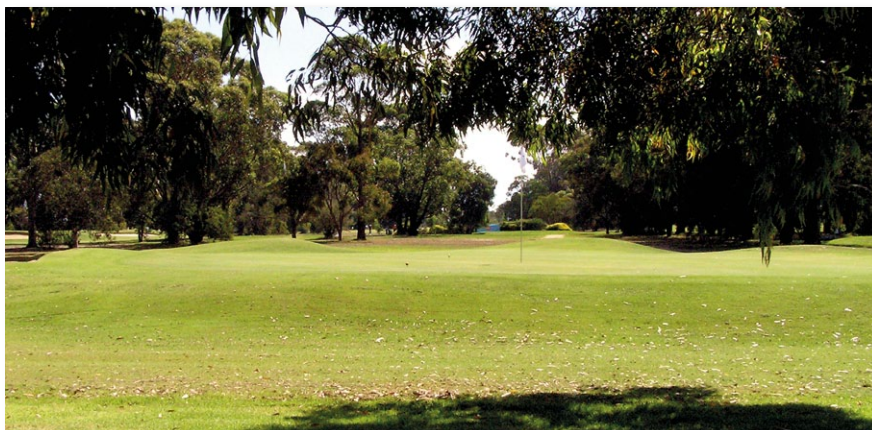
How important are the relationships you have with other nearby country course supers/trade reps? I am still in the early days here at Bairnsdale and time just seems to get away at the moment. Currently I have not had a lot to do with other supers in the area but a dream would be to create a little Gippsland sector of supers that can meet maybe once or twice a year and talk, play golf or maybe incorporate a seminar sponsored by a turf rep company.

What are some of the more unusual requests/things you have had to do as a superintendent of a regional course? I had one member, a keen fisherman, come up to me recently and said he wanted to put 100 baby trout into our ornamental dam on the 4th hole. He wanted somewhere to practice his fly fishing!

What have you got in your shed?

- Ransomes sports cutter fairway mower;
- Iseki SF 330 rough cutter;
- John Deere 955 tractor and Fiat tractor;
- Goldacres boom spray tank;
- Turfco topdresser;
- Jacobsen GKVI;
- John Deere 2653A;
- Verti-Drain 7212.

Which piece of machinery gets trashed the most and if you had a wish list what would be the next major ticket item that you would like to



purchase? The 3-wheel motorbike and two postie bikes. They are our only means of getting around the course without using a tractor. To the club's credit a Toro Workman is on order and I am hoping for another in the 2011-12 budget.

Do you have any interesting pieces of machinery which have been manufactured out of necessity or any old pieces of equipment that you keep alive? An old 200-litre spray tank was converted into a boom spray. An eight-jet boom was put on the back and it was adapted to fit an old Toro rough cutter that had its cutting deck taken off. It is used to spray the bowling greens.

Most pleasing/rewarding moment during your time as Bairnsdale Golf Club superintendent? Having a member of 40 years come up to me recently and apologise for earlier criticising my decision to reshape the fairways. At the time this particular member said that it looked silly and that the club would lose members because it was making the course tougher. This was one of the first things I changed at Bairnsdale and it has been very pleasing that such a simple change could have such an impact without spending a cent. 🌱

Since taking over as superintendent, Hack has implemented a number of preventative programmes throughout the course. Greens now receive monthly fungicide, wetting agent (summer) and gypsum applications and are verti-drained with 8mm solid tines monthly

A well-treed course, some of Bairnsdale's more mature specimens create challenging shade management issues around tees and greens





NEW TORO GREENSMaster RIDE-ON FLEXES ITS MUSCLES

The Greensmaster TriFlex and TriFlex Hybrid models, which are now available in Australia, have been redesigned from the ground up to deliver improved cutting performance

The recent 27th Australian Turfgrass Conference and Trade Exhibition gave Australian superintendents and turf managers the first chance to see the new Toro Greensmaster TriFlex Hybrid which Toro bills as the first riding greensmower to provide the precision cut of a walk-behind mower.

The Greensmaster TriFlex and TriFlex Hybrid models were released at the GCSAA Golf Show earlier this year and are now available in Australia. The models have been redesigned from the ground up to deliver improved cutting performance and course playability and Toro hopes they will set a new standard for cut quality in riding greens mowers. The TriFlex Hybrid mowers are also among the first Toro products to display the EnergySmart label, which identifies a commitment to improved efficiency, environmental sustainability, economic viability and social responsibility.

One of the key features of the new models is the Flex suspension which enables the cutting units to float over the contours of the putting surface, keeping the cutting units parallel to the ground to maintain consistency of cut. The double 'A' arm Flex suspension system prevents gouging or

scalping over modest or severe undulations. Plus, the lift-in-turn feature delivers a consistently level cut during turns, which reduces 'triplex ring' on the clean-up pass.

The TriFlex Hybrid models feature an all-electric reel drive system that virtually eliminates hydraulic leaks and delivers sufficient horsepower to handle a broad range of cutting applications. This system also has a stored energy feature that eliminates clip marks at reel start-up and delivers braking power for improved safety when reels are disengaged.

To minimise tyre tracks, weight is equally distributed over all three wheels, and redesigned balloon-style tyres eliminate sidewall loading for evenly distributed pressure over the entire footprint. Patented dual precision adjustment cutting units also maintain adjustment longer while the redesigned clippings capture system retains nearly all grass clippings for a cleaner cut.

All TriFlex and TriFlex Hybrid units are equipped to do more than greens mowing and quick-change cutting units make it possible to cut greens or fairways one minute and convert to spiking, thatching or verti-cutting a few minutes later with no tools required.

The 8, 11 and 14-blade cutting units allow operators to choose the right reel and matching clip for the job, from a 1/16th inch to 1 inch height-of-cut. Faster transport speeds, more powerful gas and diesel engines, and improved ground clearance also save time while improving the versatility of the Greensmaster ride-ons.

Serviceability has been improved through a number of features, including a lift-gate footrest which provides easy access to the centre cutting unit, while the quick-change cutting units make reel grinding, routine adjustments or occasional repairs quicker and safer. TriFlex units also have no grease points, visible fluid level windows on the fuel tank and hydraulic fluid reservoir, jack points on all three wheels, and advanced computer diagnostics.

For more information about the Greensmaster TriFlex and TriFlex Hybrid greensmowers, contact your local Toro distributor or visit <http://www.toro.com/golf/newgreensmasters/triflex-hybrid/features/> for an online demonstration.



Rain Bird's new Integrated Sensor System

ISS RAIN BIRD, ISS GOOD

Rain Bird Golf has introduced the Integrated Sensor System (ISS), a multi-component soil sensing system suitable for both golf and landscape applications which provides snapshots of soil conditions and ability to adjust system run times.

The ISS delivers real-time full central control integration. The ISS sensors send soil moisture, salinity and temperature data to the system's Soil Manager software, which in turn works with the course's existing central control system to automatically set individual station run times.

Each of the ISS's data loggers collect and store data from up to 18 sensors throughout the course and display that data on a large LCD screen with an extensive menu. The logger transmits sensor readings to the Soil Manager software through a wireless mesh communication network. If the logger is unable to communicate with the Soil Manager software due to distance or line-of-sight obstructions, information is routed through data repeaters on the course to the computer. The number of data repeaters installed on a course varies depending on its topography and the number of sensors installed.

The data logger also provides power to the sensors, eliminating the need for sensor batteries that will have to be replaced in a few years, making it necessary to dig up the greens. Superintendents can read sensor information at the data logger and immediately evaluate soil conditions without having to return to their office computers. The data logger backs up information on an SD card, preserving it in the event of a power outage.

For more information about Rain Bird's new Integrated Sensor System, watch the flash demo at www.rainbird.com/ISS, or contact Rain Bird Australia 1800 424 044.



SO GOOD FOR SOEGAARD

Lakelands Golf Club course superintendent Phil Soegaard (pictured) is bound for the US after winning the Simplot-Proline competition during the 27th Australian Turfgrass Conference Trade Exhibition

in Adelaide. Soegaard won a trip to the 2012 GCSAA Golf Show after ordering Simplot Proline products during the trade exhibition and will be heading to Las Vegas next February.

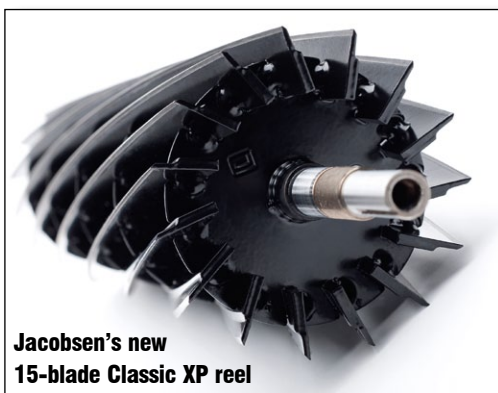
Lake Karrynup's Trevor Strachan also walked away from the trade exhibition a winner after his name was drawn out to receive an iPhone 4 16GB courtesy of Bayer Environmental Science which also contained Bayer's new Turf ID application.

JACOBSEN REEL CUTS IT FINE

Jacobsen has introduced a 15-blade reel for its range of Eclipse greens mowers – the Eclipse 100 walk-behind and Eclipse 322 ride-on series.

By utilising the new Classic XP 15-blade reel, the desired frequency of clip (FOC) and reel speed can be maintained, while operating mow speed can be increased up to 36 per cent. The additional blades provide a tighter FOC, reducing stragglers, yielding a smoother surface and delivering the ability to raise the height of cut without compromising ball speed.

The introduction of the new 15-blade reel is a continuation of the Classic XP reel technology which features Advanced Relief Technology with 45-degree relief, delivering less wear and abrasion and extending the life of the blades.



**Jacobsen's new
15-blade Classic XP reel**

APPOINTMENTS AND ANNOUNCEMENTS

SCOTTS PROFESSIONAL BECOMES EVERRIS

Following its acquisition of the Scotts Professional Division in February 2011, leading fertiliser and specialty chemicals company ICL Group announced in late May a new name for the global professional business – Everris. The company's new tagline is 'Driven by innovation, inspired by nature' and **David Westall** took the opportunity to inform the Australian industry of the name change at the recent Australian Turfgrass Conference.



"Over 15 years ago Scotts was one of the first companies to bring in new technologies in turf nutrition and we have continued to do so since then," says Westall. "With new ownership we will continue in our innovation to provide the best nutrition products for the industry."

Representing the term 'ever rising', according to Westall the name Everris is symbolic of the new company's commitment to further enhance the technologies, products and services it offers to green industry professionals. Building upon the strengths of Scotts Professional and ICL, Everris will continue developing plant nutrition brands and products such as Osmocote, Peters, Universol, Agriform, Sierraform GT, Sierrablen Plus and Agrobolen.

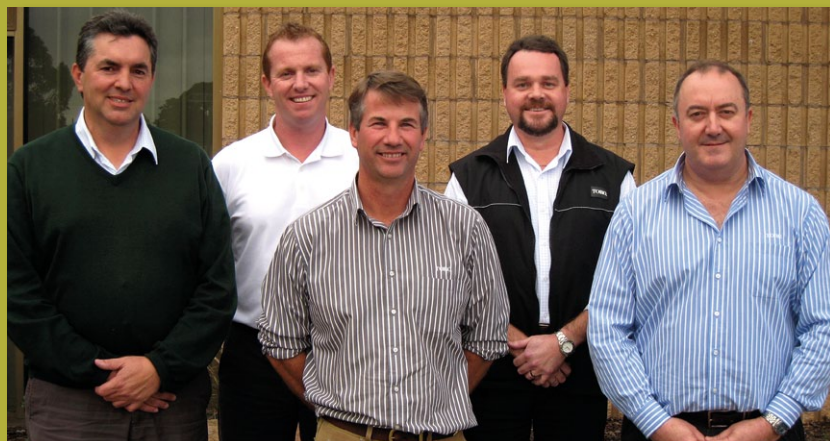
COOMBES LINKS UP WITH EVERGREEN

Evergreen Turf has appointed **Lincoln Coombes** to the newly created position of operations manager. Coombes was previously superintendent at the RACV Cape Schanck Resort on Victoria's Mornington Peninsula for seven years and comes to Evergreen Turf with a wealth of knowledge in the turf industry. The new operations division at Evergreen Turf is part of a restructure that will bring together the sportsfield surfaces and landscaping sections under a single operation.

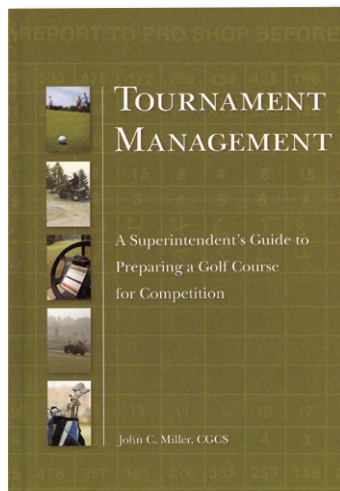
ALLEN APPOINTMENT MARKS CHANGES TO TORO IRRIGATION

Geoff Allen has been promoted to the newly formed role of national sales manager irrigation as part of a number of changes within Toro's Irrigation Business unit. Allen started at Toro in 2002 as a territory manager in South Australia before progressing to be SA regional manager in 2004, covering the agriculture, turf and golf markets. As part of the new position all Toro regional managers and customer service will report to Allen.

In other changes announced in June, **Chris Simpson** has been appointed the new regional manager for South Australia, while **Chris Linklater-Williams**, who has been with Toro for over 14 years, is now the new regional manager for Victoria and Tasmania. Linklater-Williams has looked after the golf and commercial markets in Western Australia and the Northern Territory and will be relocating to Victoria from WA in the near future. In NSW, **Michael Lenehan** has been promoted from territory manager to state regional manager. As part of the changes, **Patrick O'Shannessy** will now take on an expanded role as national golf and specification manager, supporting the turf and golf markets.



Members of Toro's Irrigation Business unit (from left) Patrick O'Shannessy, Chris Linklater-Williams, Michael Lenehan, Chris Simpson and newly appointed national sales manager irrigation Geoff Allen



Tournament Management: A Superintendent's Guide to Preparing a Golf Course for Competition

By John C. Miller Wiley 2009

Preparing a golf course for a tournament requires many elements to come together in harmony. While the focus for the players is the day, weekend or week itself, for the golf course superintendent and his maintenance crew getting their surfaces up to tournament standard can start months, even years before the event.

While the satisfaction of successfully hosting a tournament can be immense and provide a great boost to crew morale, should issues arise and conspire during a tournament it can, by contrast, be one of the most stressful and demoralising experiences in turf management. In order to ensure the former is the experience for all in the course maintenance industry, former superintendent John Miller has put together a comprehensive tournament management handbook containing "everything superintendents need for a successful tournament".

Written for superintendents and greenkeepers of all levels and from all clubs, 'Tournament Management: A Superintendent's Guide to Preparing a Golf Course for Competition' addresses the needs and challenges faced in planning and managing golf tournaments, whether they are major Tour events or local club championships.

Miller is well credentialed to discuss tournament preparation in such detail and is a Tour agronomist for the PGA. Prior to that he was superintendent at The Golf Club at Yankee Trace in Ohio where he hosted five consecutive PGA Nationwide Tour Dayton Opens.

After the foreword by eminent golf course architect Michael Hurdzan, Miller kicks off proceedings by examining perhaps the most critical part of any tournament preparation – planning and communication. After establishing that foundation, Miller looks at implementing an effective agronomic

programme before embarking on specific chapters on the management of greens, fairways, tees, roughs.

A separate chapter is devoted to bunkers and Miller goes into depth by looking at design elements, construction and drainage, sand selection as well as maintenance and eventual tournament conditioning. The final chapter focuses on the immediate lead-up to the tournament and considerations that need to be made, as well as post-tournament recovery and evaluation.

Coming in just shy of 200 pages, the book is extremely readable and being written by a former course superintendent you know that every angle is going to be covered. While the black and white photos and illustrations are a little disappointing, Miller does include breakout tips and hints to accentuate his main points, while the appendices contain a handy 12-page pre-tournament checklist as well as a set of course conditioning guidelines.

Miller openly states that a lot of the information contained in his book is basic, almost obvious, but in his experience these basics can be forgotten in a hurry with the pressures that tournaments bring. "These are little things, if corrected prior to an event, no one notices, but if they are left undone, can become topics of conversation during and after the tournament... Communicate well and often, plan and practice every detail to the letter, learn from this tournament to make the next one better, but most importantly, enjoy the moment!"

Tournament Management: A Superintendent's Guide to Preparing a Golf Course for Competition is now available through the AGCSA Bookshop and AGCSA members can purchase a copy for \$105 (non-members \$120). 📖

ALSO CURRENTLY AVAILABLE THROUGH THE AGCSA BOOKSHOP....



Golf Greens: History, Design and Construction. By Dr Michael J. Hurdzan (Wiley, 2004)

Reaching 330 pages, this book looks at the design and construction of push-up, USGA and California spec greens; guidelines for determining best construction methods; turfgrass selection; how to use design to make greens fast or slow to match players and course expectation as well as provide a foundation for agronomically sound maintenance practices; and cultural and physiological stresses.

AGCSA members: \$120

Non-members: \$139



Sportsfields: Design, Construction and Maintenance (2nd Ed.) By James Puhalla,

Jeffrey Krans and J. Michael Goatley Jnr (Wiley, 2010)

A versatile 'how-to' guide, the second edition of the USA's Sports Turf Managers Association publication suggests solutions to common field problems that are not only helpful for professional sports turf practitioners, but also for park and recreation professionals, school curators and designers. At 515 pages this book contains all the essential topics.

AGCSA members: \$114

Non-members: \$130



Poa Annua: Physiology, Culture and Control of Annual Bluegrass By J. Vargas and A. Turgeon (Wiley 2004)

This book examines *Poa annua* as both a weed and a desirable turfgrass species. Billed by the authors as the most comprehensive guide to controlling and cultivating annual bluegrass, the book contains a wealth of practical information for controlling and maintaining healthy growth of this diverse species while also detailing the anatomy, morphology and physiology of the species.

AGCSA members: \$104

Non-members: \$119



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Well another year is half over and the Australian Turfgrass Conference has been done and dusted. No doubt Brett will give great coverage to the events of the week elsewhere in this edition of ATM, but he probably won't cover what a great job all of the AGCSA staff does in the lead-up and during conference week.

To a man (and woman) they all put their personal lives on hold for a week to tend to the whims and petty complaints that we delegates come up with. The commitment of all staff is a credit to the leadership of John Neylan and events guru Simone Staples and the staff themselves. Well done to you all and thanks on behalf of all the delegates.

We have been very quiet in Queensland this year but that is all about to change with the following events on the horizon:

- **GCSAQ AGM at Brisbane Golf Club:** This year's AGM will be held on Monday 25 July. It will give us a great chance to support one of those clubs badly affected by the January floods and also possibly welcome the new superintendent who had yet to be appointed at the time of writing. New Toro rep Ben Cavanagh will get the chance to return to his old stomping ground as our major sponsor.
- **2011 Northern NSW Groundstaff Golf Day:** This is a very popular day which this year will be held at Shaun Cross's Byron Bay Golf Club on Friday 29 July. Format for the day is a BBQ at 10.30am followed by a nine-hole golf

competition. The day is a great way for the staff of these smaller clubs to meet and exchange ideas and see another golf course at the same time.

- **Superintendent/Managers Day:** This year's event will be held at Redcliffe Golf Club on Tuesday 23 August and will be concentrating on maintenance facility upgrades and construction.
- **GCSAQ Country Bus Trip:** This year will see us make a return to a hopefully drier Byron Bay with a slightly new format. We will leave on Friday 2 September and play golf at Byron Bay GC in the afternoon and return home on Sunday afternoon after a morning of lawn bowls to cap the weekend off. Our accommodation is in Byron Bay itself and the bus trip offers a great opportunity to meet your fellow supers in a relaxed environment, so start planning to attend.
- **GCSAQ Turf Research Golf Day:** A day not to be missed this year as we get to sample the new Palms course at Sanctuary Cove on Monday 24 October.

At our upcoming events we will be looking for donations via green fees or your own generosity to support the Cancer Council's 'Call to Arms' fundraiser to help the fight against cancer. www.calltoarms.com.au is the website and a more worthy cause couldn't be found.

PETER LONERGAN
PRESIDENT, GCSAQ

ON THE MOVE

A quick wrap up of major staff movements around the country...

Danny Beresford: New superintendent at Toowoomba Golf Club, QLD replacing Rob Killen.

Ben Cavanagh: From superintendent Brisbane Golf Club, QLD to Toro.

Lincoln Coombes: From superintendent RACV Cape Schanck, VIC to operations manager Evergreen Turf, VIC.

Mark Couchman: Resigned as course superintendent at Cromer GC, NSW.

Shane Heaney: From assistant superintendent at Bonville International, NSW to superintendent Ocean Shores Country Club, NSW.

Paul Johnson: New course superintendent at Alice Springs Golf Club, NT. Formerly of Mollymook, Marrickville and Illawarra.

TGAA ACT

The TGAA ACT will again host its annual one day seminar at the Hellenic Club on Wednesday 27 July. The title of this year's programme is 'A Positive Workplace – New Ideas and Products'. The seminar aims to cover a wide variety of topics to help with the ever-increasing challenges facing today's turf manager and some of the topics include:

- Workplace problems and their effects;
- Turf websites – getting the most from them;
- Pre- and post-emergent herbicides – how they work; and
- Control of kikuyu in couch.

The seminar will conclude with Les Burdett presenting on his time at the Adelaide Oval and will cap off what should be a day of interesting talks. An industry display will also run in conjunction with the seminar, so come along and see what's new. For programme enquires contact Bruce Davies (02) 6207 4623 or email bruce.davies@cit.act.edu.au. For registration forms and enquires please contact

Concec Conference Management on (02) 6251 0675 or visit www.tgaa.asn.au.

On the topic of education, the ACT region was represented at the recent Australian Turfgrass Conference in Adelaide by two of our local graduates – Ben Callaghan (Royal Canberra GC) and Danny Hull (Queanbeyan Bowling Club). They were finalists in the AGCSA Graduate of the Year and the National Sports Turf Graduate of the Year awards respectively and while both missed out they should be congratulated for getting through to the national finals.

Please mark down Wednesday 31 August for our AGM. The night includes dinner, trivia and speakers. Last year's AGM was a great event and well attended, so remember that your region needs your support and we look forward to seeing you there.

GLENN HUENDER
COMMITTEE, TGAA ACT

With winter upon us let's hope the long-term weather forecasters finally predict correctly with a mild winter and minimal rain. Certainly we will be glad to see the end of the wet weather in autumn on the east coast. It's hard to believe the turnaround in the weather and the improved condition of our courses. Hopefully spring renovations will be kind to us all.

On 3 May the NSWGCSA held its first event of the year with the Rube Walkerden Trophy being hosted at Concord Golf Club. Although it was wet under foot, Mark Parker and his staff presented the course in excellent condition and 65 eager golfers teed off for our premier golfing event. The Rube Walkerden Trophy was won back-to-back by Killara Golf Club's Ryan Fury with the scratch prize going the way of Andy Huggill from Mona Vale Golf Club.

A few weeks later, NSWGCSA members again hit the course this time for the annual Ambrose Golf Day at Cypress Lakes Country Club in the Hunter Valley. It had been four years since we last played the course and the recent changes made by superintendent Merv Hayward were on show. With a full field of 124 players it was a close result with the eventual net winners coming from Pennant Hills Golf Club and the scratch winners from Manly Golf Club. I would like to thank our sponsors for both days; your support is great appreciated.

Current NSWGCSA membership numbers have again swelled to over 300 which is up by 35 from this time last year. Alison Jones and Stuart Hall have been working alongside AGCSA membership coordinator Lyndel Conway to reduce membership discrepancies, so please notify Alison or Lyndel if your contact details have changed.

After reviewing the current membership structure, the NSWGCSA Board has decided to offer a new discounted rate: Superintendent/trade - \$88; 2IC or 2nd member - \$66; greenkeeper, 3rd member or any consecutive member - \$44; and apprentices - \$22.

This year's NSWGCSA Annual General Meeting will be held at Roseville Golf Club (host superintendent Mark O'Sullivan). The format will be the same as the past two years with nine holes of golf starting at 7am for those who can make it and the AGM to start at 10am. Please note the change of date to Monday 22 August.

Finally, as the accompanying pictures show, the upgrade works at Bonnie Doon Golf Club in the eastern suburbs of Sydney have begun in earnest. Superintendent David Scaife and his crew are set for a hectic 12 months with stage one of the works getting underway in May.

In 2010 the club secured the Ogilvy Clayton design team to come up with a course master plan and the first stage of works will see the upgrading of five existing holes, construction of two new holes



Stage one of the course upgrade at Bonnie Doon Golf Club got underway in May. Pictured is the cut made on the 1st fairway

on a former tip site acquired by the club in 2003 and upgrade to the club's practice facilities. The estimated cost of Stage One is \$3 million.

The project will also have significant environmental benefits for the local community, with plans to remove exotic tree species that have been introduced to the site over the years and replace them with extensive Eastern Suburbs Banksia Scrub (ESBS) plantings. ESBS once occupied around 5300 hectares of land between North Head and Botany Bay in Sydney's eastern suburbs. Surviving stands of ESBS total approximately 146 hectares of which three hectares exist on Bonnie Doon.

While stage one works are taking place, golfers will play a 15-hole course, with the works expected to be completed and holes opened for play by 31 March 2012. Good luck to David and his team.

**CRAIG MOLLOY
PRESIDENT, NSWGCSA**



Old greens profile at Bonnie Doon. The first stage of works will see the upgrading of five existing holes

The stockpile of material on what will be Bonnie Doon's new 5th hole



As this is my first report as the new president of the NZGCSA, I feel fortunate to be able to report to our Aussie friends (well at least until the Rugby World Cup starts) on the events in New Zealand.

As you have seen through your chosen media outlets, Christchurch is still suffering the uncertainty of aftershocks and earthquakes. As well as that, eastern suburbs golf clubs will have concerns about whether the population moves to the west of town and takes their memberships to other clubs. When will it ever end? Our hearts and thoughts are with everyone in Christchurch and it was great to see a number of our Cantab mates in Hamilton at the recent NZ Turf Conference. I'm sure the week would have come as welcome relief.

The 2011 conference was hosted in Hamilton for the very first time and the city did the event proud. Over 460 delegates attended the conference with close to 100 representing golf. Considering the change of cities (relocated from Christchurch for obvious reasons) we were happy with the turnout, but it is very disappointing that we cannot reach the membership further and change an apparent apathetic nature some have when it comes to attending these events. Increasing member participation will be a challenge for the NZGCSA Board and myself, but we are looking forward to it.

While formulating a conference programme we needed to look at industry trends and keep topics relevant to our industry. We were very fortunate to secure quality domestic and international speakers who met our requirements and would like to thank once again our Australian friends Daryl Sellar, Paul Spencer and Andrew Smith.

STA NSW



I would like to start this report with a big thank you to the AGCSA for a great conference in Adelaide recently and in particular their support of the inaugural Toro National Sports Turf Graduate Award. Unfortunately the volcanic ash cloud prevented me from getting to the conference but from all reports it was a great week.

The state award representatives have expressed what an amazing week they had, meeting lots of people and being looked after by the great staff from Toro. We look forward to continuing this award and know it will inspire many young greenkeepers coming through our TAFE system.

Speaking of TAFE, it was great to see Frank Dempsey and Phil Ford acknowledged for their hard work and dedication to teaching by being presented with the 2011 AGCSA Distinguished Service Award. Frank was a founding member of our association and has been a driving force in our development.

We were also very fortunate to secure Henk Smith who managed the practical disease workshop that I had been lucky to participate in at past Australian Turfgrass Conferences. It was so well attended that it will likely remain a permanent segment within our future conferences. It was also great to catch up with AGCSA president Allan Devlin and I am looking to continue my predecessor's great affiliation with the AGCSA.

Looking ahead, the Manawatu and Canterbury regions are now busy formatting their Fine Turf Seminar events for 2012 and I look forward to attending them both. We wish you all the best.

At the Hamilton conference the new NZGCSA Board was elected. As well as taking the reins from outgoing president Peter Boyd, Gordon Trembath from Hastings Golf Club was also welcomed to the Board. The full NZGCSA Board for 2011-2012 is: **Grant Bunting** (Wanaka GC), **Brendan Allen** (Royal Auckland GC), **Greg Swafford** (Titirangi GC), **Steve Marsden** (Cape Kidnappers), **Gordon Trembath** (Hastings GC), **Ian Carruthers** (Coringa CC) and **Ryan Irwin** (Queenstown GC).

Personal thanks must go to irrepressible past president Peter Boyd (Pakuranga CC) who has been our leader for the last four years and on the NZGCSA Board for 14 years. He has been a great president and I know I have very big shoes to fill. But Peter is not lost altogether and I have persuaded him to remain on the industry training organisation as the NZGCSA Board representative.

GRANT BUNTING
PRESIDENT, NZGCSA

Since my last report the Turf Alive event was held on 17 May. This new event saw STA NSW, NSW BGA and NSW TGA join forces to bring this event to the turf managers of NSW. Over 240 people attended the event and the feedback was very positive. It is planned that this event will be a bi-annual one and we look forward to an even bigger event in 2013.

We are currently gearing up for our annual Regional Seminar at Kurri Kurri TAFE, on 16 August, which this year focuses on turf renovation practices. What works so well for this event each year is the ability to do practical machinery and product demonstrations on a variety of turf surfaces. All details can be found on our website www.sportsturf.asn.au.

CHRIS CHAPMAN
PRESIDENT, STA NSW

ON THE MOVE

A quick wrap up of major staff movements around the country...

Duncan Lamont: From superintendent Ocean Shores Country Club, NSW to superintendent Surfers Paradise Golf Club, QLD.

Luke Mortimer: Replaces Andy Date as new superintendent at Arundel Hills Country Club, QLD.

Steve O'Donnell: From superintendent at Tanunda Pines Golf Club, SA to curator at Kapunda High School, SA.

John O'Neill Departed as superintendent of Settlers Run Golf and Country Club, VIC.

Adam Sykes: From groundsman Gold Coast Burleigh, QLD to assistant superintendent Bargara Golf Club, QLD.

Tim Warren: From superintendent Horsham Golf Club, VIC to superintendent Adelaide Shores, SA.

Brett Woodward: From assistant superintendent at Shelly Beach Golf Club, NSW to superintendent Armidale Golf Club, NSW.

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The winning David Golf 2IC Challenge team from Victoria (from left) Matthew Hose, Rod Ferry, Sam Duncan and Steve Ryalles

Victoria Golf Club hosted the 2011 VGCSA AGM on 27 May. Host superintendent Ian Todd had the course in great condition and we were fortunate to have five-times British Open winner and golf course architect Peter Thomson as our guest speaker. The day was a huge success with over 90 members attending.

Sunshine Golf Club superintendent Mark Findlay collected the VGCSA's coveted Toro Cup in the golf, while Anglesea Golf Club superintendent Brett Balloch won the Powell Trophy. Daniel Docherty from Globe won the President's Shield.

At the AGM the new committee for the next 12 months was appointed and is as follows:

- **President:** Steve Hewitt (Thirteenth Beach)
- **Vice-president:** Nathan Bennett (The Sands)
- **Secretary:** Barry Proctor (Cranbourne GC)
- **Treasurer:** Mark Jennings (Box Hill GC)
- **General Committee:** Jeremy Cutajar (Ringwood GC), Dave Mason (Riversdale GC), Michael Freeman (Huntingdale GC), Mat Poultney (Greenacres GC)

A huge thank you must go to outgoing committee members Brett Chivers and Matthew McLeod. Brett had spent many years on the committee, most recently as president, and was extremely passionate and committed to the VGCSA. He was the inspiration behind the improvement of our quarterly magazine. Matt McLeod committed to a lot of travel from Tocumwal when he accepted the position on committee two years ago. He was rarely absent at our meetings and was a voice on committee for all country delegates.

Congratulations to Dan Oswin for winning the VGCSA Graduate of the Year Award and then taking out the AGCSA Graduate of the Year Award at the recent Australian Turfgrass Conference in Adelaide. Dan has also been the recipient of other regional awards since the completion of his apprenticeship and was a very worthy winner. At our AGM Dan was presented with the VGCSA award which he won ahead of a quality field which included Scott Moroney (The National GC), John Anderson (Wodonga GC) and Timothy Bunn (Rosanna GC).

The next VGCSA meeting is for assistant superintendents. We had great numbers at last year's inaugural day and we are hoping to simulate this by having experienced speakers to educate these valuable members of staff again this year.

Speaking of assistants, Victoria secured its fifth David Golf 2IC Challenge national title in six years at Yarrowonga and Border Golf Club in late May. The Victorian team comprising Matthew Hose (The National GC), Rod Ferry (Huntingdale GC), Sam Duncan (Eastwood GC) and Steve Ryalles (Rossdale GC), posted 112 points to beat home the combined WA/SA team by six points.

September will see us at Marysville Golf Club for our last education meeting of the year. It will be a good opportunity to inspect the work of superintendent Rob Christie and the rejuvenation of the course since the Black Saturday bushfires. The golf club will be undertaking an exciting course redevelopment programme in the near future and we will hear about this from Rob and the associated parties on the day. A well known interstate superintendent will be our guest speaker for the day and many thanks go to Globe Australia for sponsoring the day.

TGAA VIC

TGAA Victoria will hold its annual Cricket Wicket Seminar at the MCG on 20 July with this year's guest speaker being Rodney Hogg. Later in the year, on 23 November, TGAA VIC will join forces with the Australian Seed Federation, Irrigation Australia, Stormwater Victoria and TPA Victoria to hold a seminar and trade day at Wesley College's Glen Waverley campus.

A recent change has seen the TGAA Victoria include its accreditation programme with membership. This programme is gathering momentum with members being recognised for their commitment to professionalism and ongoing training.

Speaking of professionalism, it was great to see TGAA VIC finalist Rebecca Dynon become the inaugural winner of the National Sports Turf Graduate

Award at the 27th Australian Turfgrass Conference in Adelaide.

Rebecca has accomplished a lot during her time in the industry including winning the NMIT Apprentice of the Year Award and the ARMA European Study Tour. One of her greatest achievements was being the first woman in the Australian racing industry to win Apprentice of the Year for turf management. We would like to wish Rebecca all the best for the future and thank Toro for sponsoring this award and looking after all state finalists.

For all queries regarding membership, seminars or accreditation, keep an eye on the website www.tgaa.asn.au or contact the office on (03) 9791 6900.

**NATHAN TOVEY
PRESIDENT, TGAA VIC**

**STEVEN HEWITT
PRESIDENT, VGCSA**

Several South Australian golf clubs are currently undergoing or have recently completed major reconstruction work. Stuart Gillespie (Riverside GC) and Jeff Kaines (Royal Adelaide GC) have been busy with their respective course works, while Richard James and his team at The Grange are in the thick of the East Course redevelopment. Blackwood and Kooyonga are also about to start construction works and we all look forward to the opening of the Greg Norman-designed The Dunes at Port Hughes on the picturesque Yorke Peninsula.

While many clubs struggle to attract new members, it is nice to see clubs striving to improve their courses. South Australia has seen some big drops in memberships and participation in recent times, however, the industry is attempting to make steps to improve participation rates and enthusiasm for the game of golf.

Following the lead of other states, we are in the process of organising a state golf industry awards night. The SAGCSA, GMA, Golf SA and the PGA are joining together under the one banner to hold the event towards the end of October. The awards will recognise a range of aspects within the golf industry and we hope this will be the start of an annual event that all clubs can look forward to.

Recently SAGCSA education representative Stuart Gillespie held a workshop for apprentices and trainees based on machinery maintenance. With the help of Geoff Glasson from SA Mobile Grinders, students went through different aspects of machinery maintenance including reel adjustment, backlapping, greasing, oil and general checks. The day was a great success and we may even look at holding a two-day workshop next year.

Our summer meeting held at Royal Adelaide Golf Club was also strongly attended and we were keen to observe recent major upgrades to the irrigation system. Jeff Kaines and Don Cameron (Hydroplan) discussed the processes involved which aims to improve water quality by harvesting



Works to the 17 East greenside bunker complex at The Grange

stormwater. While the installation proved to be a drawn out process, I am sure Royal Adelaide will see the benefits in the near future.

There has been a little bit of movement within the ranks recently, following the departure of committee member Andrew Blacker. Andy has returned 'home' and started as course superintendent at Port Lincoln Golf Club. Andy, immediate past president of SAGCSA and a committee member for the past six years, did an enormous amount of work for the association. It is a big move over to Port Lincoln and so Andy has unfortunately had to step down from the committee. We wish him and his family all the best and thank him very much for his contribution to the SAGCSA. Andy's position at Adelaide Shores has been accepted by Tim Warren, formerly of Horsham Golf Club, and we look forward to welcoming Tim to SA.

Finally, I hope everyone enjoyed the 27th Australian Turfgrass Conference in Adelaide last month and congratulations must go to the AGCSA for putting together such a great event. Kooyonga and Adelaide Shores were in top class condition and the indomitable Mal Grundy had his ambassador's coat on all week to show interstate guests around. Congratulations also to SAGCSA Graduate of the Year Tyson Dickinson from The Grange GC on making it to the final of the AGCSA Graduate of the Year Award.

**SAM SHERRIFF
PRESIDENT, SAGCSA**

The TGCSA has held two educational days so far during 2011. The first was at Devonport Cricket Club during March which involved a mixture of presentations as well as demonstrations. With around 25 in attendance we involved information on sports fields and cricket wickets in order to involve different branches of the turf industry. It was great to see some new faces from local councils supporting the day.

Our second event was at Barnbougle on 18 May. Around 25 members attended with more than half taking the opportunity to stay over and catch up in the evening for a meal. They then headed over to

the new Lost Farm course for a round of golf the following morning. This day was co-sponsored by Tas Turf Solutions, Scotts, Turf Culture, Globe and Advanced Seed.

The next event TGCSA event will be the combined AGM, conference and trade show to be held at Kingston Beach Golf Club on 16-17 August. This year we will return to our old format with an overnight stay. Golf, including the Reg Roberts Memorial Trophy, will be played over nine holes on Tuesday afternoon.

**TONY SMITH
PRESIDENT, TGCSA**



TGCSA recently hosted a meeting at Barnbougle which included a round on the new Lost Farm course

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