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COVER STORIES A MAN DOWN

6 AND 14

Turf maintenance crews are very much like a family and for two particular close-knit teams the end of 2018 proved devastating. Riversdale Golf Club in Melbourne and The Grange Golf Club in Adelaide each lost a crew member in the lead-up to Christmas – Danny Adams from Riversdale and Aiden Johanson from The Grange. Yet as they do, the crews rallied around each other and when it came time for them to prepare their respective courses for major events – the 2019 ISPS Handa Women's Australian Open and 2019 Riversdale Cup – they did so with the memory of their departed mates never too far from their minds.

Cover photo: Riversdale Golf Club's 10th green. **Photo:** Brett Robinson.



FEATURES

Metricon Stadium drops in
Agents of change

MCG digs deep

FTMI Class of 2019

Teeing off

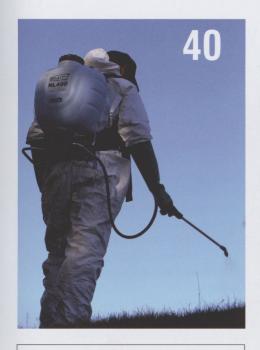
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Off the charts

t was a long night wasn't it, but boy was it worth it - every shot! As one of the commentators said after Tiger Woods planted his tee shot to within a foot on Augusta National Golf Club's famed 16th green, which would lead to back-to-back birdies and a two-shot Masters lead, "I am compelled to say, 'Oh my goodness'." Two holes later, one of the greatest comebacks in the history of all sport was complete when Woods collected his fifth Green Jacket, 14 years after his last.

While we often bemoan 'Augusta syndrome' and the unrealistic expectations it sets in regards to golf course maintenance, you really can't rival the drama and theatre that this one-of-a-kind golf course in Georgia has a knack of repeatedly creating. While there's a lot of secrecy behind the maintenance practices that go into producing the most talked about playing surfaces in the industry, the magic that Augusta superintendent Brad Owen and his team weave annually can only be marvelled at.

The 2019 Masters will go down in golf folklore and in years to come will be recalled as one of those 'Where were you when...' moments. For two Australian course superintendents (well, one Aussie and one ex-pat Kiwi if we are being technical) they were lucky enough to be there to witness it all first hand, helping to make up the more than 110 course volunteers that complemented the 50-strong Augusta National full-time crew.

Elanora Golf Club's Dan Cook, who worked within Owen's inner circle during a two-year stint there in the mid-2000s, made his annual pilgrimage back to assist, while Kooringal Golf Club superintendent Tay Wilson returned for his second consecutive guernsey. As Wilson commented to me through social media channels within minutes of Woods claiming his 15th 'major', "This is off the charts!"

Tournaments are the pinnacle of golf course management for any crew, whether it's the 160-plus throng of Augusta or the three-man crew that superintendent Bryan Kelly led when Queanbeyan Golf Club hosted the Women's NSW Open back in early March. Every superintendent and crew member strives to produce the best surfaces they can with their available resources and often do so with innumerable challenges thrown at them.

For two particular crews we feature in this edition, the agronomic challenges this past season were pretty significant. But they seemingly paled into insignificance when confronted by something else straight out of left field. Both The Grange Golf Club in Adelaide and Riversdale Golf Club in Melbourne tragically lost crew members in the months leading up to their major events. Aiden Johanson (The Grange) and Danny Adams (Riversdale) were much-loved and integral members of each crew and their sudden loss cut both clubs deep.

As you will read in this edition's dual lead stories on the 2019 ISPS Handa Women's Australian Open and the 2019 Riversdale Cup tournaments, they were harrowing situations that superintendents Rowan Daymond and Travis Scott had to navigate not only themselves but their crews through also. While immeasurably difficult, it ultimately drew them all together and created even stronger bonds. As the articles and photos attest, they certainly did their departed crewmates proud and the quality of the surfaces they delivered deserves special accolades considering the circumstances.

And while we are on the theme of negotiating difficult times, in this edition we also look at the story of Scott Irving from Latrobe Golf Club in Melbourne. Those who attended the recent AGCSA National Turf Education Seminar Series would have heard about the freak workplace accident which forever changed his life. The powerful lessons from Scott's story should be a timely reminder for the industry that you can never be too vigilant when it comes to workplace health and safety. Enjoy the read...



Brett Robinson, Editor

Despite the adversity, stop and appreciate your achievements

onest self-reflection – ensure you are taking some time to reflect on what it is you have achieved against the challenges you have faced.

That is one of the key messages from Mark Carter, international keynote speaker and author, delivered to around 400 turf managers at the AGCSA's National Turf Management Seminars conducted across each state in recent weeks.

With many welcoming the first day of autumn recently with a sigh of relief, others continue to face challenges, such as ensuring playing surfaces are ready for the changing of summer to winter sporting codes, renovations or simply just the struggle to carry on. Let us hope that the cooler weather will also bring with it some rain of note for those being ravaged by drought.

Feedback following the autumn seminars relate to the countless hours and teamwork undertaken to keep many facilities alive throughout the harsh summer where, for context, the Bureau of Meteorology confirmed that Australia sweated through its hottest summer ever recorded. Unprecedented heatwaves and drought spread across much of the country in December and January, while in Far North Queensland an active monsoon trough caused heavy rainfall and extensive flooding.

When you face the level of challenges turf managers have over the past year, it's





easy to understand why many in our industry experience continual unease. Worrying about the health of their facility can be crippling and the mental toll it can take is all too real. Turf managers spend countless hours checking off the limitless number of things that need to occur to maintain the living ecosystem

they are responsible for, many of which are out of their control yet are entirely their responsibility.

The counter to this, and a key theme from Mark Carter's presentations, is to ensure you are taking the time to review and reflect on all that you have achieved, despite adversity. This topic of resilience and personal development, along with a selection of sessions on environmental management, will be a core theme at the 2019 Asia Pacific Turfgrass Conference and Trade Exhibition to be held in Brisbane from 24-29 June.

To summarise what many have commented on after the autumn seminars, it's about making sure that turf managers and teams themselves acknowledge their efforts and results over recent months – taking stock of the achievements, reflecting on the successes and, importantly, continuing to communicate the difficulties faced with members, boards, players and the community.

Unfortunately, praise may not be received as often as we would like and not as often as it is deserved. For some, perhaps not at all. So the single most important message that comes from conversations with many turf managers after these sessions is a simple one: It is easy to forget to just stop for a minute. Stop and appreciate your achievements. Look back at what you have accomplished over recent months, despite all that has been thrown at you.

'WIN FOR TURF INDUSTRY' AS FWC DISMISSES AWARDS MERGER PROPOSAL

s members of the Australian turf industry will be aware, last year the Fair Work Commission (FWC) was presented with a proposal by Clubs Australia (Industrial) to adjust various industry Awards that sports turf managers fall under. This included proposed adjustments to the Registered & Licensed Clubs Award, The Hospitality Award, Events and Entertainment Award and others.

The proposal was designed to merge a number of Awards under the one name, and included proposals to reduce penalty rates for maintenance and horticulture staff, remove penalty rates for many in relation to weekend hours worked, adjust ordinary hours to include weekends at standard rates and amend working conditions for maintenance and horticulture employees.

among other proposed items. At the subsequent hearings, the AGCSA provided a number of presentations and submissions to the Full Bench of the Fair Work Commission arguing its position against the proposed changes.

It was presented by the AGCSA that the proposed changes would have a significant impact to our members and indeed our industry. In fact we were bitterly disappointed that this proposal was put forward initially, as it was designed to reduce earnings for an industry that is already challenged on wages and working conditions.

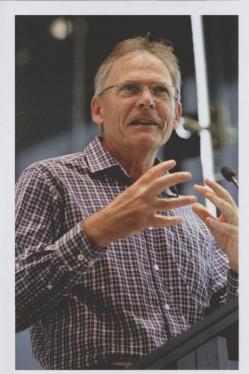
It was also argued by the AGCSA that these changes would have a detrimental impact on retention of existing workers and attraction of new employees into our industry if penalty rates for weekend work and overtime were to be reduced. This was undertaken on behalf of all turf associations, where the AGCSA represented the interests of all sports turf managers.

After significant deliberation, the Fair Work Commission handed down its decision on the proposal in mid-March, dismissing the application from Clubs Australia (Industrial). This is a great win for the turf industry as there will be no changes to Awards resulting from this proposal. Directly, this means retained employment conditions for our members, no adjustment to ordinary hours classification and there will be no reduction in penalty rates for maintenance and horticulture.

- Mark Unwin









SEMINAR SUCCESS

he AGCSA reinvigorated its traditional Autumn Seminar Series across March and April, with seven events held at major venues throughout the country. Nearly 400 turned out at the likes of Manuka Oval, Adelaide Oval, Optus Stadium, QSAC, the MCG and SCG and Blundstone Arena to hear industry experts speak on a range of management topics.

John Neylan spoke on soils and sand selection, John Forrest espoused the principles of water management, while AGCSATech agronomists Bruce Macphee and Tim Fankhauser looked at ways to develop cost-effective turf management programmes. Nathan Tovey and Matt Holmes rammed home the importance of safe work practices, while the entertaining Mark Carter brought his unique style to the floor to discuss leadership and personal development. Attendees also got to hear from the curators at each venue who gave an overview of their recent events and some of the projects they have on the go.

The AGCSA thanks all speakers and those who made the time to attend the seminars.

PHOTOS: BRETT ROBINSON

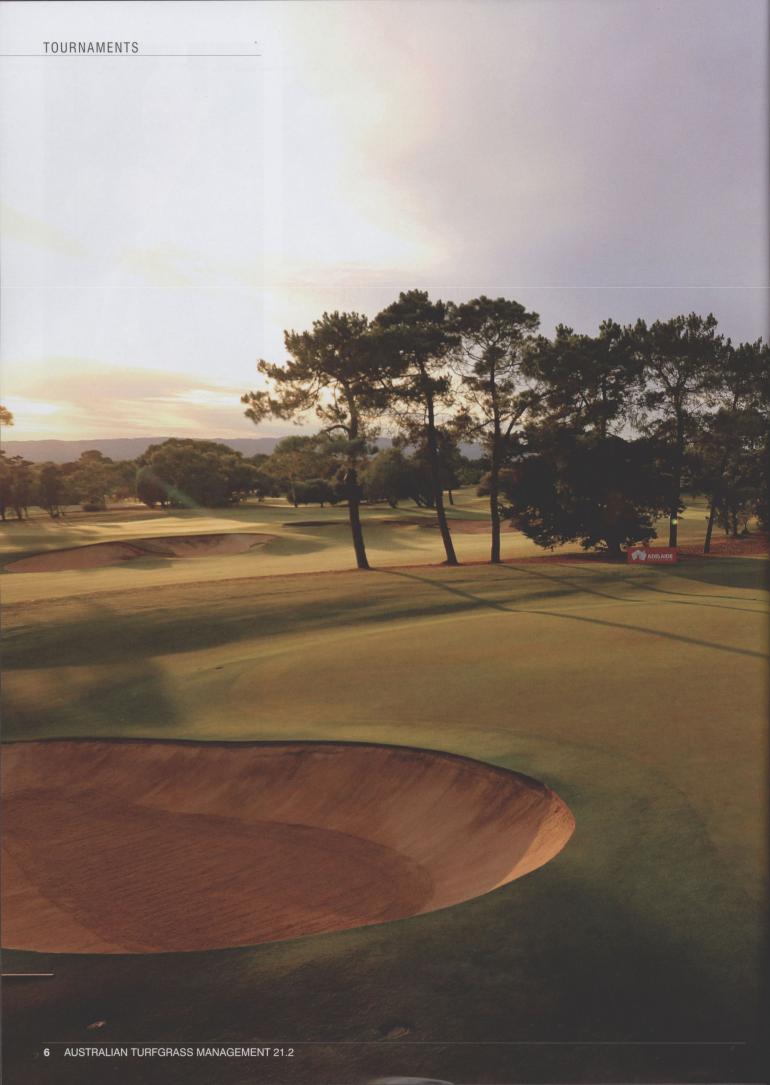












The 2019 ISPS Handa Women's Australian Open returned to The Grange Golf Club in Adelaide in February, the first major tournament in charge for course superintendent Rowan Daymond. As ATM editor Brett Robinson discovers, Daymond and his team not only had to overcome some challenging agronomic issues to get the West course tournament ready, but also the tragic loss of one of their own.

Grange cuts ne figure for Open

The Grange Golf Club's opening hole on the West course. Photos Brett Robinson t was a small tribute, but a poignant one. Pinned to the whiteboard in the tournament staff marquee within The Grange Golf Club maintenance compound during the recent ISPS Handa Women's Australian Open, were two photos. They were of Aiden Johanson, one showing him sitting on board a fairway unit smiling, the other him ripping a backside tailslide on his beloved skateboard.

Each morning of the mid-February tournament, as the crew assembled for roll call, they would file past the whiteboard and upon seeing the photos be reminded that there was someone who would dearly loved to have been alongside them, but tragically wasn't

The popular first year apprentice had only been on The Grange crew for 12 months when one day last November he left work and never returned. Shortly after arriving home from his shift at the club, Johanson suffered a massive stroke and died. He was just 23.

The news floored The Grange crew. Golf course and turf management crews are very much like family and strong bonds and friendships are forged while working out on course and inside the maintenance facility. Even though he had only been on the crew for a short period of time, the loss of Johanson was acutely felt. He was, after all, one of them.

Johanson's untimely passing would begin a horror run for golf course and turf maintenance crews in late 2018/early 2019. Three weeks out from Christmas, Melbourne's Riversdale Golf Club lost assistant superintendent Danny Adams (read more about this in the following article 'A man down' p14-17), while over in Perth a turf



Memories of former Grange crewmate Aiden Johanson, who died in November from a stroke, were never too far from the minds of Daymond and his crew during the Open

contractor was killed in a workplace accident at Mt Lawley Golf Club. Then, shortly after New Year, news filtered through from across the Tasman that 24-year-old Remuera Golf Club greenkeeper Jarryd Davidson was killed in a car accident which also seriously injured friend and crewmate Josh Presland.

For Grange superintendent Rowan
Daymond, somewhat horribly Johanson's
passing was deja-vu. At the start of
2017 Daymond had taken on his first
superintendent posting at Murray Downs Golf
and Country Club after spending the previous
seven years at The Grange as assistant.
During his short eight-month stint at Murray
Downs, before returning to take over as
superintendent at The Grange in September
2017, the mechanic there had a heart attack
and died.

Superintendents have myriad things to deal with in their roles and Daymond can attest that there have been many aspects which he has had to adjust to since stepping into the top role. But having to deal with the sudden loss of a staff member and the impact that has on the crew, well, no amount of training can prepare you for that.

"It was very hard," reflects Daymond of Johanson's passing. "Aiden was one of those guys who was a big part of the group, even though he had only been at the club for a year. He was such a great young kid, one of the best I've ever employed. He wanted to be here and loved the job.

"Since stepping into a superintendent role, staff management is certainly one of the hardest things that I have had to adapt to. I've got a fantastic crew here and we have



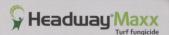


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TOURNAMENTS



The Grange's Susana Oliveira cuts the 5th green ahead of the third round

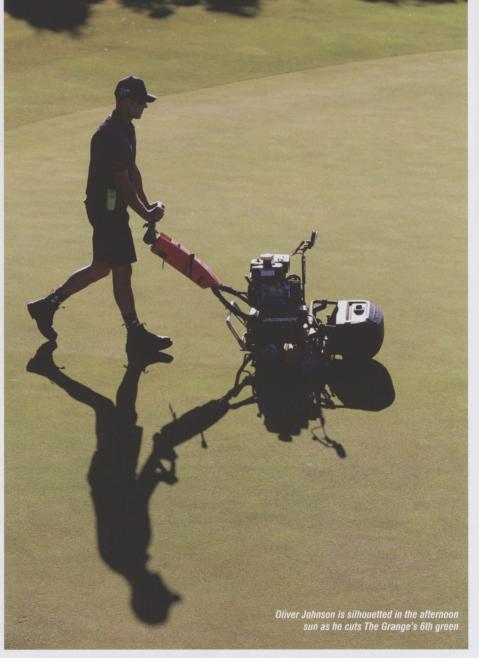
had a number of new people come on board in recent times. There are a lot of things that can just pop up out of the blue which can be difficult, but Aiden's passing really made the crew come together."

TOP NOTCH

And rally they did. The quality of the playing surfaces they and the tournament volunteers delivered on the West course was again near faultless and somewhat fittingly provided a perfect stage for Nelly Korda to continue her family's incredible dynasty of international sporting achievements. Their efforts certainly didn't go unnoticed and while Korda's two-shot win was roundly celebrated, arguably the biggest cheer during the presentation ceremony on the 18th green afterwards was reserved for Daymond and his team.

"I was really pleased with the effort the crew put in," says Daymond. "They really stood up not only the week of the tournament but for the whole lead-in period. There were a lot of weeks and months of hard work to get the course to that level and it all paid off – we got the course to where we wanted it to be and I'm very proud of the work we achieved and the result we got.

"I guess the most pleasing aspect was the way the course presented, especially considering the season we had leading in. We had, and continue to have, water quality issues which affected the health of the turf on a number of greens. We really had to change practices to improve the general health and condition of the turf. Given those factors to contend with, to see how the course presented for the tournament was very pleasing."



Those agronomic challenges started to appear the previous summer. Turf loss during that time meant a lot of work was required over winter to get the A1 greens back to full cover before renovations in September. Despite going into and coming out of renovations in a good place, as soon as irrigation practices started firing up again the same problems resurfaced. A lack of rainfall, combined with bore water high in sodium, bicarbonates and pH, conspired to see the turf decline which necessitated a serious rethink around how Daymond managed them, especially given the Open was looming on the horizon.

"It was around Christmas time 2017 that we started having some issues," recalls Daymond. "We did a lot of work last winter to get the greens back to full cover and the crew did a great job to get them to where we needed to be by the end of winter leading into renovations. But after renovations a rapid decline in turf health required a change in our nutritional approach with the season we knew we had ahead of us.

"The main issue was our water quality. While it hasn't changed, it was exacerbated because we had no rain. We had just 220mm for the whole of 2018 and just 2mm from 19 December through until the tournament. That is dry even by Adelaide standards. Without mains water connection on greens, we were filling up shuttles and handwatering our problem greens on a regular basis as a method of flushing the profiles. Our irrigation practices were pretty much flipped on their head and we did a lot more deep and infrequent irrigation rather than hand watering, just so we could keep things moving through the profile.

"Nutritionally and culturally we also had to really modify our programmes a lot. We raised our cutting heights a little bit just to maintain turf health in general. We opened the greens up a lot more through Vertidraining and Procoring and used a lot more penetrants in tank mixes to push things through the profile.

"Sprayable acids were also going out on a monthly programme and weekly we were injecting acid into the irrigation system to try and offset the high bicarb and pH issues. Plant responses to fertility applications this season have been far better and this is a result from those programmes being put in place. Additional calcium applications and also elevating our potassium output has also seen us withstand the pressures on the turf from our water source.

"We had some pretty warm weather over Christmas and New Year that knocked us around a bit, but it didn't take us long to get through that and we were good from that point on until the tournament."

PRESSURE ENVIRONMENT

For Daymond, the 2019 Open ticked off yet another milestone in his formative years as a course superintendent. The last time the Open visited The Grange in 2016, he was senior assistant under Richard James whose subsequent move across to Kooyonga ultimately paved the way for Daymond's return. It was very much a different prospect being the man in charge this time around and Daymond certainly drew on some of the experiences from that previous tournament.

"Being prepared and planning for the event was a key focus," reflects Daymond. "I wanted to make sure that everything was in place early. Then it was just a matter of timing applications, getting the little things right and hitting our targets.



Rowan Daymond, pictured left with Golf Australia tournament director Trevor Herden, was assistant superintendent the last time the Women's Open was played at The Grange in 2016

"Turf conditioning was the main focus, ensuring turf health given some of the issues we had with the greens. Bunkers were also a key focus and we started a strict programme on them about a year out. The bunkers around here have aged quite well and are a

key feature to the course so it was important that we had them right.

"I certainly felt the pressure more [being in the superintendent role]. Having been here before, I knew what the benchmark was going to be and obviously wanted to better it. Up until about two weeks out from the tournament I probably allowed that pressure to get the better of me a bit, but once I felt that all of our programmes were in place and running smoothly that pressure lifted.

"I obviously put the pressure on myself given that it was my first major tournament in charge. like we all do I guess. You want the course to be the best it can be, you want the players and spectators to come and enjoy it and you want the members to be proud of what you've achieved. Hearing the accolades the course ended up getting certainly helped to ease that pressure a little."

Also helping was a level of familiarity coming back to a club which Daymond knew well. In saying that, there were a few staff changes during his first year in charge, among them the addition of Chris McCulloch as senior assistant who had come across from The Australian Golf Club. McCulloch slotted in seamlessly alongside fellow Grange assistant Jeff Gilles and foreman Keenan Hutchings, bringing some big club experience as well as recent tournament experience having been involved in the 2017 Men's Australian Open.

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Also joining the team in the latter half of 2018 were former Murray Bridge course superintendent and industry veteran Mal Grundy and Susana Oliveira, wife of Kooyonga assistant Adam Fry. Together with a number of experienced qualified greenkeepers already on staff, it made Daymond's job a lot easier come tournament week.

"It was easy but it wasn't," explains
Daymond about coming back to his old
club. "It was good knowing the property and
knowing the staff, but there were a lot of
things that I started to see that I hadn't been
exposed to or didn't have to deal with when
I was assistant. I'm lucky in that I have got a

really good team here and good core group of people that rallied together to get the job done."

OVER THE MOON

The Grange's tournament crew for the Open numbered 37, with 13 volunteers bolstering the team. Most of those were drawn from local Adelaide clubs, with a couple of interstaters thrown into the mix as well. Cameron Isedale, who has just started an internship through The Ohio Program, came down from Cobram-Barooga Golf Club, while Scott Cowell journeyed across from The Australian in Sydney. Also helping out were Brenton Clarke (assistant superintendent

Blackwood GC), Mathew Leibelt (Flagstaff Hill), Matthew Gates and Jake Cook (Kooyonga GC), Michael Fischer and Nick Campbell (Royal Adelaide) and Matt Sugg and Jordy Barber (Glenelg GC).

"The volunteers were great," says
Daymond. "Tournaments like the Open don't
happen without a lot of help from other clubs,
so I was really appreciative of them and also
their superintendents for their support."

The West course's bentgrass greens were given cuts both morning and afternoon (either single or double cut, up and back on the same line, at 2.8mm) during the week of the tournament. The greens were single cut and rolled ahead of the second round, with the rollers staying in the shed for the remainder of the tournament. The bentgrass collars, Santa Ana surrounds and tees were kept at 7mm and the Santa Ana fairways at 10mm.

"The cut and roll on Friday got the speeds up close to where we wanted them," says Daymond. "By the final round and with a bit of warmer weather over the weekend we were able to adapt our cutting and have them in a good spot. We probably had a little more growth than we would have liked, but they were firm and rolled true which was pleasing. The tournament organisers were happy with how the course played and the membership were over the moon; of course they were asking how we could get it playing like that all the time!"



The Grange's Tom Schott cuts the 2nd green while Jay Gilbertson handwaters





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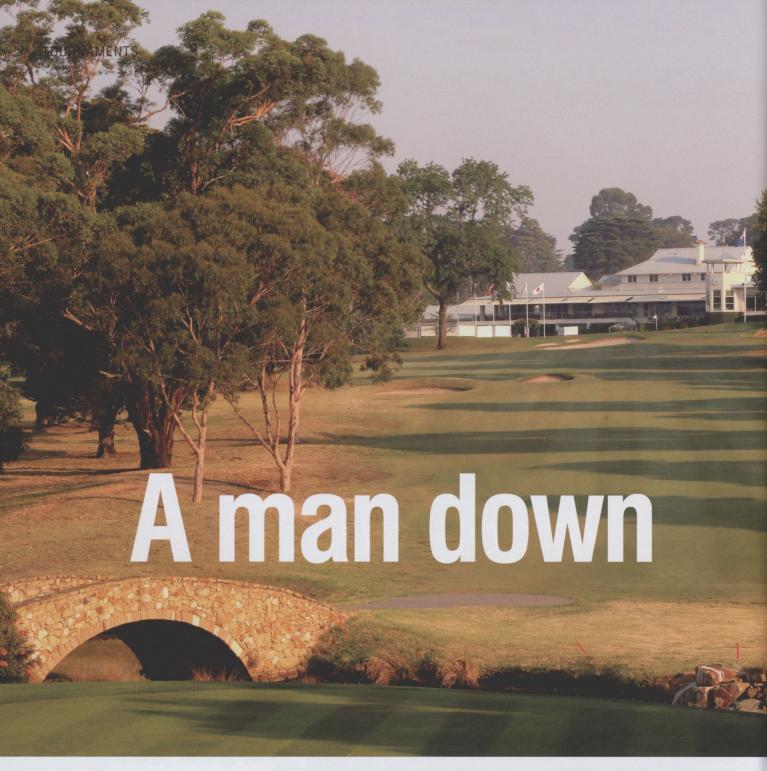
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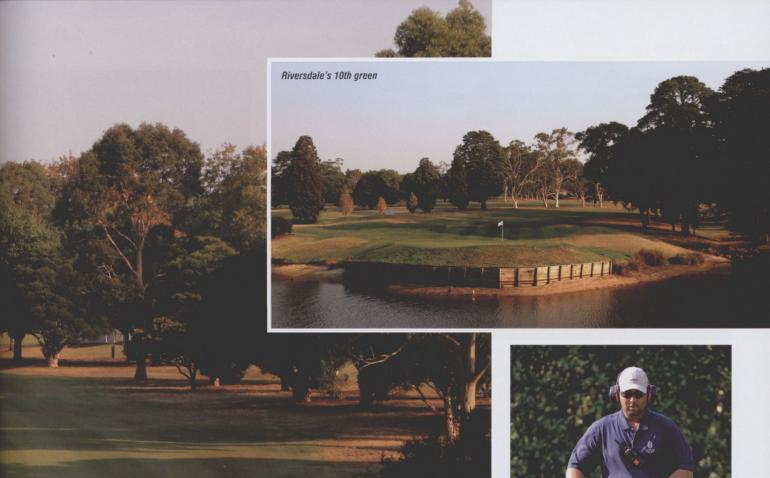
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Like their counterparts at The Grange Golf Club, the crew at Riversdale Golf Club also had to overcome the loss of an integral member of the team in the lead-up to their biggest event of the year.





The stunning view looking up Riversdale's 2nd hole. Below: Travis Scott (left)

with Danny Adam's





The Riversdale Golf Club crew with 2019 Riversdale Cup winners Yuna Nishimura and Chris Crabtree



Above: Apprentice Callum Brandt shaves Riversdale's 18th fairway at 9mm

Left: Harry Barbour (left) and Will March on the hoses following the third round of the Riversdale Cup





Pete Chua stripes up the tall fescue approach on Riverdale's long par three 1st

ournaments were Danny Adams' bread and butter. Major event preparation is the pinnacle of golf course management and for the Riversdale Golf Club assistant superintendent, playing an integral role in the club's famed Riversdale Cup had become an annual highlight and a chance for him to step up and do what he did best.

Adams was a larger than life personality down at the Riversdale maintenance facility. Originally from Leeds in England, where he had worked his formative years at Garforth and Lofthouse golf clubs, he had arrived in Australia in late 2010 after a short stint working in New Zealand. With just \$200 to his name, Adams had arranged to take on a seasonal position at Riversdale that summer and such was his skill and dedication, within three months he was promoted to foreman. Some 18 months later he was appointed assistant superintendent under then superintendent Dave Mason.

In the years that followed Adams played a key role in a number of major projects at Riversdale, including the development of the club's impressive new practice facility on the site of its old bowling green and installation of the new irrigation system which he effectively project managed. In 2017 he gained a place on the AGCSA Future Turf Managers' Initiative and few would have doubted that in the next few years he would have achieved his lifelong goal of becoming a superintendent.

Along with his worth ethic and the high standards he set for himself, it was Adams' personality that endeared him to many at the club and as he did each year in the lead-up to Christmas thoughts were turning to the prospect of another Riversdale Cup in early March. The 2019 Cup would have

Riversdale assistant Mark Brooks (foreground) and superintendent Travis Scott on course set up ahead of the final round been Adams' ninth, but sadly the 32-year-old wouldn't get to see it. Instead, early on the morning of 8 December the tragic news came through that Adams had collapsed and died. He was just 32 and left behind partner Kelly and their one-year-old son Reggie.

The sense of loss felt by the Riversdale crew was cavernous and in the days and weeks after the club rallied around as everyone tried to process what had happened. Despite having overcome his own share of adversity with his health in the past, for current day Riversdale superintendent Travis Scott nothing could quite prepare him for having to deal with the loss of his right hand man and a popular crewmate.

"It was absolutely tragic news," recalls Scott, who has been Riversdale superintendent since September 2015. "The crew are quite a tight bunch of guys so they rallied together well. It hit some harder than others but the club was very supportive. The AGCSA reached out to us and organised some group counselling, while a few of the



Leading hand Josh Wilson rolls the 11th green

guys also did some individual counselling to help them process things.

"As a superintendent it was tough. It's something that you could never prepare yourself for and there's no right or wrong way to go about dealing with it. One of the things that I've taken away from the situation is that I want to be there for the guys more, get to know them a bit better on a personal level and be there to support and help them if they need it.

"It was definitely a tough time losing Danny and having the tournament brought that home a bit more. Danny really thrived on the whole tournament preparation side of the job. We tried to keep the tournament week as normal as possible and didn't try to change anything. Danny loved the tournament environment and we always decked the shed out and got the marquee set up, so we kept that tradition going this year which is definitely what Danny would have wanted.

"Early in the New Year we made the decision to promote foreman Mark Brooks to



assistant superintendent and didn't replace Mark's position until the week prior to the Cup. We had Brad Carey come on board and literally threw him straight in, but he has fitted in really well. So we were pretty much a man down right up until the week of the Cup, but the senior guys, really stepped up and led the team well and brought the young guys together.

"Mark was a huge support through the whole event even prior to being promoted and was there to support and lead in any way he could. I couldn't have asked for more from him and all the senior staff considering what they had been through."

TESTING TIMES

While it seems trivial by comparison, in addition to coming to terms with the loss of Adams, Scott and the crew also had to focus on a number of agronomic challenges to ensure the course was at its best come the Riversdale Cup.

Boasting *Poa* greens and a lot of coolseason tees and surrounds, Scott needed to be ever-vigilant in regards to disease flare ups, as well as judiciously manage his diminishing water resources. And it wasn't just the Cup that he had to consider. Throughout most of February Riversdale held its club championships as well as the first round of Pennant, which meant keeping the course at a high level for a consistently long period of time.

"It was a mad six or so weeks," explains Scott. "We had some massive disease pressure, especially leading into the club championships. With *Poa* greens and the high humidity overnight, which was a little bit different to what we are normally used to in Melbourne, we were kept on our toes a fair bit with anthracnose, pythium and curvularia.

"It was dry as well, probably the driest we have been for that time of year in a long time. We were lucky that we got through with the amount of water we had, because we rely solely on stormwater. With minimal rain fall throughout that period, we just had to manage our water very carefully and keep an

eye on what we were doing with the fairways and our couch surfaces.

"We put out wetting agents every 3-4 weeks on those areas to make sure we got the most out of the water we were applying. We cut back some water on the fairways for about a week or two at one stage which caused a little downturn in quality, but about a week or two out from the Cup we got them back up to speed."

Despite all the challenges, overall Scott was extremely pleased with how the course presented for the 111th edition of the Riversdale Cup. The tournament again attracted a full field of 168 leading Australian and international amateurs with Sunshine Coast's Chris Crabtree securing the men's title with the final shot of the tournament and Japan's Yuna Nishimura winning the women's by three shots.

RIVERSDALE CUP - PREPARATIONS

Greens: Toro Flex 2100 walk mow 2.8mm and rolled with Tru Turf R52 ELTac electric rollers (morning)

Collars: Toro 1600 walk mow 8mm (morning).

Short surrounds: Toro 3250 10mm (evening).

Tees: Toro 1600 walk mow 8mm (evening). Fairways: Toro 5510 9mm (evening). Long surrounds: Toro 3500 Sidewinder 44mm (evening).

Tee surrounds and first cut rough: Toro 3100 Sidewinder 22mm (evening).

Other: Bunkers hand raked and fairways blown each morning.

Staff: 13 – Travis Scott (superintendent), Mark Brooks (assistant), Tim Smart (construction assistant), Brad Carey (foreman), Josh Wilson (leading hand), Tristan Bergman (mechanic), Dominic Bowd (horticulturist), Peter Chua (arborist/groundsman), Will March (4th year apprentice), Callum Brandt and Nic Boundy (3rd year apprentices), Jake Sali (1st year apprentice) and Harry Barbour (summer casual).



Jake Sali cuts the 13th green at 2.8mm

"Considering what the boys went through in the last 4-5 months, for me it was probably the most rewarding Riversdale Cup we have held," reflects Scott. "We had less staff as well and I thought the playing surfaces we produced were as good as they have been in the time I have been here.

"What pleased me most was the way the boys came together to present the place as they did. The weather conditions leading up to the tournament were pretty tough, but we managed to get through without using any town water.

"We provided good quality surfaces for the field and the feedback we got from everyone was extremely positive. We had everything planned in the lead-up and it all fell into place. We will certainly use how we set up this year as a base for future Riversdale Cups." **



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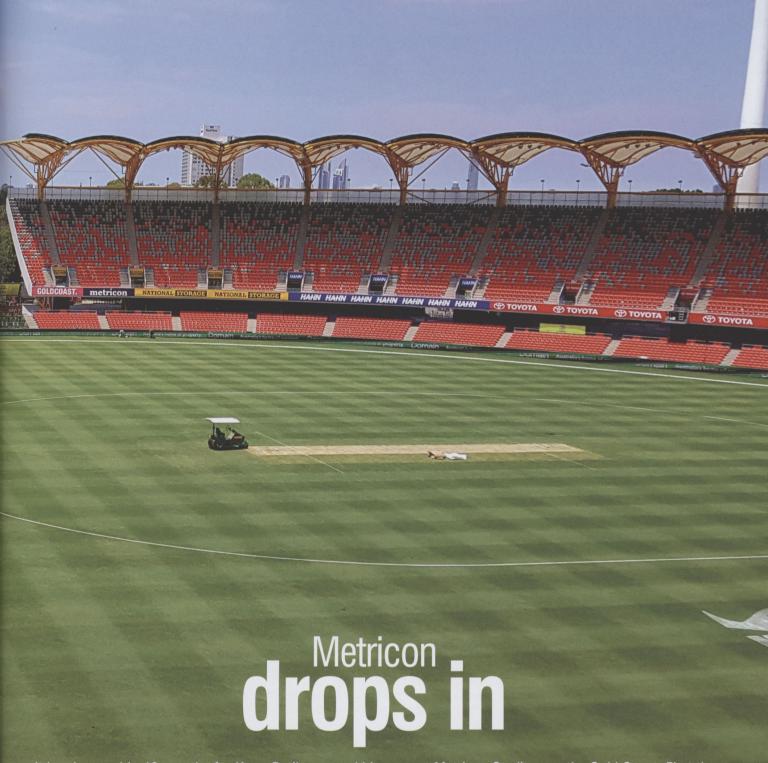
Metricon Stadium hosted its first ever T20 International last November between Australia and South Africa. It went on to host a further three Big Bash League matches over summer. Pictured is the ground one day out from the T20I



n 17 November 2018,
Metricon Stadium on the
Gold Coast hosted its
inaugural official international
cricket match using the first
ever drop-in pitches created and used in
Queensland. The Twenty20 International
(T20I) match between Australia and South
Africa kicked off the increasingly popular

format of the game for the season. To ensure the ground met the criteria required to gain International Cricket Council (ICC) accreditation, the grounds team constructed two portable drop-in pitches plus a sixturf pitch block and run up area within an 11-month period.

Each year, Metricon Stadium, which is the home ground of the Gold Coast Football Club



It has been a big 12 months for Kerry Betihavas and his crew at Metricon Stadium on the Gold Coast. First the Commonwealth Games, then the reinstatement of the playing surface and finally hosting T20I and Big Bash League cricket for the first time in the venue's history.

(Gold Coast Suns) hosts a plethora of events. However, 2018 was unprecedented with the stadium holding the XXI Commonwealth Games Opening and Closing Ceremonies plus the track and field events for the Games (see ATM Volume 20.2 - March-April 2018 - 'Fast-track transformation' - for more on the Games build at the precinct - Ed). To accommodate the Commonwealth Games,

the number of fixtures for the Gold Coast Suns was reduced. Given this, meticulous planning was required to ensure the T20I match proceeded on an optimal playing surface.

PLANNING AND PREPARATION

Preparation of the drop-in pitches began in January 2018 with two portable pitch trays

constructed and assembled in a temporary onsite nursery at the stadium. The initial creation of the trays took approximately one week, which involved;

- Assembling the galvanised steel trays;
- Compacting and levelling approximately 48 cubic metres of Klimowsow wicket soil; and
- Turfing with washed Wintergreen couch.

I specifically chose Wintergreen couch to assist in quicker recovery and assist in uniformity with the current playing surface. Additionally, the same soil as the 'Gabba' was used to replicate the iconic ground's pace and bounce in the future. It's important to note that we used all local suppliers throughout the entire project. We carefully maintained and monitored the pitches throughout the Commonwealth Games (4-15 April) and AFL season in readiness for the cricket season.

Once the Commonwealth Games concluded, the entire ground was reinstated and resurfaced with stabilised Eclipse Wintergreen couch and oversown with ryegrass for the first Gold Coast Suns home game on 2 June. Upon completion of the AFL season in August the transition from AFL to cricket began in earnest.

The first step in transitioning the ground was spraying the surface to eradicate the ryegrass. Two weeks after this, the centre area was excavated to expose the strip footings to house the two drop-in pitches. Once excavated, correct depth levels were determined for the drop-in pitches and, importantly, 20mm of sand was placed across the entire trays, including the strip footings, to eliminate tray to concrete contact.

DROP-IN INSTALLATION

Turf protection, in the form of 14 LD panels, was laid on the southern end of the field with two 80-tonne cranes used to lift and release the four $12.5 \,\mathrm{m} \times 3.05 \,\mathrm{m}$ drop-in trays that make up the two pitches. Once the pitches were elevated on the temporary onsite nursery crane, they were transported on a flatbed truck to the other crane positioned in the centre of ground and then carefully lowered and placed with absolute precision. After months of preparation, the installation of the pitches took eight hours. Once in position they were heavily watered and rolled.



Metricon Stadium's horticulture and logistics manager Kerry Betihavas

Nine days post-installation, the pitches were lightly scarified and topdressed to achieve optimum levels. They were then fertilised to promote leaf growth leading into the first T20 trial match that was played on 14 October between the U19 Queensland and Gold Coast Dolphins teams. The practice match afforded us the ability to establish how the pitch and outfield played and how the stadium performed under lights for a cricket match. Cricket Australia (CA) officials eagerly watched to ensure the pitch and outfield were up to first-class standard.

Following the practice match, light renovation of the outfield took place which included hollow coring, rubbing in and fertilising as required. The two drop-in pitches were lightly scarified and topdressed.

T20 MATCH PREP

Centre pitch and practice pitch preparation started on 9 November to ensure that the



pitches were at the highest possible standard for match day (17 November). Regular rolling, mowing and, importantly, moisture levels were monitored throughout the preparation. Further to that, the outfield was mown daily at 12mm.

The pitch was mown at 8mm and water was applied through a Sumi Soaker hose in 30-minute intervals for one day. The pitch was hand rolled in a north/south direction for 20 minutes, followed by diagonal rolling for 20 minutes and left to dry overnight.

Due to the very young age of the pitch (just 10 months), it was of paramount importance to closely monitor the moisture levels throughout the preparation. It was critical to not overwater the pitches due to their immature root development and to ensure we didn't restrict bounce and carry of the pitch. Cricket Australia's pitch consultant Les Burdett was also on hand in the lead up to the T20I to ensure our turf facilities were up to first class standard.

For the next five days, the pitch was mown at 6mm and rolled with a medium pedestrian roller for 40 minutes twice a day. Additionally, due to the fine and warm conditions, the pitch was hand watered as required to sustain moisture in the trays. Two days prior to the game, the pitch was mown at playing height of 4.5mm and a heavy roller (2-tonne) was used for 40-minute intervals for two days.

Favourable weather conditions were experienced throughout the preparation period with fine, sunny days and average temperatures of 27-28 degrees. However, the match day forecast was for showers and storms. Therefore, we aerated the apron around the pitches and applied dew suppressant to the entire ground to prevent excessive moisture if the showers and storms eventuated. The outfield was mown daily at 12mm throughout the match preparation period.

MATCH DAY

Match day arrived and the covers were removed early with the outfield being double cut to 12mm and signage sprayed. The pitch was mown at 4.5mm and rolled for 50 minutes at two intervals. TV broadcast arrived at midday to complete their final checks for stump cam and audio.

ICC officials and both teams arrived under cloudy skies with showers evident on the radar. We covered the pitch 40 minutes before the toss was due to occur as the Bureau of Meteorology issued a severe storm warning. Sure enough, just as patrons were arriving at the stadium a severe storm hit, with

To ensure Metricon Stadium met the criteria required to gain International Cricket Council (ICC) accreditation, the grounds team constructed two portable drop-in pitches plus a six-turf pitch block and run up area within an 11-month period

Two 80-tonne cranes were used to lift and release the four 12.5m x 3.05m drop-in trays that make up Metricon's two pitches

the stadium experiencing winds of close to 80kph and 34mm of rain within a 25-minute period (50mm within an hour). The stadium's emergency management plan was enacted with loose items secured, transport services suspended, patrons moved to shelter and the game delayed.

Once the storm passed, our team of four quickly removed the minimal surface water on the outfield with a Super Sopper plus a hessian wrapped rope. Thankfully, the covers did their job and the pitch was bone dry and within 50 minutes the ground was ready for play.

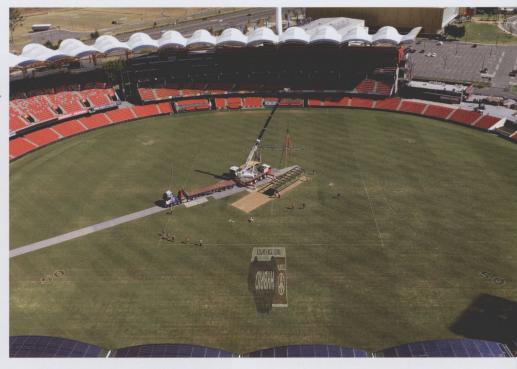
In my opinion, the drainage system on the outfield of Metricon Stadium is second to none. Despite the volume of rain, the match ultimately proceeded under revised playing conditions some 90 minutes late with each innings reduced to 10 overs. The match was exciting for all spectators with South Africa (5-117) defeating Australia (80 all out).

POST-MATCH

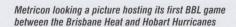
Immediately following the T20I, the pitches were heavily watered and sieved soil was applied to footmarks. Eight days later the pitches were top-dressed and fertilised in readiness for the first ever Big Bash League (BBL) matches to be played at Metricon Stadium.

Brisbane Heat played two of their BBL home games against Hobart Hurricanes on 22 December and Sydney Sixers on New Year's Day. Match scores were over 150 for both matches which is indicative of pitch performance and ideal for T20 cricket. Our final game of the summer was played four days later on 5 January between the Melbourne Stars and Sydney Thunder with the former winning by eight wickets.

After months of preparation, the installation of the pitches on 27 August took approximately eight hours. Once in position they were heavily watered and rolled



Overall, the drop-in pitches, outfield and practice pitches (and stadium facilities) exceeded the expectations of umpires, players, ICC and Cricket Australia officials, particularly given the young age of the pitches and newly created facilities. The Metricon Stadium team and I look forward to preparing the ground for many more international and BBL matches in the future.

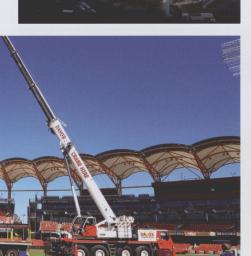








The T20I pitch (from top down) five days prior, two days prior and the morning of the match. On match day, the pitch was mown at 4.5mm and rolled for 50 minutes at two intervals



n the last edition (Volume 21.1 – Jan-Feb 2019), Australian Turfgrass Management carried a USGA-authored piece on wetting agents and the important role they play in agronomic programmes. The article looked at the numerous agronomic and environmental factors that influence wetting agent performance and highlighted the importance of testing and evaluating products to determine which is best for your facility.

To provide some local context to the article, ATM canvassed a number of Australian superintendents to get an insight into their use of wetting agents and the practices and products they employ. ATM asked the following questions; What sort of wetting agent programme do you have in place at your facility and what have you found works best for your situation (or what hasn't worked)? How has your use of wetting agents changed over time and how do you go about determining what is the best wetting agent for your situation? The following is a snapshot of responses that ATM received...

DAVID JOHNSON

Patterson River GC, Vic

I attended a seminar titled 'Wetting agents and their effects on putting greens' at the GCSAA conference in San Antonio last year (2018) conducted by Doug Karcher (University of Arkansas). His research changed the way I use wetting agents and opened my eyes in regards to hydrophobic sands and soils and water retention.

Dr Karcher's research found that two initial high application rates of a wetting agent in the first month at the start of the warm season, with 5mm of watering in, followed by high single monthly applications should be enough to break water retention and penetrate into the soil profile to the roots.

With regular irrigation, either by sprinklers or hand watering, this should give you an optimum moisture level of between 15-20



per cent. Anything lower than 15 per cent moisture is heading into local hand watering stage and 11 per cent moisture or lower is at wilt point. Dr Karcher also found that this practice reduced his irrigation by 20 per cent over the summer months. Moisture meters were also recommended to keep a close eye on moisture percentages and local dry patches even though the green may look fine.

I started this practice late in the summer last year when I got back from the USA and have continued the same practise through the recent summer period from September. I have

found that although it has been an indifferent summer period, with rains at the beginning of December followed by a long dry spell, the signs are very positive. Localised dry patch seems to have been minimised and the moisture levels seem to be steady at around 15-25 per cent. Irrigation water usage is the one I'm keen to keep my eye on though, but I'll have to wait until the summer irrigation period is over before evaluating whether or not usage has dropped.

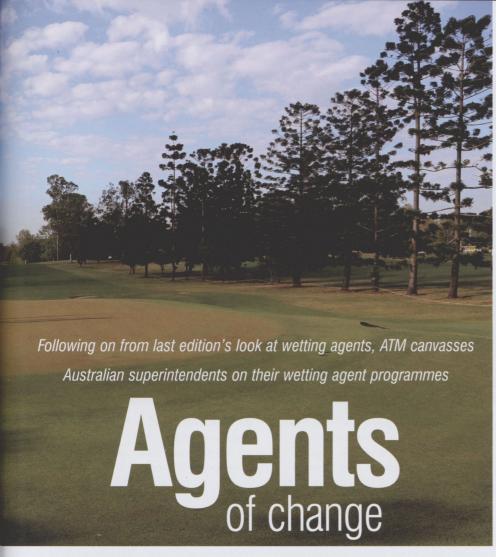
PETER BLAIN

Forster Tuncurry GC, NSW

The wetting agent programme I'm using at the moment includes; August to October – Hydrolink Advance 25L/ha, every three weeks; November to March – Hydrolink Retain 25L/ha fortnightly; March to May – Hydrolink Advance 25L/ha every three weeks; May to July – Revolution 10L/ha every three weeks. This has been my first season as a superintendent using these products. The main reason for choosing these products is the service availability in my area which is the best I have found. The cost of these wetters is also a factor. As for when I use them, this is based on the weather, with heat and rain impacting the amount and how often I spray.

Wetting agent tablets are a go-to for many when dealing with hot spots





SEAN STUCHBERY

Bundaberg GC, Qld

I have been at Bundaberg Golf Club now as superintendent for 10 years and I have used most of the wetting agents on the market. Bundaberg can produce very long hot dry spells and also very long wet spells.

Above all the products I have used, my favourite is TriCure. I have played around with rates, but I don't think you can beat it. I have a monthly application of it go out nearly all year round and I do very little hand-watering. Through winter I do change it up a bit and mix it with TeraFirm. I know in the US they go with the two at different rates at different times of the year, but in the winter I like a 50/50 mix.

Since starting this only a few seasons ago the algae issues we have had in the past seemed to have disappeared due to the TeraFirm getting it through the top layer. I will also add that I use Matchplay Strike with a lot of my foliar mixes and I don't have much worry with fairy ring with these going out all season round. Strike is so affordable that you're mad not to have it in a mix going out. This is what I have found works for me and I'm sure that there are other long chain wetters out there that do the same thing.

"What I am looking for in a wetting agent is that uniformed drying of the turf in the late afternoon, not localised random dry patch" — Simon Muller

SHAUN CROSS

Byron Bay GC, NSW

From September to April we groom our 328 greens fortnightly and dust weekly. With such an intensive cultural programme and a very regular dusting programme with imported USGA sand, we have found that weekly applications of wetting agents at light rates has played a key role in maintaining a uniformed surface when applied directly after the sand has been rubbed in. We have also found that this practice allows us to mow the

There is a seemingly endless pipeline of new wetting agents available and sifting through manufacturer claims to determine which products fit best in your wetting agent programme can be difficult but nonetheless highly important

next day after dusting, with a reduced night time irrigation cycle and a syringe before mowing.

Our wetting agent application frequency changes accordingly with our groom and dust programme. Over time we have altered application intervals to mirror dusting inputs. Less dusting applied, the longer the interval between wetting agent applications. But generally we are applying a soil application at least fortnightly regardless, so the wetter goes in the tank with it.

Uniformity directly after dusting our putting surfaces and syringing is our desirable result, and due to the frequency I mainly use a wetting agent suitable for injection through our booms. The ole 'little and often' theory.

DARREN WILSON

Wembley Golf Complex, WA

At Wembley we boom spray all greens and green surrounds monthly from October through to the end of March with 15L/ha of Biagra wetting agent. We apply three minutes irrigation just before the sprayer gets on then two lots of five minutes to reduce puddling afterwards. We take this opportunity to apply some fertiliser if required as well. Wetting agent is also applied via fertigation unit at night through the irrigation system. On our fairways and tees, every time we boom spray we add 1-2L/ha of Biagra to the tank which doesn't need to be watered in.

The entire irrigated golf course has broad wet wetting agent injected through the fertigation system twice a week from November through to the end of February. Two months either side of these it is injected weekly. The injection pump has a proportional flow control which increases and decreases the rate of wetting agent according to the





irrigation flow rate. This does vary due to ET as the irrigation system is connected to an onsite weather station which automatically adjusts the irrigation to the past day's weather, hence the amount of irrigation and wetting agent depends on the ET. If we have an ET of five on the system, it irrigates approximately 3,500m³ of water over the entire golf course (72-plus hectares). This is equivalent to 4L/ha weekly or 16L/ha monthly over 72 hectares of irrigated turf which averages out to 290 litres of wetting agent per week. The maximum ET is 10 which is very rare – it has never happened but we have reached 9 once in 10 years.

Over time the way we apply wetting agents has changed. At first we were boom spraying everything and watering it in to prevent turf burning. As wetting agents have progressed, they can be injected. Having a newish irrigation system or a high efficiency

rate, injecting saves time and is much easier on labour and there is no need to water in. Being a busy golf course, not having to work around golfers is a plus. Having a proportional injection pump is the key so as to distribute the wetting agent evenly over 36 holes through the whole irrigation cycle as the irrigation pressure ramps up and down depending on required flow. It has been proven to save 10 per cent in irrigation water through trialling over time.

What hasn't worked? Cheaper wetting agents have been tried and shown the visual appearance of dry patch at the same settings which are not as efficient in beating water repellence. I'm happy to keep trialling new products but they need to be trialled for a month to see how they perform. Value for money with wetting agents that work are only used. I seem to be always going back to the same one!

SIMON MULLER

The Dunes, Vic

We use Maximiser Elite every 28 days from November to the end of the watering season. This specific product has been used for many years as it seems to have good soil wetting properties and also moisture retention, which is needed on our yellow sand greens profiles. We have experimented with other products due to good marketing but none have given the reliability that Maximiser has. What I am looking for in a wetting agent is that uniformed drying of the turf in the late afternoon, not localised random dry patch.

With specific dry patch we use Hydro Wet pellets; these are effective for wetting up the profile in specific areas when soil moisture has dropped below acceptable levels. The fairways, tees and surrounds are also given a monthly application of Tsunami. This product works well for us for the price and the constant use is also helping build the CEC of the soil with the wetting agent seaweed based with fulvic acid.

MATT BAILEY

Lynwood CC, NSW

Located in Sydney's Hawkesbury region, Lynwood Country Club regularly experiences summer temperatures in excess of 40 degrees. We have a pure sand base profile with minimal organic matter percentage. Our programme consists of fortnightly applications of Stamina 90 (synthetic wetter) at 14L/ha and Stamina Express (penetrant) at 3.4L/ha. On the opposing fortnight we apply Bio Active (a blend of Kelp amino acids etc) at 5L/ha and



Understanding how wetting agents interact with water and soils under different agronomic and environmental conditions is critical to developing an effective wetting agent programme It is best to treat hydrophobic soil conditions preventatively rather than curatively. Research has shown that applying wetting agents prior to the onset of hydrophobicity can result in fewer localised dry spots

Natural Wet (natural wetter made of Yakka extract) at 10L/ha. This means that we are applying a wetter of some sort weekly.

I've found that spoon-feeding wetting agents has greatly improved the consistency of the soil profile's water-holding ability. We have been able to reduce Stamina 90 application rates by using more kelp products which has reduced some pressure on the budget.

We have trialled a range of wetters over the years but have found Stamina 90 has worked best for us. Some wetters that were trialled caused stress symptoms to the plant or didn't show the same longevity of Stamina 90. The plant looks happiest with light, frequent Stamina 90 applications.

TIM HOSKINSON

Cairns GC, Qld

In Cairns we have a distinct wet and dry season – December to April (wet) and May to November (dry). Most of the year I run with Hydrolink Profile, which I find is a good blend to push water away from the putting surface while still retaining available moisture in the profile. I have tried running with just penetrants during the wet season, but they dry the profile out significantly, so if we do have a couple of weeks of high temps (early 30's consistently), it becomes a challenge to keep water up to the greens. As such, I find the Profile to be suitable during this time.

During dry season, I will try to continue to run with the Profile blend, however, if we are really dry I may switch to the Hydrolink Advance, which helps retain a little more moisture. I would never apply a strictly

Australia Pty Ltd



retention type product on my greens as I prefer them on the drier side if anything, particularly with our tropical weather.

The biggest factor for me in selecting a wetting agent is to keep that top inch or so dry while retaining some moisture in the profile. Wet greens up this way lead to serious issues (disease) very quickly! We do have sand greens, however, there is definitely some clay content within that sand. I'd love to apply wetting agents to our tees and fairways as well, however, due to low budgets, staffing and a horrendous irrigation system, this simply is unachievable.

STEVE LEWIS

Royal Hobart GC, Tas

The programme we currently use at our facility on very hydrophobic sands includes monthly applications of TriCure boomed on to greens from November to March. This helps get fairly good penetration from irrigation but really helps when hand-watering any known

dry areas. Fairways are injected with an injectable penetrant a couple of times a week. Nothing has really changed over time other than we rely on it and it can be injected into the irrigation system. We used Wetta-soil back in 1980s which was a fantastic product back then. We find the thicker wetting agents seem to perform better and last longer.

TREVOR U'REN

Devilbend GC, Vic

Devilbend Golf Club is a small country style golf club with a small membership base. We have four ground staff and a couple of volunteer member helpers from time to time. We have *Poa* greens and Santa Ana couch fairways. As superintendent here for the last 24 years I've tried lots of different wetting agents and programmes over the journey.

The current programme, which we have used for over 15 years now, is as follows:

Monthly applications on greens and coolseason surrounds of Pinnacle wetting

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The degree of hydrophobicity plays a major role in wetting agent performance. Soils become hydrophobic due to a coating of hydrophobic compounds on soil particles

agent at 20L/ha. In the tank we also add imidacloprid at 2.5L/ha and bifenthrin at 3L/ha. We have found applying it all together not only a time-saver but secondly the wetting agent helps with getting the insecticides into the profile (we are chasing Black beetle and Stem weevil). We try and do the same programme on our tees as well.

We have a fertigation unit in the pump station that feeds the entire course a small amount of Pinnacle any time the pumps run. We have found that the uniformity on the fairways has improved. A number of years ago we tried two large applications of wetting agent per year (September and December/ January) but it didn't work for us.

We have tried many wetting agents over the journey and my way of testing the new 'golden' product is to trial them up against each other. Many times we've done nine greens with a product and nine with a different one. We also look at value for money with any product we use.

JARED ARMITAGE

Emerald GC, Qld

We currently use a six-week programme for our liquid wetting agent throughout the year and use wetting agent tablets on hot spots between applications. We have tried a few different brands of wetting agent and length of time between applications in my time here, but we keep going back to Stamina 90 (which is what my predecessor had started the greens on) as we are finding great results with it.

We determine if a new wetting agent might be useful to us by trialling it across all our greens. We need to use it on all our greens as they all have different soil profiles. We find if we are not seeing results on our greens that suffer the worst from localised dry spot than we will not continue with it. It is extremely important to us to have an excellent wetting agent due to Queensland's climate and small staff.

JOHN NELSON

Grafton GC, NSW

Generally we make monthly applications on our one hectare of greens of 8L TriCure AD and 2L TeraFirm soil penetrant. During the winter months this changes to 6L TriCure and 4L TeraFirm. During the peak of summer our applications are every three weeks at 8L TriCure and 2L TeraFirm. We find this works quite well for us, giving good even water infiltration and penetration. The problems we have associated with dry patch come mainly from uneven irrigation and tree root encroachment.

DAVE CASSIDY

The Cut, WA

I am going through a bit of a trial and error to get on the right programme with different products as I have only been at The Cut for six months. I put out a penetrant wetting agent on greens fortnightly, tees monthly and fairways every six weeks from November through to April. I would like to go a bit more frequent on the fairways which I will allow for in the next budget, however, with the greens and tees I am happy with the current programme.

I wasn't a huge believer with wetting agents at first, but I have found when playing around with rates and leaving particular areas I have seen the results for myself. I am always willing to try new products and hear what others have tried, but I do like to find out first hand. I am also a big fan of Aqua Aid tablets when watering hot spots.

TIM MUIR

Cumberland Council, NSW

With small staffing numbers and limited fiscal resources, the use of surfactants, penetrants etc has become a staple hub of our yearly agronomic practices. We use a monthly programme (TriCure) in summer to ensure that our soil profile never puts us in a situation that we are unable to recover from.

We will also incorporate products throughout the calendar year such as Hydrolink Rapid, Stamina Express/Balance/Revive depending on whether we want to retain or move water through the profile. Our use of wetting agents has evolved over time due to trial and error, knowledge and literature being passed on by sales reps and networking with peers.

STEWART MACFARLANE

Waterford Valley, Vic

At Waterford Valley Golf we apply a wetting agent monthly (greens only) between the months of October and April. During the winter months we apply a penetrant to help keep the greens firmer by removing excess water from the putting surfaces. We regularly mix our wetting agent applications with other products such as fungicides and insecticides.

Our collars are prone to drying out easily during summer, so to help prevent this we solid tine these areas (2-3 laps round each green) as regularly as possible (monthly) and follow this up with applying a wetting agent, then hand watering in heavily. During summer, to target localised dry spot, we spot treat using a penetrant, followed up by hand watering with our wetting agent tablets regularly until we get good moisture retention.

When I started as superintendent here I discovered that the previous wetting agent used on the site was no longer available. I had to select a new product with only a few weeks until summer. I obtained as much information as I could from suppliers and talked to other local superintendents. Cost was also a factor that had to be considered. After the new product was selected it took a few applications to get a result we were happy with. This is the second summer using the product and I'm confident I have made the right choice.

ACKNOWLEDGEMENTS

ATM wishes to thank all superintendents who provided responses for this article.



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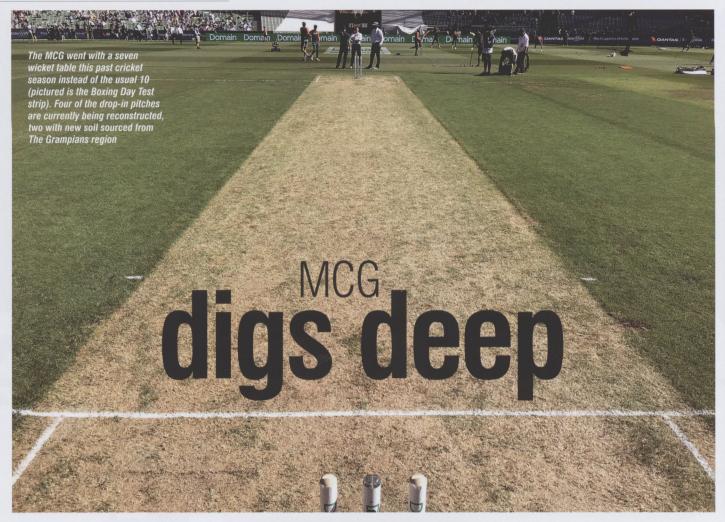


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For Earth, For Life Kubota



t is coming up nearly 18 months now since I arrived at the Melbourne Cricket Ground as head curator from the WACA in Perth. It has been a busy introduction to the famed Melbourne arena and the past cricket season has seen plenty happening both on and off the ground as we look to improve our turf surfaces.

Within 24 hours of Dom Sheed slotting the winning goal for the West Coast Eagles to clinch the 2018 AFL Premiership, preparations for what would rate as one of the biggest events I have been involved with started in earnest. WWE Super Show-Down wrestling came to town on 6 October and it wasn't until the bump-in started that I fully appreciated the scale of what was about to unfold.

Bump-in began on the Sunday night after the Grand Final and took six days. We had roadways from the arenas race on the southern boundary side out to the middle of the ground to set up the ring and out from that it was basically flooring and seating. The Super Show-Down attracted just over 70,300 spectators, the largest wrestling event conducted in Australia.

Within two days of WWE finishing we were basically into our pitch preparation for the 2018/2019 summer of cricket. Once the WWE bump-out finished, HG Sports Turf was straight in digging up the middle so we could



MCG curator Matt Page looks back on a busy summer and plans afoot to improve the drop-in wickets.

put our drop-in pitches in and replacing areas that had experienced high traffic during the AFL season.

This season we decided to go with a seven pitch set-up instead of the traditional 10. The main reason for this was that we wanted to get more deterioration with our pitches. Traditionally with the 10 pitch set-up, we have had the Test match pitch just off-centre and haven't played cricket either side of that in an effort to keep it pristine for Boxing Day. One of the things we discussed

was if we played a Sheffield Shield game on either side of the Test strip, could we create some more wear and tear on it and hopefully get some deterioration. We set up the seven trays and also put down a bed of sand on the concrete base upon which the drop-ins sit to create a more natural growing environment.

We played a Shield game down each side of the Test pitch prior to the Boxing Day Test and we looked at different ways of preparation for each. We also collected a heap of data that we could use going into the Test to give us the best possible chance to produce a pitch that we were hoping for – one that gave the bowlers an opportunity first up, then helped the batsman out a little bit before deteriorating, taking spin and getting some variable bounce.

With those Shield games we played around with our wicket grass heights as well – the first was 15mm and the second 10mm which we were happier with. All the while we were collecting data in terms of bulk densities, moisture content, surface hardness – trying to put bits of the jigsaw puzzle together.

We left a lot more grass on the pitches than in previous years. That was more so to create a bit of seam movement early and hopefully as the game went on some deterioration to accelerate the game at the back end.

After two Shield games, we then had a Bon Jovi concert on 1 December, six days before the third scheduled match against WA. We were in full wicket preparation mode for that game as the bump-in began. The concert guys were fantastic, however, and allowed us to do what we needed to do.

They built all around the pitch up until Saturday lunchtime at which time we covered the pitch before final flooring and seating went down a few hours before the show. The following morning, we came back in and all the flooring on the pitches had been removed and we were able to get on with what we needed to do.

Following the third Shield game, it was then all about the lead-in to the Test. One of the issues we faced this year was renovating the outfield. Traditionally, as soon as AFL finishes we get 3-4 weeks to be able to renovate and get the outfield looking pristine.

This year, with the WWE, we didn't get that chance, so we got through by just Vertidraining every couple of weeks. We then did as close to a major renovation as we could three weeks out from the Test match which involved scarifying, coring, topdressing and seeding. We then had a timely 40mm of rain in two hours which helped germination.

For the Boxing Day Test the plan was very similar to what we were trying to achieve during the Shield games. We wanted some seam movement early for the quicks and then as the game went on we wanted it to deteriorate. The first two days we probably didn't achieve what we wanted as there was more variable bounce than what we were hoping. From Day 3 onwards we were happy with how it played as we started getting the deterioration we were after. We scraped through and got a pass mark from the International Cricket Council, but we are still a long way from where we want to be.

We came off the Test match and within two days had our first Big Bash League match on New Year's Day. We had two pitches on the go during the Test and we ended up having five games in a month and a half.

RAILS AND RECONSTRUCTION

The major project following the cricket season has been the removal of the concrete slab from underneath the centre of the ground. The slab was put in during the late 1990s when the MCG converted to drop-in pitches. The slab was removed immediately after our second major concert of the season – Eminem – on 24 February 2019. The pitches were out within two days and transported to the turf nursery adjacent to Punt Rd Oval.

Over four days the slab was ripped up and we then installed 160mm slotted drainage pipe, filled it with a 250mm gravel drainage layer and sand before HG Sports Turf came in, levelled off the surface and put turf down ready for the footy season.







One of the big projects following the cricket season has been the removal of the concrete slab in the centre of the ground

After moving the drop-ins to the nursery, they were renovated with a tractor-mounted scarifier (20mm spacings at 10mm deep seven ways) and then topdressed and fed. We have got six that we plan to use for the next season and we are currently in the process of reconstructing the other four.

Two will be constructed with the MCG's traditional Merri Creek soil and Legend couchgrass, while the other two will use a new soil that has been sourced from The Grampians in western Victoria (one will be

Legend, the other Santa Ana). This new soil has a higher clay content than what we currently use and we are hoping it will provide some more pace and bounce and hopefully some more cracking. It hasn't been tested in a tray yet, so at the moment we are just ticking boxes to ensure that everything goes alright and if it does then hopefully in a couple of years when they are ready we'll have two that we can use.

We are also looking at improving the site where out wicket nursery is. The drop-ins currently just sit on a crushed rock base with a fence around them. We are in the planning stages to build a proper nursery where we can set 10 up side by side on a rail system with a drainage system underneath and irrigation. Hopefully we will get the go ahead in the coming months which will make our lives a lot easier.

Following on from the slab removal, the next project that will happen at the end of the current AFL season is the installation of a rail system out in the middle. Now that we have got rid of the concrete slab, we are trying to create as natural an environment for everything out in the middle as we can. The rail system is used at the likes of Adelaide Oval, Optus Stadium and North Sydney Oval and will hopefully improve our pitch performance.

The rail system comprises 600mm wide rails with the pitches straddling them 300mm each side, so in the middle you basically have a natural environment of gravel and sand that the roots can penetrate down into. The slab was just one big chunk of concrete that didn't let any water pass through it and we couldn't get any root system down. We found this year that by putting that layer of sand over the top, our root system was a lot healthier. Hopefully the installation of the rail system will not only help with our wicket performance in future, but also with our drainage during the footy season as well.



The MCG crew, with curator Matt Page third from left, on day one of the 2018 Boxing Day Test



on the right path

urf managers, in whatever sector of the industry they work, are renowned for their willingness to share ideas and experiences. It's this sense of comradeship which sets the industry apart from many others and helps to form special bonds.

Ask any turf manager who attends the annual conference what the most rewarding part of the week is and they'll invariably tell you it's the opportunity to be around likeminded professionals and discussing the many and varied issues that they all face.

For the past four years, the AGCSA's Future Turf Managers' Initiative has followed a similar format – take a group of talented up and coming turf managers, bring them together for three days of intensive networking and education, expose them to new ideas and concepts and take them out of their comfort zone a little.

It has proven a recipe for success worldwide for the Jacobsen-led initiative and since its inception literally hundreds have gone through the programme, harnessing valuable new skills that they have subsequently been able to put into practice to progress their careers.

For the fourth consecutive year in March, the AGCSA Future Turf Managers' Initiative, presented in conjunction with Gold Partner Jacobsen, brought together 20 of Australasia's finest up and coming turf managers.



Getting the opportunity this year in Melbourne were 20 candidates – 16 from Australia and four from New Zealand. The Class of 2019 comprised: **Greg Askew** (City of Newcastle, NSW); **David Egan** (Adelaide Oval, SA); **Rhys Short** (Shelly Beach GC, NSW); **Mark Brooks** (Riversdale GC, Vic); **Ryan Stores** (Royal Canberra GC, ACT); **Martyna Synak** (Oatlands GC,

NSW); Matthew Jewell (Warrnambool GC, Vic); Scott Mortimer (City of Kingston Council, Vic); Scott Reid (Country Club Tasmania, Tas); Taylor Wills (The Kew GC, Vic); Heath D'Altera (Kingston Heath GC, Vic); Rohan Farrow (Mount Lawley GC, WA); Braydan Millar (Rowes Bay GC, Qld); Aaron Taylor (The Lakes GC, NSW); Harry Brennan (Dubbo Regional Council, NSW); Jared Armitage (Emerald GC, Qld); Harry Middleton (Tauranga GC, NZ); Callum Cameron (Remuera GC, NZ); Ben Simons (Cape Kidnappers, NZ); and Philip Marra (Shandon GC, NZ).

Joining the group were four superintendent mentors whose role it was to provide some practical context to the material being delivered. Among them was FTMI Class of 2016 participant Rowan Daymond who is now superintendent at The Grange Golf Club in Adelaide. He joined returning mentors Travis Scott (Riversdale GC, Vic), Leon Hennessy (Cromer GC, NSW) and Leo Barber (Paraparaumu Beach GC, NZ).

This year's FTMI kicked off on Sunday night with a unique team-building event which combined gameshow style games and sports trivia to help break the ice before the

serious component kicked off on Monday at Peninsula Kingswood Country Golf Club (PKCGC). Across the following two days the candidates sat in on presentations covering subjects such as personality profiling and communication, understanding budgets, CV writing, interviewing and presentation techniques, managing staff and effective leadership techniques. The group also got an insight into operations at PKCGC thanks to host superintendent Glenn Stuart.

For Karen Proctor, Jacobsen's director of international marketing, the FTMI is one of the most rewarding programmes the company invests in and she was again blown away by the calibre of this year's candidates. "Every year the passion and dedication that the FTMI students display never fails to impress and this year was no exception," says Proctor. "The 20 individuals now join an elite group of graduates from around the world who have taken part in this career-changing initiative.

"This wouldn't be possible though without the support of the mentors and our valued partners the AGCSA. I look forward to following the careers of this year's students and watching them flourish. The future of the industry is in exceptional hands."

Following the FTMI, ATM canvassed those who attended to get an idea of the things that resonated with them. As you will read below, all took something different away...



Oatlands assistant superintendent Martyna Synak (centre) is presented her FTMI certificate by Jacobsen's Karen Proctor and AGCSA's Mark Unwin

MARK BROOKS

Riversdale GC, Vic

The FTMI provided a great insight into sharpening your skills for career development. The programme offered a great opportunity to network and build career-long friendships, as well as working closely with the mentors. The group discussion with the mentors was one of the highlights, speaking to them about past experiences with staff, committees and

projects and how they overcame various obstacles. Another key take-home was the importance of being patient – opportunities will present themselves when you least expect them. The session I found great value in was looking at personality profiles – how different personalities may not match, but how to make the best out of the situation.

HEATH D'ALTERA

Kingston Heath GC, Vic

The FTMI really helped me get out of my comfort zone and gave me valuable skills that I intend on using in working towards my goal of becoming a superintendent. It was great working with like-minded people who were there for the same reasons as myself. The knowledge I gained on how to set out a resume through to understanding personality types when managing staff was invaluable.

RYAN STORES

Royal Canberra GC, ACT

Every topic that was covered was on point with modern turf management. I walked away with my eyes wide open because I realised how much I had learned that I didn't know! I got more out of two-and-a-half days than I would have in years of 'learn on the job' experience. I would highly recommend this programme to any turf manager that is looking to broaden their managerial skill set.

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MARTYNA SYNAK

Oatlands GC, NSW

The FTMI was an amazing experience and made me think a lot about my career and the future. What I took away was that I have to work on my CV, not just writing it but focusing on what I can add to it. I need to get out of my comfort zone as a 2IC and experience more – volunteer at some big tournaments (which I have applied for already), get some knowledge and experience, see how things can be done differently, how to manage a big crew etc...

The personality profile session helped me to understand myself better and also recognise my colleagues' personalities so I can treat them individually. This is a key to better communication at work. I always thought 'treat others how you want to be treated', but thanks to this session I have now discovered 'treat people the way they want to be treated' – to do that you need to know their personality type.

BRAYDAN MILLAR

Rowes Bay GC, Qld

I went into the FTMI with a very narrow mindset that I was only going to learn from certain parts of the programme. However, once it got underway it really opened my eyes up to the fact that no matter what the topic is you can always learn something new and improve yourself. Also, while you're around new people you should 100 per cent take advantage of the networking opportunity and never be afraid to ask questions.

AARON TAYLOR

The Lakes GC. NSW

The FTMI offered training that cannot be obtained by studying. It was specific education, teaching the unknowns of stepping up into a lead role – intensive and direct superintendent preparation taught by those who have been there and done that. The honesty of the mentors and speakers gave the initiative the highest integrity.

BEN SIMONS

Cape Kidnappers GC, NZ

I was lucky enough to be one of four candidates to be selected from New Zealand for the 2019 FTMI. All the content and educational speakers were informative and topics very relevant for my goals and positions moving forward. I drew many lifelong skills from the presentations and the networking opportunities were amazing. Also being able to talk and discuss topics with the four mentor superintendents, who have been in the same situations, was invaluable.

DAVID EGAN

Adelaide Oval, SA

I got a lot out of all the presentations, especially the personality profiling.

Communication is so important and this session gave everyone some tools to help with understanding staff and different personalities. It was great to hear from an experienced general manager about the way communication and budgets worked in his situations and advice on how to go about this in the future. Networking with everyone was great and hearing about everyone's workplace and the way they all go about their work, the processes they have in place and the similar issues we all face.

JARED ARMITAGE

Emerald GC, Qld

I found the FTMI excellent. I can now understand budgets and annual reports much better. This has already helped our club as we are currently setting our budgets. I would recommend this course to every greenkeeper.

CALLUM CAMERON

Remuera GC, NZ

My goal before going was to have no expectations but to know I would be motivated and get an understanding of what the next step of being a turf manager could look like. Networking with future superstars, asking the questions that I have struggled

The Kiwi contingent (from left) Harry Middleton, Ben Simons, Callum Cameron, Phil Marra and mentor Leo Barber

with, how to manage and lead staff were all great take away points. The interview and resume workshop was an eye-opener on what future employers are looking for and how to make sure you stand out from the crowd.

I really enjoyed the course walk at Peninsula and the attention to detail and high standards. It was also great to hear from experienced speakers, like Mark Prosser, who were very relatable. The mentors had a wide range of ages and experiences and they were not afraid to share their experiences. Any question could be asked of them and not a single question was left unanswered.

MATT JEWELL

Warrnambool GC, Vic

What I got most out of the FTMI was being able to stand up, or simply speak, in front of a group of people and feeling just a little more comfortable in doing so. Being forced out of my comfort zone has immediately led me to seek doing so more! Secondly, what to look for in job advertisements and how to best prepare a CV tailored specifically to that job. These skills are going to be invaluable for me both professionally and socially.

PHIL MARRA

Shandon GC, NZ

The FTMI helped to emphasise the fact that whatever happens in my career, I am the one that needs to take charge and progress if that is what I want to do. There is support out there in our turf community – make the effort to interact, partake in events nationally and internationally so that it helps normalise our career pathways. Too often we assume that we are not talented enough to take on high profile positions when in fact we are probably the best and balanced individual for the job.

When in management, understand your staff strengths and let them do their job well by supporting their working environments. When it comes time to choose your next employee, value the importance of choosing well-suited personnel that can be upskilled as they progress. It's harder to rectify a poor work ethic than it is to upskill someone who is learned and keen to do better.



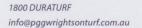
FTMI participants got an insight into maintenance operations at Peninsula Kingswood Country Golf Club thanks to host superintendent Glenn Stuart

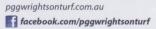


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LIVING TURF











Teeing

Practice tees require a unique management programme because of heavy divotting and use throughout the season write USGA agronomists David Oatis and Larry Gilhuly.

n many ways, the practice facility at a golf course is like the shooting gallery at a carnival. There are far more misses than makes, people rarely hit the bullseye and the prize of a well-struck shot usually leads to the desire to hit another

The intensive use that most practice tees receive can make them one of the most challenging areas to maintain on a golf course. Course superintendents are always on the lookout for strategies that can help a practice tee perform better through the constant wear and tear.

While this article will focus on management practices to improve turf quality on the practice tee, the design and amount of usable hitting area have a bigger impact on turf conditions than anything else. Even the best management programmes cannot compensate for insufficient size.

Several excellent articles have been written on how large practice tees should be and how they should be built, including the USGA articles 'Tailor-made' (March-April 2002), 'Building a new driving range tee? Super-size it' (July-August 2005) and 'How does your practice facility stack up?' (July 2016). Unfortunately, many golf facilities do not have the space or resources to build a practice tee that is large enough to fully meet their needs. In these cases, the management programme becomes even more critical.

In order to maintain the best turf possible, heavily used driving range tees require intensive management. This translates to more labour hours and more money for seed, fertiliser, plant protectants and other inputs.

Destruction and recovery is a never-ending battle when it comes to managing practice tees

COURSE

Fortunately, given the popularity of practice and the high visibility of practice tees, golf facilities are increasingly willing to invest in the inputs required for successful practice tee management.

GRASS SELECTION

Various grass species can be used on practice tees successfully. New grasses and new techniques for using them are constantly evolving. Selecting the grass or grasses that are best adapted to your climate and usage level is essential for top performance.

Rapid establishment, wear tolerance and recovery rates are the most important attributes for turf on a practice tee. The species' ability to produce sufficient thatch should also be considered. Practice tees are unlikely to develop thatch problems because they are so heavily used, and having some thatch is necessary for cushioning, resiliency and soil stability in this high-use environment.

Factors like tee size, usage level and available resources should be considered as well. Unlike most areas of the golf course, turf on practice tees should be considered an 'annual crop' that is essentially harvested and replanted multiple times each year.

DESTRUCTION AND RECOVERY

Practice tee management programmes and recovery techniques vary widely. Divot mix composition, filling technique and repair frequency all vary due to factors such as climate, grass species and available resources.

Divot filling is an essential maintenance practice on heavily used practice tees, and the first key step is selecting an appropriate divot mix material. When selecting the divot mix material, carefully consider the characteristics of the soils used to build the tee to avoid creating potentially harmful layering problems.

It is best to choose a material that has similar drainage characteristics as the material used to build the tee. If the divot mix holds significantly more moisture than the construction material, excessive moisture may be held at the surface, generating drainage and disease problems.

Using pure sand to fill divots works well and is economical for tees planted with warmseason species where recovery is vegetative and seed germination is unnecessary. It often makes sense to mix soil or an organic matter source with sand to increase moisture retention where recovery from seed is required. Divots in practice tees comprised of overseeded bermudagrass or cool-season grasses are commonly filled with a sand and soil or sand and organic matter mix to increase moisture retention and promote seed germination.

Spot-filling of individual divots is rarely practical due to the volume of divots on



It is important to level the material used to repair divots in order to maintain a level practice tee

most practice tees. More frequently, heavy applications of sand or divot mix are made to damaged areas and drag mats or landscape rakes are used to spread the material and level and fill the divots.

There are options for applying seed when it is necessary for divot recovery. The most common practice is to mix seed with the divot mix prior to application. Alternatively, seed can be broadcast applied or slit-seeded into the tee surface prior to a topdressing application. Some superintendents have also had success aerating with small-diameter solid tines at a shallow depth prior to broadcast seeding. This can help create a good seed bed without causing unacceptable damage to existing turf.

Slit-seeding success depends on using more modern slit-seeders that are less damaging to existing turf. Older models are effective in achieving good seed-to-soil contact but can thin existing turf. Given the wear that practice tees receive, seeding is best accomplished with as little damage to existing turf as possible.

Where feasible, priming or pregerminating seed provides notable advantages. Primed seed germinates more



quickly than untreated seed once it is planted and irrigated. However, priming requires additional time and labour, which makes it a less common practice. Divots filled with pre-germinated seed require less water to promote germination, and drier turf is much less susceptible to mechanical injury and disease. Pre-germinating also speeds divot recovery by a few days, which can be a significant benefit over the course of an entire season.

Perennial ryegrass can be pre-germinated easily by mixing seed with the divot mix and keeping it moist and aerated for two or three days. Pre-germinating creeping bentgrass seed requires more time and is more difficult.

WATER MANAGEMENT

Water management can be challenging on practice tees since the turf is in varying stages of health and maturity for most of the season. Mature turf requires less frequent irrigation whereas new seedlings require light and frequent irrigation.

Watering areas of a practice tee differently is difficult and potentially labour intensive. Overwatering healthy, mature turf wastes water, adversely affects turf health and increases wear injury. Conversely, insufficient irrigation can result in the death of new seedlings. Spot watering newly seeded areas in the morning and once or twice during the day is ideal.

Some courses have installed irrigation systems that allow damaged areas to be irrigated independently of healthy turf. If precise irrigation of recovering areas is not practical, the irrigation system must be used to irrigate larger areas, which may lead to some overwatering.

NITROGEN FERTILITY

Heavily used practice tees should be the most heavily fertilised area at most golf facilities. The goal should be to promote enough growth and recovery to keep pace with wear, so heavily used practice tees require considerably more nitrogen fertilisation than regular tees.

Even with intensive management, small, heavily used practice tees require periodic closure for turf recovery

Practice tees provide a perfect environment for introducing new golfers to the game

There are often concerns regarding increased disease pressure when cool-season turf receives high levels of nitrogen fertiliser. While the concern is valid, under-fertilised or moderately fertilised cool-season turf on a practice tee may not be around long enough to succumb to disease. "You have to have grass to have disease," is an adage worth considering as nitrogen fertility rates are determined for a practice tee.

Annual nitrogen inputs on practice tees may need to be 50 to 200 per cent higher than what is applied to tees on the golf course because of the extreme difference in wear. Additionally, plant protectants will likely be required to control diseases in many locations based on turf types and climate.

WEED CONTROL

The best defence against weed invasion is to maintain a healthy, dense stand of turf, but this is not possible on practice tees. Weeds can be difficult to control due to constant divotting and the need to continually reseed. Pre-emergent herbicides can be used but they can impact seedling establishment and survival. Furthermore, heavy divotting can break through the herbicide barrier, thereby reducing efficacy.



Pre and post emergent herbicides must be carefully selected and applied to avoid injuring seedlings. In areas of heavy weed pressure, both pre and post emergent herbicides may be necessary to achieve acceptable control.

PLANT GROWTH REGULATORS

Plant growth regulators (PGRs) are occasionally used on practice tees. Class A PGRs are the most commonly used products since they alter growth but do not slow

recovery. Class A PGRs also cause little or no injury to seedlings. Class B PGRs provide many benefits but they could slow growth and recovery to a point where their use may be counterproductive.

CULTIVATION

Performing core aeration on a practice tee one to three times annually is helpful for several reasons. It can promote recovery and create a good seedbed. It is also extremely helpful for levelling and combatting layering.





Practice tees often become unlevel due to heavy divot filling, while layering is common. Although primarily used on bermudagrass tees, fraise mowing also can be used to level cool-season grass tees and remove thatch and layering prior to replanting.

MANAGING PRACTICE TEE USAGE

The most common methods of identifying and moving the hitting areas on a practice tee is with a rope or by placing wooden or plastic dividers on the ground. While some golf courses still utilise two ropes spaced several yards apart and attached to the ground with small stakes, this is not advised for two reasons.

First, there have been multiple cases of injury when this rope is struck by a player's club. Second, a forward rope is not needed when wear progresses from the front of the tee to the rear. Worn turf in front of golfers will discourage them from moving forward of the desired area.

Play must also be shifted laterally within the defined hitting area, particularly when dividers are used. For example, ropes can be shifted on day one and the dividers shifted on day two, with the process repeating continually. Dividers to separate hitting stations can be purchased or made from wood or composite materials. It is important

to remember that dividers left in place for more than a couple of days can smother turf and cause unsightly damage. Regardless of the precise techniques used, the goal should be to manage golfer movement in a way that creates relatively uniform wear within the defined area before moving to the next.

Another simple and effective way to reduce wear on practice tees is to modify the amount of golf balls positioned at the practice area. Unlimited balls on the actual practice tee leads to far heavier usage. A system where golfers are provided smaller buckets or bags of balls from a station near the tee can help keep usage at more manageable levels.

Systematic use rotation is critical and many successful programmes start with a measurement of tee depth and install permanent markers at the optimal spacing to provide guidance to the staff responsible for moving the ropes and dividers. For example, installing the markers to designate one week's worth of usage, can help ensure that wear and the associated recovery is kept on a predetermined schedule.

At most golf courses, grass practice tees will need to be closed at various times during the year to promote recovery or prevent excessive damage. Artificial turf can be used periodically during the season to provide regular respites for grass tees. Extensive use

Shifting usage patterns with ropes and dividers helps ensure wear is spread evenly so that the entire practice tee is used as efficiently as possible

of artificial turf is common in the shoulder seasons or winter when recovery is slow or during extremely wet conditions when increased damage is likely.

Installing an artificial surface at the back of the practice tee can allow continued usage of the practice range while the grass tee recovers. Various types of mats are discussed in the USGA article 'Welcomed mats for small practice tees' (Jan-Feb 2008). In addition to the permanent installations, some golf courses in milder climates have used moveable mats as part of the regular practice area. When moved daily, and when temperatures are not extreme, this technique has proven helpful on smaller tees.

GOLFERS CAN MAKE A DIFFERENCE

Golfer habits and use patterns have an extraordinary impact on practice tee turf quality. Educating golfers about how to use a grass practice tee in the least disruptive manner possible can significantly reduce wear and tear. Fewer or smaller divots reduce recovery requirements. Reducing wear and implementing intensive maintenance is the key to maximising turf quality.

In the USGA article 'Practice like a Pro' (June 2012), various types of divot patterns are discussed. The linear style is strongly preferred as it results in less turf damage and promotes faster recovery. A scattered or concentrated pattern should be avoided.

CONCLUSION

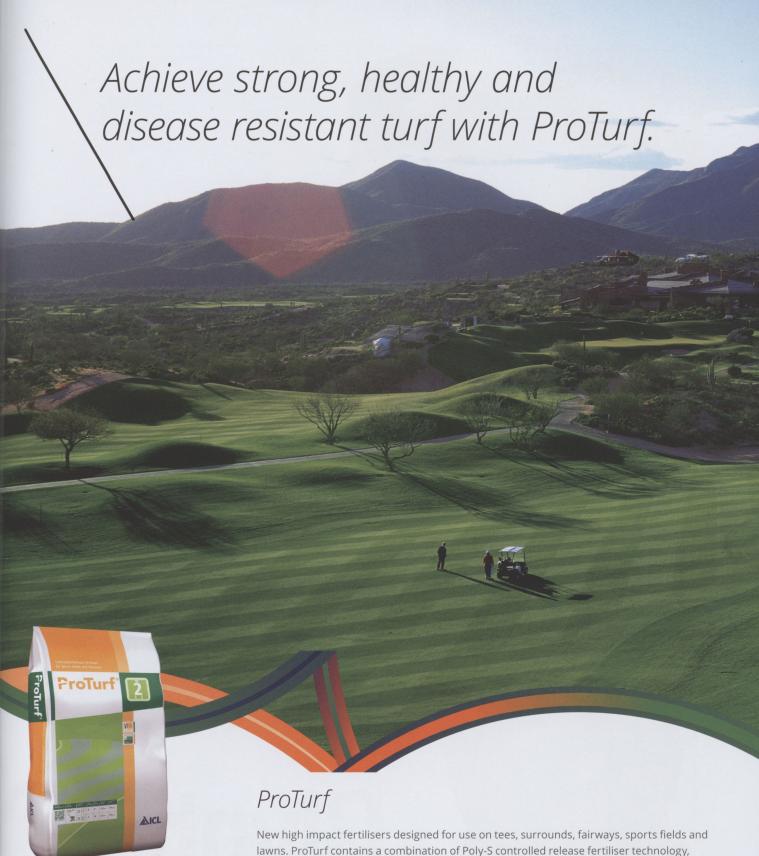
Simply managing the practice tee with the same inputs used for the tees or fairways on the course will probably result in marginal conditions at best. The practice tee requires a unique management programme because of heavy divotting and use throughout the season. Factors such as nitrogen fertilisation, irrigation and repairing divots become even more important as the tee size decreases. Without the fundamental programmes described in this article, the practice experience will be less than perfect.

ACKNOWLEDGEMENTS

David Oatis is regional director of the USGA Green Section North East Region. Larry Gilhuly is an agronomist in the USGA Green Section West Region. Australian Turfgrass Management Journal wishes to thank the USGA Green Section Record for allowing publication of this article. The original article, 'Practice tees that please' appeared in the 1 March 2019 edition of the Green Section Record Vol. 57 (5).

Artificial surfaces are needed at most facilities to prevent extreme damage following inclement weather and during periods of slow turf growth





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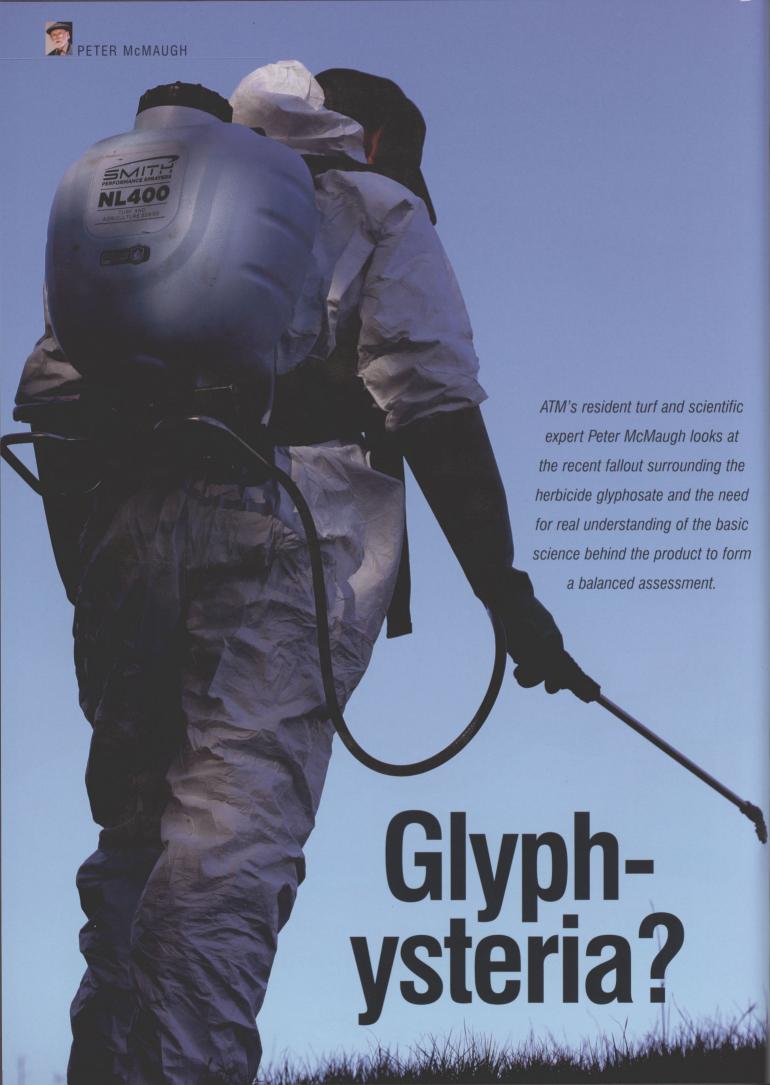












TITUENT: 360 g/L GLYPHOSATE SOPROPYLAMINE SALT



The current assessment by the APVMA is that products containing glyphosate are safe to use as per the label instructions

ecently in the press and visual media there have been reports and programmes highlighting the possible carcinogenic effects of glyphosate herbicide. These have been brought into focus by the Californian Superior Court award of damages to a school maintenance operator who had used glyphosate (as Roundup) for many years and who had sued Monsanto for culpability and damages for the occurrence of his non-Hodgkin lymphoma. As this edition of ATM was going to print, a second similar case heard in San Francisco was also ruled in favour of the plaintiff. There were claims by investigative journalists and lawyers of systemic coverups by Monsanto (now Bayer owned) and obfuscation of data and general insinuations of malpractice.

A great deal of the impetus for this came as a result of a report issued by the International Agency for Research in Cancer (IARC), a subsidiary of the World Health Organisation (WHO), placing glyphosate on the list of possible carcinogenic substances. This led to some countries placing a ban on the use of glyphosate in their territories.

There was reaction worldwide to the initial IARC listing which covered a wide spectrum from 'let's ban it immediately' to 'let's investigate it more thoroughly'. The USA



court cases upped the ante and put the Bayer/ Monsanto machine on the defensive and into overdrive. They have and will be appealing the court decisions and it will be a fascinating show watching the empanelling of the jury because a great deal hangs on the ability to understand the science and epidemiology that underlie the truth and facts in these cases.

It is very easy to cause consternation in using the word 'carcinogen' and science has, in general done a very poor job of transferring the knowledge of science and scientific fact into popular mainstream understanding of the facts in ways that allows them to converse sensibly about these issues. The fact that we have hardly improved on this aspect of our communication ability since the 1950s - when Rachel Carson's book 'Silent Spring' became a wrecking ball for the chemicals industry means that the lessons of this have not been learned by the scientific community in general.

The ferocity of the charges of cover-up in this Roundup case has not been helped by the

Turf was one of the early uptake users of glyphosate, with the big attractions being its lack of any notable residual activity, its ability to kill most plants at very low concentrations and how safe it was to anything that wasn't green

well-known cover ups by the giant chemical conglomerates on other products. This has created a climate of mistrust which pervades much of our thinking when approaching new products from 'big pharma'.

Unfortunately, this propensity of the marketing divisions of these companies to put only positive spin on new products, leaving you to dig out the negatives yourself, still dominates their thinking.

If you see this through the eyes of the territory sales manager in terms of dollar turnover, it is good. If you see it through the eyes of the end producer who has seen the expensive chemical fail to perform, it is bad. And then the further spin sets in – 'Did you use it properly according to the label?' If the answer is a resounding 'yes' then along with the suggestion that maybe you should have used it earlier or at a higher rate, you finally dig out the fact that, well, yes we know it doesn't work on the third or fourth stage instars comes to light. Recompense for the turf manager? Not in my experience.

There is some pertinent early history around the development and marketing of glyphosate, which was first discovered by J.E. Franz. The dates in the literature are a little confusing and vary between 1970 and 1972. It was manufactured in 1972 and sold commercially in 1974 as Roundup.

It was hailed as a new miracle herbicide because of its safety and its effectiveness on many plants at very low concentrations. Monsanto marketed it very aggressively and developed new technologies around it by harnessing genetic resistance technology to widen its agricultural usefulness and market success.

In 1985, a monograph 'The Herbicide Glyphosate' was published by Butterworths which contained 29 papers by 39 authors. It was edited by E. Grossbard and D. Atkinson and while dated is still very useful. Interestingly, in the foreword, J.D. Fryer (Agricultural and Food Research Council, Weeds Research Organisation, Yarnton, Oxford, UK) made this statement: 'Regrettably, much of the research which has been undertaken on glyphosate remains, for commercial reasons, unpublished'.

It is also interesting to note that only eight pages out of 490 are devoted to a paper on toxicology. Most of the data in this is sourced from EPA registration data.

When we come to consider the current issues around glyphosate, we need to be aware of some facts:

- There is an essential difference between glyphosate – N-(phosphonomethyl)glycine – and the formulated product Roundup.
- The Australian Pesticides and Veterinary Medicines Authority (APVMA) and the EPA in the USA, and any other registration authority, register 'products' not 'chemicals'
- Often the non-target effects of a chemical can be traced to the formulation content of not the active ingredients and this historically has been true of glyphosate. These affects are not always deleterious but it is the deleterious ones which are mostly the more easily observed and commented on.
- You cannot be poisoned by glyphosate unless you are green and contain the very specific site of action in the enzymatic process with which it specifically interferes.

- Non-target affects need not necessarily be primary in nature (e.g.: if you kill green algae and they rot and the toxins which that rotting produces kills marine organisms, it is not directly due to glyphosate).
- Glyphosate has been around since 1972 and if there were to be a major environmentally toxic affect, I think it would have shown up epidemiologically a long time ago.
- Monsanto (now Bayer) have been accused of a dirty tricks campaign of not releasing negative data about glyphosate. This may be so and if it is true it would not be the first global chemical conglomerate to be guilty of this. But until this is proven I think we need to be cautious exactly what is said in this regard.
- Of perhaps greater concern is the development of resistance to this herbicide in perennial grass weeds. There are many and various strategies that contribute to this situation, but often it can be due to ignorance of the limitations of glyphosate on certain plant species, which it will not effectively kill even at very high rates.

As a general word on the matter, on 29 October 2018 the APVMA issued a document relating to glyphosate, which covers many of these issues in detail. It is available through the following link – www.apvma.gov.au/node/13891. This is a seven-page document which covers in detail its assessment of the IARC report. It also details the reactions of other regulators including the joint FAO/WHO meeting on Pesticide Residues (JMPR). It also deals with polyethoxylated tallow amines (POEAs) in glyphosate-based products.



The simple rule for safe use of any chemical used in horticulture or agricultural is to read the label and follow the safety and use instructions

All users and advisors of glyphosate products are urged to read this well-balanced document. There is still a long way to go with this story and I am sure we will see a lot of hysteria, but the need for real understanding of the basic science behind glyphosate will greatly help you form a balanced assessment of where this product fits now and in our future.

GLYPHOSATE IN TURF

Turf was one of the early uptake users of glyphosate, with one of the big gestalt reactions being the lack of any notable residual activity. The second great attraction was that, by and large, it killed most plants at very low concentrations. This made it a very cheap herbicide to use without incurring a big budget penalty. The third great attraction was how safe it was to anything that wasn't green. This was all great where no selectivity was required, but it meant that you had to take a lot of care in application not to injure off target species.

After a few years of use, especially in grasses, a lot of information began to accumulate that there were considerable differences in rate sensitivity between species and that timing was very critical for it to have optimum affects.

Two classic examples of this were that with couch (bermudagrass) there were huge differences in susceptibility between varieties. In general, the tetraploids *C. dactylon* were very immune to low rate applications in the range of 0.5L to 1.5L of 360g/L glyphosate. The danger period was in the autumn when CHO accumulation in the roots and rhizomes was very active. Then the translocation right through the plant is maximised. Even at low rates then substantial damage could occur. Anything that was completely dormant or in full strong growth was hardly affected.

However, there were varietal exceptions and it is notable that a lot of breeding programmes at that time, especially in the USA, did not routinely screen their germplasm for herbicide tolerances. Among the Cynodons it became obvious that the South African couch diploids (*C. transvaalensis*) and its hybrids with *C. dactylon* were far more susceptible to damage than the straight dactylon types.

The practical outcome of this is that glyphosate was a very potent weapon at low rates on both wintergrass and summergrass. Like most successful strategies this quickly led to overuse without any interspersal of alternative herbicides, with the consequence that we now have glyphosate-resistant *Poa annua* and *Lolium perenne*.

This whole syndrome is currently being repeated in the treatments for mites in warm-season grasses. Greed for the dollar is driving the registration of single action chemicals when dual action applications are what is needed and with variation between these. I



As the old saying goes 'variety is the spice of life' and applying the well-known best practice requirements of rotating chemicals is critical for avoiding the development of resistance

really do fear that before long we will have wholesale resistance in mites also.

The other grass group that showed resistance to glyphosate early were the tall fescues. Even with rates in the 3L-4L of 360g/L glyphosate, only about a 50 per cent kill rate was generally achieved with tall fescue. Cynodons are even worse because with many strains of *C. dactylon* even 12L/ha of 360g/L glyphosate will not achieve a total kill. Fortunately for these total vegetation control situations there are other quite specific grass killers which are very active on couchgrass at quite low rates.

Whether it is the high level of endophyte in turf type tall fescues that import this, is something of which I have no knowledge. Nor do I know of any tall fescue breeding programmes which have tried in any way to profit from this selectivity in their programmes.

Very early in the commercial life of glyphosate, Monsanto exploited its special qualities by putting Roundup resistant genes into many crops. Only three of these have been strong success stories in general agriculture. They are maize, cotton and canola and the world is still trying to come to grips with GMO plants.

In the world of turf, O.M. Scott & Co, who had a very strong seed production for turf grasses division, ventured into GMO for bentgrasses. I remember herbicide-resistant bentgrass plots at Michigan State University back in the 1970s under the care of Joe Vargas. The outstanding feature of these was that not only were they herbicide resistant, but they showed amazing cross resistance to fungal diseases, especially rhizoctonia patch and quite a few others as well.

These grasses never saw commercial release. I don't know why but I suspect that as much as anything else that they may have had poor seed yields. However, the thought of a herbicide-resistant bentgrass as a new

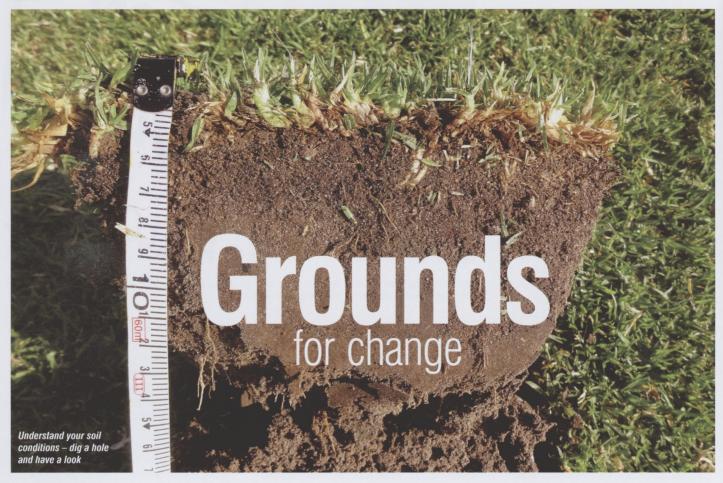
uncontrollable weed species may have been a step too far for the EPA (USA). Bentgrass can be a horrible weed to control without being herbicide resistant as many a racecourse manager in Victoria will attest.

In relation to these problems, a study done by J.K. Wipff and C. Fricker was published in the International Turfgrass Research Conference Journal (Vol 9 2001 p.224-242). This examined the practices of plant breeders of the time in containing pollen spread and while it found movement much further than expected (e.g. 1km along one transect and 1.3km along another when only about 80m was the worst expected), a much later study, based more on climatic data of wind trajectories, indicated movements of 15km in the first hour and 40-55km at hours two and three. This study, done in 2003 and reported in Ecol.Appl.2007 June 17(4) 1244-56, while more a theoretical paper showed very good correlation with the field 'sentinel plant' studies. These very long distance distributions of pollen show why people do get justifiably concerned about the unintentional and unexpected flow of genes from GMO crops.

Much more to the point now is that in turf worldwide, including Australia, *Poa annua* resistance to multiple herbicide chemicals of multiple herbicide groups, including Roundup, has occurred. It is causing major concern in the USA with a multi-university study being recently set up to look at the problems. We are well aware of this through the work of John Neylan and David Nickson in Victoria.

What all this really means is that the industry as a whole has been extremely slack in applying the well-known best practice requirements of rotating chemicals. The chemical supply industry has to take a considerable share of the blame here, because of the pressure to use a particular brand, year in year out. As the old saying goes, 'variety is the spice of life'. Listen and learn.





n April 2017 a research project funded by the Sports Turf Association (Victoria) was commenced to study the effects of hours of use on sportsfields of different construction types and levels of maintenance. The results of the first year of the study were published in ATM Volumes 20.3 (May-June 2018) and 20.4 (July-August 2018). The research was completed in December 2018 and the detailed final report is now available at vicsportsturf.asn.au.

This article is the first of a two-part series on the completed study and presents the soils data collected over the 21-month study period. The second part will look at the data collected on surface quality parameters including turf composition, wear, traction and turf health.

FIELDS AND SOIL TYPES

The project was undertaken on local government sports fields that are in play and maintained by the council or their service provider. The fields included sand profiles with a subsoil drainage system and fields constructed with a native soil profile. All fields have an irrigation system.

There were two Santa Ana couch sports fields of which one is over-sown each autumn/ winter with ryegrass and two kikuyu sports fields. The project selected both elite sports fields and community fields so that a good

Over the past two years John
Neylan and David Nickson have
undertaken an STA Victoria-funded
project to determine the potential
hours of use for sports fields of
different construction types and
maintenance regimes. In the first of
a two-part article they look at the
project's findings.



comparison could be made in terms of budget, resources and playing surface quality. The description of the sports fields is detailed in ATM Volume 20.3.

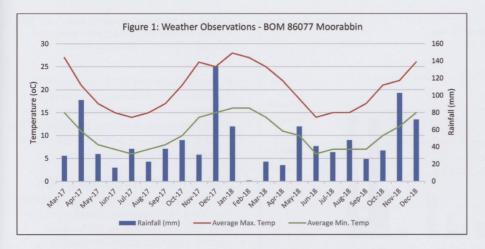
The key periods of the study were prewinter sports, mid and late winter and through the spring/early summer. Because sports fields suffer the most damage from winter sports (e.g. soccer, AFL, rugby league and rugby union) when the weather is wetter and cooler and the growth and recovery of the turf is slower, the research concentrated on this period of the year.

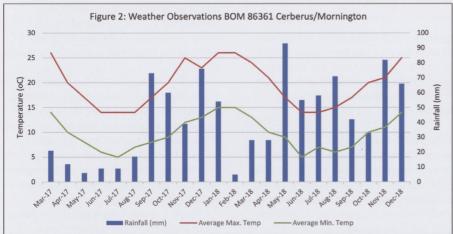
The following soil test parameters were determined:

- At each location, profile samples
 were initially taken to a depth of
 300mm-500mm (or to subsoil depth) to
 describe the soil texture, depth of topsoil,
 thatch depth, compaction and root
 growth. At subsequent dates thatch depth
 and root depth were measured.
- Soil moisture content was measured using a TDR probe at five locations in each test area and related back to the soil type, condition of the playing surface and recent weather conditions.
- Soil infiltration rate was measured at each test location using a single ring infiltrometer and related back to soil type, compaction and thatch depth. It also related to the effective irrigation of the sportsfield.
- Soil strength/compaction was measured at five locations in each test area using a soil penetrometer and used to gauge the degree of soil compaction.

WEATHER DATA

Weather data was collected for the closest Bureau of Meteorology sites and the results are detailed in Figures 1 and 2. The most noticeable aspect of the weather





was the cool spring temperatures and irregular rainfall events across the 21-month assessment period. The spring/early summer temperatures tended to be relatively cool which reduced the rate of recovery of the warm-season grasses, in particular the couch.

The rainfall from March through to November 2017 was relatively low and below the long-term average for all sites. In contrast, December 2017 was wet and the rainfall was well above the long-term average. From January to March 2018 it was very dry and the rainfall was well below the long-term average and all fields were dependent on irrigation.

Over May to October 2018 the rainfall was near or below the long-term average for Fields 1 and 4, whereas for Fields 2 and 3 it was considerably wetter in May 2018 and higher than the average for July and August 2018. Fields 2 and 3 were the wettest of the fields and in part reflect the higher rainfall as well as the poorer draining soils. September and October 2018 were dry with the rainfall in November and December 2018 being above the long-term average.

The weather had the greatest influence on the surface conditions in terms of the degree of damage from the winter sports and then on the recovery of the turf in the spring. The rainfall events late in the winter and on match day had the greatest impact on the wear and damage to the surface. Where the soils were fine-textured, they quickly turned to mud and stayed that way until the spring.

These observations reinforce the impact that a relatively minor difference in rainfall between locations can have on managing sportsfields. It highlights the importance of setting site-specific maintenance programmes that account for local climatic conditions.

SOIL PROFILES

Soil samples were taken from each field and analysed for particle size distribution with the results detailed in Table 1. The sand/soil types can be described as follows;

Figures 1 and 2. Weather data from the corresponding Bureau of Meteorology stations. The most noticeable aspects of the weather across the 21-month assessment period were the cool spring temperatures and irregular rainfall events

SP1: Fine-medium sand (slightly silty). This sand would be expected to have;

- A moderate drainage rate;
- Adequate moisture retention; and
- Adequate aeration porosity.

The data collected on infiltration rates and soil moisture content confirm the above expectations and provides a good guide as to selecting an appropriate soil for a well-drained, high-use sportsfield.

SP2 and SP3: Fine sandy loam to sandy clay loam. This soil would be expected to have;

- A low drainage rate;
- High moisture retention;
- Marginal aeration porosity under compaction; and
- Susceptible to compaction.

The soils in SP2 and SP3 are a good example of the least preferred soil type for constructing a sportsfield. The consistently low infiltration rates and the absence of a measurable infiltration rate during the winter months confirms the expected characteristics for this soil type.

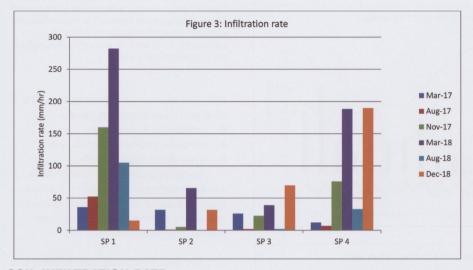
SP4: Evenly graded fine – medium sand (very slightly silty). This sand would be expected to have:

- A moderate drainage rate;
- Adequate moisture retention;
- Adequate aeration porosity; and
- Susceptible to compaction.

The data collected on infiltration rates and soil moisture content confirm the above expectations. The soil having a slightly elevated total fines content and a deeper layer of accumulated organic matter tended to have a reduced infiltration rate by the end of winter. The infiltration rate of this soil was quickly restored with appropriate aeration.

TABLE 1: SOIL TYPES

	Percent Particles Retained (%)			
Sieve size (mm)	SP1	SP2	SP3	SP4
2.00	0	0	1	0
1.00	3	1	4	3
0.500	18	16	11	32
0.250	46	21	30	34
0.150	26	21	24	16
0.053	3	19	12	10
<0.053mm (silt plus clay)	5	21	18	4
D85	0.66	0.60	0.54	0.83
D15	0.18	0.053	0.053	0.16
Total fines (0.053 - 0.150mm)	34	61	54	30
Fineness Modulus	0.93	0.59	0.7	0.85
Coefficient of Uniformity (D60/D10)	2.5	N/A	N/A	4.2



SOIL INFILTRATION RATE

The infiltration rate varied across each field and varied throughout the year (Figure 3). As would be expected the infiltration rate was highest on the relatively new sandbased construction and quite low on the fine-textured soils. Across all sportsfields tested there was a substantial reduction in the infiltration rate by the end of the winter months, including the sand-based fields.

There was variation in the infiltration rate across each field which was related to thatch depth, soil moisture content and soil compaction at each particular location. Compaction and surface sealing occurs during the winter sports season irrespective of soil type and it is important that post-winter renovations are undertaken to restore the infiltration rate and soil aeration.

SP1 (sand-based field) had a low infiltration rate in mid-December 2018 and reflected a lack of effective soil decompaction in the spring. This result emphasises that regular soil decompaction is critical, even on sand-based fields. At all sites the soil aeration process improved the soil infiltration rate.

It was noted on one field that was being aerated during mid-winter that the effective depth of tine penetration was about 50mm

(see soil strength/compaction section below) and while the area had been aerated there was no improvement in the soil infiltration rate. The soil was compacted at the bottom of the tine hole, effectively reducing the infiltration rate.

SOIL MOISTURE CONTENT

The soil moisture content varied across each field and varied throughout the year (Figure 4). The variation in the soil moisture content was related to thatch depth, soil compaction, surface contours, irrigation distribution and traffic. There are several observations that can be made from the data collected;

- The sand-based field was never at an excessively high moisture content or saturated throughout the year.
- The soil-based fields became saturated in June/July and remained that way through to the late August assessment. Under traffic these soils turned to mud and the quality of the surface rapidly deteriorated.
- Fields 1, 2 and 4 were quite dry at the March 2018 assessment and reflected the very dry summer. There were other factors including poor irrigation coverage and keeping the surface dry to assist in stressing out a *Poa annua* biotype.

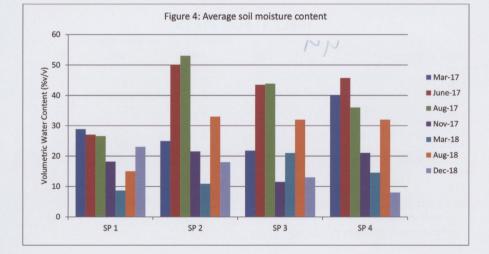


Figure 3. The infiltration rate varied across each field and varied throughout the year, with a substantial reduction by the end of the winter months

 At the December 2018 assessment the soils were considerably drier as would be expected. The sand-based field had the highest moisture content and reflected the high rainfall event on the day prior to the assessment being undertaken.

SOIL STRENGTH/COMPACTION

The soil strength and depth to the compacted layer were highly variable across most sports fields and was affected by soil moisture content, traffic and soil decompaction practices. All fields had the shallowest compaction layer at the end of the 2017 winter sports season (August 2017) which reflected the high traffic and wet soils (Figure 5).

During the August 2017 assessment, Field 1 was being solid tined and when checking the effects of the solid tining there was no positive result as the soil was very compacted at the bottom of the tine hole (i.e.: about 50mm). This particular observation highlights the importance of monitoring soil compaction, selecting the most appropriate equipment and reviewing the results of the operation.

Fields 1, 3 and 4 were aerated in spring/ summer 2017 and this was reflected in an improvement in soil conditions at both the November 2017 and March 2018 assessments. The soil strength on Fields 2 and 3 tended to be influenced by the soil moisture content with soil strength greatly reduced in winter because of the saturated soils.

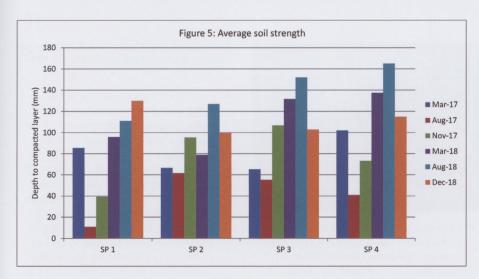
Overall there was a reduction in soil strength with an increase in soil aeration. However, with many of the fields being compacted at 100mm depth there is still room for improvement by initiating a programme of deep tine (150-200mm) aeration. Varying the depth of the aeration process would also be highly beneficial.

THATCH DEPTH AND ROOT GROWTH

The thatch depth (Figure 6) did not change substantially over the period of the project and is related to the renovation programme, age of the profile and the high wear on three of the fields. The high wear reduces the amount of biomass in the high traffic areas of the field such as goal squares, centre bounce and the goal-to-goal line.

In addition to the thatch depth, there is also the accumulation of organic matter below

Figure 4. Soil moisture content varied across each field and varied throughout the year. The sand-based field (SP1) was never at an excessively high moisture content or saturated throughout the year



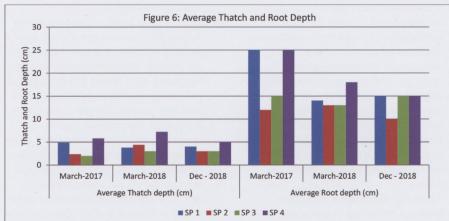


Figure 5. The soil strength and depth to the compacted layer were highly variable across most sports fields and was affected by soil moisture content, traffic and soil decompaction practices

Figure 6. Thatch depth did not change substantially over the period of the project and is related to the renovation programme, age of the profile and the high wear on three of the fields

the thatch layer. The organic matter layer is a function of age of the profile and does influence the infiltration rate and the moisture retention. As a general premise, hollow coring of sportsfields every year would be very beneficial in thatch and organic matter control and improving the infiltration rate. Deep tine aeration, to break through the compacted layer at 100mm, would be valuable in improving water penetration from irrigation, improving drainage and stimulating deeper root growth.

At the initial assessment there was a considerable difference in the root depth between the couch (SP1 and 4) and kikuyu (SP2 and 3) fields (Figure 6). The couch fields had an average root depth that was about 10cm deeper than the kikuyu. This greater root depth in the couch in part reflects the better drought tolerance compared to the kikuyu.

At the March 2018 assessment there was a substantial reduction in the average root depth on both couch fields compared to the





kikuyu fields where there was no obvious change. The reduction in root depth was due primarily to a low soil moisture content, with both couch fields having a below optimum soil moisture content. Field 1 was affected by

CONCLUSIONS

the Poa annua population.

At the completion of the project there are several conclusions regarding the soils and soil management:

poor water distribution uniformity and Field 4

was being kept dry as a means of reducing

- A sand profile that has some subsoil drainage substantially improves the ability of the surface to cope with high traffic loads. From this research, the strongest recommendation is that any new sportsfield construction should be a sand profile. While there may be a greater capital cost, the long-term sustainability, playability and safety of the surface is going to be best achieved with a sandbased rootzone.
- It is very important to note that the value of the sand profile and the improved water infiltration rate can be substantially diminished if the aeration programme is inadequate.



- The oval constructed on a heavy soil type deteriorated very quickly once the rain came in the winter months in both 2017 and 2018 and highlights the importance of a well-drained profile. The damage on these heavy textured soils can be substantial and therefore the rectification costs can be substantial (e.g.: turf replacement, topdressing etc).
- At the end of the winter sports season, deep tine aeration and hollow coring are key maintenance practices required to restore soil permeability. Topdressing is not always required and should be undertaken on a field by field basis to restore surface levels and for thatch control.
- The thatch depth has a significant influence on surface moisture retention and infiltration rate even on a sand profile. Thatch and organic matter management is a critical maintenance programme that has to commence as soon as the field is completed.
- The increase in soil compaction and reduction in the infiltration rate over the winter months reinforces the need for a targeted renovation programme in the spring.

- Ovals constructed on a heavy soil type deteriorate very quickly once saturated and subjected to high traffic
- Field 4, while damaged due to high traffic loads and wet soils late in the winter, responded extremely well to the programme of aeration and fertiliser applications.
- The poor water distribution at some sites was affecting the consistency of the soil moisture content and consequently overall turf health, turf density and root growth. Irrigation management and uniform water distribution are key components in managing any playing surface so as to get the best out of the capital investment.
- One field was being aerated during the August 2017 assessment and provided a good opportunity to assess the effect of the process being undertaken. The field was being solid spiked and the depth of penetration was no more than 5cm. On checking the soil strength (compaction), the spiking process was actually increasing the level of compaction at the bottom of the tine hole. This observation reinforces several important aspects of compaction control and aeration;
 - It is important to understand where the problem is within the soil profile (i.e.: where is the compacted layer).
 - Use the most appropriate equipment e.g. deep compaction control (150mm-200mm) requires a Vertidrain or similar with some 'kick' to disrupt the compacted layer.
 - The only way to reduce soil compaction or soil bulk density is to increase the soil volume and this must involve some soil disturbance. Using a solid tine will have a substantially greater effect if there is some soil heave involved.
 - Post-renovation, measure soil strength or infiltration rate (or both) to determine the effectiveness of the treatment.
 - Thatch control requires a different process compared to compaction control (i.e.: hollow coring and scarifying).



Authors John Neylan (SportEng) and David Nickson (Grand Prix Turf) wish to thank the STA Victoria for their support and funding of this project and the Frankston City Council, Bayside Council and the Mornington Peninsula Shire for allowing access to the sports fields under test.



A sand profile that has some subsoil drainage substantially improves the ability of the surface to cope with high traffic loads during the winter months





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Your chance to volunteer at The Players Championship 2020



he Australian Golf Course
Superintendents Association, in
conjunction with Silver Partner
John Deere, is delighted to
announce the launch of The
Players Championship (TPC) Volunteer
Program for members of the AGCSA.

In March 2020, three full members of the AGCSA will secure a once-in-a-lifetime opportunity to be involved in what has become affectionately dubbed golf's '5th Major', thanks to the generous support of long-standing association supporter John Deere.

The lucky trio will head to Ponte Vedra Beach, Florida in the US to join the course management team at TPC Sawgrass and help prepare the famed Stadium Course for The Players Championship in what is an outstanding career development opportunity.

TPC Sawgrass, with its iconic island green on the par three 17th, has been home to The Players Championship since 1982. The world's best annually descend on the Stadium Course to compete for what is now the highest prize purse of any golf tournament - US\$12.5 million.

The 2019 event, won by Rory McIlroy, returned to its traditional March date after 12 years of being held in May. That shift, which will also occur in 2020, means the course management team, headed up by director of golf course operations Jeff Plotts, are confronted with very different challenges to getting the course tournament ready. One of the biggest changes is that the course is now played on surfaces that have been oversown.



HOW DO I SIGN UP?

Selected AGCSA members (you must be a current financial AGCSA member) will join the TPC Sawgrass maintenance team for the duration of The Players Championship, with travel, accommodation, meals and uniform all included. The programme is also being run in New Zealand with one lucky NZGCSA member getting the opportunity to head Stateside (visit www.nzgcsa.co.nz). The application process involves three distinct stages;

STAGE 1: REGISTER YOUR INTEREST

To get the process started, interested applicants are required to fill in an online form to ascertain their eligibility. Once submitted and checked, details will be sent by email regarding the next step. Please note that

applicants need to be 21 years of age or over, have been a member of the AGCSA for at least 12 months or more and be allowed to enter into the USA. Tick all these boxes and you will be asked to complete the rest of Stage 1. The online form, which comprises 10 questions and should take about five minutes to complete, can be accessed through the following link - https://www.agcsa.com.au/services/initiatives/tpc-sawgrass-volunteer-program/

STAGE 2: FORMAL APPLICATION

All eligible candidates will be sent an email inviting them to continue to Stage 2 of the application process where they will be required to submit a short video (no more than three minutes in length) introducing themselves and briefly addressing the following topics:

- Ambition where you would like your career to go in the next five years;
- Plans what steps you plan to take to achieve your ambitions;
- Interest (greenkeeping) what your favourite aspects of greenkeeping are;
- Interest (external) what your key interests are outside of greenkeeping;
- AGCSA/NZGCSA what do you believe should be key priorities over the next 3-5 years.







The purpose of this video is for the selection panel to gain an understanding of the applicant as an individual, their career aims and ambitions and the positive impact the opportunity to take part in The Players Championship Volunteer Program could have. Details of the exact format/content and how to send it to the AGCSA will be provided.

The deadline for registering your interest (Stage 1) is Friday 31 May 2019, with all videos to be received by the AGCSA (Stage 2) by Wednesday 31 July 2019.

STAGE 3: INTERVIEW

The application videos will be assessed and rated by John Deere, with shortlisted candidates then invited to attend a regional interview during October 2019. Interviews will be conducted by a panel of three - AGCSA/ NZGCSA member of staff (or regional officer), John Deere dealer or member of John Deere field staff.

Both the video and the interview will be scored to eventually select the four successful volunteers, with the successful AGCSA members to be notified by 30 November 2019. The winning candidates will be expected to attend the national conference for photo shoot and press meetings at their expense.

THE NITTY GRITTY

The provisional date for the 2020 Players Championship is Monday 9 to Sunday 15 March. The successful applicants will need to arrive into the US on Friday 6 March and will not begin the journey home until the afternoon of Monday 16 March. Once the selected candidates arrive at the venue they will be provided with the following;

- Uniform for each day;
- Transport to and from the golf course;
- All meals during the stay;
- Accommodation in a two-person room in a 4-star hotel

AT A GLANCE -**TPC SAWGRASS**

Director of Golf Course Operations:

Years at TPC Sawgrass: Four Stadium Course Superintendent: Kyle

Course Architect: Pete Dye (1980) Tournament length: 7189 yards **Turf:** Greens – TifEagle bermudagrass overseeded with Poa trivialis and velvet bentgrass; Tees, fairways and rough -Celebration bermudagrass overseeded with Champion fine ryegrass

Average green size: 510m²

Average tee size: 167m²

Fairway area: 10.5ha

Rough area: 48ha

Bunkers: 88

Water hazards: 17

Soil: Sandy loam

Water sources: Reclaimed



JAGCSA

They will be encouraged to constantly update all personal social media platforms following The Players Championship Volunteer Program guidelines. On the Monday morning after the championship they will all get the opportunity to play the famous 17th hole in a nearest-the-pin competition, the winner taking home the genuine flag from the famed hole.

When they return home they will be asked to submit some written copy to the AGCSA/ NZGCSA to be part of an article about the experience, as well as prepare a short presentation to be delivered at both state and national conference level.

John Deere will cover travel expenses for return economy travel from the following locations to Jacksonville, FL:

- AU: Sydney, Melbourne, Brisbane, Perth and Adelaide
- NZ: Christchurch and Auckland The following costs are the responsibility of the chosen individuals:
- Travel to the conference;
- Filling out and paying for the online ESTA (US visa):
- Travel insurance;
- Transport to and from the selected departure point.

If you would like to be part of the AGCSA and John Deere TPC Volunteer Program in 2020, head to the AGCSA website for more details https://www.agcsa.com.au/services/ initiatives/tpc-sawgrass-volunteer-program/







a story...

Compliance expert Terry Muir espouses the importance of sharing stories and experiences to ram home some powerful lessons when it comes to safe workplace practices and procedures.

hose that have recently attended one of the AGCSA's National Turf Education Seminars will remember the video of Latrobe Golf Club superintendent Scott Irving discussing the workplace incident that resulted in him losing four toes from a crush injury.

In the video, Scott conveys a very personal story about the incident, his experience and life after things go wrong at work. Scott participated in the video to convince people, especially people with experience in an industry, and perhaps a long history of doing things not as safely as they could, to at least consider doing things differently.

The video should find that internal switch that responds to the question, "Why should I care about this information?" and answers "Because it makes sense for me to care." The video has another function too, like helping others in the industry make sense of what is happening out there.

Scott's natural storytelling recounts his experience and provides behavioural cues and communicates the consequences of unsafe behaviours or complacency in the workplace. The value here is that we have a credible insider who should have significant power to change behaviours inside the industry.

Scott does not speak in a highly technical or regulatory language and learners are much quicker to pay attention to, and pick up on, the meaning of the information because Scott looks, walks and talks like they do.

People pay attention to, and listen more attentively, to Scott's story than they would to

more formal types of instruction because he is a recognised member of the culture. He has the credibility to comment on the culture and tell stories about it. Scott doesn't have to be a compliance expert to use his story to motivate people, but he has to be credible – and he is.

Scott's story resonated with the audience because the person in the story is just like the listeners and is understood by them. There is a shared sense of camaraderie and an understanding that what happened in the story could happen to them.

Listeners will long remember Scott's story. Why? Because almost anyone who has been working in this industry has either heard of, or experienced, a 'close call'. We want more superintendents to share their stories because they not only reveal the dangers and complexity of their work, they instruct the listener on what to do in a similar situation. And importantly, not all stories need to be disaster stories.

Safety training expert and researcher
Dr Elaine Cullen wrote an article titled 'Tell
me a story: Using stories to improve

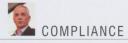


Current GCSAQ president Paul McLean spoke at the 2014 Australian Turfgrass Conference on the Gold Coast about the lessons learned from a workplace accident when he was superintendent at Royal Pines

occupational safety training' and identified four types of stories that can influence compliance across an industry.

- Hero stories: They may be about skilled workers who taught others how to do the job safely and productively, or about someone who saved a colleague in a crisis. They will almost always refer to traits that are admired by the culture, such as hard work, dependability, toughness, courage and creativity under duress.
- Villain stories: These stories reveal just as much about the values and expectations of the culture as the hero stories do, just from the opposite angle and are invaluable teaching lessons.
- Adventure or disaster stories: These stories are about events, and may have many characters included, all who react to the event. Stories of this nature can be heart-breaking or entertaining, but they can also serve to highlight dangers that are intrinsic to the work environment. These types of stories are very good teaching stories because they inform listeners about what could go wrong and give them guidance by describing what others have done when this happens.
- The 'chump' stories: These may be the most valuable training stories you can find. They are about what happens when someone ignores warnings, forgets their training, becomes careless or complacent and perhaps does something unsafe.

They all provide powerful lessons from the experience and for an industry fraught with risk these stories are priceless. The industry needs to find stories that teach its own people, its workers and managers



Many tasks on a golf course, whether maintaining the playing surfaces or the general landscape, come with inherent dangers. It's imperative that risk assessments are documented and that staff training is up to date

that hazards exist, that incidents occur and that people will, from time to time, do silly things. But they also need to know the industry does have some experienced rock star superintendents and assistant superintendents that can be industry mastermentors and support and communicate the message.

The industry should endeavour to identify these mentors and provide opportunities for them to contribute to the wellbeing of the industry by passing on their knowledge and their experiences to others through reflection on their own compliance and sustainability practices and experiences.

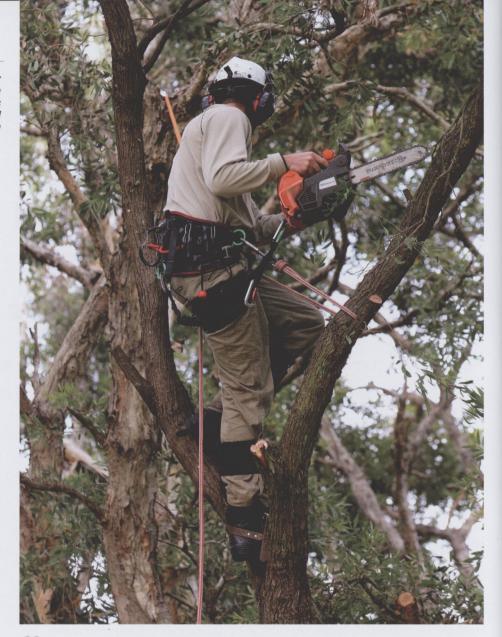
Overall, the long-term impact of Scott's presentation on the audience is not his actions that led to his injury, but the effect of his injury on himself, his family and his team. This was the emotional impact that the audience felt. He spoke, for example, about how he was relieved that it happened to him and not to one of his staff. He also talked about the effect the whole incident had on his workmates.

Of course, we can all stick our finger into an electrical socket, get a massive shock and learn from the experience to never do so again. Or we can read about it, or better, even see it from someone like Scott who was prepared to teach us all through his experience. Everyone in the seminars has had the privilege of learning from Scott's experience.

We want more mentors like Scott to help the industry raise awareness of operational flaws and inadequacies and to provide insight into the development and implementation of compliance and sustainability processes.

We've all heard the story about four people named 'Everybody', 'Anybody', 'Somebody' and 'Nobody': 'Everybody' thought that 'Anybody' could get the job done, but 'Nobody' realised that 'Somebody' would not do it safely and get hurt. It ended up that 'Everybody' blamed 'Somebody' when 'Nobody' did what 'Anybody' should have to keep them all safe! The story may be confusing, but the message is clear – no one took responsibility and people got hurt.

Superintendents and turf managers sharing their compliance stories can be one of the most powerful means to influence, teach and inspire. Good stories build familiarity and trust and allow the listener to enter the story where they are, making them more open to learning. Stories teach, but they also stick. They help with learning because stories are easy to remember.



It does go to show just how dangerous this job can be at times and how sometimes we take things for granted. It's not nice what has happened, but at least I am still here and I'm able to talk. More importantly, I'm just glad that it happened to me and not one of my crew.

- Scott Irving, Latrobe Golf Club

US organisational psychologist Peg
Neuhauser found that learning which stems
from a well-told story is remembered more
accurately, and for far longer, than learning
derived from facts and figures. Similarly,
psychologist Jerome Bruner's research
suggests that facts are 20 times more likely to
be remembered if they're part of a story.

The goal of every superintendent in every compliance communication with their team is to influence the team. Information alone rarely changes any of these and research confirms that well-designed stories are the

most effective vehicle for exerting influence. Stories are the emotional glue that connects the audience to the message and they also make people care. Stories about professional mistakes or incidents and what leaders learned from them are a great avenue for learning.

Because people identify so closely with stories, imagining how they would have acted in similar circumstances, they're able to work through situations in a way that's risk free and for that we all owe Scott a debt of gratitude for sharing his story with the industry.

"I'M JUST GLAD THAT IT HAPPENED TO ME..."

n 16 April 2018 Latrobe Golf Club superintendent Scott Irving and members of his crew, which included his eldest son Thomas, were undertaking some tree maintenance work near the 18th tee. Just before lunchtime, as Irving was trimming a tree branch overhanging the tee with a pole saw, it fell across his left foot which resulted in a severe crush injury.

Scott, who has been at the club for 14 years, including the last seven as superintendent, was rushed to nearby Austin Hospital in Heidelberg by assistant superintendent Brad Winnell. Scott suffered severe crush injuries to the four smaller toes on his left foot and over the course of the following week they had to be amputated. Scott spent just over a fortnight in hospital and was off work for two and a half months. He also endured many months of rehabilitation including learning how to walk again.

Speaking to the AGCSA shortly after the incident occurred, Scott was in remarkably good spirits despite the ordeal: "It was just one of those freakish things that happen. I'm a pretty upbeat person, so you just

have to move on, look forward and stay positive. It does go to show though just how dangerous this job can be at times and how sometimes we take things for granted. It's not nice what has happened, but at least I am still here and I'm able to talk. More importantly, I'm just glad that it happened to me and not one of my crew. I've got a great team at Latrobe and they are like family."

The accident was subsequently investigated by WorkSafe Victoria with Latrobe's WHS provider epar also involved. That highlighted a number of aspects that the club needed to address in regards to its work practices and training.

"We learnt a few things about ourselves in terms of what we could have done better and what we weren't doing as an organisation in regards to ongoing training and risk assessments," says Irving. "WorkSafe deemed that the risk assessment that I had done the morning of the accident was in my head and not on paper and that it really needed to be documented. It also highlighted some flaws in our training. Although quite comprehensive back in the day, we hadn't conducted ongoing 12-month training reviews. It was one of

the things I never realised, but WorkSafe commented that if any bad habits started to creep in, the regular reviews would help to knock those on the head.

"I've grown up in the industry and always believe you are doing the best you can for the golf course, but when an incident does happen and WorkSafe investigate they want to see documentation. They are not interested in how long you have been at the club or how long you have been doing it for. We all go to work not expecting the worse, but there are risks associated with the job that we do and as a result we need to have best practices behind us so that if something does happen there's not going to be anything that comes back on you or the club."







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Gamechangers

ATM environmental columnist Kate Torgersen looks back on the recent Sports Environment Alliance Summit in Melbourne.

he Sports Environment Alliance (SEA)... hands up if you have heard of it? If not, may I suggest looking into this not-for-profit organisation and seeing how you can get involved in making sure there is a future for all to continue playing sport. The SEA hosted their third sustainability summit at the Melbourne Cricket Ground on 5 March and being a previous panellist in 2017 I was eager to return and hear from all the presenters.

The summit focusses on practical ways the sports industry can limit its impact on the environment. The event brought together national, state, community and professional sporting associations along with all levels of sport and government, facility managers and sustainable service providers to explore what a sustainable future may look like for the sporting sector.

As Dr Sheila Nguyen, executive director of SEA, explains: "The sport industry needs the environment and right now the environment needs a loud, sexy, high profile voice and I believe sport holds the megaphone." Dr Nguyen will be presenting at the 2019 Asia Pacific Turfgrass Conference in Brisbane on reducing environmental impacts at sporting venues and I can guarantee you will leave the

presentation feeling empowered to create a sustainable future at your workplace.

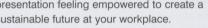
FACILITY TOURS

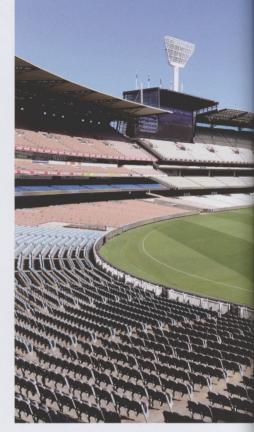
This year's summit kicked off with three facility tours of the MCG, Flemington racecourse and the Melbourne and Olympic Parks Trust precinct. The MCG tour took delegates 'back of house', going behind the scenes of the iconic arena to get an insight into the ecoefforts being made. The Melbourne Cricket Club is a proud foundation member of the SEA and was recognised with the inaugural #SEAChanger Award at the 2016 summit.

In 2018 the MCG became the first sporting venue to close the loop on organics recycling, with waste produced at the stadium treated in-house via an organics dehydrator. This waste is turned into a soil additive that is then used on the stadium surrounds.

At Flemington, home of the Victoria Racing Club (VRC), executive general manager James Reid, explained the facility's sustainability innovations which went into the design of the new state-of-the-art Club Stand.

Due to pressures from the public, the VRC took this on board and knew it was time to start implementing new sustainable practices, with some of the initiatives including;





- Installing solar panels on the grandstand rooftop and superscreen (this generates more than 25,000KW/h of power each
- Working closely with waste contractors to increase recycling to in excess of 90 per
- Openly communicating with their members and patrons through race books, signage and newsletters to encourage their support of sustainability initiatives when utilising their facilities;
- Redistributing surplus food through SecondBite to people in need. After one Melbourne Cup Carnival alone, 3670 kilograms of fresh food was redistributed, providing more than 7000 meals to people in need.

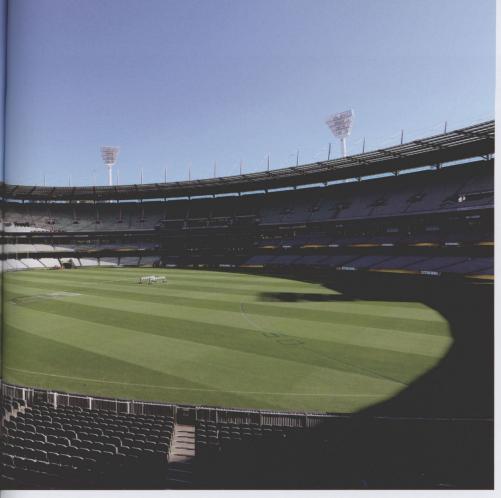
Each year the VRC aims to reach peak potential with their sustainability outcomes, even to the point where they offer funding incentives for sponsors and corporates to reduce MDF in their builds, encouraging them to use recyclable materials.

MOPT TOUR

This year I participated in the Melbourne and Olympic Parks Trust (MOPT) tour which visited Margaret Court and Rod Laver arenas to gain an insight into their sustainability initiatives. During the tour we learned about the design features that contributed to Margaret Court Arena becoming Australia's first Leadership

The new Club Stand at Flemington incorporated a number of design and operation elements to improve the VRC's sustainability efforts





The MCG hosted the third annual Sports Environment Alliance Summit in early March

to see that many golf course superintendents and sports turf managers already have a focus in this area and, in many regards, are leading the way with their thinking around water management and minimising environmental impacts at their venues."

DOING YOUR BIT

As Mark mentions there are a number of sports turf managers out there already heading down the right path in creating a sustainable future within their workplace. With current weather patterns changing and the impact of climate change upon us, not to mention increased pressures from committees/members and challenging budgets, if you have not already done so then now is the opportune time to start taking action at your facility.

You can start by implementing the smallest of changes at your workplace and below are five actions you can do to kick-start the process:

- Ensure all lights and computers that are not needed overnight are completely shut down:
- Change light fittings to more efficient lighting (e.g.: LEDs)
- Regularly perform irrigation audits to check sprinkler heads are operating correctly and irrigating only what is needed;
- Reduce amounts of mown rough to native areas;
- Ensure rubbish collected from on course is sorted into recyclables and land fill.

Often a good idea is to delegate a staff member or a club member volunteer to be responsible for implementing these actions, researching more sustainable options and educating members and visitors. These days there is so much information readily available and there are certifications available to clubs, funding opportunities and organisations out there willing to assist. Any step you take is going to show the community and your members that you are committed to a sustainable future.

One quote that really stuck with me from the summit came from the VRC's James Reid when he answered a question about 'where to do you start'... "Just start! If you are doing the right thing then generally it works out!" Whatever direction you choose, heading towards a more sustainable future will be a positive selling point for your club." **



in Energy and Environmental Design (LEED) Gold certified stadium.

Central to this is the water management system which has a storage capacity of about 6.2 million litres, made up of the following;

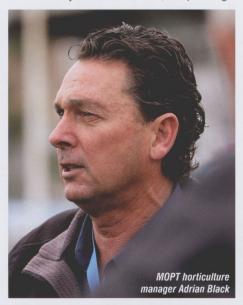
- 4.5 million litre raw water storage tank located under Rod Laver Arena;
- 550,000 litre clear water storage tanks located at the northern end of Melbourne Arena:
- 911,000 litre clear water storage tanks located at the treatment plant room at the southern end of Rod Laver Arena;
- 200,000 litre underground catchment tank and pump wells located at the Bateman Ave berm.

Some eight million litres of this water is used for toilet flushing in the Rod Laver Arena, Margaret Court Arena and the Tennis HQ building in the past year, with the remainder used for irrigation.

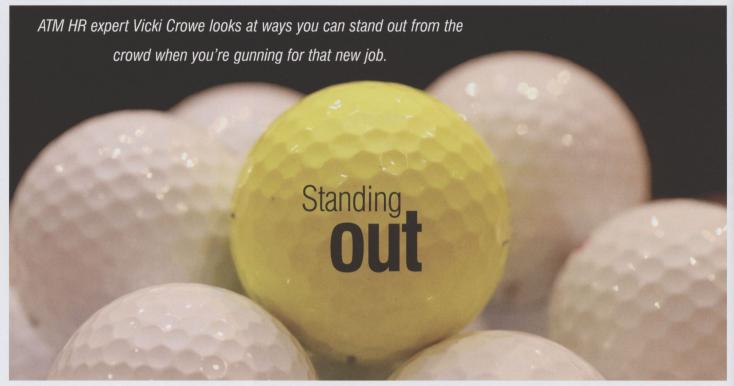
MOPT horticulture manager Adrian Black spoke about the success of the system: "The water harvesting system at Melbourne Park produced a phenomenal 42 million litres over the last 12 months. We harness this to operate Melbourne and Olympic Parks' irrigation network covering approximately 20 hectares, ensuring the various areas are maintained in excellent condition for all their widespread uses. This includes the training and playing grounds for an array of professional sporting clubs and codes, along with community recreation and public spaces that welcome the Victorian public to enjoy the precinct in the heart of Melbourne city."

Adrian also mentioned that studies were currently being conducted to see if more water could be harvested from other areas of the precinct, as there is always an increasing numbers of events; the more water that can be harvested the better!

AGCSA CEO Mark Unwin attended the summit and says it was great to see the work being achieved across the sports industry in the area of sustainability: "As the issues from drought conditions across Australia continue to place further pressures on already challenged turf managers, its events like the SEA Summit that reinforce the conservation and environmental stewardship approach. While there is always more work to do, it is pleasing







esides technical skills, known as 'hard skills', employers are looking for certain behavioural attributes, known as 'soft skills', to help their businesses grow. If you are a candidate looking for a new job, being able to demonstrate some of these attributes will make you stand out from the other potentials.

If you are an employer, select the attributes that are important to your workplace and develop some questions to ask at the interview. Behavioural interviewing questions use the STAR story framework which stands for;

- Situation (to set the context for your story);
- Task (what was required of you);
- Activity (what you actually did); and
- Result (what was achieved).

For example, recently I was interviewing candidates for a new position. The stand-out candidate, and the person who was subsequently offered the position, told me a story about having to go above and beyond for an elite golfer when he was playing in a major tournament in the US. With only one story, she demonstrated resilience, persistence, adaptability, analytical thinking and problem solving (solutions focused) which ticked a lot of boxes for the position.

Too often candidates focus on emphasising the results, which is meaningless as it doesn't demonstrate to the interviewer all of the other attributes you used to get the results. If you are applying for a new role, think about prior workplace situations in which you could demonstrate the key attributes required to get the job.

Below are some of the key attributes employers look for when searching for the right candidate:

- Adaptability: Workplaces are constantly changing environments. Employees who can adapt quickly are highly valued.
- Analytical thinking: People often associate analytical thinking with 'data' and office environments. You may be surprised how often you actually analyse situations on a daily basis.
 - A proactive approach: Being able to demonstrate how you were proactive, for example in having to make a decision when a manager wasn't available to get the job done, or how you ensured you achieved your KPI's or goals, demonstrate a proactive approach.
- Solutions focus: Problem solving has now changed to solutions focused. While recognising there was a problem, highlight how you went about finding a solution rather than how you dwelt on the problem.
- Resilience: Resilience is now considered to be one of the most important attributes a person can possess.

People in the workplace are under more pressure, expectations are higher and technology means you can be contacted 24/7. Demonstrating you are comfortable with failure and being able to get back up again is a key strength. Resilience is also demonstrated when there is significant change in the workplace.

SUPERVISORS AND MIDDLE MANAGERS

Supervisors and middle managers will need to have developed or be able to demonstrate the attribute of 'emotional intelligence' or 'EQ'. Studies by psychologist Dr Daniel Goleman show that EQ accounts for 45 per cent of a person's job success, rising to 85 per cent for leaders and for up to 70 per cent of an

individual's performance. By comparison, thinking ability and technical competence account for only 30 per cent and IQ for less than 6 per cent. For example, in a study Goleman conducted in a global food and beverage company in 1996, departments whose senior managers had a critical mass of EQ outperformed their yearly earnings goals by 20 per cent.

EQ are learned abilities, not inborn talents. By developing your emotional intelligence in the following five key areas, you can become more productive.

- Empathy: Social awareness or the ability to read, be sensitive to and influence other people's emotions, concerns and perspectives, and to understand your impact on others.
- Handling relationships: The ability to enter and sustain satisfactory interpersonal relationships by, for example, managing conflict productively and collaborating, and through social skills.
- Managing emotions: The ability to manage your emotional states to control emotions or to shift undesirable emotional states associated with a drive to achieve and succeed.
- Motivating oneself: Self-control, the ability to delay gratification, stifle impulses and enter into the desirable emotional states associated with a drive to achieve.
- Self-awareness: The ability to identify and name your emotional states and to understand the link between emotions, thought and actions.

Is it worth the effort? Well, many researchers have found that a person's EQ is a higher predictor of managerial success than their IQ... you be the judge.



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100% ACTIVE Ingredient

PREMIUM PENETRANT SOIL SURFACTANT

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45 YEARS OF RESEARCH AND DEVELOPMENT IN PIONEERING HIGH PERFORMANCE WETTING AGENT PRODUCTS

What Makes Tournament-Ready® So Special?

3 KEY COMPONENTS UTLISING SMART SURFACTANT TECHNOLOGY™

Component 1:

Quick wetting penetration of soils, plus moves water out of water saturated soils.

How does it do it?

Immediately relieves localized dry spots (LDS) and wets the soil profile where most competitive products will not wet the soil immediately and efficiently.

Component 2:

Moves excess water out and keeps doing it.

How does it do it?

Tournament-Ready will reduce the surface tension and attraction of water molecules to each other, making water "spread and infiltrate". The effect will increase the downward movement of excess water out of the root zone while decreasing the upward movement of capillary water in the soil. This will remove excess water from the 12" zone of a USGA or California style green.

Component 3:

How does it do it?

Holds water in the right place where it should.

Relieves localized dry spots (LDS) in thatch that won't wet, but will not leave thatch permanently wet. It will dry down like any part of the green, but allow water to continue to re-wet the area when Tournament-Ready is in use.

Note: Tournament-Ready does not require watering in and is non-phytotoxic but to achieve the results mentioned above, it is recommended to water in the product following application.







Underhill

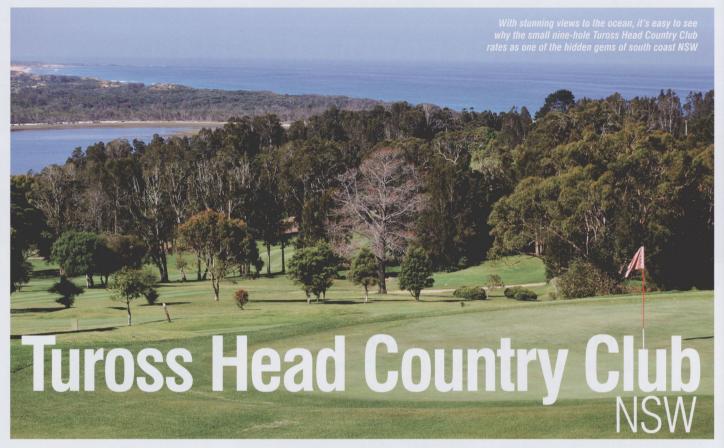
Contact your **David Golf Representative** or Head Office on 1300 790 890



10 Litre Soil Surfactant Code: UH-TUR02

208 Litre Drum Soil Surfactant Code: UH-TUR55

1003 Litre IBC Soil Surfactant Code: UH-TUR265



Superintendent: Tim Watson (33). **Nickname:** Rednut or Biscuits.

Family: Wife Kristy and kids Ashleigh, Scott and Caydence.

Period as a superintendent: 8.5 years.

Association involvement: AGCSA, Far South
Coast Greenkeepers Association.

Career: Apprenticeship at Moruya Golf Club, assistant superintendent Moruya for 1.5 years and superintendent at Tuross Head Country Club for 8.5 years.

Qualifications: Cert III Horticulture (Turf Management).

Where in Australia is Tuross Head Country Club? Tuross Head is situated on the south coast of NSW about 300 kilometres south of Sydney. We are a small town of 2500 people about 10 minutes off the Princes Highway. The town is a tourist destination for its beaches, river systems and relaxed vibe. We are very lucky to have a touring pro golfer Brendan Jones grow up here who has been very successful on the Japan Golf Tour. Brendan is great in supporting the club with donations and helping with fundraising. Recently the club was included in iseekgolf. com's Australian Top 25 9-hole courses list which was a great reward for the efforts of everyone involved at the club.

The Tuross Head crew (from left) Tyson Hastie, assistant Ben Hewison, superintendent Tim Watson, Terry Beales and Richard Kelly The far NSW South Coast
is blessed with a number of
fantastic golf courses as well as
a close-knit group of passionate
superintendents. Among them is
Tuross Head's Tim Watson.

Tell us a bit about your background and how you came to be a superintendent. I have lived in the area all my life and played many sports as a kid. I was a sports nut and

always knew that the sports industry would ultimately provide me some sort of career. I played my junior golf at Moruya Golf Club where I met superintendent Brent Hull who offered me a greenkeeping apprenticeship. I loved it from day one.

After completing my apprenticeship I was getting itchy feet with so many ideas and ambitions of my own. I knew that I was ready for the next step, but it was just a matter of waiting for an opportunity around this area as I was settled here with my wife Kristy and our two kids at the time. Thankfully Tuross gave me that chance.

The best thing about being the superintendent here is the relationships I have



with the members. I love a good joke around and so do they and I'll often get a serve about how well (or not) my beloved Wests Tigers are doing. The views here are also pretty spectacular.

Who were some of your early mentors in the industry? Aside from my learnings at Canberra Institute of Technology with Bruce Davies and the team, I've really had just the one mentor in Brent Hull. We've ended up good mates and, not to talk him up too much, he definitely moulded me into the greenkeeper I am today, from the skills and knowledge out on the course to leadership and management. It's great with him just 15 minutes up the road and I can always rely on his continual advice and support when it comes to borrowing equipment.

Give us an overview of Tuross Head

CC. The course sits on the side of a hill overlooking the ocean and Coila Lake. It's not an easy course – our greens are tiny and unless you're hitting darts you need to use the slopes to hit the greens. The majority of holes run across the hill so placement off the tee is critical. Due to the slope I keep my cutting heights high to help keep the ball in play. The best part of the course is the 5th tee shot – it is at the highest point of the course and you hit down the hill towards the ocean. The ball looks like it travels for miles and you get the spectacular ocean views.

What are some of the unique features about Tuross Head CC from a turf management perspective? One of the more unique challenges we face is dealing the pockets of granite in the soil which create pathways for muddy water to seep through to the surface. Many unsuccessful attempts have been made to drain these areas, with the water seeming to find new ways of coming up through, sometimes just 1-2 metres from where you just drained!

Is it an easy/hard facility to manage? It's up and down. We face a lot of challenges and it really comes down to finances. In saying that, I do enjoy the challenge of presenting this place at a high level with limited resources. Recently we have been fortunate to lease a Ventrac and through fundraising efforts by our men's golfing committee we were able to purchase outright a new out-front rough

The recent addition of a Ventrac with contour deck to the Tuross Head fleet has helped to improve mowing efficiencies and provide a greater level of safety due to the course's sloping terrain



Superintendent for more than eight years, Watson enjoys the challenge of presenting Tuross Head at a high level with limited resources

mower. Having a small staff is a challenge, but thankfully our volunteers help with lots of tasks that we can't get to and also contribute to major jobs, especially drainage and constructing carts paths.

What changes have you implemented in terms of managing the course during your tenure as superintendent? The club has always just got by with what they had and have done a fantastic job. My goal is to get this place up to speed with the modern day and getting the message across to staff and membership about quality control and my expectations to create a more professional culture. The 'one per cent' jobs mean a lot to me, from clean neat furnishings, no weeds in the bunkers to sharp mowing patterns.

What other maintenance changes do you hope to implement? I am currently looking into time management practices. For example, we have a number of bunkers causing us grief with issues ranging from

washed out faces to being too close to greens and receiving too much traffic. If all goes well, we will be altering the bunkers so that they have a flowing grass face (which will enable the Ventrac to sweep around) and be in more sensible and strategic positions. Hopefully the trimming process will be cut in half and damage will be limited during heavy downpours.

Any special environmental considerations that you have to incorporate into the management of the course? There are many considerations for us in this department. Three sides of the course are bordered by housing, so noise and spray drift are high on the list. We wait until 7am to roll out the machinery and won't spray with winds above 10kph. Our other boundary has the lake and we are very mindful of leaching through the profile. The local council conducts testing every month or so to check we are all good.

What are some of the major challenges facing Tuross Head CC from both a turf and club management perspective? Our biggest challenge is getting visitors to the club. It seems to be a challenge drawing in visitors from the Highway, but if they are holidaying in the town itself they do support the club. In saying that though, we wouldn't survive without the strong local support.

The hardest selling point for us is only having the nine holes. The keen golfer wants 18, but it seems the social players looking just for nine and a bit of fun is our biggest audience. Our population is mainly elderly and most are members, so we have a limited target audience locally. We do take advantage of the summer and Easter periods by offering combo deals to get people to play and dine.





Any major course improvement works recently completed or in the pipeline?

Drainage has been a major focus for us over the past few years. We have been lucky and thankful to have Martyn Black from Golf NSW come and offer advice and also award the club grant money to go towards our drainage works on two occasions over the past four years. With this and the many funds raised by the membership, we have made huge improvements to the course.

The three holes on the lowest part of the course have everything going against them. Everything flows to this point (both surface and seepage water) and as mentioned we have housing that borders three sides of the course and a main road at the top which we get all the run off from. Any time we got 50mm or more rain these holes would became unplayable and during the winter months they could be closed for up to a week.

Therefore, the goal was to get the course playable 365 days a year. These areas had ag line all through them but with limited success. As mentioned earlier, we struggle with seepage and they can move all the time and were popping up next to existing drainage. So my plan was to over-compensate and go

To remedy major drainage issues on lower parts of the course, Watson installed large rubble drains which have proven very successful big. I decided to run 500mm square 40-70mm rubble drains (no pipe) lined with bidim geo fab in a herringbone pattern through the problems areas, with 200mm of river sand between the turf and drainage.

My thought was that by having the large cavity and big core space between the rubble would allow for the excess flow of water during a downpour, but to then also suck in the seepage more effectively. The only real challenges we faced was finding old gum tree stumps and roots from the old swamp it used to be, but with a bit of chainsaw and axe work we were fine (not to mention the odd rock). The result has been very positive. After three

years we haven't had to close down these holes (unless the whole course is closed), water flow is perfect and the seepage areas seem to have disappeared (expect for one). The only down side is that the turf on top of the lines needs more water, however, it's a small price to pay for its success.

How is Tuross Head CC faring in the water management stakes? Unlimited treated effluent water is a blessing, however, the quality can vary. The kikuyu is fine but the greens start to struggle after regular applications. Nothing beats a flush from Mother Nature!



Watson and his crew also maintain three Tifdwarf couchgrass bowling greens

The weather and climate is always a great leveller. How has Mother Nature treated the course in recent times? When it rains, it pours! We seem to go through phases where we get constant and too much rain or we get nothing for ages. It's very rare to get that nice balance. About two years ago, after work one day, we had a hail storm roll in and blanket the whole course white in about five minutes. It was quite a sight and I thought I better go and check the course, only to find that the locals were treating it like a ski resort!

What are some pros and cons of being a regional superintendent? Pros are definitely the lifestyle; I could never see myself in a city. I have a two-minute drive home and can be fishing five minutes after that... Cons would be just dealing with the limited resources available and lack of money.

Are expectations of course presentation and conditioning any less than that placed on your metropolitan counterparts? I would imagine yes. I'm sure that if our members were to play a top course in Sydney they



would expect that 'wow' factor, but for me if your members are happy and feedback from visitors is positive, that's a win for us.

The one product I couldn't manage my course without is... Primo – to slow that kikuyu down over the Christmas period!

Do you have to be more resourceful as a regional superintendent? One hundred per cent! That's our challenge, but I feel we do it well. We just have to find that happy medium. Volunteers play a huge part and without their

help I doubt we would survive, not only from a labour perspective but all the work they do fundraising, finding sponsors and running competitions. They really are priceless and their contribution to the course, bowling greens and clubhouse is highly appreciated.

If you could change one thing about your job as a regional superintendent what would it be and why? Training availability. Our apprentices have to travel many hours to Canberra for training every week. I would personally love to do my Cert IV, but wouldn't



be able to manage a four hour drive up to Ryde and back and study one day every week – maybe when the kids are older.

How important are the relationships you have with other course supers/trade reps? We are very fortunate to have a great bunch of blokes up and down the south coast who are just a phone call away whenever you need help or just want to vent, blokes like Brent Hull, Mark Puglisi (Bega CC) and 'the guru' Dave Thomson (Bermagui CC). In recent times, with the leadership of Pat Wilson (Pambula-Merimbula GC), we have formed the Far South Coast Greenkeepers Association. We all take turns hosting monthly catch ups, whether it's just the supers having lunch and nine holes or like, in March, when Dennis Grounds (Club Catalina) hosted we had talks and presentations from Turfcare, Floratine and Ventrac. This month at Pambula-Merimbula we had Ben Gibson from the Toolbox Team talking about leadership and management training along with Roger Maher and Pat O'Shannessy from Toro giving

What are some of the more unusual requests you have had as a regional superintendent? You can't make this stuff up... One time a group of lady golfers screamed to me that there was dog that had

us a presentation about their new products.

just swallowed a duck and was drowning in our bottom dam. Just like Bondi Rescue I found myself diving in to save it! The dog made a full recovery.

What have you got in your shed? Toro 6500-D (fairways), Toro 3100-D Sidewinder (tee tops and fringes), John Deere 2500B (greens), Kubota F36909 (rough), Ventrac with contour deck and blower, Kubota L4310 tractor with 4.5 tonne tip trailer, Agrison FEL, Cushman, Club Car utility. Since its recent arrival, the Ventrac has risen to the top of the popularity stakes – it's a huge time-saver and you feel very safe operating it on some of the slopes we have. We are due to replace our fairway unit next as it's a 2006 model and has done a lot of work. On the wish list would be a Sisis scarifier – I'd love to rip into the kikuyu.

Best advice you have received about being a course superintendent? Brent Hull said to me the day I left to become super at Tuross, write everything down so you don't forget things and GO HARD!

What do you think is the most challenging aspect of a superintendent's role today and what have you worked on personally to improve your skills? The way society is going, presenting the golf course is becoming the easy bit. Managing staff and dealing with

committees and management is becoming the real challenge. Learning about how to treat and work with different personalities and their needs is becoming more of a common part of the role as super.

I have worked a lot on my communication skills as early on I found that my message wasn't getting across clear to staff. I think I lacked confidence early to be able to tell people what to do. A lot of the time the message was clear in my head, but when conveyed to staff the job didn't end up getting done as I had expected. I have definitely built up that confidence now.

What gives you the most job satisfaction?

There's nothing better than busting your gut all week and getting the place in mint condition, then going for a round of golf taking a nice cold six pack and enjoying it as a greenkeeper and a golfer. Also watching the development of my first apprentice and hopefully guiding him to future success.

Most pleasing/rewarding moment during

your time as Tuross Head superintendent?
After seven years, I was rewarded with my first trip to the Australian Turfgrass Conference, which just happened to be in New Zealand. It was a great experience and the boys from the far south coast made it a memorable week! I feel I really got a lot from all the seminars.

AT A GLANCE - TUROSS HEAD COUNTRY CLUB. NSW

Course specs: Nine-hole course played twice with two sets of markers separating the nines for both men and women (5362m men, 4755m women). Course size 18.5 hectares with a 1/3ha bentgrass (Penncross and G2) and *Poa* greens (they are tiny). Five hectares of kikuyu fairways and fringes and 2000m² of kikuyu tees. We also maintain three Tifdwarf bowling greens (4500m²).

Members/rounds: 1800 (250 golf, 100 bowls)/16000.

Major events: Tuross Head Open, Club Championships, May Bowls Carnival.

Operating budget: \$60K.

Staff structure: Tim Watson (course superintendent), Ben Hewison (assistant superintendent), Terry Beales (groundsman), Tyson Hastie (apprentice) and Richard Kelly (mechanic).

Climate: Being right on the coast we get very humid over summer. It would be rare to get a day over 35 and during winter we may get a handful of frosts (I've only ever once seen the place fully covered). Annual rainfall averages about 800mm.

Soil types: Very heavy soil profile with heavy clay and rich black soil, as well as a fair bit of rock with granite pockets here and there. The greens are old push-ups with heavy loamy sand, except for two which were built five and eight years ago close to USGA spec.

Water sources/irrigation system: Unlimited treated effluent water. We have a Rain Bird ESC-1 block system, running 8005 Rain Bird sprinklers. For the bowling greens we use old perforated pipes (very behind the times). We are in the process of seeking council grants to upgrade to a Rain Bird IC system. Pumps are old Ajax ones that are nonvariable speed.

Cutting heights/regimes: Greens 3.5mm, green fringes and tees 12mm, fairways 16mm, green surrounds 44mm and rough 65mm. Bowling greens 2mm.

Renovations: Major greens renovations are completed in September with the assistance of member volunteers. We use a Ryan Lawnair with generally 5/8" hollows to about 100mm depth, heavy scarify in two directions

with a good feed and topdress to finish. We use 8mm solid tines every 4-6 weeks, but looking into an 8mm hollow instead. Tees get a few scarifies and solids punched each year and we will generally renovate one of the bowling greens each year.

Major disease pressures: We get the odd flare up of dollar spot over summer in the golf greens. Winter brings a lot of fusarium in the kikuyu areas but we have been getting better with timing and techniques of preventative applications over the years, but we are restricted by budgets. On the bowling greens we battle with white helmo but it really doesn't affect playability.

Nutrition: Regular foliar feeding of greens. I find outside of renos I get better results with the liquids getting taken straight up by the plant due to our poor old profiles. The kikuyu areas really miss out and may get a few iron and urea applications a year if lucky. The bowling greens are similar – foliars and I am a big fan of Carbon Trader over winter which has done wonders in keeping good surface coverage through dormancy.







Powerful herbicides deliver total weed control

BARRICADE Herbicide is the ultimate season long barricade against a wide range of pre-emergent grassy weeds in turf and gardens beds. The combination of BARRICADE with the post emergent activity of either MONUMENT LIQUID or CASPER Turf Herbicides deliver total weed control for grasses and broadleaf weeds.

Early spring applications of BARRICADE will ensure season long control and mixing with MONUMENT LIQUID and/or CASPER provides you flexibility for broadleaf weeds, sedges or residual *Poa annua*.



For more information ask your Syngenta Agent or go to www.greencast.com.au

OUTCROSS 9060 POWERS INTO AUSTRALIA GCSA Platinum Partner Toro Australia has launched the all-new Outcross 9060 with a series of demo days held in Melbourne throughout March. Initially unveiled at the 2018 Golf Industry Show in the US, the Outcross 9060 is a revolutionary, turf-friendly machine that delivers on the benefits of both a tractor and a super-duty utility vehicle. "The Outcross 9060

is designed to allow superintendents and turf managers to do more with less stress, less labour, fewer resources and less time," says Toro's equipment product manager Brian Goodridge. "This machine is a timesaving, easy-to-use, multipurpose, turf-friendly workhorse that will bring you year-round flexibility, consistency and productivity".

In contrast to many traditional compact tractors, the Outcross 9060 is turf-friendly thanks to a weight-balanced chassis and four-wheel steering, coupled with full-time four-wheel drive. All four wheels turn individually at a rate determined by the machine's ground speed and turning angle, ultimately minimising the possibility of turf damage and allowing the machine to traverse various terrain with ease. "It's the first machine of its kind to be purpose built for the management of fine turf; it is extremely gentle on turf," says Goodridge.

Superintendents and turf managers can also pre-programme attachment parameters, reducing the possibility of operator error. The Outcross incorporates a standard threepoint hitch with PTO without counterweights, drawbar and universal loader mounting plate,

enabling the machine to accommodate a variety of standard turf maintenance attachments. This includes, but is not limited to, loader buckets, forks, pull-behind rotary mowers, fertiliser spreaders and aerators, as well as seasonal attachments for snow and ice maintenance.

Says Goodridge: "Users can keep busy year-round by utilising the Outcross's threepoint hitch, drawbar or front loader. Mow grass, spread fertiliser, load sand, haul a pallet of sod, aerate, topdress, spread seed. tow a trailer and much, much more".

Additionally, intuitive automotive style controls and one-time parameter setup keep operations simple and efficient, allowing operators of all skill levels and experience to accomplish many different tasks. The Outcross also features a passenger seat and roomy operator station for easily transporting people, as well as an optional cargo bed with a 2041kg, one cubic metre capacity for hauling tools and materials.

Capable of towing up to 7257kg and powered by a 59hp (44kW) Yanmar liquidcooled diesel engine, the Outcross is as powerful as it is versatile. "From the very beginning of the development of the new Outcross 9060, Toro focused on what matters most to superintendents and turf managers, which all centres around doing more with less," says Goodridge. "This includes simplifying operation, optimising power and uptime and integrating dozens of attachments to perform virtually hundreds of tasks, all while focusing on being extremely turf-friendly."

To enhance efficiency and productivity, intuitive one-action controls, a utility bed and cruise control come standard on the Outcross 9060. Available as an option is an all-season. climate-controlled safety cab to protect the operator from weather, insects and debris. For more information about the Outcross 9060, visit www.toro.com.au or contact your Toro golf area sales manager. W





NEW DAVID GOLF CUP NOW A HOLE LOT BETTER

GCSA Bronze Partner David Golf is launching a new putting cup and ferrule. The 'David Golf Locking Cup' is manufactured from heavy duty cast aluminium and available in two different finishes anodised with replaceable liner or bright white powder coat finish with machined natural aluminium base

The Locking Cup features a notched base that together with the new David Golf 'Locking ferrule' ensures flagpoles lock in. This reduces flagpole movement in windy conditions which, in turn, reduces cup and ferrule wear and meaning flagpoles stand straight. The new locking ferrule is manufactured using engineer-grade

aluminium. It has a notched rim that seats perfectly into the cup as well as a nylon base that eliminates chipping when returning the flagpole to the cup.

"This new locking system has taken quite a lot of time to develop," says David Golf's national sales and marketing manager Casey Johnson. "It is an exciting addition to our range of putting cups and means that we truly have a putting cup for any course."

The cups and ferrule are in stock now and can be dispatched immediately. Please contact David Golf on 1300 790 890 or through the website www. davidgolf.com.au for further information or to place your order.



AGCSA, GOLF BUSINESS FORUM TO MERGE CONFERENCES IN 2020

he AGCSA and Golf Business Forum announced in March a new partnership that will deliver Australia's largest ever sports turf management and golf business conference in Melbourne next year.

Through the partnership, the AGCSA will host the Golf Business Forum in conjunction with the 2020 AGCSA Sports Turf Conference in Melbourne. Already the largest conference in golf course and sports turf management in Australia, this partnership provides a platform for the AGCSA to significantly expand conference education, networking and value that members and trade partners receive.

"Partnering with Golf Business Forum ensures that Australasian sports turf managers have expanded access to leading education opportunities to continue creating and successfully managing some of the most breathtaking sporting facilities in the world," explains AGCSA CEO Mark Unwin.

Guy Chapple, the Forum's director, is equally thrilled: "This is a natural evolution for Golf Business Forum. It has been our objective to create an education and networking event for the whole golf industry. Joining forces with the AGCSA, together with the ongoing support of our foundation partner Golf Australia, and the PGA of Australia, will see this combined event have a tremendously positive impact on the golf industry."

Over 1250 delegates are expected to attend the combined programme in which both events will be held concurrently, coming together for education, networking and a large trade exhibition. The Golf Business and Sports Turf Trade Exhibition will occupy

a massive 6,000m² at the Melbourne Convention and Exhibition Centre, making it the largest and most diverse golf and sports field industry exhibition ever staged in Australia.

The Australasian Turfgrass Conference is a four-day event for Australian and international sports turf managers. The Golf Business Forum is a two-day event that connects and inspires the entire range of golf businesses, industry organisations and commercial partners that delight Australia's 2.1 million golf participants.

Both events will tee off on Tuesday 23 June. All education sessions will be held in the main theatre providing a single stream of education for delegates. Tuesday afternoon education will be provided in the exhibition area and different concurrent sessions on a range of golf business and sports turf topics will be offered. The conference will expand into specific streams of education provided

on Wednesday before a combined closing keynote presentation. Optional pre-event workshops will be available on Monday 22 June while there will be a range of facility visits and turf management tours on the Thursday

There will also be plenty of opportunity for networking and social interaction at the event. Golf Business Forum will continue with its major social event on Tuesday night, while the turfgrass conference will get together for the Sports Turf Management Industry Awards Dinner on Monday evening and the legendary Conference Farewell Bash on Thursday night.

"We know that successful golf facilities enjoy a great partnership between the general manager and superintendent," concludes Unwin. "Both Guy and I worked with that approach in mind during our partnership discussions and we are both very eager to continue this approach and bring something very special to the golf industry in 2020."

INDUSTRY APPOINTMENTS SPORTENG SIGNS NEYLAN



Melbourne-headquartered Sporteng announced in March the addition of one of Australia's most respected agronomists, John Neylan, to its team. Neylan

(pictured), founder of AGCSATech and a former general manager of the AGCSA, joins the company to strengthen its 'Field of Play' team. Neylan, who after leaving the AGCSA in 2011 set up his own turf consultancy and research business, brings with him over 40 years' experience having held various roles

within the turf industry since he graduated with a degree in Agricultural Science from the University of Melbourne in 1977.

"The title 'expert' often gets thrown around too readily without any true basis these days. However in John's case it is more than appropriate," says Sporteng director Jarrod Hill. "John has extensive experience in undertaking research and consultancy with a wide range of clients including golf, sports fields, racetracks and local government. John has expertise in soils, drainage, water management and turfgrass selection and evaluation."

VGCSA 🗢

hat a summer! I know from speaking with many course managers/superintendents from the Murray River down to Bass Strait that we are all facing some sort of turf decline this summer – you are not alone. Even clubs who are financially secure are still under pressure regarding turf health due to the multiple compounding factors that have been thrown our way this growing season.

This summer has highlighted any weakness we have in our maintenance programmes (whether cultural and/or chemical), irrigations systems (infrastructure, worn nozzles, water quality and water storage capacity) and budget restraints.

There is no doubt that summers in Melbourne and Victoria are becoming more challenging which makes open communication with boards and membership even more important to emphasise the impact that environmental, maintenance and golfer traffic stresses have on playing surfaces during these times. Now in the first month of autumn, I'm sure in six weeks all will be forgotten and we'll be returning our focus to, yes you guessed it, *Poa annua* control in our warm-season surfaces, which brings me to our trial update.

The VGCSA allocated funds to conduct further herbicide trials during the summer and winter seasons. With part one of the summer trials currently being collated, we are continuing with our wintergrass trials this winter/spring season, monitoring plant numbers and phytotoxicity to warm-season plants. Other VGCSA initiatives in recent months include:

Apprentice of the Year and Diploma
Scholarship awards: I have been lucky
enough to sit on this panel and witness how
passionate these guys are about our industry
and credit how well they present on the
day. I know myself from applying for course
manager positions how it feels to be standing
there in front of a panel and presenting. It
blows me away at how well some of the
candidates over the years have prepared
and presented. It's great to know we have a
consistent standard of professionalism like
this among our future turf managers.

Congratulations go to **Nicholas Fiddelaers** (Huntingdale GC) as winner of the
2018-19 VGCSA Golf Turf Apprentice Award
and to **Tim Hamilton** (Kingston Heath GC)
who received the VGCSA 2nd Year Diploma



Scholarship. Both winning candidates were nominated by Holmesglen Institute of TAFE.

Overseas scholarship award: The committee is in the process of developing a new educational award category whereby a member can gain professional development through national or international travel. Discussions are currently being finalised to establish criteria and eligibility for the award

More than 100 members turned out for the first VGCSA meeting of 2019 held at Peninsula Kingswood Country Golf Club (host superintendent Glenn Stuart, pictured)

prior to its launch to members at the May AGM. It is the committee's goal to provide dedicated people in our industry as much opportunity as possible to further their knowledge and skill set. We are confident the award will be a great avenue to do just that.

VGCSA Superintendent and Trade
Recognition Awards: Our members are
currently being invited to nominate a VGCSA
course superintendent and/or VGCSA trade
representative who has supported the
association exceptionally well and is held
in high esteem for their work achievements.
Once again, winners will be announced at our
AGM in May.

Finally, our first education meeting of the year was a great success. Over 100 members attended the dual course walks at the refurbished Peninsula Kingswood Country Golf Club. Thanks to director of courses Glenn Stuart and superintendent Shane Stuart for their informative talks.

BARRY PROCTOR PRESIDENT, VGCSA



NSWGCSA •

enovation time and the rain hits (for some)! Large rain events hit parts of NSW during mid-March, with the eastern suburbs of Sydney alone registering 210mm in seven days. It was a major shame that the rain didn't fall in other areas of the state that need it most.

The NSWGCSA has had to move the Annual Ambrose event, scheduled for 6 May at Royal Canberra Golf Club, to Cypress Lakes Resort (superintendent Craig Molloy) in the Hunter Valley. Everything stays the same except the venue. Early indications show a good number of registrations which will make for an enjoyable day and night.

This years' entertainment will be retired ABC sports broadcaster Peter 'Wilko' Wilkins. Peter is a captivating keynote speaker and MC who entertains with untold stories from Australian and international sports competitions and inspires audiences with key messages about teamwork, endurance, performance and commitment to achieving goals.

It has been some time since the association has held an event at Cypress Lakes Resort (pictured top) and we are excited to see the finished bunker reconstruction works and the current course conditions.

Two walk 'n' talk dates have now been confirmed:

Brighton Lakes Golf Club (formerly New Brighton GC): 28 May.





The Lakes GC assistant Simon Blagg

Bayview Golf Club: 13 August.

A large change for 2019 will see the NSWGCSA restructure its membership prices with all categories having the yearly membership price reduced. To coincide with the price reductions, the association will be making 1 July the date for all membership

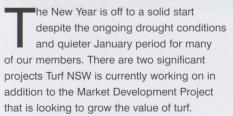
renewals so everyone's membership is streamlined with the financial year. Below is a list of the new prices effective from 1 July.

- Superintendent: \$125
- Assistant Superintendent: \$90
- Superintendent/Assistant package: \$185
- Greenkeeper/Groundsman: \$70
- Apprentice: Free
- Trade (from same company): \$105, \$195 (x2), \$250 (x3) and \$50 for any after.

The NSWGCSA is excited to announce that The Lakes Golf Club assistant superintendent Simon Blagg will be joining the association in a representative role for assistants and greenkeepers. Simon's role will be to liaise between the NSWGCSA, assistant superintendents and greenkeepers in planning and scheduling training days and functions. Simon will also be assisting in the production of the NSWGCSA's magazine. We look forward to building on this position as well as working with Simon to help develop the next generation of superintendents.

NATHAN BRADBURY PRESIDENT, NSWGCSA

TURF NSW Turf On New South Wales



'Buffalo yellows', or 'Take-all root rot' is a fungal disease that impacts buffalo and is being reported across many farms in the Greater Sydney, Central Coast and Hunter Valley regions. It has also been found in kikuyu paddocks. Four farms were tested in the spring of 2018 and the results all showed fusarium and pythium fungi, significant soil borne diseases that impact production. Loses of up to 60 per cent in buffalo paddocks are being reported in some areas of the state.

Symptoms include leaf yellowing, blackening of stolons, browning of roots and root rot. A new strain of take-all root rot has also been discovered that needs further research. Further investigation is required to determine what is causing this disease and developing and extending effective control options to manage it. More will be communicated to members on this issue in the coming months.

Turf NSW has also started a consultation process with Turf Australia and the National Heavy Vehicle Regulator (NHVR) about load width exemptions for turf producers. In NSW, cotton, hay and wool producers currently have an exemption from the standard load width of 2.4m and a standard load height of 4.6m. This is called the NSW Class 3 Baled Commodities Dimension Exemption.

Turf producers do not have this exemption in NSW. Some members have reported infringement notices being issued for not complying with load width requirements on certain routes. Turf NSW is currently investigating if this is a national issue or largely confined to NSW. If any members are experiencing this issue, please contact Matthew Plunkett on 0434 147 988 as soon as possible.

An update to the current website and a new email notification system is also under development. If Turf NSW members have any specific training requirements or require assistance, please contact Matthew on the number above or email info@turfnsw.com.au.

> MATTHEW PLUNKETT **IDO. TURF NSW**

STANZ STANZ Sports Turk Association AZ Inc

ry, dry, dry! That pretty much sums up the weather across much of the country since we had some rain in the New Year. Parts of New Zealand have experienced an extremely dry February with only around 2mm of rain having fallen in Auckland, coupled with the 7mm of rain (from one single event) we experienced in January.

By Australian standards this probably sounds pretty good, but in the temperate climate of NZ this stable weather pattern of warm, dry days and humid nights has made it difficult to maintain and manage coolseason turfgrass species. A large number of stakeholders have either lost greens or cricket blocks (where the latter has not been couchgrass) and with a dry autumn on the cards there may be minimal opportunity to renovate and restore damaged areas.

One of the biggest events of the summer in New Zealand has been that hosted by the Wellington Stadium (aka the 'Cake tin'). Curator **Hagen Faith** and the turf team had to manage the following schedule in the space of less than four weeks:

- 21-24 Feb: Te Matatina Kapa Haka Festival:
- 2 March: Eminem concert8 March: Super Rugby
- 15 March: Nitro Circus

The Te Matatina Kapa Haka Festival is a significant cultural festival and the pinnacle event for Maori performing arts. Held every two years, it is one of the most highly anticipated events for performers, their whanau and the mass of passionate Kapa Haka fans throughout the world. The festival resulted in most of the field being covered for up to five days.

As soon as all of the infrastructure around this event was uplifted, the Eminem stage and flooring then went up, which meant Hagen had about three days in between to try and get to his turf surface – the true essence of a multi-use stadium. As an aside, I really think it should become a set module in any turf apprenticeship now – how stadium turf is managed through the challenges of multifunctional use. Today's stadium turf managers have to juggle so many variables each year.

Aside from the weather, the summer has been a busy one for turf managers around the country, with many stadium and council sports park venues being utilised for the hosting of festivals and concerts. The never-ending demand to utilise open green





The impressive Marae stage (top) used for the Te five Matatina Kapa Haka Festival at Wellington Stadium and (above) as it is removed the Eminem stage build commences

space to the maximum of its potential has increased significantly over the past five years in Auckland and some of the other larger New Zealand cities. The challenge this brings to the management of these surfaces both pre and post these events is still being understood.

Elsewhere around the country, the Crusaders home stadium (Christchurch Stadium) has completed its surface upgrade. The new Desso Grassmaster surface has already come through its first full Super Rugby game with flying colours with only a handful of days post the completion of the installation before the match.

WILL BOWDEN COMMITTEE, STANZ



The new Desso Grassmaster surface at Christchurch Stadium one day after completion of stitching

TURF AUSTRALIA TURE AUSTRALIA AUSTRALIA

urf Australia recently held the inaugural 'Women in Turf' conference, an event designed to connect women working in the turf production industry. There are many women involved in the ownership, operation and management of turf farms around Australia and it was a great to see women from the industry connecting with new people who understand their work and family life, sharing stories and learning from presenters and each other.

As we approach the season of conferences and seminars, I'd encourage everyone in the industry to take the time to attend the various events on offer. It's an opportunity to learn, share ideas and, most importantly, network with fellow industry workers. Turf Australia is holding it's bi-annual conference for turf producers in Sydney on 30-31 May and will include a day of presentations and workshops and conclude with an on-farm visit for machinery and product display and demonstration.

This year will see a new event on offer on the Gold Coast - the Landscape Irrigation Conference from 18-21 June presented by Irrigation Australia. Turf Australia is pleased to partner in this event which is designed for anyone working with irrigation including sports turf, golf, local government and landscapers. Guest speaker for the event is Costa Georgiadis from Gardening Australia.

With the start of the winter sports season and the continued pressure of usage on grounds, I'd encourage all sports turf managers to get to know their local turf suppliers. Build the relationship like you would with your chemical and machinery suppliers and work with your grower to



Turf Australia recently held the inaugural 'Women in Turf' conference

develop the best turf product available for your needs. Visit the farm and talk to them about what's new on the market and how it could assist you in providing the best quality turf surface available.

Finally, 2019 has already provided a strong reminder of the importance of a safe work place and safe work practices, with some serious injuries and deaths across the country in the wider turf industry. Already in Australia there are a total of 30 recorded deaths from work place accidents across all industries; 30 people who set off to work one day and never came home...

The drain on businesses to have all the paperwork sorted and available can seem overwhelming and quite often put off for a rainy day. Invest in the time to get the essentials sorted and staff trained and ensure that safety is the number one priority for your staff, every day. Remember that a safe work place includes mental health and with increasing pressures in work and life, be sure to have awareness of mental health issues and management.

The Safe Work Australia website has links to local organisations that offer resources and opportunities to assess your workplace or consider engaging a consultant to assist you. Safety starts at the top of the staff ladder, so to all managers please ensure you practice what you preach.

Stay safe and enjoy the cooler days of autumn.

> **JENNY ZADRO** MARKET DEVELOPMENT MANAGER, TURF AUSTRALIA

STA ACT



s in most areas of Australia it's been a very tough summer for all turf managers in Canberra and the surrounding region with the average temperature up a full two degrees over summer and rainfall very scarce - a lethal combination. I have to commend everyone as the standard of turf facilities has still remained very high despite the tough season.

Some major events for the summer were the cricket Test match at Manuka Oval between Australia and Sri Lanka where head curator Brad Van Dam and his crew did a fantastic job to present the ground in pristine condition for the capital's inaugural Test match. Ladies professional golf also returned to Canberra in a big way with two European Tour events held - the Actew AGL Classic at Royal Canberra Golf Club and the Worrell's NSW Women's Open hosted at Queanbeyan Golf Club.

Feedback on both events was overwhelmingly positive and I was lucky enough to visit both sites in tournament week and the course quality was magnificent with slick greens to match. Congratulations must go to respective superintendents Ben Grylewicz (Royal Canberra) and Bryan Kelly (Queanbeyan) and their dedicated crews.

Recent events for the STA ACT included our annual golf and sponsors day on 1 April at Queanbevan GC where we had a full field. with planning also well underway for our annual education seminar on 24 July. This vear's seminar will be held at a new venue -Raiders Club, West Belconnen. We would love as many attendees as possible from interstate so please get in touch for further information.

> SCOTT FOGG PRESIDENT, STA ACT

GCSAQ



he big calendar event for the GCSAQ at the time of this edition going to publication is the annual Turf Industry Golf Day on 12 April. Held at Lakelands Golf Club (host superintendent **Phil Soegaard**) this is a thoroughly enjoyable event that is always very popular with members and industry partners.

The other big event recently was the Queensland Golf Industry Awards held on 21 March 2019 at RACV Royal Pines Resort. A total of 31 awards were handed out across the Queensland golf industry on the night, with the GCSAQ recognising four of its outstanding members. Congratulations goes to:

- Industry Recognition Award: Gary Topp (Twin Waters Golf Club)
- Superintendents Achievement Award:
 Darryl Edwards (Gold Coast Burleigh Golf Club)
- Assistant Superintendents Recognition Award: Richie Flesser (Lakelands Golf Club)
- Apprentice of the Year: Jack Schmidt (Cardwell Golf Club)

Far North Queensland clubs copped an absolute hammering in January and February with up to two metres of rain falling. This was devastating for the area including the golf courses. An image gallery from this weather event can be found on the GCSAQ website.

Townsville Golf Club was one of the worst affected with the course copping nearly 1500mm of rain in a 13-day period. The course was completely submerged with the second green entirely washed away leaving a huge clean-up for course superintendent Jason Foster and his crew of Zak Holm, Rohan Fryer and Jake Wilcoxson. Rowes Bay Golf Club, to the north of the city centre, was also severely flooded with a number of large trees also down.

The Bureau of Meteorology's Townsville weather station recorded the sobering daily tallies... Sunday 27 Jan: 30mm - Monday 28: 51.6mm - Tuesday 29: 80mm - Wednesday 30: 108.6mm - Thursday 31: 153mm - Friday 1 Feb: 216.4mm - Saturday 2: 141.8mm - Sunday 3: 171.6mm - Monday 4: 181.4mm - Tuesday 5: 42.2mm - Wednesday 6: 110.4mm - Thursday 7: 16.4mm - Friday 8: 118mm. 13-day total: 1421.4mm.

Thank you to all our members who completed our two-minute online survey recently; we appreciate your feedback and have had a lot of valuable comments from our

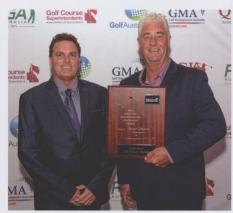


members including a few people who have put their hands up to assist the committee in a variety of ways. We will use the information that we collected to assist with planning for the remainder of 2019. Thanks to Toro for sponsoring this promotion.

All GCSAQ members are invited to jump on board our Stripe it Up with Nuturf promotion that will run until 30 April 2019. Email your best course pictures to info@ gcsaq.com.au for your chance to win a \$100 Dan Murphy's Gift Voucher.

PAUL MCLEAN PRESIDENT, GCSAQ

Townsville Golf Club was severely damaged when some 1500mm of rain in a 13-day period caused widespread flooding





GCSAQ winners at the Queensland Golf Industry Awards were Gary Topp (left), Darryl Edwards (top right) with Max Whatman and Richard Flesser (above left) with Paul Bevan





STA VIC @



he STA Victoria calendar for 2019 is jam-packed with valuable programmes in technical information, education, health and wellbeing and hands-on field day experiences. The first of these was the OH&S and Wellbeing Seminar which was held on 2 April at Kardinia Park, Geelong sponsored by Syngenta.

The idea of OH&S and wellbeing is to ensure we all live in a happy, harmonious and healthy environment. Occasionally we forget about looking after ourselves and those around us, so hopefully the recent seminar has reached out to regional country areas and informed the attendees of the importance of not only their own wellbeing and health but that of workmates, family and friends.

Syngenta sponsored this day and we thank them for their input and informative presentation. Thank you also to all of our presenters on the day for helping to put together a great programme. Among the speakers were:

- Paul Cotter (City of Greater Geelong);
- Dan Docherty and Tim Bilston (Syngenta):
- Mark Osborne (Cancer Council): Sun safety out in the field;
- Lessa Thom (OHS trainer and Consultant, Recovre): Intergenerational workforce challenges;
- Amy Baker and Michael Devlin (Worksafe Victoria): Incident reporting, notifying workplace incidents and identifying possible incidents prior to them occurring; and
- Rae Bonney (integrated wellbeing specialist): Creating environments that support how our people are feeling - it's everyone's responsibility.

Please forward any comments on how we can improve the programme and the day for next year to Jan Fenton - vic@sportsturf. asn.au

RESEARCH PROJECT RELEASE

In April 2017, a research project funded by STA Victoria was commenced by John Neylan (Turfgrass Consulting & Research) and David Nickson (Grand Prix Turf) to study the effects of hours of use on sports fields of different construction types and levels of maintenance. The objective of this research project was to

- Sportsfields of different construction
- The associated maintenance practices



GMHBA Stadium in Geelong hosted STA Victoria's OHS and Wellbeing day in early April.

- compared to the quality of the playing surfaces; and
- The potential hours of use for the different construction types and maintenance programmes.

John Neylan has written a number of updates on the project since its start in Australian Turfgrass Management Journal and in this edition and coming ones will present the final findings. You can find a link to the final report summary on the STA Victoria website http://vicsportsturf.asn.au/hours-ofuse/.

The topic for this research project was decided as a result of a survey of members at the STA Victoria Sports Turf Seminar in July 2016. If you are passionate about a subject and would like to see it researched, please contact Jan.

TORO SPORTS TURF GRADUATE OF THE YEAR AWARD

It was a very tough decision for our interview panel to make this year in choosing a winner from all the nominations received. With a strong field of candidates, it confirms we have some great talent in our industry in Victoria.



Congratulations, however, goes to Nathan Andrews (pictured) who studies at Melbourne Polytechnic's Fairfield campus and who works for Citywide Service

Solutions. Nathan will go on to represent Victoria at the final judging to be conducted at the Asia Pacific Turfgrass Conference and Trade Exhibition in Brisbane in June. Good luck Nathan, you are a great ambassador for Victoria.

FUTURE EVENTS

Planning for the annual Sports Turf Seminar,

to be held on 10 July at the MCG, is progressing and we look forward to bringing you the programme. Until such time, please save the date in your diary. We also hope to bring you information shortly on the Pitch Preparation Day in September and an Irrigation Seminar in October.

Our industry covers many aspects of parks, fields and gardens. We are forming closer ties with similar organisations and supporting them in their events, so as members of STA Victoria please come along to show your support for them as well. Some of these events include;

- ASBA/STA (Vic) Field Day: The ASBA (Vic) and STA (Vic) will again join forces to conduct the biennial Field Day on Friday 12 April 2019 (8.45am - 3pm) at Marcellin College, Bulleen. Invitees include business managers, property/ facility managers, grounds managers, curators and maintenance staff. The event will also showcase up to 30 supplier sponsors who will exhibit their various businesses during all breaks. STA Victoria members are eligible to receive a member discount.
- Parks & Leisure Australia (Vic/Tas Region): This event will be held 16-17 May at RACV Cape Schanck Resort, Mornington Peninsula. The content for the Day 1 Parks Stream targets outdoor staff. Once again, STA Victoria members will receive the member discount, however, you must note your membership number when registering. Visit the conference website http:// victasconference.parksleisure.com.au/.

We look forward to seeing you at the various STA Victoria events throughout 2019.

COMMITTEE, STA VICTORIA

TGCSA

he TGCSA held a committee meeting in early March to plan for the year ahead, with some informative events earmarked for 2019. The events calendar was kick-started with the AGCSA Turf Management Seminar at Blundstone Arena in Hobart and planning is well underway for our annual state conference which will once again be held at Tamar Valley Resort in August.

Other events in the pipeline include a day for 2ICs to get together for some valuable networking. There is also the potential for a roving walk 'n' talk seminar to Dial Park Stadium (a twin oval development at Penguin that opened in April 2018), Devonport Golf Club (to look at the redevelopment) and a visit to Ulverstone Golf Club.

As mentioned in a recent edition of the AGCSA e-newsletter The Cut, we lost an absolute pioneer in **Ted Gilligan**. Ted, father of current Tasmania Golf Club superintendent **Danny Gilligan**, was one of the initial founders of the Tasmanian Curators Association which would become the current day TGCSA. Our deepest sympathies and condolences are with Danny and his family for the loss of a great father and very highly respected leader in the turf industry. (**See the obituary on Ted later this edition, pages 78-79 – Ed**)

Elsewhere around the Apple Isle...

- Mark Johnson, former superintendent and general manager at Ulverstone Golf Club, has taken a jump completely out of the industry to work in a family business headed up by his daughter and son-inlaw. We wish Mark all the best and he has assured us that he will keep in contact.
- Isaac Jones, who took over from Mark at Ulverstone when he jumped into the manager's office, has just prepared the course for the Tasmanian Open. All we have heard is rave reviews on the course set up and presentation – well done to Isaac!
- University of Tasmania Stadium (turfologist Bryan Dunn) in Launceston is about to embark on a total surface reconstruction. Some \$2.8 million is budgeted to carry out works on sub-surface drainage, irrigation and resurfacing, with turf grown off site which has a budget of another \$1 million. Earthworks are expected to start in August 2019 and we wish Bryan and his team all the best for this major project.
- Planning and approval is all but complete on the proposed 18-hole golf course







This August will see the University of Tasmania Stadium in Launceston (top) undergo a multi-million dollar surface reconstruction. The new surface (pictured above) is currently being grown in off site

development at Arm End (Opossum Bay), Hobart. Approval has recently been granted to supply effluent water in assisting the golf course and a number of local farmers in their supply of irrigation water. The current waste water pumped out of Blackmans Bay is currently being pumped directly into the Derwent River after treatment. What a waste!

In closing, thank you to the AGCSA for supporting each state superintendent association with the recent Turf Management Seminar Series and I look forward to catching up with you all in Brisbane.

Dial Park Stadium (below) is a twin oval development in Penguin that opened in April 2018



PHIL HILL PRESIDENT, TGCSA



PHOTO: NEAR!

STA WA 🝩

he STA WA held a welcome BBQ for all first-year apprentices recently at the South Metropolitan TAFE. This is held on behalf of the WA turf industry to introduce the apprentices to our associations and to let them know that there is a whole wider industry that is prepared to support them, engage with them and to ensure that their training package is the best that it can be. We want to see these young people come out of their time well educated and fully prepared for turf life.

It's great to see 18 new turf apprentices. fresh faced and ready to go. Most are from golf, but this year there are three young men in sports turf apprenticeships. A further series of BBQ lunches will be held over coming weeks for the older apprentices.

On 13 February the STA WA also conducted its annual industry breakfast at Kings Park. It was a great industry turnout with close to 50 attendees from across the sector, from production to maintenance and sponsors. It's always good to start the year in such a positive manner.

Lecturer and researcher Dr Natasha Pauli from the University of Western Australia's School of Agriculture and Environment. presented on her current project, 'What are the social benefits of street verge transformations?' With some levels of government here in WA pushing for lawns to be ripped up and replaced with 'waterwise' verges, this is proving to be an interesting research project.

Many councils in WA are in the process of developing street verge policies, engaging consultants to liaise with the community about what is acceptable

Many councils in WA are developing street verge policies currently, engaging consultants to liaise with the community and to develop policy about what is acceptable as street verges. Hopefully many will see the light about synthetic turf on street verges for the heat island effect they create. Natasha has committed to working with the turf industry soon for the next stage of her project.

Our executive officer queried the intent and design of the research project, commenting that from an industry perspective this particular project is likely to have a negative impact. However, in saying that it could perhaps lead on to a more intensive study, as was discussed at UWA Turf Industries Turf Research Steering Committee meetings and by the turf production sector, one that would compare the various street verge treatments, natural vs hardscaping, natural vs natural, regarding heat island effect and urban liveability.

EVA RICCI WA TURF INDUSTRY EO

TURF QL



urrently many of our Queensland turf farmers are under huge stress, initially with drought and now with flood damage to their properties in some instances. Drought continues to be an issue in southern Queensland, whereas north Queensland is recovering from cyclones and floods. This of course causes considerable anguish to farmers and their families, resulting in a huge amount of stress in trying to get their property back to workable condition.

Available water is in short supply and therefore requires considerable management along with the restrictions and increasing costs. Water security, we believe, is a priority across all of our turfgrass industries. On-farm water storage and water allocations are extremely critical to ongoing success. Natural turfgrass is a living product and like humans it has to be watered to make it grow and be healthy.

The second biggest dam in Queensland (Fairbain) is, at the time of writing, running at less than 13 per cent with a huge number of restrictions in place affecting agriculture and our farmers. Businesses around the Emerald

area are obviously under considerable pressure. The dams in the Gatton/Lockyer area are basically operating at 0 per cent.

Turf Queensland, the Sports Turf Association of Queensland and the Golf Course Superintendents Association of Queensland are jointly promoting a Workplace Health and Safety, Health and Wellness Workshop to be held in Brisbane on 14 May.

> JIM VAUGHAN **EO. TURF QUEENSLAND**



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TGA WA PTGA by Groven Australia for



he Turf Growers Association of Western Australia and the Sports Turf Association (WA) are proud to present the WA Turf Seminar 2019 to be held on 1 May at the Larkhill Sporting Complex in Port Kennedy.

Responding to requests from previous events, this year's seminar has been especially planned to bring delegates outdoors during much of the day for some practical instruction and demonstration. An array of trade expo marquees will also be set up outside, representing various turf industry equipment and product suppliers and distributors ready to display their wares and services.

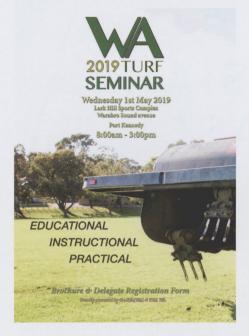
On the larger lawn arena, we will be leading groups of delegates through various educational and instructional machinery and renovation sessions. Each presenting company, with guidance by WA Turf Seminar volunteers, will have time to demonstrate to the groups the 'how, what and why' of the equipment, machinery, products and renovation procedure on display. Why choose this specific type of machine? What is the purpose of outfitting the equipment in that configuration? How to achieve differing outcomes from differing machinery or configurations?

We look forward to an anticipated full house on the day. Delegate registrations are already coming in which is great, and we have a full house of trade exhibitors and expo participants. It will be an ideal opportunity for direct and uncrowded interaction between delegate and presenter.

THE PERTH GARDEN FESTIVAL 2019

The Perth Garden Festival 2019 was held at McCallum Park from 11-14 April. The TGA WA took up a smaller display area this year, where all WA turf varieties were on display in trays. This sort of display proved to be very popular, with the public able to touch and feel and ask questions about the traits of each turfgrass. Literature and business cards from members' farms were also on display along with our industry brochures. The TGA WA instructional best practice videos were on loop on a screen at the site as well.

The TGA WA was also offered the 'rock star' speaking position on the main stage at the festival! Horticulture Media Association members here in WA coordinate the speaking spots and we were allocated mid-morning



The TGA WA and STA WA will be conducting the WA Turf Seminar 2019 at the Larkhill Sporting Complex in Port Kennedy in 1 May

speaking spots between WA's two most popular female media horticulturists - Sue McDougall (Today Tonight) and Sabrina Hahn (ABC Radio). The TGA WA also spoke in the educational tent throughout the event.

IS WA IN RECESSION?

It has been tough times here in WA regarding turf sales. Sales are down across the board, even over summer by up to 60 per cent! Each year for the past four years sales are declining when, comparatively, producers on the eastern seaboard don't have enough turf to meet supply. It's unique, it's concerning and disturbing and it's economically impacting WA growers, but sadly there is little one can do when the economy is in such a poor state.

Some of our growers are redefining areas of production or investigating alternative options, but ultimately our industry is in the grip of economic pressure and it simply is not easy for most of our members currently. People aren't spending, competition is high, landscapers are mercenary and costs are increasing.

Synthetic turf is in epidemic proportion in our newer suburbs, with whole streets of plastic. Blocks sizes are shrinking and houses are getting bigger; it's a perpetual spiral and I'm not sure that it is one that we will come out of. It really is difficult times for the majority.

CHANGING THE IMAGE OF TURF IN WA

With all the pain. TGA WA members are still proactive though. As a priority, we want to change the negative image of turf. We simply could not sit on our hands any

longer and wait for a national campaign. We have employed Strategic Seed Marketing consultant Harsha Quartermaine to work with our executive officer, Eva Ricci, for a period of six months to implement a marketing strategy that was developed late last year. It's early days yet, but Harsha and Eva will continue to work towards a tangible and hopefully positive outcome.

GREEN SPACE ALLIANCE **STRENGTHENS**

The WA turf industry executive officer continues to administrate for the Green Space Alliance (GSA), herding the cats into regular meetings and towards better outcomes for appropriate natural green spaces in WA.

The GSA recently developed a matrix of priorities, which has been redefined over several meetings down to seven high priorities. These priorities will be evaluated again shortly with the intent of attending to the list from highest priority backwards.

New members have come on board with the Grey Water Industries Group joining the TGA WA, the STA WA, Nursery and Garden Industry Association, Landscape Industries Association, Australian Institute of Landscape Architects, the Tree Guild WA, Australian Institute of Horticulture, the Horticultural Media Association WA, the Perth NRM and the City of Belmont as committed members. The GCSAWA has attended a recent meeting and looks set to join also. State government departments such as Sport and Recreation, Water and Environmental Regulation and the Water Corporation all remain involved.

A communication plan for website extension and a social media platform is being progressed and an organisational chart currently being developed. There is a priority on developing a Water Policy paper and addressing Metronet. The WA turf industry is committed to supporting the GSA well into the future - a united group with one voice to advocate for natural green space on all levels.

EVA RICCI WA TURF INDUSTRY EO

ON THE MOVE ...

STUART GRAHAM: From superintendent Riverside Oaks Golf Club, NSW to Wagga Wagga Country Club, NSW

GARY MCCLYMONT: From assistant superintendent to superintendent Twin Waters Golf Club, Qld





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Vale Edward 'Ted' Gilligan (1930-2019)



The Tasmanian golf course management community recently bid farewell to one of its founding fathers.

Superintendents Association (TGCSA),
Edward Lindsay 'Ted' Gilligan, passed away
peacefully at the age of 89.
Gilligan was head curator of the Hobartbased Tasmania Golf Club from 1973 through
until his retirement in 1988 and together with a
number of other prominent turfies of the time
formed the Tasmanian Curators Association
(TCA) in the mid-1970s. Throughout his years
of involvement, he played a significant role in
improving the collaboration, education and
knowledge of Tasmanian golf course curators.

019 got off to a sad start for

following the loss of one of its

founding fathers in the first week

the Tasmanian golf course

management community

of February. Former Tasmania Golf Club

superintendent and founder of the forerunner to the current day Tasmanian Golf Course

One of four children, Gilligan grew up on a farm in Lucaston in the Huon Valley west of Hobart. The farm grew a range of small fruits and vegetables and ran dairy cattle. Gilligan was a relative latecomer to the game of golf and took it up around the age of 30 at the Huon Valley Golf Course which was adjacent to his workplace, where he managed an apple shed/coolstore and distribution shed. Gilligan found the golf course an ideal place to relax and unwind after work and over time golf would become his passion.

His farming background led him to become involved in the maintenance of Huon Valley's small fleet of mowers and machinery, and subsequently the turf as well, along with a small band of club volunteers. In the mid-60's a new course site at Glen Huon was purchased and Gilligan, together with the other volunteers, helped with the course layout, construction and grow-in.

THE DYNASTY BEGINS

In 1973, Gilligan was contacted by lan Grimsey who at the time was the superintendent, or 'head curator', at the new



Tasmania Golf Club located on the eastern outskirts of Hobart. Gilligan and Grimsey had grown up in the Huon Valley together, living just a few kilometres from each other and attended the same school.

Grimsey had just played a major role in helping construct the Tasmania course after Lindisfarne Golf Club was forced to relocate from its site near the Hobart CBD (the club changed its name as part of the move to the new site). Noted architect Al Howard designed the course and it was constructed by Grimsey who was later made a life member in recognition of his efforts. The course opened in 1971.

Grimsey informed Gilligan that he was moving interstate to take over at Royal Canberra Golf Club and insisted his former schoolmate apply for the soon-to-be-vacant role. Although unsure whether he had enough experience to fill the role, Grimsey assured Gilligan that his previous hands-on experience at Huon Valley, not to mention his farming background, would more than suffice. It also helped that Grimsey was assisting the club's selection committee.

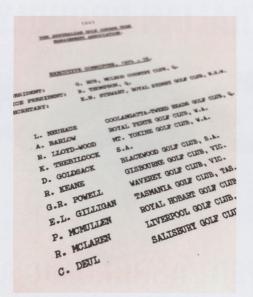
In July 1973, Gilligan was duly appointed as Tasmania's new superintendent and started what has become something of a family monopoly on the role. Spending 15 years as superintendent up until his retirement in 1988, Gilligan would hand the baton over to son Dan, who took on an apprenticeship under his father at the age of 17. Some 31 years on and Dan is still Tasmania's course superintendent today.

FOUNDING FATHER

The year following his start at Tasmania, Gilligan, along with fellow Tasmanian curators Norm Ayres (Kingston Beach GC), Andrew Layland (Devonport GC) and Peter McMullen (Royal Hobart GC), attended the 3rd National Turfgrass Conference in Melbourne. Events at that conference would spark the formation of the Tasmanian Curators Association (TCA) which eventually morphed into the current day TGCSA.

The TCA aimed to incorporate all aspects of turf maintenance, from golf to bowls to sportsfields and everything in between. Always a parochial lot, the TCA brought together Tasmania's three separate regional curator groups - South, North and Northwest under the one banner for the first time. Together with a number of other prominent turf 'personalities' at the time, it took Gilligan a while to convince everyone that a single body should prevail, but by the mid-1970s they had succeeded.

As both secretary/treasurer and president of the TCA, Gilligan found himself as part of the national committee of what was then the Australian Golf Course Turf Management Association, a forerunner of the current day AGCSA. At that time the president and



secretary of each of the state bodies were automatically on the national conference committee and following the 5th National Turf Conference in Sydney in 1978 it was announced that Tasmania would play host in 1980 for the first time.

As TCA secretary/treasurer at the time, Gilligan played a leading role on the organising committee which also included Ayres, Layland, Ian Febey (Claremont GC) and Kevin Flakemore (Royal Hobart GC). Gilligan also recruited then Tasmania GC secretary/manager Les Evans who had about 20 years in the services and who had managed the Air Force Golf Club. His past experience organising large events made him a key recruit in the successful delivery of the conference. Together they managed to arrange and coordinate sponsorship, guest speakers, accommodation and a field day at StrathAyr and Royal Hobart Golf Club.

NATIONAL ACCLAIM

Held at Wrest Point Casino, the highly successful (and profitable) 6th National Turf Conference attracted 169 delegates and

featured Olympia Fields Golf Club (US) head curator Warren Bidwell. According to history documents at the AGCSA, the conference was 'more like the opening of parliament', with the State Premier present along with the leader of the Opposition and the Governor. Evans was good friends with the Mayor of Hobart and there was also a civic reception for delegates before the conference.

Among his plans for the smooth running of the conference, Gilligan had one particular goal he wanted to achieve. In the past, he had been unimpressed by the length of time it took for conference reports to be distributed (in some cases they were posted out several months after the event). Gilligan wanted to issue reports immediately upon the conclusion of the conference and recalls former Victorian president Ray Keane saying 'I wish you luck'.

In order to meet his objective, Gilligan had all conference papers pre-printed. After each paper was presented, there was Q&A time for 45 minutes and the organising committee had a stenographer on standby to record and then print the three-or-so pages of questions straight away. The sheets were progressively inserted into the folders with the pre-printed papers.

On the last day, the conference finished at 5.20pm and by 9.30pm all reports were finished. Wrest Point Hotel porters were then seconded to distribute them to the delegates' beds before they turned in for the night. This was a first at any national turf conference and certainly surprised many in attendance.

Gilligan, who lived his later years in Devonport, was farewelled by friends and family on 11 February 2019. On behalf of all readers and AGCSA members, Australian Turfgrass Management Journal sends its condolences to the Gilligan family and congratulates Ted for the indelible mark he has left on furthering the cause of Tasmanian turf managers. Vale Ted. 4



Formerly Lindisfarne Golf Club, Tasmania Golf Club relocated to its present day site in 1971. Ted Gilligan became superintendent in July 1973 and stayed in the role until his retirement in 1988 after which time his son Dan took over. Dan is still the superintendent there some 31 years later

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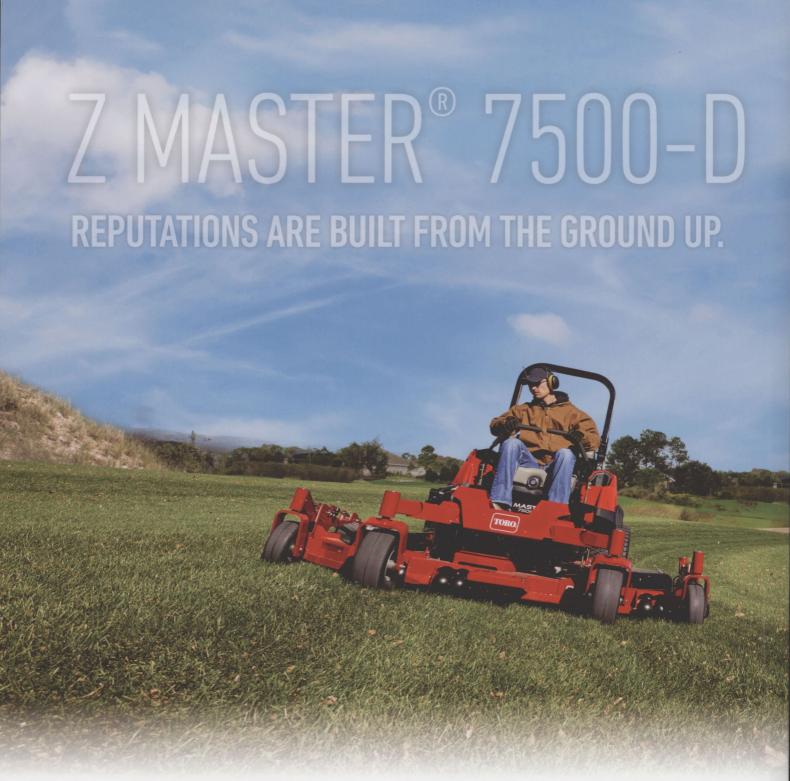
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