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VOLUME 20.5 SEPT-OCT 2018

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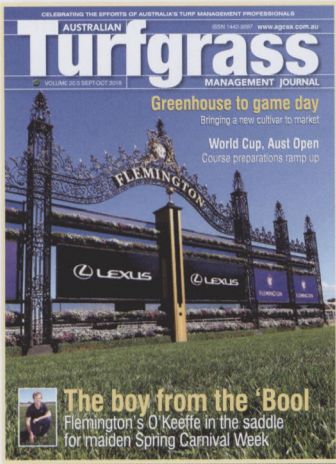
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COVER

Flemington: The 2018 Spring Carnival kicks off at Flemington on 3 November with AAMI Victoria Derby Day. **Photo:** Brett Robinson.



LEAD STORY: The boy from the 'Bool

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The hallowed turf of Flemington is set to come alive again as Melbourne readies to host Spring Carnival Week. The eyes of a nation (and the world) will be firmly cast on Australian racing's most famous of racetracks as it hosts four major meets in the space of eight days. It is the equivalent of Grand Final week for Victoria Racing Club's senior track manager Liam O'Keeffe who will be in charge for the first time after being promoted to the top job earlier in the year. ATM profiles the boy from Warrnambool and how he and his team manage the track through that first week in November.

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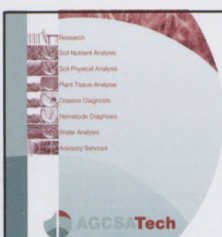
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PETER MCMAUGH

A dead cert!

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Starting from this edition ATM welcomes one of Australia's leading minds on all things turf, Peter McMaugh. Kicking things off, he looks at a new turf certification scheme being unveiled by the Australian Seeds Authority called 'TurfCert'.



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Simon Blagg (The Lakes GC); Will Bowden (STANZ); Nathan Bradbury (NSWGCSA); Dominic Bowd (Riversdale GC); Vicki Crowe (PGA of Australia); Idris Evans (Western Australian GC); Dr Phil Ford (Melbourne Polytech); Peter Fraser (Hervey Bay GC); Charlie Giffard (Indooroopilly GC); Dr David Greenshields (Barenbrug UK); Tina Hamden (STA SA); Daniel Hendrie (Morisset CC); Phil Hill (TGCSA); Steve Lalor (Natadola Bay GC); David Mason (Metropolitan GC); Paul McLean (GCSAQ); Peter McMaugh (Turfgrass Scientific Services); Hayden Mead (Kingston Heath GC); Terry Muir (epar); Steven Newell (Victoria GC); John Neylan (Turfgrass Consulting and Research); Liam O'Keefe (Victoria Racing Club/Flemington); Matthew Plunkett (Turf NSW); Barry Proctor (VGCSA); Albert Sherry (TAFE NSW); Simone Staples (AGCSA); STA Victoria; Arthur Stubbs (Courses for Horses/ARMA); Kate Torgersen (Environmental Golf Solutions); Mark Unwin (AGCSA); Jim Vaughan (Turf Queensland); Bryce Walsh (Royal Hobart GC); Colin Winterton (Medway GC); Jenny Zadro (Turf Australia).

A winning team

How good was it to see Team Europe triumph in the recent Ryder Cup at Le Golf National in France?! It was a commanding performance by Thomas Bjorn's men and much of the talk in the aftermath was how Europe's 'champion team' beat Team USA's 'team of champions'.

Reading the commentary and listening to post-tournament interviews with players and pundits, it was clear that a 'team' ethos was a central pillar of their success. Bjorn summed it up as such: "The whole team has been part of this... We got it right this week. We worked as a team and we knew we were up against very strong opponents, but we went out on the golf course and believed in ourselves and what we stand for as a team. This is the best team room I've ever been in. It was calm. It was determined. It was focused. It was fun."

Europe's victory perfectly encapsulated the attributes that a team needs to achieve success. Those who attended Steve Herzberg's talk at last year's Twin Waters conference on that very topic will recall that those traits include having clarity on goals, being comfortable with conflict, clear communication, individual accountability, measuring and celebrating success, possessing a hunger to improve and strong leadership.

Team Europe seemingly ticked every one of those boxes, but there were a couple of other aspects which were equally as important. For a start, everyone contributed. Every European player, from debutant Thorbjorn Olesen to seasoned campaigner Sergio Garcia, all scored at least a full point. There was also the element of trust. As Justin Rose stated afterwards, Bjorn "didn't fill our week with pointless team meetings. He trusted us to be 12 players that would come together working towards the same common goal." And, of course, having fun. If you can't have fun doing what you do, then what's the point...

The art of golf course management is very much a team effort and as any superintendent will tell you, you are only as good as your weakest link. Having a cohesive team makes the job so much easier, especially when facing adverse times like some are at present with drought affecting widespread areas of the country. Getting that cohesiveness doesn't just happen by chance and it takes time and a lot of work nurturing it, but when it all comes together, like it did for Team Europe, the result is there for everyone to see.

One group who will be hoping to emulate the above attributes of a high performing team is the maintenance crew at Metropolitan Golf Club. Under the leadership of superintendent Dave Mason and assistant superintendents Nick Launer and James Cocker, Metropolitan will be in the spotlight in a few weeks' time when the ISPS Handa World Cup of Golf returns to Melbourne for the third time in six years.

Listening to Dave speak at the VGCSA's September education meeting at Kew Golf Club, he highlighted the importance of a team approach in their preparations and ensuring that all members of staff, including the many volunteers who will also be a part of the tournament, are on board for the journey. As if to reinforce that, Mason has on all his social media posts in the lead-up to the tournament included the hashtag '#winningteam'.

ATM wishes all crews, whether hosting tournaments or just fighting the fight to provide the best playing surfaces they can in challenging conditions, all the best as we head into what many are predicting will be a brutal summer. And just as a stark reminder of how hard some are doing it at present, just as I was finishing off this editorial the AGCSA received a call from the superintendent at Forbes Golf Club in central west NSW. Their year to date rainfall to 16 October... not even 90mm! Enjoy the read...



Brett Robinson, Editor



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Many successes, some challenges in a productive year



This issue marks 12 months since I joined the AGCSA and I can say it has been a thoroughly enjoyable, sometimes challenging, first year as chief executive. We continue to face some difficulties around education in various forms and it is certainly one item of work that will never be 'finished' as we continue to work with state and other associations, TAFE and government sectors to constantly improve education outcomes and move the turf management industry forward.

The proposal to amend conditions and penalty rates under the Registered and Licensed Clubs Award has been trying and taken up far more time than we would have liked. However, it is a necessary area of focus for the AGCSA to invest time and resources into given what is at stake for our members and all turf professionals.

On the positive side, wins have come through delivering a very successful conference in New Zealand for the first time, growing membership numbers, launching of a new online member management system and website, expanding AGCSATech's analytical and consultancy services and the continued success of the Future Turf Managers' Initiative.

As indicated in the previous issue of ATM, the AGCSA has also been working to expand its membership benefits programme to offer increased value to your membership. After a few months of working through the details, I'm pleased to let AGCSA members know that from November your membership will now include access to an expanded benefits programme, with a comprehensive range of offers and discounts across entertainment, travel, technology and business services from leading Australian brands. Further announcements and details will be circulated to members shortly.

On the topic of successes, a note of congratulations must go to all turf managers who turned out facilities for the various finals and grand finals across all codes throughout September. Whether it was on the national stage or at local level, by and large the surfaces presented across the board highlighted the efforts and skill of the turf management teams who continue to make the industry proud.

As another summer approaches, there seems to be a mismatch of weather conditions for teams in various states. Members in Tasmania and areas of Far North Queensland have received above average rainfall over winter, while others in Western Australia and parts of South Australia are on, or around, their average yearly falls. Many regions of NSW and southeast Queensland continue to be well below average and our thoughts remain with all turf managers battling the odds in many parts of western and northern NSW and the ACT, where the lack of rainfall received to date this year is critical.

October is **Golf Month**, a national campaign to drive golf participation where clubs and facilities across the country will throw open their doors and welcome visitors to take part in a variety of golf activities. The AGCSA supports the initiative from Golf Australia to attract new players to the game, develop skills and enjoy the magnificent courses each of you turn out.

Looking ahead, and as I mentioned in the last issue, planning is well underway for the 2019 conference in Brisbane (23-28 June). Over the coming weeks via the AGCSA website and in future issues of ATM, we will be providing updates and announcements relating to speakers, further enhancements to the education programme and information about the trade exhibition.

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An early change we can advise members of is the conference branding. From 2019 onward, the event will be renamed to the **Asia Pacific Turfgrass Conference & Trade Exhibition** following significant increases in delegates, visitors and exhibitors to the conference from New Zealand and numerous countries throughout Asia.

By the time this issue of ATM is delivered, we will have launched the Exhibition Prospectus for our trade partners and industry organisations to view the range of exhibition and sponsorship opportunities available. Find out more by visiting the conference section on the AGCSA website www.agcsa.com.au/conference.

I also recently caught up with representatives from each of the state superintendent associations to discuss a variety of areas focused on developing state and national strategies and increasing collaboration over the next 12-18 months. I see this collaboration, not only between state and national bodies but also within all sportsturf industry associations, as critical to the future development of our industry for education, training and opening up further opportunities to all turf managers. Pleasingly, I feel the sentiment was shared by each of the states, though there remains some work to do on ensuring this level of collaboration continues and involves all industry bodies.

One of the approaches looking to the future is a revision of the national and state industry awards and nominations process, and working toward aligning all state awards to the national awards. Again, some work needs to be done here, but such changes will increase the prominence of the awards and consistency between all states.

The AGCSA continues to expand its communications via digital and social platforms, so ensure you stay up to date with industry news, events, jobs and information by subscribing to The Cut newsletter, visiting the AGCSA website and following the AGCSA on Facebook, Twitter and Instagram.

Finally, in what seems to be a regular update to provide, there has been a further delay in the Fair Work Commission hearing into the proposal to amend and revoke the Registered and Licensed Clubs Award. Originally scheduled for September, the matter is now listed for the hearing of evidence on 29-30 October 2018 followed by closing submissions on 1-2 November 2018 in Sydney. We will continue to keep members and industry associations updated as the hearing approaches and after the Commission delivers its findings. 🙏



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After joining Victoria Racing Club as assistant racecourse manager from Warrnambool in October 2013, in March this year Liam O'Keeffe assumed the role of Flemington senior track manager following the departure of Mick Goodie

The hallowed turf of Flemington is set to come alive again as Melbourne readies to host Spring Carnival week from 3 November. It is the equivalent of Grand Final week for Victoria Racing Club's senior racecourse manager Liam O'Keeffe who will be in charge for the first time after being promoted to the top job earlier this year.

The boy from the 'Boo!

What happens when a young lad grows up in Warrnambool, is more interested in outdoor activities than schoolwork and has a particular liking for golf and horse racing? Well, when the opportunity arises to undertake work experience in sports turf management one day a week at the Warrnambool Racecourse, the die is pretty much cast. Such was the beginning for Liam O'Keeffe's involvement in the 'sport of kings' and it's fair to say in the years subsequent he has made, pardon the pun, every post a winner.

O'Keeffe could have easily gone and worked on a golf course, such was his interest in the presentation of quality turf. However, Warrnambool Racing Club and now Victoria Racing Club (VRC), custodians of Melbourne's famed Flemington track, have benefited from his choice at the 'fork in the road' not so many years ago.

Instead of becoming a golf course superintendent, O'Keeffe now finds himself as senior track manager for the VRC, having taken over the top job from Mick Goodie in March this year after spending the previous five as his assistant.

GETTING THE JUMP

O'Keeffe's journey into the turf industry benefited from the enlightened attitude of his schools in Warrnambool who recognised that not everybody was destined for university. Provision of the Victorian Certificate of Applied Learning programme enabled study of a trade of choice, with O'Keeffe jumping at the opportunity to get into turf.

After working casually at Warrnambool Racing Club while completing his apprenticeship in 2007, O'Keeffe was promoted to leading hand. The following year he was promoted to assistant racecourse manager while completing his Diploma of Sports Turf Management through The Gordon TAFE which he achieved in 2010. O'Keeffe would later be named as one of five finalists in the then AGCSA Academic Achievement Award sponsored by PGG Wrightson, alongside the likes of now Adelaide Oval curator Damian Hough and current AGCSATech agronomist (and eventual winner) Tim Fankhauser.



WORDS: ARTHUR STUBBS AND BRETT ROBINSON. PHOTOS: BRETT ROBINSON

When John Green (formerly from Caulfield) was elevated from Warrnambool racecourse manager to the CEO of Warrnambool Racing Club, O'Keeffe assumed his first managerial role in January 2010. In addition to that, O'Keeffe's talents were recognised by Racing Victoria who seconded him to assist fellow regional track managers at Hamilton Racing Club and Coleraine Racing Club.

With a thirst for knowledge and an eagerness to learn more about the profession, O'Keeffe also won the inaugural Anco Racetrack Event Education Award in 2010. This enabled him to experience Melbourne Cup week as part of the Flemington track team, one he wouldn't forget after more than 80mm fell between Derby Day and Melbourne Cup Day. He then broadened his outlook further when in 2011 he was awarded the Steriline Scholarship which enabled him to study racecourse operations in Singapore and Hong Kong.



However, it was his management role at Warrnambool, home to the famed Grand Annual steeplechase event each May, that really set O’Keeffe up for what would be the next step in his career. With a supportive committee he managed the track expertly for nearly four years, during which time he had to deal with a few challenges, none greater than at the 2011 Grand Annual.

Steeplechaser Banna Strand made worldwide headlines when, after throwing his rider off, spectacularly leapt over a two-metre high brush fence and into a crowd of spectators. While no one was seriously injured, it triggered calls for the event to be scrapped on grounds of animal welfare and led to a wide scoping review by WorkSafe Victoria.

“I will never forget when WorkSafe turned up to investigate and saw the size of the fence that Banna Strand jumped,” recalls O’Keeffe. “They said, ‘Well, you wouldn’t expect a horse to jump that would

you!’ From that investigation the club received funding to improve its perimeter fencing which was a small positive in what could have been a disastrous incident.”

In October 2013, O’Keeffe departed Warrnambool after accepting the role of assistant racecourse manager at the VRC under Goodie. Moving from a regional track to ‘Headquarters’, as Flemington is affectionately known, was quite an adjustment and O’Keeffe admits it took him a good 18 months to adjust to the Flemington style working alongside Goodie and foreman Tim McSweeney. Then in March this year Goodie departed after more than a decade in charge and O’Keeffe was thrust into the senior role with the prospect of his first Spring Carnival in charge just nine months out.

“It was a very difficult few weeks after Mick’s departure,” reflects O’Keeffe, who during his time as assistant also undertook a VRC-funded study tour

O’Keeffe with Flemington assistant racecourse manager Brendan Jackson



PHOTO: ARTHUR STUBBS

The hallowed Flemington facility contains four grass tracks, including the 30m wide x 2312m long Course Proper. Flemington's famed 'Straight Six' (1200m or six furlongs) can be seen starting from top right



PHOTO: NEARMAP

During Spring Carnival week, the most important thing is getting some rest when you can. It is a massive week and very draining both physically and mentally. On a Melbourne Cup eve it's not uncommon to clock up 40,000 steps showing the international trainers around, so it can be pretty tiring.

-Liam O'Keeffe

to the UK to spend time with the track managers at Royal Ascot, York and Newmarket. "I was fortunate Tim stepped up to the plate and did an outstanding job to assist me in what was a challenging time. I can't thank Mick enough for the opportunity he gave me here five years ago and I am really glad Racing Queensland are using his expertise to re-build Eagle Farm. He will do an outstanding job.

"Since Mick's departure I have made some small adjustments as any manager would, but given we have always had good methods in place it has just been business as usual. And now I have Brendan Jackson, formerly the racecourse manager at Moe, as my assistant, who has added his knowledge to the team approach we have here at Flemington."

GOING FLAT STICK

Flemington is a vast and very busy racing complex with activities going on 24/7 throughout the year. The facility comprises a total of 10 tracks, including:

- Course Proper (30m wide x 2312m long): Perennial ryegrass and Kentucky Bluegrass on a sand profile;
- Steeple Track (12m x 2029m): Perennial ryegrass and kikuyu on a loam/clay profile;
- Inside Grass (20m x 1612m): Perennial ryegrass on a sandy loam profile;
- Pro Ride synthetic track (8m x 2100m);
- Three sand tracks, a dirt track, trot track and pool track.

Some 600 horses are stabled on site and training goes on every day of the week, usually starting at 4am. O'Keeffe manages 25 track staff, five of whom have turf management qualifications, with an additional 10 track work supervisors who work from 3.30am to 9am. Jump outs are run every Friday alternating between both grass tracks and on the Course Proper bi-monthly. Grass gallops are available every Tuesday, Thursday and Saturday for horses engaged in metropolitan races.

Flemington hosts 25 race meetings each year with the Spring Carnival and, to a lesser extent, the Autumn Carnival, being the feature events. Track renovations take place twice a year after each carnival and the type of renovation is based on annual benchmarking reports (i.e.: thatch and *Poa annua* levels) and also governed by the length of break after the carnivals (read more below on the upcoming renos post Spring Carnival week).

Recovery after each race meet is pretty standard. A Toro Rak-o-Vac will go out to sweep up any loose debris, with staff then repairing the track via filling (using a seed/sand mix) or sodding. Depending on the length of break between meets and the race schedule, that will determine other practices such as cutting heights and fertiliser/water applications (desalinated water is used on all the tracks).

"The main challenge we face here at Flemington is uniformly applying irrigation in windy conditions for nine months of the year," says O'Keeffe. "This is difficult because of the 'straight racing' factor and horse training hours and is something that I have not encountered at any other racecourse. Flemington is one of only two 'straight racing' courses in Australia (the other is Pinjarra in WA) and until you are exposed to preparing a track to host straight races it can be very hard to describe and very tricky to manage.

"On normal tracks, most horses will never get to the outside 10m, which is used more for training or running heavy equipment up and down, such as irrigators. However, at a place like Flemington you have to be careful to limit the amount of track work on it and spread machinery so that you can have the track as even as possible.

"When we have good rainfall the track is a lot easier to manage, but when we have long periods of hot dry weather it can be very difficult. We use pop

CONTINUED ON PAGE 10



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The Flemington Course Proper is a mix of perennial ryegrass (three varieties) and Kentucky bluegrass. Race day height is generally around 5 inches with the aim to provide a 'Good 3' track rating

CONTINUED FROM PAGE 8

ups as much as possible, but unfortunately with the wind we get here this may only be an option 50 per cent of the time.

"Alternatively, we use an Upton irrigator, but that can compact the ground and if we relieve the compaction via a Vertidrain or the like we are all over social media accused of 'doctoring the track'. You're damned if you do and damned if you don't sometimes. Fortunately, the staff have done a great job embracing new maintenance methods over the last few years and it has been racing excellently."

Like all turf managers, regardless of the sector they work in, O'Keeffe has to regularly deal with racing industry stakeholders as part of the job. With millions of dollars' worth of horse flesh running around the track, O'Keeffe is never short on receiving 'advice' from trainers, jockeys and owners. Those who know O'Keeffe will attest he is a pretty laid back character and he has a pretty simple philosophy when it comes to dealing with this aspect of the job.

"I have learnt over the years that if you make a mistake, put your hand up, fix the mistake and move on," says O'Keeffe. "Everyone is human and everyone in the industry makes mistakes. I have found this is better received by all industry participants rather than trying to hide something."

"We do get a lot of 'free advice' from the Aussies and overseas visitors, but it just comes with the job."

In between race meets during Spring Carnival week, the track is swept using a Toro Rak-o-Vac to remove any loose debris



People will try to make you water the track to suit their own horse. It has always been the case and will continue to be the case, but at the end of the day we have a policy to produce a 'Good 3' track and that's what we will continue to try and achieve."

On the subject of track ratings, they have and will always be a talking point in the racing industry, a bit like green speed in golf. Back in December 2014 the Australian Racing Board introduced a new system of 10 ratings, starting at a 'Firm 1' and going through to a 'Heavy 10'. Old track rating terms 'Fast', 'Dead' and 'Slow', were replaced with 'Firm' and 'Soft', while 'Good' and 'Heavy' ratings were retained. The current track numerical rating system is;

- **Firm 1:** Dry hard track;
- **Firm 2:** Firm track with reasonable grass coverage;
- **Good 3:** Track with good grass coverage and cushion;
- **Good 4:** Track with some give in it;
- **Soft 5:** Track with a reasonable amount of give in it;
- **Soft 6:** Moist but not a badly affected track;
- **Soft 7:** More rain-affected track that will chop out;
- **Heavy 8:** Rain-affected track that horses will get into;
- **Heavy 9:** Wet track getting into a squelchy area;
- **Heavy 10:** Heaviest category track, very wet, towards saturation.

"I can only speak as a Victorian in regard to track ratings, but I will say a track manager should not have to toss around whether a track is rated a Good 3 or Good 4 on race morning," says O'Keeffe, who advocates measuring the track with a Going Stick, which measures penetration and shear, and rating the surface 'Fast', 'Good', 'Yielding', 'Soft' or 'Heavy'. "A good track is a good track!"

"I have found the number system, 1-10, creates unnecessary upgrades and downgrades when the going has hardly changed at all. This then creates talk, opinions and debate over a track rating change. The focus should be on the winner of the race and not debate as to whether a track is a 3 or a 4."

HOME STRAIGHT

While the famed Melbourne Cup may be touted as 'the race that stops a nation', running for all of three-and-a-half minutes, it is but a small part of what is a mammoth Spring Carnival week for O'Keeffe and his track team. With four separate race meets in the space of eight days, it is the equivalent of Grand Final week for O'Keeffe and it takes some special management to ensure Australia's most hallowed piece of racing turf is at its peak to go the distance.

Carnival week this year kicks off with AAMI Victoria Derby Day on Saturday 3 November followed by Lexus Melbourne Cup Day on Tuesday 6 November. Kennedy Oaks Day follows two days later (8 Nov) and the week concludes with Seppelt

Wines Stakes Day on Saturday 10 November. In total, Flemington will entertain 37 races, including eight elite Group 1s.

Preparations begin as far back as late August when the Course Proper is oversown with a 70/30 mix of perennial ryegrass (three varieties) and Kentucky bluegrass. The last major race meet before the Spring Carnival week was Turnbull Stakes Day on 6 October, where champion mare Winx picked up her 28th consecutive win and her 21st Group 1 success. With a three-week break between the Turnbull and Derby Day, O'Keeffe was able to carry out some works on the track to help thicken and strengthen up the grass so that it can cope with the heavy load across Carnival week.

After being cleaned up and given a good fill post-Turnbull Stakes Day, the track was cut down to three inches to get some sunlight into the canopy to assist with seed germination to thicken up the grass. Around 12 days out from the Carnival a granular fertiliser is applied and the track given a final cut at 4.5 inches about 2-3 days before the first meet so that come race day it is around five inches.

O'Keeffe works around nutritional inputs of 0.3-0.4 of actual N per month and is very mindful not to overfeed the ryegrass/bluegrass mix. If anything he prefers it looking a little bit hungry to help promote a strong root system, but leading into race day he will green it up with some liquids to ensure it presents at its best.



During the Spring Carnival week itself, one of the main tasks performed by O'Keeffe and his crew is moving the running rail if needed. The rail is moved based on the condition of the track, which is assessed after every meet, but for the big meets, like Derby and Cup day, it is always kept as close to its 'true' position as possible.

The rails can be moved out at any increment as long as the minimum width of the track is 15 metres. For Turnbull Stakes Day, O'Keeffe had the rail at the 9m position (nine metres in from its 'true' position) which gave the inside of the track a good break leading into Derby Day, where the rail be back at its 'true' position.

Flemington track crew 'fill' the track after each meet with a sand/seed mix to repair any holes or punch marks left by the horses. Sodding is carried out if needed

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Above right: The new VRC Club Stand which opened this spring

Above: One of the main tasks performed by O’Keeffe and his crew during Spring Carnival week is moving the running rail if needed. The rail is moved based on the condition of the track, but for big race meets, such as the Melbourne Cup, it is kept as close to its ‘true’ position as possible



Cup eve it’s not uncommon to clock up 40,000 steps showing the international trainers around, so it can be pretty tiring.”

While Stakes Day signals the end of Carnival week for the jockeys, trainers and racegoers, unfortunately there is little respite for O’Keeffe and his team. With a four-week gap until the next major meet – the 15 December Community Raceday – the Course Proper undergoes the second of its two major annual renovations.

The track will be mown down to two inches with clippings collected, before contractor Lawn and Turf Maintenance (Mick McMahon) comes in with a fleet of tractors and Vertidrains to scarify and hollow core 10 hectares of track. The Vertidrains are fitted with one inch tines at 75mm x 75mm spacings and take around five hours to fully aerate the track.

After being cleaned up, the track will then be topdressed with a sand matching that of the profile before being brushed in, fertilised and left to rest. It’s a big renovation and coming off the back of Cup week when everyone is battered and bruised it can be a big effort to lift. O’Keeffe, however, wouldn’t have it any other way and he is primed for his maiden Spring Carnival week in the hot seat.

“It’s a very busy time of year but it’s a fantastic time of year and I’m really looking forward to it again,” says O’Keeffe. “I’ve been in charge of some big meets before – like the Grand Annual – but no matter what track you manage there are always nerves and butterflies leading up to your big day. This is a good thing as it shows that you care about your profession and you want to make sure everything runs smoothly.

“This year definitely has a bit of a different feel given that it’s my first in charge. There’s certainly a lot more pressure stepping into that No.1 role, but I have been very fortunate to learn off one of the best in Mick Goodie and about how to manage things and deal with any issues. I’ve been fortunate to experience a wet carnival, a dry carnival and an average carnival and how to manage the track in each situation. So with a bit of luck with the weather, we should have a good week.”

ACKNOWLEDGEMENTS

ATM wishes to thank the Australian Racecourse Managers Association (ARMA), Arthur Stubbs and Liam O’Keeffe for allowing the publication of this article. This article has been adapted from an article of the same name published in the September 2018 edition of ‘Courses for Horses’, the ARMA’s official publication (‘The Boy from the ‘Boo’, p18-21).

In between each meet the track team will use a Toro Rak-o-Vac to sweep up any loose debris and fill any holes or punch marks in the track with their usual sand/seed mix. As the week progresses, O’Keeffe might also apply a hit of iron if he deems necessary to help it through.

On each race-day itself, O’Keeffe is on site at 5am to inspect and rate the track with assistant track manager Brendan Jackson. They will head around the track taking measurements with the Going Stick and logging rainfall or irrigation amounts before sending that information off to VRC officials, trainers and media. They will also check in with the trainers to see if they have any issues or questions. O’Keeffe’s track crew start around 8am for any final checks or adjustments that need to be made to set up for race day.

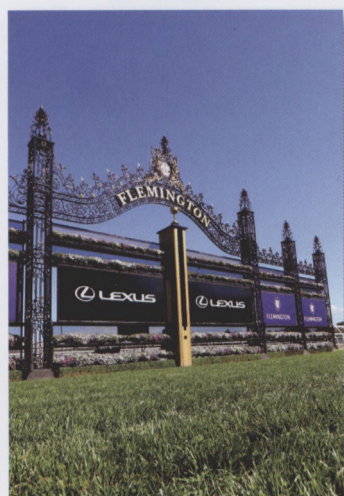
Once racing starts, O’Keeffe stations himself at the Flemington clock tower, which is just out the front of the mounting yard, to address any issues that may crop up during the day. They can range from general track rating changes, clearing flocks of seagulls on the track through to dealing with injured horses.

The biggest consideration for O’Keeffe in all the above is time management – ensuring his turf management practices are on the money and also ensuring he looks after himself through what is an exhausting week.

“Everyone wants a piece of the track manager around Carnival time, so it’s important that you manage your time in the lead-up to and during the week,” states O’Keeffe. “It’s important to spend as much time at the track in the build-up ensuring that all your inputs – water, fert, oversowing – are spot on and that the track is peaking at the right time. Our practices are fairly simple, but the aim is to have the track going in 100 per cent at the start of the week so that it really responds each day and bounces back after each meet.

“During the week itself, the most important thing is getting some rest when you can. It is a massive week and very draining both physically and mentally. I’ve done a few Spring Carnivals now and I’ve come to appreciate the importance of recharging the batteries and not to peak too early. On a Melbourne

Spring Carnival week sees Flemington host four race meets in eight days, incorporating a total of 37 races





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Metropolitan Golf Club was last in the major tournament spotlight when it hosted the 2014 Australian Masters. It hosts the 2018 ISPS Handa World Cup of Golf from 22-25 November

Metropolitan Golf Club has always held a special place in Australia's tournament golf landscape, with many in the industry still lauding the surfaces that were presented when it hosted the WGC-Accenture World Match Play Championship back in 2001.

On the Metropolitan crew at that time, getting a front row seat to one of the biggest golf tournaments Australia has hosted, was Dave Mason. Having started his apprenticeship there eight years earlier, Mason was one of a number of up and coming greenkeepers to benefit from the tutelage of then superintendent (now Royal Melbourne custodian) Richard Forsyth and being exposed to major events such as the World Match Play.

Having risen to the role of assistant in an 11-year stint at Metropolitan, in 2004 Mason took the plunge and scored his first superintendent posting at Warrnambool Golf Club. After four years there he headed back to Melbourne to take over at Riversdale Golf Club. In August 2015 the journey home was complete when he assumed the mantle of Metropolitan superintendent following Glenn Stuart's departure to oversee the mammoth redevelopment at Peninsula Kingswood.

Since stepping foot back inside the gates at Metropolitan, Mason has wasted little time in stamping his management authority. He has also overseen a number of projects, the biggest of which was the recent installation of a new Rain Bird irrigation system. With an eye to a possible future greens replacement project, he also embarked on some extensive in-house trials (now two years down the track) evaluating a number of bentgrasses (old and new) and profile construction methods. Add to that ongoing works in the plantation areas and the start of a five-year Course Improvement Plan under the auspices of Golf Strategies and Mason has barely had time to enjoy his homecoming.

WORLD AT THEIR FEET

Then came the announcement last November. Mason was out on the club's 19th hole overseeing the construction of a new tee when the news reached him that the ISPS Handa World Cup of Golf was heading to Metropolitan at the end of 2018. It wasn't quite 12 months out from when the tournament was due to land and immediately his head started swimming with thoughts and considerations as to what needed to be done.



Tournament ready

The ISPS Handa World Cup of Golf returns to Melbourne for the third time in six years this November with Metropolitan Golf Club readying to host 28 international teams. ATM editor Brett Robinson takes a look at preparations, as well as those at The Lakes Golf Club which hosts the 2018 Emirates Australian Open the week before.

Foremost in those initial ponderings was the management of Metropolitan's SR1019/1020 bentgrass greens. At that time Mason had, in his usual style, been pushing them hard, very hard. However, after a couple of hot November days in a row, a few of his greens gave him a timely reminder that they can only be pushed so far.

As a result, that conjured up thoughts as to how he was going to manage them in the coming 12 months and finding that important balance between giving the members what they have come to expect (i.e.: rock hard greens stimping at 13-14) and doing what would be best from a management perspective to condition them for the World Cup and the PGA Tour's requirements.

"We really had to take a different look at the approach to the greens this past winter," says Mason. "We kept a lot more grass on them than we normally would, which is not my management style, but it was more to protect the surface. As we all know it's easier to take grass off than add it.

"Over the past couple of years we have undertaken a huge amount of plugging on the greens which has given us a great result. We've probably replaced somewhere in the vicinity of

100,000 plugs during that time and it's giving us a result that chemicals can't and removes the scarring that comes from dabbing and hand-weeding.

"However, we pulled the pin on the plugging process back in April. When we dry the greens out the challenge is to keep the plugs from shrinking and becoming loose in their holes. The plugs we use are only 30mm-40mm, but the last thing we want is for one of the players to hit their approach in and strike a loose plug."

Management of the greens has been just one of many considerations in the lead-up to the 22-25 November tournament. Mason and his senior team, which includes assistants Nick Launer and James Cocker, spent a couple of days away from the club back in June to formulate and fine-tune their plans for the tournament.

Spending a night at Victoria Golf Club, they discussed their vision for how they wanted to present the course and what they needed to do to achieve that. Kingston Heath Golf Club superintendent Hayden Mead joined in, imparting some important insight from his experiences hosting the 2016 World Cup, while discussions were also held via Skype with the PGA Tour's tournament agronomist.



Dave Mason was appointed superintendent of Metropolitan Golf Club in August 2015. It was a return home for Mason who started his apprenticeship there in 1993



◀ Soren Kjeldsen (left) and 2018 Ryder Cup player Thorbjorn Olesen will return to defend Denmark's 2016 World Cup of Golf crown



PHOTO: DAVE MASON

Ensuring the consistency of Metropolitan's famed sandbelt bunkers has been a huge focus in the lead-up to the World Cup

"A big part of our programme to date has been to nurse the turf a lot more," explains Mason. "We have put out a lot more ropes and hoops than in the past to protect areas that we normally wouldn't worry too much about. With the dry weather we have had over winter, our golfer numbers haven't dropped off as much, so it was important we were mindful of having those areas a bit stronger come spring.

"We sat down and looked at our fertiliser and pesticide programmes. We have been trying to take a very minimalist approach to get the turf to where we want and I think all in all it's coming along nicely. We have been keeping up with our *Poa* control on fairways, a paclobutrazol programme on the greens and renovating them as we would normally. For the past three years we have only used the Air2G2 on our greens along with regular dusting and I believe they are better for it.

"So, we are doing everything that we normally would, but there will be a point where we hit the stop button and start ramping up for the tournament. Most of our time to date has actually been spent in the plantation areas and in the bunkers."



PHOTO: NEARMAP

METRO MAKEOVERS

Metropolitan's famed hazards have been a big focus this year and Mason reckons they haven't received this much attention since before the 2001 World Match Play Championship. Last year the club conducted an audit of all of Metropolitan's bunker complexes and since then James Cocker and a crew of three have spent some of the best months of their lives ensuring they will be in peak condition for the World Cup. From lips and access points, to the depth of sand, removing hard pans and replacing drainage, the bunkers have received the ultimate in makeovers and the end result speaks for itself.

That process has been aided by Mason instituting a hole closure schedule in the lead-up to the tournament. Each week a hole has been taken out of play which has enabled the crew to undertake a plethora of jobs without being disrupted. A mountain of work has also been undertaken within the club's plantation and out of play areas around tees and carries, with more than 20,000 plants (the majority of them grasses) going into the ground over the past 12 months.

At the start of this year, the 17th tee complex was also extended, which served two purposes. First, it added 25 metres of length to the hole (it is now 393m) and, second, helped to tidy up what was once a 'pokey' corner of the course. The club's practice range also received a considerable refurb in early autumn. It was laser levelled and at the same time Mason took the opportunity to mine around 500 tonnes of sand from the site to assist with the aforementioned bunker works.

For the World Cup itself, Metropolitan's 19th hole will be used as part of the tournament routing, with the 13th taken out of play. The 19th, constructed back in 2009 (the final year of Forsyth's tenure at Metropolitan), will become the tournament 6th hole. Like many of the Metropolitan members, the PGA Tour preferred this hole over the 13th as it is a much tougher prospect – an uphill 163m par three with a tight entry and one of the most undulating greens on the course.

As this edition was going to print, all the tournament infrastructure was starting to roll in through the gates, adding another air of excitement with the tournament just over a month out.

"It's not very often you get to say you're hosting a major international golf event, especially in Australia, but we are pretty fortunate in Melbourne that we do get to host these sorts of events," says Mason. "The PGA Tour has been very supportive of myself, the team and the club in general and we will be doing everything we can to make this event a big success. Metropolitan has a very proud history when it comes to hosting major tournaments and the one thing about the course is that it always comes up well. This one won't be any different."

An aerial view of the improvement and extension works undertaken to the 17th tee earlier this year

THE LAKES IN SEVENTH HEAVEN

The week before Metropolitan returns to the glare of the tournament spotlight, The Lakes Golf Club in Sydney will kick off the three-week stretch of major tournaments when it hosts the 2018 Emirates Australian Open. It is the seventh occasion The Lakes is hosting the Open in its history and fourth since 2010.

The Lakes hosted three consecutive Opens between 2010 and 2012, with the latter year the first Open for incumbent superintendent Anthony Mills. Mills originally arrived at The Lakes as an assistant superintendent, but within three weeks of starting found himself elevated to superintendent and in charge of preparing the course for his first major national tournament. Six years on and Mills is steeling himself to do it all over again.

It has been a busy past 18 months for The Lakes crew with a number of major projects completed in the lead-up to the Open. It all started in March 2017 with the first stage of the club's new practice facility development which saw the construction of a new 1300m² putting green. Later in the year, the second stage of that project focused on the practice range, with works including;

- Rebuilding and lowering the height of the range tee by 500mm;
- Installing a Tee-line synthetic driving range mat for winter use;
- Installing target greens on the range fairway and mounds on both sides to protect golfers on the 10th and 11th holes;
- A new chipping green and bunkers;
- Rebuilding the men's and ladies championship 10th tees and 1st gold tee; and
- Installing a new concrete pathway to both the 1st and 10th tees.

With that major project ticked off, this past winter has seen a large number of 'one-percenter' jobs around the course completed, the biggest of which was renovating the fescue bunker surrounds. Starting in early May, four herbicide applications were made to control kikuyu that had encroached into the fescue. After that the fescue was shaved down to the soil using whipper-snippers before being given a final application of herbicide.

While the fescue was short, it provided an opportunity to trim back and reshape some of the fescue bunker edges before the surrounds were sown with a seed/soil mixture containing four different types of fescues (slender creeping fescue, Shoreline creeping fescue, hard fescue and Chewing's fescue).

Spring renovations followed in the last week of September and comprised of the following;

- **Fairways:** Due to the Open being less than two months away, normal fairway renovation practices had to be modified. Instead of tractor-mounted VC-60 scarifiers, verticutting units were used on fairway units, with all of The Lakes' kikuyu fairways double scarified before being

PHOTO: ANTHONY MILLS



cored with 25mm hollow tines. An application of a slow-release granular fertiliser followed, as well as applications of wetting agent, insecticide and pre-emergent herbicide.

- **Greens:** Were cut first then perimeters edged to combat any kikuyu encroachment. Greens then cored with 10mm hollow tines, holes hosed out, greens rolled and heavily topdressed (in excess of 100 tonnes of sand went across all greens). Amendments (AmendMax, Humic DG, NutriDG High K and NutriDG Magnesium) applied over three consecutive days, with a follow-up biostimulant mix. (The greens had earlier been given a light renovation with 5mm hollow tines at 2.5-inch spacings in July ahead of The Lakes' club championships).
- **Greens surrounds:** Cored with 5/8" hollow tines with cores rubbed back in.
- **Tees:** Scarified and cored with half-inch hollow tines, heavy topdress with a 90/10 sand, followed by applications of Dolomite (5kg/100m²) and an upfront granular fertiliser (31-1-8).

It is set to be a bumper few weeks come November and early December and ATM wishes the respective crews at Metropolitan, The Lakes and 2018 Australian PGA Championship host venue RACV Royal Pines (superintendent Lincoln Coombes) all the best as they showcase their skills to the world. 🌳

The Lakes cored their two hectares of A4 bentgrass greens with 10mm hollow tines in late September



PHOTO: DAVE MASON

Metropolitan's fairways get their second mow of the season in early October

The Lakes' Santa Ana tees were scarified before being cored with half inch tines

PHOTO: SIMON BLAGG



Victoria Golf Club is currently half way through its green and surrounds replacement project which is seeing all greens converted to Pure Distinction bentgrass. Pictured is the 18th green four weeks after sowing



PHOTOS: STEVEN NEWELL AND HAYDEN MEAD

From tees to greens

It has been a busy winter and spring to date for two of the Melbourne's famed sandbelt golf clubs as they undertake works in preparation for their future hosting of the Emirates Australian Open

During the two month course closure, Victoria staff sod cut a total of seven hectares of turf from the course, including 1.5 hectares of existing bentgrass/*Poa* greens

While The Lakes and Metropolitan golf clubs are well along the road in their preparations for the upcoming Emirates Australian Open and ISPS Handa World Cup of Golf, two of their tournament host counterparts have been busy in recent months as they look ahead to hosting the Australian Open in the coming years.

In late August 2018 Golf Australia confirmed the Emirates Australian Open schedule through until 2023, with the tournament set to return to Melbourne in 2020 and 2022. After Moonah Links hosted the 2005 Open, won by Robert Allenby, the Open has resided in Sydney with the likes of The Australian (4), Royal Sydney (4), The Lakes (3) and NSW (1) having hosted the past 12 events.

After The Lakes this year, The Australian will host the 2019 event before 2016 World Cup of Golf venue Kingston Heath Golf Club returns to the Open spotlight in 2020. It will be the first time it will have hosted the Open since 2000 when Aaron Baddeley won the second of his back-to-back titles.

The Open heads back north to The Australian in 2021 before returning to Melbourne and Victoria Golf Club in 2022. Victoria last held the Open in 2002, the infamous tournament which was reduced to 54 holes after some of the greens became unplayable during the first round.

In preparation for hosting their respective Opens, both Victoria and Kingston Heath have embarked on works, both minor and major, in the past few months. Kingston Heath is currently in the process of building new tournament tees, while Victoria is going all out with a complete greens and surrounds replacement project which kicked off in late July.

At Kingston Heath, four holes are being lengthened, with the 6th and 12th tees completed in August and September respectively and the 16th and 18th tees to follow suit in December. The works have included/will include;

- **6th:** Due to the 19th hole being rebuilt last year on a slightly different angle which has allowed for more room, the 6th tee has been moved back a further 20 metres. New hole length is 425m.
- **12th:** About 35 metres has been added to the par five 12th, taking it out to around 560m in length. There is now a 290m carry to fly the bunkers in the middle of the fairway.
- **16th:** The 16th tee will be extended back by 40m, giving a new hole distance of 440m.
- **18th:** The tees will be moved back by 30m, meaning Kingston Heath's closing par four will be a challenging 450m.

A few suburbs closer to Port Phillip Bay, and at Victoria it has been a hectic winter and start to spring for course superintendent Steven Newell who arrived at the club last August.

With the course closed for two months from Monday 30 July, Victoria staff along with course architects Ogilvy Clayton Cocking Mead (OCCM) went full tilt removing the existing greens and surrounds turf before reshaping and reinstating all greens. The course reopened on 1 October with 18 temporary greens in place until February 2019 when the new greens will be ready for play.

During the course closure a total of seven hectares of turf was cut from the course, including 1.5 hectares of existing bentgrass/*Poa annua* greens



Kingston Heath is adding approximately 125m of length to the course with the addition of four new tournament tees. Pictured is the extended 6th

and 5.5 hectares of cool-season turf. This is being replaced with Pure Distinction creeping bentgrass on the greens and Santa Ana couchgrass on tees and surrounds. Seven sod cutters were hired along with two that the club already owned to complete the task. Newell had expected to be cutting sod for two weeks but to the credit of his staff the 7ha was done in 3.5 days.

Victoria's greens are among some of the oldest on the Melbourne sandbelt and course staff have been working closely with OCCM to re-instate most of them back to their original contours. Greens 12 and 17 are being redesigned, while the greens on 6, 11 and 13 are being replicated but on a softer grade.

Six 9-tonne dump trucks have clocked up a huge number of kilometres to date ferrying material to and from the various greens sites around the course. At the time of this edition going to print, a total of 14 greens had been seeded with a further six under fumigation. The remaining greens will be sown in early November.

In addition to the greens replacement, a new irrigation system is also being installed at the same time. All mainlines are in along with greens and tee irrigation infrastructure, with the fairway component to be completed by the end of



December. Between 2-3 hectares of Santa Ana sod is also being harvested from the fairways to restore some areas, with a further four hectares to be purchased from Peninsula Kingswood Country Golf Club's Kingswood site later in the year.

"We are coming to the half way mark of the project and good weather and good work from the course staff and contractors sees us slightly ahead of schedule," says Newell. "We hope that the weather continues to be favourable and we expect to deliver an exceptional result for the club and its members in February." 🙌

Most of Victoria's greens are being reinstated back to their original contours, with greens 12 and 17 redesigned and greens 6, 11 and 13 being replicated but on a softer grade



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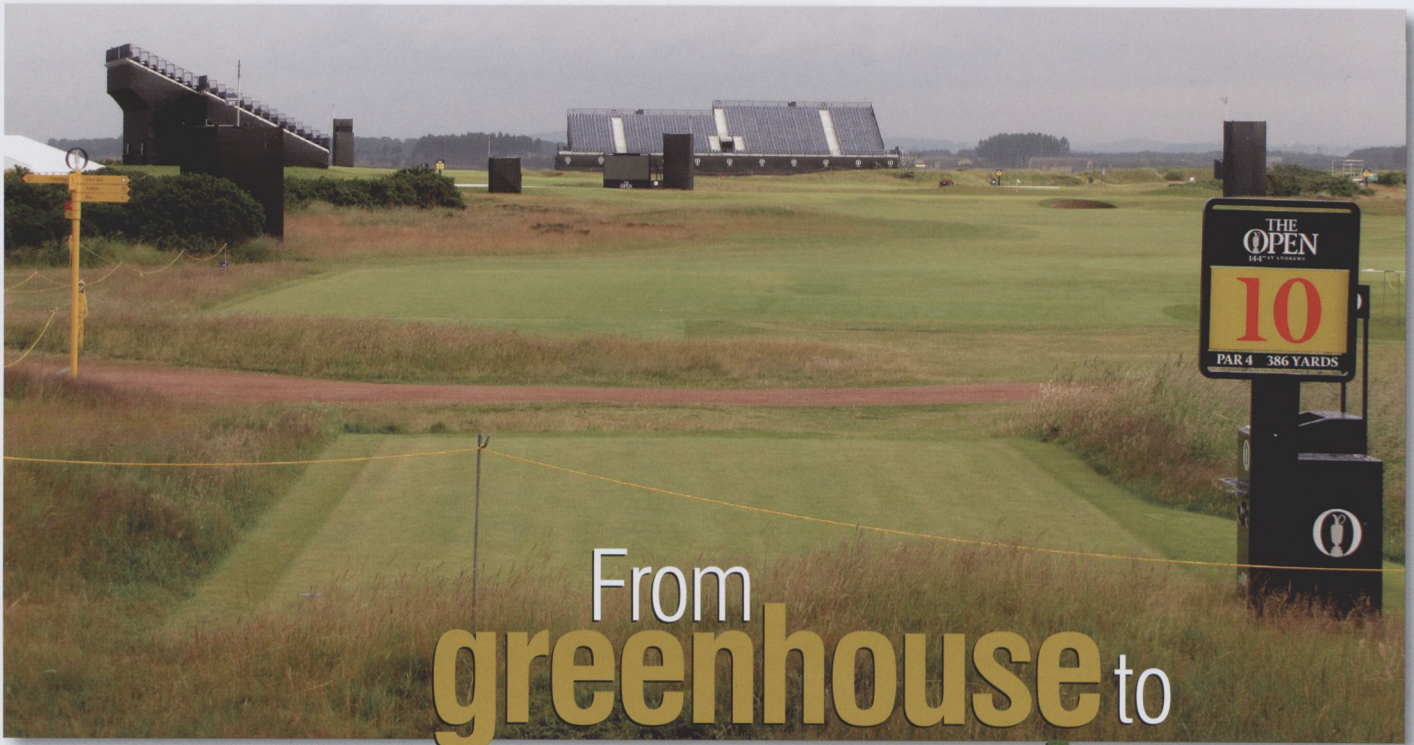
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From greenhouse to game day

Barenbrug UK's Dr David Greenshields, who presented at this year's Australasian Turfgrass Conference, examines the detailed seed research and development process that goes into bringing a new cultivar to market.

Above: The time and effort invested into bringing a new cultivar to market is huge and to see it being used at world class facilities, such as the Old Course at St Andrews, is the ultimate accolade for breeders, researchers and production staff

Barenbrug is a global grass breeder which produces a range of seed varieties for a wide number of applications, including sports turf. Developing these varieties is a long and exhaustive process and invariably it can take anywhere up to 15 years (or longer) to bring a new grass cultivar to the market.

This article will examine that process and highlight the stages of the process and the many considerations that go into ultimately selecting what is hoped will be the best variety for the end user. For the purposes of illustrating some of the stages, we will use the recently released perennial ryegrass variety Barolympic as an example.

As mentioned, the 'story of grass' is a minimum 15-year process, the main stages of which are;

- **Years 1-3 – Crossing:** Crossing parent plants and offspring to produce F1 and F2 generations;
- **Years 4-6 – Selection:** Field assessments for desired characteristics, selection of best new material;
- **Year 7 – Isolation:** Production of new synthetic lines from clonal selections;
- **Years 8-10 – Private trials:** Multiple trials across multiple seasons in potential market locations;
- **Year 11 – Multiplication:** Harvest of 'Breeder's seed' of best synthetic lines. (Note: All stages to this point occur within dedicated breeding stations, which in the case of Barenbrug are located in the US, France and The Netherlands);
- **Years 12-15 – Official trials:** Breeder's seed sent for official independent trials (e.g.; ANTEP) and governmental testing;

- **Year 16 – Registration and certified production:** Once registered, seed is sown for harvest and commercial use.

BREEDING

The first seven years of a variety's development involve traditional plant breeding techniques. In years 1-3 initial crosses are made, typically between plants of an existing cultivar and plants isolated from the wild or a particular environment of interest (e.g.: high wear, drought). The breeder will have a broad goal at this stage – perhaps to improve seed yield whilst retaining the turf quality of the existing variety.

Years 1-3 are often the 'discovery' phase when dealing with materials collected from the wild. It's the 'What do I have?' phase before moving on to years 4-6 where the breeders will ask themselves 'How do I intend to cross things and what do I intend to make?' Incidentally, the initial cross is not as important as some might think, rather it is the selection process that delivers the end result.

Years 4-6 involve the laborious, yet critical, selection process of the original cross progeny. From the original cross you are looking at somewhere in the vicinity of 10,000 progenies with the next step to whittle that down to about 500. Breeders will sow out one seed/one plant in a large nursery and have a look at what the individual plants look like. Left unmown, the plants are scrutinised for a broad range of characteristics, removing those with weaknesses to disease, heat, cold etc. as well as those that are too open in growth habit. Only the very best are selected to continue on the journey.

After initial selection, the individual plants that make it through are then planted out again in a turf trial situation. The plants are mown at around 20mm and basic aspects such as turf quality, density, fineness, disease tolerance and persistence start to be examined. Seed yield will also start to come into the equation as well (typically the finer and denser varieties having lower yield potential).

From the initial 10,000 plants, by the end of this three-year selection process there may be as few as a dozen plants remaining. Interestingly enough, the gain due to selection increases the stronger you get with your selection. For example, if you keep the best 5 per cent, you make a little bit of genetic gain, but if you keep the best 1 per cent you actually make more genetic gain.

Year 7 is when it starts to get a little more interesting, with the surviving plants grouped together based on similarities. They are first cloned and then planted out (typically in groups of six clones) and assessed for yield, heading date, fineness, colour etc. and then grouped together in similar profiles. These are then isolated from the others (they are planted in maize fields) and allowed to cross-pollinate within their group.

The resulting 'synthetic line' is the basis for a new cultivar. It is important to remember that a cultivar always exists as a population of genetically different individuals that are very similar (but not identical) to one another. The process of isolation at the breeding stage is the foundation of this fact.

It is an exhaustive process to get to this stage and in the case of Barolympic, after seven years work only 500grams of seed existed – a scary thought for business managers!

PERFORMANCE TESTING

In years 8-10, new synthetic lines are tested in a turf situation by the breeding department against other elite lines and existing cultivars from Barenbrug's and competitors' global breeding programmes to determine whether it is good enough to go to market. This will happen at multiple locations depending on the target markets for the breeding material in question.

For perennial ryegrass, synthetic lines will be tested under simulated wear/traffic and at a low mowing height (10mm normally) as two basic stress factors. A breeder may also wish to include a range of other trials or laboratory testing at this stage, for example tolerance to a particular turfgrass disease.

MULTIPLICATION

Results of performance testing are presented to product development teams in target markets and a decision is taken on which synthetic lines to multiply up to become a cultivar.

The multiplication (year 11) is a vital and costly process, forming what is called a 'breeder's seed' stock, which will be used as the foundation for commercial production in the future. Around 5000



plants are sown in a 1000m² plot to produce 100kg of breeder's seed stock. It is imperative to ensure absolute seed purity at this stage.

It is important to note that those varieties that don't get chosen don't just end up in the bin. While some might, others will be reintegrated into future programmes, they might be selected from again to improve the variety or used as a back cross.

OFFICIAL TRIALS

In years 12-15 and beyond, cultivars are submitted to official trials across the globe, depending on their target markets. ANTEP in Australia, NTEP in USA and BSPB/STRI in the UK are well-known examples of these trialling systems. Cultivars are assessed independently for a variety of turfgrass traits according to particular turf usage parameters.

In the BSPB/STRI trialling system for example, a perennial ryegrass can be assessed at 25mm height of cut under wear simulation for winter sports (soccer, rugby), at 10mm mowing height for lawn applications and at 5mm mowing for (golf) greens or cricket. The BSPB/STRI trials are conducted for one or two years and a cultivar needs to be analysed across at least two trial periods for an official published listing.

In parallel, it is necessary for a cultivar to be examined under legislative protocols to ensure it is

In years 1-3, initial crosses are made typically between plants of an existing cultivar and plants isolated from the wild or a particular environment of interest

Years 4-6 involve the laborious and critical selection process. Those exhibiting any weaknesses are killed off. From the initial 10,000 plants generated in the first phase, by the end of the selection process there may be as few as a dozen plants remaining





In year 7, the surviving plants are grouped together based on similarities. They are then isolated from others and allowed to cross-pollinate within their group. The resulting 'synthetic line' is the basis for a new cultivar

The breeding process and the production of new cultivars is literally at the root (and shoot!) of driving the turfgrass industry forward with the expertise of turfgrass managers around the globe. Pictured is Machrie Links



eligible for sale. For registration in Europe, official government trials are carried out with the following aspects scrutinised over a fixed period of time (typically three years or longer);

- Distinction – must have at least one significantly different characteristic to all existing cultivars;
- Uniformity – individuals within the population must be very similar (includes heading date, colour, leaf width, growth habit and disease tolerance); and
- Stability – must not revert to parental wild-type in a fixed time period.

Once this process is completed, companies will then be asked to name the cultivar.

As official trials are progressing, Barenbrug also strives to undertake significant product development and R&D on a local level in the global marketplace to ensure that new cultivars are integrated into product lines effectively.

Product development encompasses a range of processes, such as mixture synergy trials (the combined performance of species and cultivars) or looking closely at the intraspecific traits that a new cultivar delivers and how best to match these with end-user requirements in particular markets. Among some of the in-house trial work Barenbrug conducts relates to wear, colour, drought tolerance, salinity germination, cold-temperature germination, shade and disease tolerance.

PRODUCTION

Once a cultivar has been through official trials, certified seed production can start. First, breeder's seed has to be multiplied to produce 'pre-basic' seed, which then goes on to 'basic seed' after another harvest. In the case of Barolympic, five tonnes of pre-basic seed were produced with one tonne of it stored to produce more basic seed if required down the line.

The basic seed is then supplied to farmers to sow resulting in certified seed production, which is the grade of seed sold to end-users. At all stages, it is imperative to remove off-types to maintain a cultivar's integral purity. In the case of Barolympic, in Autumn 2013 two 11ha sites in the UK were sown at 10kg/ha with yields the following year of 750kg/ha and 850kg/ha (approx. 17 tonnes).

SEED USAGE

Finally, after some 15-plus years of development, the seed is finally available for turfgrass managers to put into action. As has been demonstrated, the amount to work to get it to this stage is significant and to therefore see the variety being used in world class facilities is the ultimate accolade for the breeders, researchers, production staff and the marketing and sales teams.

In the case of Barolympic which was released in 2015, it has been used in several projects across a number of high profile sports facilities in the UK including;

- Trialling and implementation into tennis courts at Wimbledon;
- Use on tees in combination with fine fescue at St Andrews Links to improve wear;
- Reseeding areas of lost turf following a bad winter at Royal Troon GC, host of the 2016 Open Championship; and
- Incorporated into surrounds and fairways at The Machrie Golf Links, UK.

In conclusion, the 'story of grass' is a long and varied one. It takes a wide scope of work over more than 15 years across many departments on a global scale to deliver a new cultivar of turfgrass to the market.

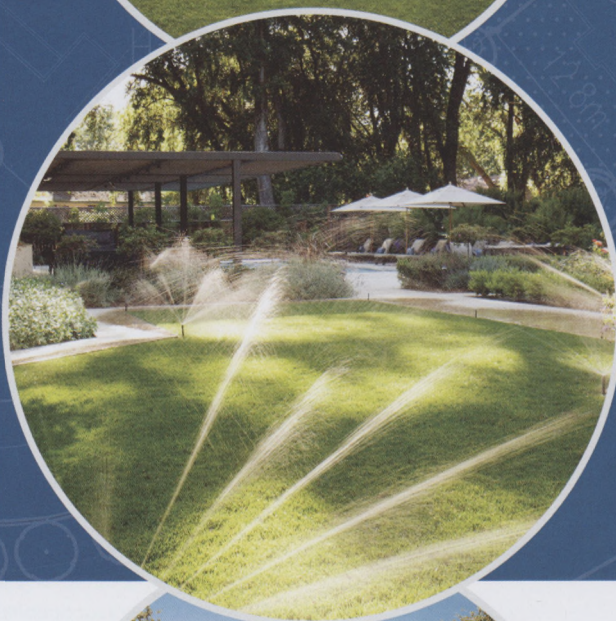
The breeding process and the production of new cultivars is literally at the root (and shoot!) of driving the turfgrass industry forward with the expertise of turfgrass managers around the globe. Improvements in wear tolerance, disease resistance and fineness of leaf of new breeding material are just a few aspects that make game day a reality for grounds managers, players and fans alike.

ACKNOWLEDGEMENTS

Dr David Greenshields has been with Barenbrug UK for the past 10.5 years and has held a range of positions including his current role of amenity product manager. He has PhD in Plant Genetics from the University of Edinburgh. Follow him on Twitter @ Barenbrug_DG. 🌱

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You'd be hard pressed to find a more idyllic setting to prepare for a major international golf tournament than Natadola Bay Golf Course on Fiji's Coral Coast. Superintendent Steve Lalor looks back at preparations for the recent 2018 Fiji International.

The \$1.25 million 2018 Fiji Airways Fiji International was held at Natadola Bay Golf Course in the first week of August. It is the fifth consecutive year that we have prepared the Vijay Singh-designed course for the event which is tri-sanctioned by the European Tour, Asian Tour and PGA Tour of Australasia.

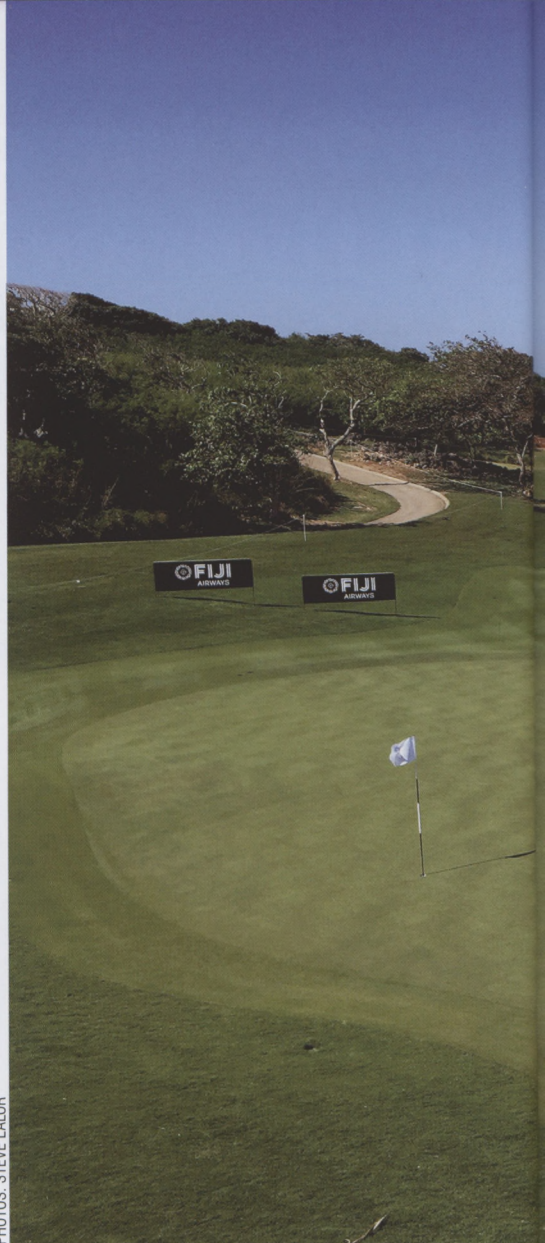
Indian professional Gaganjeet Bhullar shot a superb final round 66 to win in one of the most dramatic finishes we have seen since the tournament first touched down in 2014. Bhullar chipped in for eagle on the 17th to stave off Anthony Quayle by a single shot, the Queenslander having earlier posted a blistering final round course record 63.

After a 2-under front nine, Quayle tore up the back nine in 7-under, posting birdie, eagle, birdie, birdie from holes 11-14 and then a further eagle on the 17th to come home in just 29 shots. It proved a fitting way to end the tournament as the course drew rave reviews from players and organisers all week, including drawcard Ernie Els.

Our preparations for this year's tournament started three months before the event, although our mowing schedules and fertility programmes were fine-tuned within the final six weeks. The first weeks involved preparing for several local tournaments, applying pre-emergent herbicides, landscape area management, bunker maintenance, general trimming to reduce time to carry out tasks closer to the event and any requests from PGA tournament officials as outlined in a tournament report which was formulated in early June.

The clearing of the perennial weed pest vaivai (*Leucaena leucocephala*) was limited this year due to unexpected rainfall during the dry season. This weed plagues the majority of the grassland areas of the course and control is never-ending.

Our procedure for controlling it is to burn off the grasses, manually cut the tree down to knee height and then spray the new growth as it comes up with herbicide. The burning allows better access to the weed for removal, encourages new growth of the



PHOTOS: STEVE LALOR

wanted grasses and also smokes out any wasps that have a tendency to make their nests on the branches of the plant, thus preventing unwanted stings to the team.

The rainfall stopped us from carrying out any burning which gave us extra time on the golf course which proved advantageous with the preparation of

Superintendent Steve Lalor (far right) and the Natadola Bay crew celebrate a successful week following Gaganjeet Bhullar's single shot victory



Prepping paradise



Doesn't get much better than this... The stunning setting of Natadola Bay's par three 13th. The course played host to the Fiji International for the fifth consecutive year in August



Natadola's 9th hole

the playing surfaces (Natadola Bay is wall-to-wall Sealsle Supreme seashore paspalum). The team worked well and carried out tasks more efficiently in prior years, with our planning and execution right on schedule as opposed to the 2017 event. Our tournament maintenance schedule included;

Greens

- Primo, KNO_3 and silicate applied Monday of tournament week;
- Double cut at 3mm on the Sunday prior to the tournament and then mown each morning at 3mm with Jacobsen GK522 walk-behinds;
- To keep green speeds consistent, irrigation was applied every second night and greens rolled the following morning;
- Hand-watering to the newer greens and drier areas on older greens occurred during the morning preparation.

Tees

- Championship tees hand mown in the morning at 5mm with Jacobsen GK522s;
- Other tees hand mown in the afternoon at 5mm with Jacobsen GK522s.

Bunkers

- All hand-raked each morning.

Fairways

- All fairways mown each morning at 8mm with Jacobsen LF550s and LF3400s.

Roughs

- Primary rough – mown each afternoon at 20mm with Jacobsen Tri-Kings and TR3s;
- Secondary rough – mown at 60mm but not during tournament week.

Looking down the 12th hole with its green nestled right next to the Pacific Ocean



◀ Natadola's 11th green looking down to the 14th green in the distance



Volunteer Dean Scullion cuts the 10th fairway at 8mm

Natadola's 17th green gets a morning cut at 3mm



Els played well throughout the week, improving every round before finishing with a 65 and a four-round total of 12-under. He was impressed with the outlook and the conditioning of the course, as was Vijay who acted as a tour guide for his long-time friend on the Wednesday before the tournament.

I didn't manage to spend much time with Vijay this year as he arrived late from the UK where he had contested The Senior British Open and then departed shortly after the Fiji Open concluded to prepare for the PGA Championship the following week at Bellerive Country Club.

He was pleased with how the course presented a year after the redesign works which were undertaken between the 2016 and 2017 tournaments. As was featured in Australian Turfgrass Management Journal Volume 19.5 (September-October 2017),

we reconstructed 12 greens and six tees, made changes to several fairways, bunker complexes and landscape areas and installed new cart paths.

Vijay didn't request any additional changes which will let us concentrate on improving the course as a whole moving forward. We have already started on some long overdue projects and will hopefully have them completed by the start of the wet season this year. Among these projects/programmes are;

- **Scarifying/renovating all fairways:** This has never really been fully completed since opening in 2009. I have scarified random fairways but now I am looking to carry out this process several times a year. We are pretty lucky/unlucky that we have a 12 month growing season for quick recovery. I will look at scarifying/aerating fairways and roughs on a quarterly basis. We are on the last few fairways to date.
- **Raise catch basins:** There are several catch basins that sit too low. These have been like this for quite some time, so levelling them out a bit to prevent balls from funnelling down to them will alleviate the wear around the drains. We have completed these works since tournament.
- **Level and promote turf between 10 and 18 fairways:** This has probably been the item that I have wanted to do for the longest time as players, both professional and amateur, land in this area which is uneven, lined with rocks and difficult to hit out of. During the original construction, the project managers did not see the importance of this area and decided not to spend the money to develop this part of the golf course. With the redesign works a couple of



years ago, we have a large stockpile of sand that was stripped off holes for the new construction to go ahead. I will use this sand to cap the area and then use the scarifications from fairways to grass. We are currently around half way through this project and looking to complete before the wet season hits.

- **Kerbing of high traffic areas:** We began to kerb around the clubhouse and front nine tees some years back and the Fiji International prevented us from continuing with the remainder of the course. With the redesign works we have noticed more players coming through and so now we need to direct traffic to cart paths and keep them on the paths. Kerbing will go around greens 2, 3, 5, 7, 9, 10, 15, 16 and 17 and around tees on 11, 12, 15, 16, 17 and 18. All kerbing works are done in-house and will be carried out over the next six months.
- **Tees:** A year after the redesign, it came apparent that several tees were built too small for play and maintenance. We have rebuilt/extended these tees and they will be fully in play within a few weeks.

Reflecting on this year's tournament, it was a very busy but successful week and the crew enjoyed celebrating their efforts with the volunteers afterwards. Overall, preparations this year went far better than last year given we had no crazy construction timelines to deal with and I was certainly surprised how much more relaxed I was this year – all the planning must have been on the mark!

Although volunteer numbers were down this year (from the 20 that initially said they were interested we had only two come through), the boys really



stepped up and achieved all that was expected from them during the week of the tournament.

The guys who came out were dedicated to the cause and everything went as smooth as you could ask. A big thanks to Kevin Adams, Terry Sullivan from Powerturf NZ, Jordan Phillips from Newcastle Golf Club, Dean Scullion from Jacobsen Australia, Ryan Markwell, Manasa Vinidakai, Jone Racola and Senirusi Ramumu from Denarau Golf and Racquet Club.

The Fiji International has grown markedly over the past five years and we are looking forward to it gaining even more traction in 2019. 🙌

Top: Tournament drawcard Ernie Els tees off on Natadola's spectacular 1st. Els finished third

Above: Natadola's 16th hole

Below: The 14th green, which was relocated 40m to the left of its previous position, was one of 12 greens reconstructed between the 2016 and 2017 tournaments





Probing deeper



Agronomic expert John Neylan delves

into the use of soil moisture sensors and how to get the most out of them and also looks at some recent trial work on the potential of fraise mowing as a non-chemical means of controlling *Poa annua*.

Above: The addition of soil moisture sensors into the turf manager's arsenal has helped to add an extra level of precision in understanding the relationship between soil moisture content, turf health and playing surface quality

Soil moisture monitoring using portable probes has become commonplace over the past few years for determining soil moisture and for scheduling irrigation. This has added an extra level of precision in understanding the relationship between soil moisture content, turf health and playing surface quality.

Soil moisture probes are but a tool, albeit a very useful tool. The power of the device is in understanding the numbers the device is generating and then relating it back to a wide range of variables including weather, irrigation programming, turf health and surface performance at your location. What the soil moisture probe provides is a reasonably repeatable measure that can be related to key maintenance practices.

At the 2018 Australasian Turfgrass Conference in Wellington, New Zealand, a Plenary session paper was presented by Carmen Magro entitled 'Optimising turfgrass performance using precision monitoring technology'. The presentation highlighted the importance of monitoring soil moisture content and how the data can be related to changes in turf health. It was unfortunate that the presentation only concentrated on one specific device and didn't provide a broader overview of the available technology.

There have been frequent comments made over time that different technologies have various attributes and/or weaknesses that may make one device preferred over another. This was implied in Magro's presentation with no detail behind it. It therefore had me thinking that it may be useful to review the use of soil moisture sensors in these

pages and what turf managers need to consider when using such devices.

SENSOR TYPES

In a review of Michigan State University's Turfgrass Information File (which all financial AGCSA members have access to), the information regarding the comparison of soil moisture probes is very limited. Consequently, I had to look towards agriculture and horticulture to obtain a better insight into this technology. Interestingly, this further emphasises the lack of research into some fundamental areas of turf management where we assume that a tool we are using actually means something.

There are basically two groups of sensors:

- Water potential sensors, such as tensiometers and granular matrix sensors which directly interact with the soil matrix; and
- Soil moisture sensors that give a percentage or relative content of soil moisture (water content sensors).

In turf applications, the first soil moisture sensor that was widely used in turf was the matric or soil water potential sensor developed by Ken Cuming. This device measures directly the change in soil water potential by responding to the capillary tension in the rootzone, which in turn is related to soil water availability. The Cuming sensor was a considerable advancement over the gypsum block device because it compensated for changes in soil salinity.

In trials undertaken by Pathan et al. (2003) it was demonstrated that the cumulative volume of water applied to turfgrass plots controlled by

the sensors represented a saving of 25 per cent in summer, when compared to water applied to plots according to recommendations for Western Australian homeowners.

This device was used by Neylan and Robinson (1997) for monitoring nutrient and water use in a sand amendment trial and provided considerable information relating to water movement and nutrient leaching. The Cuming sensor was an excellent management tool, however, as with many buried sensors it was not widely adopted.

Buried sensors, with their associated wiring, were seen by many turf managers as too difficult to deal with because of concerns around damage from aeration equipment. Fortunately, the wireless sensors now available have, in part, eliminated these concerns. The portable probes that are represented by the water content sensors have been more widely accepted because they are not in a fixed position.

Water content sensors measure the water content of a soil using the time or frequency of a pulse travelling between or returning to electrodes. The most common types are capacitance and time domain reflectometry (TDR) soil moisture probes. Most sensors in this category are accurate to within 2-3 per cent of the actual soil moisture (<https://www.agric.wa.gov.au/horticulture/soil-moisture-monitoring-selection-guide>).

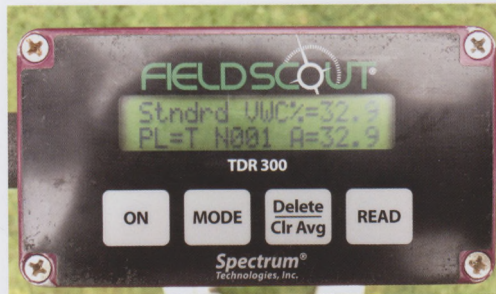
TDR is the method used by many modern soil moisture probes used in turf management to calculate volumetric water content. In simple terms, the TDR probe works by sending a wave of electric energy down each metal conductor rod that is inserted into the soil. Depending on soil moisture, the wave will be transformed as it travels down each rod and part of it will be reflected back to the meter.

The meter then uses a calibration curve to relate the reflected signal to the volumetric soil water content. The measurement extends to about 3-6cm around the sensor, giving a reasonable volume of soil measured when compared to some other probes.

It is important to note that the soil moisture content is a measure along the length of the probe. For example, if a 12cm probe is used it measures the average moisture content along the 12cm length. This may be applicable for a couchgrass sportsfield with a 20-30cm root system, but not so for a bentgrass putting green. According to Magro (2018), most of the root activity in golf greens occurs in the top 6cm and therefore shorter probes are more appropriate.

In my experience the 7.6cm probe is a good length for putting greens, with the 3.8cm probes being particularly useful for determining the effects of the thatch layer. Where the soil moisture content of the deeper layers is required, it is best to take out a turf plug using a hole changer and then inserting the probe.

In theory, accurate estimation of water availability with TDR sensors is best achieved by calibrating



it to each particular soil type. Without specific soil calibration the numbers become less accurate (absolute) but are still very repeatable (Kreuser, 2016). Soil texture, organic matter and even soil particle shape will affect the probe's calibration.

However, a TDR moisture probe doesn't need to be accurate to be useful; it just needs to be repeatable. In my experience, this is the most important consideration. The numbers that the probe generates are rarely going to be absolute. In my opinion they are just a number that can be related to turf performance in a particular situation.

For example, when a probe is purchased it is important to take regular readings and then compare the readings against the changes in the turf. The obvious one is when the turf begins to wilt, as this provides a number or reference point around which irrigation or spot watering would be considered.

At the other end of the scale, when the surface becomes soft, this provides an understanding of what the upper limits of soil moisture are. In fact measuring soil moisture in mid-winter, after a significant rainfall event, can provide an indicator of water infiltration and drainage problems related to organic matter accumulation (Glasgow, 2018).

Having undertaken several benchmarking and monitoring studies, the TDR probe is always used. The results show over time the relationship between irrigation regime, renovation programmes, organic matter accumulation and weather. It is important to know your site and don't get hung up with the numbers a turf manager is getting at another site.

Kreuser (2016) recommended the following keys to effectively using a TDR probe;



Soil moisture probes are but a tool, albeit a very useful tool. The power of the device is in understanding the numbers it is generating and relating it back to a wide range of variables and surface performance

When using a moisture probe, it is important to take regular readings and then compare them against the changes in the turf. The obvious one is when the turf begins to wilt, as this provides a number or reference point around which irrigation or spot watering would be considered





The 7.6cm probe on a TDR probe is a good length for putting greens, with the 3.8cm probes particularly useful for determining the effects of the thatch layer

- Know the minimum soil moisture required to prevent wilt. This number will vary depending on factors such as turf age, soil composition and management.
- Measure areas before and after irrigation to fine-tune irrigation scheduling and monitor irrigation system performance.
- Compare the change in soil moisture reading with daily evapotranspiration to further refine irrigation scheduling.
- Verify the usual dry spots are actually dry before hand-watering.

SALINITY AFFECTS

One of the discussion points regarding soil moisture probes is how they are affected by changes in soil salinity. In particular, soil moisture readings can increase as the soil salinity increases. A laboratory study was conducted by Serena et. al. (2017) to test the accuracy of four moisture sensors in a range of soil salinities. Sensors included in the study were the TDR300 (Spectrum Technologies Inc.), POGO (Stevens Waters), Turfguard (Toro Company) and 5TE (Decagon). Sand meeting USGA specifications for particle size distribution was used for the study.

The TDR300 measured accurately to a salinity level of 0.5dS/m (ECe), however, as salinity increased moisture readings were higher than measured values but deviated linearly. This indicated that with

Measure areas before and after irrigation to fine-tune irrigation scheduling and monitor irrigation system performance

correct calibration, the TDR300 can report moisture content accurately even at high salinity.

The POGO and the 5TE sensors performed well to salinity levels as high as 15dS/m (ECe). The Turfguard sensor was the least affected by salinity, maintaining an accurate range of readings with salinity as high as 40dS/m (ECe). (Note: Non-saline soils equate to <2dS/m, slightly saline soils 2-4dS/m and highly saline soils 8-16dS/m).

Agriculture Victoria (Note Number: AG1412 February 2010) has provided a check list to consider when purchasing a soil moisture probe. Among the questions they ask the purchaser to consider are:

- What information do I need from a soil moisture monitoring device?
- How labour intensive is the device?
- How useable is the information from the device?
- What level of accuracy do I need?
- Does soil type affect my choice?
- Does the irrigation system I use limit my choice?
- What other site factors affect my choice?
- How durable is the product?
- How much maintenance will it need?

As with most things in life, there can be several ways to achieve the same outcome and the use of soil sensors is no different. In my experience the most relevant aspects are;

- Whatever device you use, stick to it.
- Once the device is purchased, or in the case of in-field sensors once they have been installed, use it! Take the time to understand the data being generated.
- Take numerous measurements under a range of conditions representing different turf areas and record the data. Relate this to your management programme, turf quality and surface performance.
- Push the limits – understand what the breaking point is for soil moisture and then create an 'action band' within which irrigation must occur.
- Relate the soil moisture data to other key indicators that can be measured such as surface hardness.
- It is important to know your site and don't get hung up with the numbers a turf manager is getting at another site.

INTEGRATED POA ANNUA CONTROL – FRAISE MOWING

In any weed control programme it requires multiple strategies rather than relying on just the herbicide option. CropLife Australia (2014) provides several key strategies to be considered in managing weeds including the following non-herbicide options;

- Focus on preventing weed seed production and reducing the number of weed seed in the soil seedbank;



In a recent golf course trial to establish the process of fraise mowing and its viability as a *Poa annua* management tool, a fraise mower was operated at a depth of 4cm across the trial areas

- Emphasise cultural practices that suppress weeds by using turf competitiveness; and
- Use mechanical and biological management practices where appropriate.

Research undertaken by Neylan and Nickson (2016) and Neylan (2017) has demonstrated seed bank numbers in couch and kikuyu of up to 11,000 *Poa annua* seedlings per square metre, with up to 90 per cent occurring in the thatch layer.

Brosnan et. al. (2017) hypothesised that with greater than 80 per cent of viable *Poa annua* seed being found within the top 1cm of soil, that fraise mowing may be an effective means of non-chemical *Poa annua* control, particularly useful in scenarios where herbicide resistance has resulted in limited chemical control options.

Fraise mowing was pioneered in The Netherlands by Ko Rodenburg in 1996 with the invention of the KORO Field Topmaker (Minnick, 2018). The original intention was to use it for the control of *Poa annua* by removing large plants and reducing the seed bank, as well as the removal of thatch and organic matter.

Brosnan (2017) has tested fraise-mowed strips and found a 40-50 per cent reduction in the number of *Poa annua* plants present. Fraise mowing is said to remove 80 per cent of visible *Poa annua* seeds and physical removal of *Poa annua* through fraise mowing may be part of a successful control strategy.

In a recent golf course trial to establish the process of fraise mowing and its viability as a *Poa*



annua management tool, samples of the trash and turf sods from the treated area were collected and the seed numbers determined. The fraise mower was operated at a depth of 4cm across the trial areas and the trash removed.

The trash and turf sods were allowed to dry for four months and then the material was placed onto trays that contained seedling propagation mix. The trays were watered and then the number of seedlings counted immediately upon seedling emergence.

Finished surface following fraise mowing. Note the visible stolons and rhizomes

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Iron (Fe)		3%
Zinc (Zn)		0.06%
*2.5% Slowly Available Nitrogen derived from: Plant Protein Hydrolysate, Potassium Humate, Fish Protein Hydrolysate		
ALSO CONTAINS NON-PLANT FOOD INGREDIENTS		
Bacillus subtilis	7.5 x 10 ¹⁰ CFU per gram	
Bacillus licheniformis	2.5 x 10 ¹⁰ CFU per gram	
Bacillus amyloliquefaciens	2.5 x 10 ¹⁰ CFU per gram	
Bacillus pumilus	2.5 x 10 ¹⁰ CFU per gram	
Yeast (Saccharomyces cerevisiae)	4.5 x 10 ¹⁰ CFU per gram	
INGREDIENTS		
Humic Acid (derived from Leonardite)	20%	
Kelp Extract (Asaphragllum nodosum)	10%	
Natural Wetting Agent (Panicum schidqera)	1.5%	
Gibberellic Acid	0.001%	
Total L-Amino Acid		
3.36% Glycine	0.96% L-Threonine	
3.80% L-Glutamic Acid	1.74% L-Isoleucine	
2.44% L-Aspartic Acid	1.90% L-Phenylalanine	
1.87% L-Alanine	1.44% L-Histidine	
3.07% L-Proline	0.85% L-Methionine	
3.31% L-Leucine	0.44% L-Methionine	
1.40% L-Isoleucine	1.19% L-Cysteine	
1.48% L-Serine	0.70% L-Cysteine	
3.11% L-Arginine	0.21% L-Tyrosophan	

Net Contents: 250 grams



Poa annua seedlings in trash from fraise mowing 10 weeks (left) and 20 weeks (right) after seeding



Poa annua seedlings in couch sod from the fraise mown area four weeks after seeding

Number of Poa annua seedlings in trash from fraise mowing (above) and number of Poa annua seedlings in couch sod from fraise mown area. The number of seedlings in the treated (fraise mown) area was significantly less, indicating that it could be an effective tool to treat problem areas

Seedling counts were undertaken at 12, 22 and 36 days after seeding (DAS) (Figures 1 and 2). About 50 per cent of the seedling emergence for the trash material had occurred at 12DAS with most seeds emerged by 22DAS.

For the turf sods, about 33 per cent of the seedling emergence had occurred at 12DAS and 75 per cent at 22DAS. This result does demonstrate that *Poa annua* is going to germinate over a period of time rather than all at once and emphasises the importance of a well-planned pre-emergent programme.

The process of fraise mowing undoubtedly removes a substantial amount of weed seeds, however, it does generate large volumes of trash that needs to be disposed of. The process removes most, if not all, of the mature plants and then with the use of pre-emergent herbicides provides an excellent opportunity to keep the area 'weed free' or at least at levels where spot treatments are going to be more viable.

Based on the limited observations to date, it does provide a tool that could be used to treat problem areas rather than entire golf course fairways.

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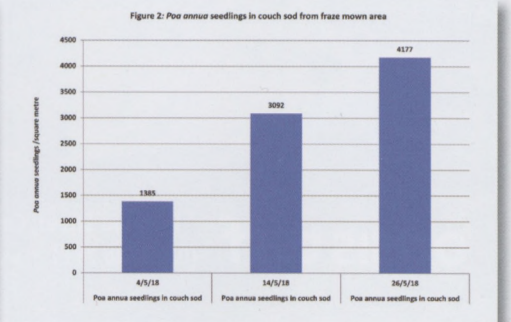
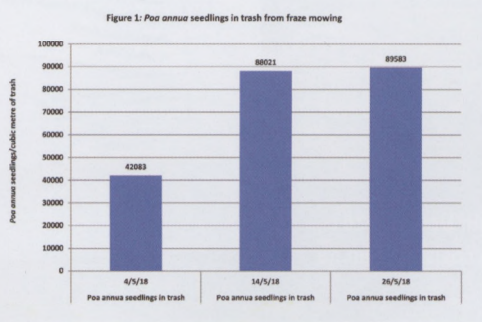
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To date in Australia, there has been no genuine fully-fledged 'true' certification scheme for vegetatively propagated turfgrass varieties

A dead cert!

Starting from this edition, Australian Turfgrass Management Journal is honoured to have one of Australia's foremost agronomic experts provide a regular column. Peter McMaugh's insight and knowledge of the turf industry is unsurpassed and he kicks off his regular contributions by looking at a new certification scheme for turf producers called 'TurfCert'.



To use the vernacular, there is a 'new kid on the block' – certification. The Board of the Australian Seeds Authority, which holds the Commonwealth Government licence for certification of all agricultural seed used in Australia, has seen a gap in the turf industry for the quality assurance of its vegetatively reproduced stock and has set up a new certification scheme for turf producers called 'TurfCert'.

In its simplest terms 'certification' is a guarantee. It guarantees that what you order is what you get, and that what you get is produced under tightly controlled conditions (rules) which are protected and enforced by regular independent inspection.

Readers of this magazine are familiar with the purchase of certified seed, especially bentgrass and ryegrass seed, from their reputable seed suppliers who many years ago adopted this guarantee of quality. The imperative to do this came largely from the fiasco many years ago of the dumping of non-certified Pennncross bentgrass seed into Australia when things went wrong with production of that variety in the USA.

This was caused by contamination in the production crops in Washington and Oregon states in the USA and had to be addressed by wholesale crop destruction and replanting of new parent stock which had been reselected to meet the quality standards required by certification. If you are familiar

with the USA seed industry, they talk about 'blue tag' crops, referring to the blue coloured certification tags attached to fully accredited bags of seed.

If your first reaction from reading so far is a yawn, with the impression that we already have certification because you have seen something like this already well-advertised, then think again. To date, in Australia, there has been no genuine fully-fledged 'true' certification scheme for vegetatively propagated turfgrass varieties. I was going to say 'any' grass varieties, but I'm not sure about sugarcane which is the only other grass variety which is extensively vegetatively propagated.

You may also think that because we already have 'Plant Breeders Rights' (PBR) to protect varietal integrity, that we don't need another layer of protection. But the protection through PBR is very largely the protection of the owner of the rights and not the protection of the end user. Certification offers protection at both levels.

The Australian PBR scheme, introduced in 1987 through the Plant Variety Rights (PVR) legislation, is based on and is part of the international scheme regulated by the International Union for the Protection of New Varieties of Plants (UPOV).

This scheme covers all plant varieties in both seed and vegetatively propagated form and is based on three principles - distinctness, uniformity and stability. None of this is about genetics. It is



I have just recently consulted on exactly this situation. If you see a paddock where the contamination is in long strips without being very wide, you can be sure that it is the end result of a single contaminated roll of turf going through the shredder of a line-planting machine. What might be 5 per cent contamination of nursery stock becomes 40 per cent in the new planting. There is an excellent article on this topic by Dr Phil Busey from the University of Florida in the 2009 International Turfgrass Society Research Journal (Vol.11, Part 2, p1177.)

True 'certification' is a major step forward in guaranteeing end users the quality they are paying for and gives those growers who choose to provide it a big advantage with the discerning customer

about the appearance (phenotype) of the plant so that DNA as such has absolutely no direct bearing on the success or failure of a PBR application.

The process is different in the USA where PBR is attached to the seed part of the industry but the vegetatively propagated materials are covered under a separate Plant Patent scheme. In my experience this has a more contorted and yet less vigorous process.

Under the PBR act, when a person or entity is awarded ownership of a plant variety, there is an obligation that requires access for licence holders to pure stock. Failure to provide this can result in loss of the licence.

Achieving and maintaining this purity of strain over the 20 year life of the patent is really quite easy for rose growers or suppliers of nursery stock plants which are clearly identical while being separate entities. It isn't quite that simple for vegetatively reproduced grass of the turf type.

Contamination is a far harder issue to deal with over an extended life span of a paddock. This is especially so when the dominant weed species of an area is the same as the crop species, e.g. couch in couch. When grasses purported to be of a clearly distinguished variety are propagated by vegetative plant from contaminated stock, the extent of the contamination is quickly multiplied until it is almost impossible to tell the original from the contaminant.

AN INDUSTRY DOYEN

How do you introduce a man who needs no introduction? As you can see from the accompanying photo, **Peter McMaugh** is not a young man, but according to those old enough to have gone the distance in the turf industry he has looked like this for at least the last 30 years!

With old age, however, comes a profound level of experience and in his 54 years in the turf industry Peter has worn (pardon the visual pun) many a hat. As a researcher, teacher, consultant, turf producer, plant breeder and machinery designer, Peter is a scientist at heart who has got, and continues to get, his hands dirty at the coalface. The value of such experience cannot be measured and as those who have read his huge body of work over the years, it gives an added dimension to his writings.

Years of working with golf course architects on over 50 projects and with major stadium venues and racetrack constructions in his portfolio, Peter has a

many-faceted view of our industry. Major portions of his work have been across Asia and his international reputation is second to none. All this shows in the many awards he has received along the journey, including the AGCSA Distinguished Service Award (2000) and becoming the first member of the turf industry to receive Australian horticulture's highest honour, the Graham Gregory Award (2009).



The depth and breadth of Peter's turfgrass knowledge was perhaps best summed up by the late great Dr James Beard. During one of his visits in the 1980s, the esteemed Dr Beard proclaimed that 'Peter McMaugh is the only other turfgrass scientist in the world that knows the literature as well as me'. Enough said.

We welcome Peter's quirky personal column to the pages of Australian Turfgrass Management Journal and encourage readers to send in any questions or topics that they would like him to address. You can email these to Brett Robinson brett@agcsa.com.au. Enjoy the read...

Does 'certification' mean that you are getting the best performing grass for your purpose? No. It simply means you are getting the best quality of the grass you have selected to suit your needs



This type of rampant grass contamination has historically happened with the early improved selections of couchgrass in Australia – Greenlees Park and Wintergreen – which were always public domain varieties and never subject to PBR. The consequence of this was amply demonstrated by Dr Peter Martin many years ago when he collected over 30 samples of Greenlees Park from various sources and proved that they were all genetically different and in most cases not related to Greenlees Park at all. This same experience has been replicated with Wintergreen. This in general means that there is no really reliable way of obtaining currently pure stock of either of these grasses.

This will change in the future because under the rules of certification the plant breeder of the original variety can reselect that variety and through

controlled propagation create a new certified (or guaranteed) breeders stock.

This provides a very clear illustration of what 'certification' is all about. It is all about the guarantee that any grass you buy from a 'certified' paddock carries a clear line traceable back to the 'breeder's nursery stock' which originally came from a single node propagule.

This characteristic of 'certification' means that you cannot have a 'certified' farm producing 'certified' products, you can only have 'certified' paddocks', clearly identified by GPS coordinates, which contain a specific quantity of a specific grass variety.

This is where 'certification' shows clear differences from schemes of accreditation. While farms can be accredited, they can produce reliable good quality turf on a consistent base. They can be like a 5-star Halliday Winery but they can't be 'Hill of Grace'.

There is a vast difference between 'a true to type' certification and a trademark or brand which can cover a multiple of different blends of bits and pieces and a true to type single variety at the same time. In other words, a trademark can be used as a cover name for the selling of multiple variety blends or even contaminated single variety types, as well as 'true to type' certified single varieties. In the wine industry the blend can sometimes be better value or even more enjoyable than the single variety, but that is rarely the case in turf and especially so in vegetatively reproduced grasses.

Does 'certification' mean that you are getting the best performing grass for your purpose? No. It simply means you are getting the best quality of the grass you have selected to suit your needs. It is no more a guarantee of superior performance than is PBR which guarantees difference.

'Certification' reinforces the uniformity and stability aspects of PBR and trueness to type. If the grass you choose because you get sold on the marketing hype of the product is a dud, you get a guaranteed dud. However, in reality the effort that is

Certification is a guarantee. It guarantees that what you order is what you get and that what you get is produced under tightly controlled conditions (rules) which are protected and enforced by regular independent inspection





Above: When grasses purported to be of a clearly distinguished variety are propagated by vegetative plant from contaminated stock, the extent of the contamination is very quickly multiplied

Above left: The 'TurfCert' scheme has been set up by the Board of the Australian Seeds Authority, which has seen a gap in the turf industry for the quality assurance of vegetatively reproduced stock

needed to produce the quality and purity involved in certification is generally an indicator of a top-end performer.

'Certification' has by its nature one defining characteristic – you are either certified or you are not. You can't be 'partially certified' and work your way up, step by step, to full certification. Any scheme of this type may be accreditation of a type but it is not certification.

True 'certification' is a major step forward in guaranteeing you the quality you are paying for and gives those growers who choose to provide it a big advantage with the discerning customer. In case you think this is something new, recently I came across a report I wrote in 1986 to the Board of the

TGA NSW recommending uptake of such a practice.

There are pseudo certification schemes in the market place and there have been some disgusting examples of people trying to hide poor performance behind definitions in ways similar to what we have seen in the recent Royal Commission into the finance industry.

Make sure you understand the real definition of 'certification' and the difference between it and 'accreditation'. You need this in the same way as you need to understand the difference between a plant variety name and a trademark. They both impinge on the concept of you getting a guarantee that what you order is what you get. Tread carefully and you won't fall down a hole! 🌱

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Riparian rejuvenation

Riversdale Golf Club horticulturist Dominic Bowd writes about a recent project to dramatically transform a weed infested riparian area of the course as part of a wider community effort to enhance Damper Creek.

Above: The rejuvenation of the weed infested riparian area on Riversdale's 2nd hole will provide long-term benefits by turning it into an ecologically rich and visually stimulating feature of the course

The Riversdale Golf Club is Melbourne's second oldest golf club. It is also one of Melbourne's most unique golfing experiences. Between its spectacular undulating topography, small quick greens sloping back-to-front, floristically diverse gardens and novel assemblage of both Northern Hemisphere and Southern Hemisphere tree species, Riversdale certainly has a great deal going for it.

I was appointed head horticulturist at Riversdale in mid-2015, a role that has involved extensive renovations of non-play areas, often in conjunction with the club's appointed course architect Paul Mogford of Crafter & Mogford Golf Strategies.

Much of this work has involved strengthening pre-existing themes throughout the course while attempting to stay true to the club's rich and unique floristic history. Getting the balance between visionary, forward-thinking ideas and tradition right is not always an easy endeavour. But in my view it is both a noble and worthwhile challenge.

As an environmental scientist and restoration ecologist by training (with a BSc. Environmental Earth Science/Botany, UNSW), I have always been interested in ecological systems, particularly those within the urban context. In addition to improving thematic continuity throughout the course, and performing ongoing maintenance tasks as is required of any horticulturist, I wanted to contribute

my knowledge and experience to Riversdale in a more profound and meaningful way.

I saw a unique opportunity to employ both ecological science and landscape design principles and begin to transform what was, and largely still is, a neglected and weed-infested part of the course – the riparian zone flanking Damper Creek – into an ecologically rich and visually stimulating feature.

I believe ecological restoration work of this kind produces multiple benefits, among them;

- Creating a visually appealing landscape for members and guests of the club;
- Enhancing the local ecology within the course; and
- Reducing dispersion of weed seed and vegetative material into the surrounding environment.

DAMPER CREEK

Close to its northern fence-line boundary (near High Street Road), Riversdale Golf Club is bisected by Damper Creek, a tributary of the Yarra River. Ecological restoration programmes both upstream and downstream of the course in recent years have turned what was once a degraded and weed-infested creek line into a beautiful and floristically diverse habitat.

This important work, initiated by Monash Council and The Friends of Damper Creek, benefits not only local residents, but also local wildlife, such as the

endangered Southern Bell Frog (*Litoria raniformis*), Powerful Owl (*Ninox strenua*) and Musk Lorikeet (*Glossopsitta concinna*). What I envision for the future is a relatively seamless corridor of indigenous vegetation that links the riparian ecology upstream of the course with that downstream.

As with any big and bold agenda, you have to do your research prior to breaking ground. For me, this involved choosing a location, researching the local ecology, drawing-up a design and coming up with a plan.

Location: For our location, we chose an embankment adjacent to the dam beside Riversdale's uphill par four 2nd hole. This location featured virtually 100 per cent weed coverage and, amongst others, included labyrinthine;

- Blackberry (*rubus fruticosus* agg.) brambles up to 4m high;
- Trad (*Tradescantia fluminensis*);
- Tree lucerne (*Chamaecytisus palmensis*);
- Gorse (*Ulex europaeus*);
- Hawthorn (*Crataegus monogyna*); and
- Silver poplar (*Populus alba*).

Research: In order to find out more information about the local ecology of the Waverley area, I organised a meeting with the local bush-care group (The Friends of Damper Creek) and two members of Monash Council's bush crew, all of whom were more than happy to share their knowledge, passion and experience.

I also consulted Monash Council's 'Monash Gardens for Wildlife' booklet, Marilyn Bull's exhaustive 'Flora of Melbourne' book, the State Government's 'Bioregions and EVC Benchmarks' website and a case study on ecological restoration of the Merri Creek published by the Merri Creek Management Committee.

Design and plan: Using my existing scientific and horticultural knowledge, in addition to that which I dug up during my research, I drew up a design for



the re-vegetation of the embankment. It featured the following elements;

- Rushes, sedges and moisture-loving grasses planted six to a square metre close to the waterline;
- Smaller shrubs (up to 2m) planted at reduced densities further up the slope;
- Taller shrubs (up to 4.5m) further uphill from the smaller shrubs; and
- A mixture of tall and small shrubs at the very top. I opted to go with a mixed planting at the top in order to soften the interface with a turfgrass nursery and to ensure that it will not be heavily shaded when the plants mature.

The flora used were all locally indigenous species selected from Ecological Vegetation Class (EVC) 127 - 'Valley Heathy Forest', a historically common vegetation community in low-lying riparian zones within the Waverley area. This was my attempt to mimic, as much as is possible within a highly altered landscape, the pre-1750 vegetation assemblage.

The weed-infested embankment adjacent to the 2nd hole prior to the restoration works

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An excavator was used to remove 200mm of weed seed infested topsoil and to create a smooth batter for jute matting to go down



The embankment was planted out with the likes of gold dust wattle, silver banksia, tree everlasting and Austral indigo (pictured)

Riversdale assistant superintendent Danny Adams (right) and foreman Mark Brooks (left) assisting with the planting of indigenous tube stock



TRANSFORMATION

In terms of a plan of attack, I firstly surveyed the area for any indigenous species that might need to be moved or flagged prior to commencement of earthworks. I did not uncover even one! I then commenced a series of herbicide spraying missions of the understorey weeds using bioactive glyphosate, conducting a total of three runs over five weeks. I then enlisted the help of the course arborist to fell all the larger shrubs and trees, chipping the material on-site and deep-burying it at our secluded dumping site.

Following this, the embankment was battered using an excavator. We scraped the top 200mm of soil to reduce weed recruitment, in the hope of saving both time and money in maintenance over the long-term. Next step was rolling out and pegging in the jute matting, a geofabric designed to both stifle weed growth and reduce erosion.

The jute-matted embankment was then planted out by me and members of the ground-staff with locally indigenous tube stock I had chosen, including species such as;

- Gold Dust Wattle (*Acacia acinacea*);
- Silver Banksia (*Banksia marginata*);
- Tree Everlasting (*Ozothamnus ferrugineus*); and
- Austral Indigo (*Indigofera australis*).

My hope, in undertaking a project like this, is to provide an example to other golf clubs with similarly degraded areas bursting with aesthetic and ecological potential, that with a heady cocktail of vision, enthusiasm and research, neglected non-play areas can be transformed into spaces that not only improve the appearance of the course, but give something back to the environment upon which we all rely, and for very little cost.

ACKNOWLEDGEMENTS

Dominic Bowd has 10-plus years of experience in horticulture, landscaping and bush regeneration/ restoration ecology. He has a B.Sc. (Environmental Earth Science/Botany) and a B.A. (Environmental Studies) from UNSW. Currently employed as the head horticulturist at Riversdale Golf Club, he has also worked as a member of the bush crew at Earth Repair Ecology & Restoration (Sydney), team leader of natural areas at Citywide (Sydney), junior environmental consultant at A.D. Envirotech (Sydney) and leading hand (Northern & Western Divisions) at Australian Ecosystems, Melbourne.

Bowd wishes to thank Riversdale Golf Club superintendent Travis Scott and assistant superintendent Danny Adams for giving this project the green-light.

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Dominic Bowd spot-sprays weeds that have managed to penetrate the jute matting

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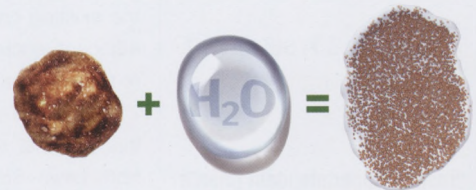
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Indooroopilly Golf Club is currently growing in a 500m² LF1 (Trinity) *zoysia matrella* practice green following the successful conversion of its collars to zoysia over the past two years

Indooroopilly gives zoysia green light

After successful projects to install zoysia into its green collars and bunker surrounds, superintendent Charlie Giffard writes that Indooroopilly Golf Club has taken the next step and is currently growing in its first zoysia green.

Indooroopilly superintendent Charlie Giffard (right) shows David Doguet (Bladerunner Farms, USA) the newly planted zoysia green



Over the past couple of years, Indooroopilly Golf Club in Brisbane has been trialling the use of zoysia grasses to determine its potential as a playing surface going forward. As was reported in Australian Turfgrass Management Volume 18.5 (September-October 2016, p48-49), a 1.8-metre wide strip of Shade Tuff zoysia *matrella* was installed around a newly stolonised green to gauge its performance.

In time, this turned out to be very successful and in early 2017 we subsequently planned an all-out assault on couch encroachment around, and in some cases in, our 328 Tifgreen greens. Initially concentrating our efforts on the newer West course, the programme embarked upon was to poison out the existing collar grass (Greenlees Park) and any adjacent encroachment in the green edges and re-turf with the new zoysia variety Sir Grange.

We were able to get some early release of this material to trial thanks to Simon Adermann from Lawn Solutions Australia. Over the next two years we have successfully carried out the collar conversion to Sir Grange and to date we have been more than happy with the results.

The method employed to convert the surrounds was pretty straightforward. After spraying out the couch collar and removing the dead material, we levelled the area and then solid turfed with Sir Grange. The zoysia grew in very quickly and due to its low growth we were able to mow it down to a collar height of 8mm within a month of laying it.

We have certainly noted its low growth rate and how this has been a great saving as the collars only require a mow every other week in the growing season and once a month during the winter. This represents a real saving and our 'return on investment' would be in less than five years' time going by this indicator alone!

Other benefits so far include;

- High tolerance to salt (particularly beneficial as Indooroopilly uses effluent irrigation water);
- Low to nil disease and insect incidence;
- No dew formation;
- Upright growth habit effectively 'perching' the ball for an improved lie;
- Drought hardy;
- Low nutritional requirement; and
- Low seed head formation.

The only noticeable difference we have observed is the playability in comparison to the original Greenlees Park couchgrass. We have noticed that the ball tends to check more when pitched onto the collar, similar to kikuyu. However, the 'swing' to this 'roundabout' is that on sloping run off areas around the greens the ball will hold up in the adjacent collar, meaning a happy result for the player. We haven't really noticed any extra wear on the cutting units due to the additional toughness of the leaf blade (due to higher levels of silica).

In addition to the collars, we have also successfully rolled out Shade Tuff zoysia in our bunker surrounds. The Shade Tuff has settled in very nicely and shows great definition on tongues. We only need to trim these about once a year and they stay at a similar height. The ball won't bury itself and will pop up on top of the wiry zoysia when hit into these tongues which makes them very fair and playable while also looking fantastic!

GOING GREEN

With the success experienced with the collars, the next logical step for us was to explore the possibility of putting zoysia down on a putting green. Again through Lawn Solutions Australia, we procured some material that had an even finer growth habit that was suitable for a green.

The plant material offered was a *zoysia matrella* developed by David Doguet from Bladerunner Farms based in Texas, USA, the world's largest privately-owned zoysia research facility. The variety offered for trial was L1F (now known as Trinity) which is a very fine-textured greens-grade zoysia that is gaining popularity, especially in the USA.

We subsequently went about preparing a 500m² practice green situated within the East course. We stolonised the surface back in late March 2018 and we are sitting at around 75 per cent coverage at the time of writing (late September). Unfortunately, we have had a particularly cold winter this year and, as it turned out, timing an off-season planting time is not something we'd recommend. Noted, it is different from the standard 328 Tifgreen and grows from underneath via rhizomes rather than from above-ground stolons.

According to accounts from David, their experience in the US indicates it can take up to 50 per cent longer to establish when compared to the current hybrid bermudagrass varieties. He did say, however, that the big advantage with Trinity is that it tends to be more tournament ready almost as soon as you achieve full cover when compared to regular hybrid bermudas that typically can take as long as 18 months to attain a similar level.

About four months after we stolonised the green we were fortunate to receive a visit from David who came out to Australia for the Lawn Solutions Australia conference and field day. It was his and wife Sheri's first trip to Australia and during his time at Indooroopilly we were able to show him the new



green. He was suitably impressed to see his variety of grass growing "all the way Down Under".

Currently we are mowing the Trinity zoysia at 5mm and waiting for that auspicious day of 100 per cent cover before we can properly assess its playing/putting characteristics. We are hopeful it will perform to expectation. If it proves to be so, the plan is to then roll it out on a possibly proposed short par 3 loop where zoysia would be planted tee to green, with Trinity on the greens and Sir Grange everywhere else. This would afford us an excellent test case in deciding on whether zoysia would be a potential grass type for any future developments on our main courses (East and West).

Even at this early stage in the trial, we believe this type of grass could potentially be a real game changer not only for our club but for the golf and turf industry. Its lower nutritional and plant protection requirements, combined with low growth characteristics, would mean huge cost savings in terms of maintenance and inputs.

Playability is hard and fast and appearance, with its dark green, upright growth habit, makes for a very attractive finish. Imagine looking down a golf hole on a typical early morning in southeast Queensland with literally no dew in sight, ready for play! Here at Indooroopilly, we are indeed hopeful of this grass's potential and, importantly, how reduced inputs can make it a truly sustainable proposition for clubs looking to save money and improve quality. 🌱

Indooroopilly has also successfully used Shade Tuff *zoysia matrella* in its bunker surrounds and tongues where it provides great definition

The L1F (Trinity) six months after stolonising. A March 2018 planting date combined with a cool Queensland winter has led to slow establishment, with present coverage around 75 per cent



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Above: Walsh (left) became the first graduate from Tasmania to be named as winner of the AGCSA Graduate of the Year Award

Right: Joint 2018 AGCSA Graduate of the Year Award winners Bryce Walsh (second from left) and Daniel Hendrie with Toro's Laurence Bingham (left) and Elise Willemsen



Double delight

HARD WORK PAYS OFF

The relief that Hendrie felt when Toro's Laurence Bingham read out his name on stage during the awards ceremony was almost palpable. In the lead-up to the conference and the awards judging itself, not much had gone right for the former Toronto Golf Club apprentice turned current Morisset Country Club assistant superintendent.

Out on a training ride in April for a triathlon, Hendrie came off his bike heavily and badly tore his Achilles tendon. As well as having to negotiate his way around the Wellington conference in a moonboot and on crutches, just an hour before he was due to present to the award's judging panel he discovered he had left his palm card notes back in Australia. Luckily he had them on file and was able to hastily print off another set. Despite those hiccups, the 21-year-old impressed and became the NSWGCSA's 10th recipient of the national award.

"The award means so much to me," says Hendrie, who completed his apprenticeship studies at Kurri Kurri TAFE in the Hunter Valley. "It really gives credit to how hard I worked during my apprenticeship and it has already opened up doors to progress in the industry that wouldn't have been available if I didn't win the award.

"My plan had always been to do The Ohio Program next year, but unfortunately due to my ankle injury that won't be possible, so I'm planning to spend another year as an assistant superintendent to allow me to mature more as a turf manager. I'm only 21 and time is still on my side."

In accepting the award, Hendrie praised the contributions of all the superintendents he has worked under, but gave particular mention to his first, Mick Dundas.

"I had three superintendents during my apprenticeship, but it was Mick that inspired me and guided my passion during the two years I worked

Daniel Hendrie and Bryce Walsh created a little slice of history at the Australasian Turfgrass Conference in Wellington when they were named joint winners of the 2018 AGCSA Graduate of the Year Award, presented in partnership with Toro.

Daniel Hendrie's opening word said it all – "Wow!" Having hobbled up to the lectern on crutches to jointly accept the 2018 AGCSA Graduate of the Year Award on the opening night of the Australasian Turfgrass Conference, you could tell he was in a state of shock. Similarly, fellow recipient Bryce Walsh standing next to him had tears welling up in his eyes.

It proved to be a special night for two of the Australian turf industry's up and coming practitioners and they created a little slice of AGCSA Awards history by becoming the first joint winners of the Toro-sponsored award in its 22-year history. Having put the seven state and territory finalists through their paces on the eve of the conference, the three-member judging panel could not split Hendrie and Walsh and duly decided to bestow the honour upon both.

Hendrie and Walsh beat home a talented crop of finalists which included **Steven Lewis** (Chinderah GC, Qld), **Thomas Schott** (The Grange GC, SA), **Luke Snedden** (Gold Creek CC, ACT), **Dechlan Turkington** (Royal Melbourne GC, Vic) and **Matt Vroom** (Mandurah CC, WA).

In winning the award, Hendrie and Walsh will now travel to the USA in July 2019 to attend Toro's Turf Pros event. They will join around 20 other international superintendents for a week-long tour of Toro's headquarters, engineering and manufacturing facilities where they will get the chance to test out the company's new products.



under him," says Hendrie. "He was almost a father figure to me and a great role model on and off the golf course.

"I'm also thankful to Nathan Reynolds who gave me a shot as an assistant at Morisset and who has driven me to succeed. Mark Frith is another who answers the thousands of questions I have every time I see him, as well as my TAFE teachers Mark Crawford, Albert Sherry and Greg Smith."

Now in the assistant's role at Morisset, Hendrie is aiding Reynolds in all facets of turf management including formulation of maintenance and capital works projects, programming of all agronomy practices and overseeing the club's environmental management system and WHS system.

"I love the game of golf, so being able to work on a golf course is the dream office," says Hendrie. "I like how every day is different and there is always another project on the horizon or another problem area that needs addressing.

"I like how the industry is a community. That was one of the biggest things that hit me straight way was how close the industry is and how no matter where you're from or who you are, if you have a question or need something, someone will always be happy to help.

"One of the biggest highlights during my apprenticeship was volunteering at two Australian Opens (2015 and 2016). At the time I was just another apprentice from a small course, so to have the opportunity to be a part of Australia's biggest tournament twice was really special and definitely helped my development."

STATE FIRST

While Hendrie continued the NSWGCSA's excellent track record in the award, Royal Hobart Golf Club's Bryce Walsh created an additional slice of award history. Twenty-four-year-old Walsh became the first graduate from Tasmania to be named as winner of the award, something that he hopes will encourage others from the Apple Isle to aspire to.

"Being the first Tasmanian to win the award leaves me very proud and honoured," says Walsh. "I hope that winning this award encourages current and future students in Tasmania to realise that if you put the work in and believe in yourself anything is possible. I also hope that this may encourage more people to undertake studies in turfgrass management within Tasmania.

"When I heard my name read out I was initially in shock and I remember looking at my boss Steve Lewis and he looked like he had seen a ghost! He told me afterwards I looked the same! It was great to be able to share the moment with both Steve and (assistant superintendent) Gareth Kelly who spent a lot of time helping me with my TAFE studies and preparing me for my awards judging presentation."

After finishing his Year 12 studies, Walsh applied for a number of horticultural positions before being fortunate enough to gain a full-time apprenticeship



at Royal Hobart under superintendent Lewis. During his time at Royal Hobart, Walsh has been involved in a number of projects and more are on the horizon with the club about to embark on major masterplan works. He also helped prepare the course for the club's centenary events in 2016 and played a role in preparations for the 2013 Australian Amateur Teams Championship and 2017 Australian Senior Amateur Championship.

Walsh undertook his studies at TAS TAFE Warrane Campus under the guidance of teachers Mark Potter (turf) and Tanya Norris (horticulture) whom he thanked for the amount of time they invested in him during his studies and for continually pushing him to produce high quality work.

"My favourite part about working in the turf industry is being able to work outdoors and seeing the enjoyment club members get out of our work," says Walsh. "During my apprenticeship Steve was great in giving me lots of responsibilities during renovations, week-to-week work and also leaving me in charge of the course on numerous occasions. These all helped to develop my skills as a turf manager.

"Winning this award gives me a great opportunity now to travel to America and further my knowledge. I also believe it will contribute in helping me further develop within my workplace and potentially lead to a higher role within the industry in the future. My next steps currently see me staying at Royal Hobart and hopefully being involved with the masterplan redevelopment which will be a very exciting time for the club." 🏆

"The award means so much to me"
– Daniel Hendrie

Walsh was able to celebrate his award with superintendent boss Steve Lewis (left) and Royal Hobart assistant Gareth Kelly



The National Turf Education Working Group is working hard to ensure sports turf management education standards in Australia are the best they can be to address the needs of industry



The complete package

Albert Sherry and Simone Staples from the National Turf Education Working Group provide an update on the current review taking place of the industry's sports turf management training package.

With changes made by the Australian Industry and Skills Committee (AISC) on how training packages are reviewed, the meeting of the National Turf Education Working Group (NTEWG) last December concentrated on detailing inadequacies in the current training package for the Australian turf industry.

Once identified, these concerns were presented to an Industry Reference Committee (IRC) and Skills Impact who assisted in putting together the NTEWG's submission for the 'Employment, Skills Outlook and Training Product Review Plan 2017-2020'.

This submission was successful and the NTEWG received approval in June 2018 to proceed with the review. As a result, Skills Impact, in consultation with IRC members, invited a representative sample of industry to form a working group to prepare draft documentation for wider turf industry consultation later this year.

This 'subject matter expert' (SME) group consists of industry representatives from all sports turf sectors and states, providing much needed advice and background information on all areas of turf management and training. The group includes;

Western Australia

- Hugh Gardner (STA WA/Subiaco Council)
- John Forrest (Hartfield Country Club)

South Australia

- Damien Hough (Adelaide Oval)

Queensland

- Darren Lee (GCSAQ/Palm Meadows GC)

Victoria

- Simone Staples (AGCSA)
- Dr Phillip Ford (Consultant)
- John Shannon (STA Victoria/Melbourne Grammar School)
- Chris Deppeler (Gordon TAFE)

Australian Capital Territory

- Wade Turner (NSW Bowling Greenkeepers Association/Queanbeyan BC)
- Bruce Davies (Canberra Institute of Technology)

New South Wales

- Albert Sherry (TAFE NSW)
- Mark Schroder (NSWGCSA/Liverpool GC)
- Jyri Kaapro (Bayer)

THE PROCESS

The purpose of the SME group is to provide industry engagement and expertise in the review and redevelopment of the sports turf management qualifications and related units of competency in the AHC Agriculture, Horticulture and Conservation and Land Management Training Package.

With the main objective to define the main occupations and job functions within the sports turf management industry, two highly productive meetings have been conducted to date at the Skills Impact office in North Melbourne. At these meetings the following information was determined;

- The typical job roles for each qualification conducted across the turf industry;
- Key purposes in those roles;
- Work functions of each role;
- Typical tasks conducted in each role;
- Required skills and knowledge expected by industry at each qualification level;
- Revision of the specialist 17 sports turf units specific to each qualification (specialist sectors have been, and will review, business, pest management, irrigation, WHS and environmental units currently used in the training package);

- Construction of a qualification pathway reflecting industry needs.
There are four main phases in the review.

PHASE 1: JOB ROLES AND PURPOSE OF EACH QUALIFICATION

The group discussed job titles and their purpose within the sports turf industry and put together a workforce analysis. Although job titles for various roles vary slightly within different parts of the industry, the following roles were aligned against current Australian Qualifications Framework (AQF) levels:

Certificate II

- Groundsperson (pre-trade) – pre-apprenticeship (aligned to AQF Level 2).
- Purpose: To support groundstaff and conduct ongoing maintenance practices in sports turf management facilities.

Certificate III

- Sports turf tradesperson – apprenticeship (aligned to AQF Level 3).
- Purpose: Use agronomy to produce sports turf surfaces to a standard expected by sports turf industry stakeholders and/or the public.

Certificate IV

- Assistant golf course superintendent/assistant turf manager (aligned to AQF Level 4).
- Purpose: Use agronomic skills to lead and manage workgroups (including contractors). Work autonomously and take responsibility for the outcome of own work and that of the team.

Diploma

- Golf course superintendent/sports turf manager (aligned to AQF Level 5).
- Purpose: Management of the sports turf facility.
The SME group was then divided into smaller groups to determine the job tasks for each qualification.

PHASE 2: REVIEW OF EXISTING UNITS

Working with Skills Impact representatives, curriculum writers and experts, the SME group started a revision of the existing AHCTRF units taught from Certificate II to Diploma level to determine where improvements could be made and find any noticeable 'gaps' in the units of competency.

This exercise will also assist in establishing if;

- Any new units need to be written to facilitate changes within the industry; and
- The training package needs to be expanded to include new skills.

PHASE 3: INDUSTRY CONSULTATION

Once the initial review is completed and the SME group is satisfied with the draft documents, they will be released for wider industry consultation. Skills Impact will host information workshops in most major capital cities to brief any interested parties on the content and reasoning behind the drafts. Wider consultation via websites and online feedback forms

will also be available to allow the broadest possible input. The initial consultation is currently scheduled for late October/early November 2018.

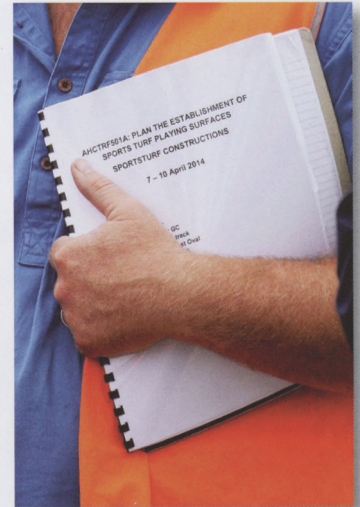
This feedback will be considered, documents will be rewritten taking into account arguments received, before being reposted for a second round of consultation. Association websites (eg: AGCSA/STA), publications and social media will keep industry aware of the progress and how they can contribute, participate in workshops and give feedback.

PHASE 4: IMPLEMENTATION

It is hoped that after the two industry consultation periods that the final draft will be ready to submit to the Industry Reference Committee for endorsement in April 2019, before being forwarded to the Australian Industry and Skills Committee and other government agencies for approval. Implementation would then start in February 2020.

For more information about the training package review or to get in touch with the National Turf Education Working Group, please contact one of the following representatives;

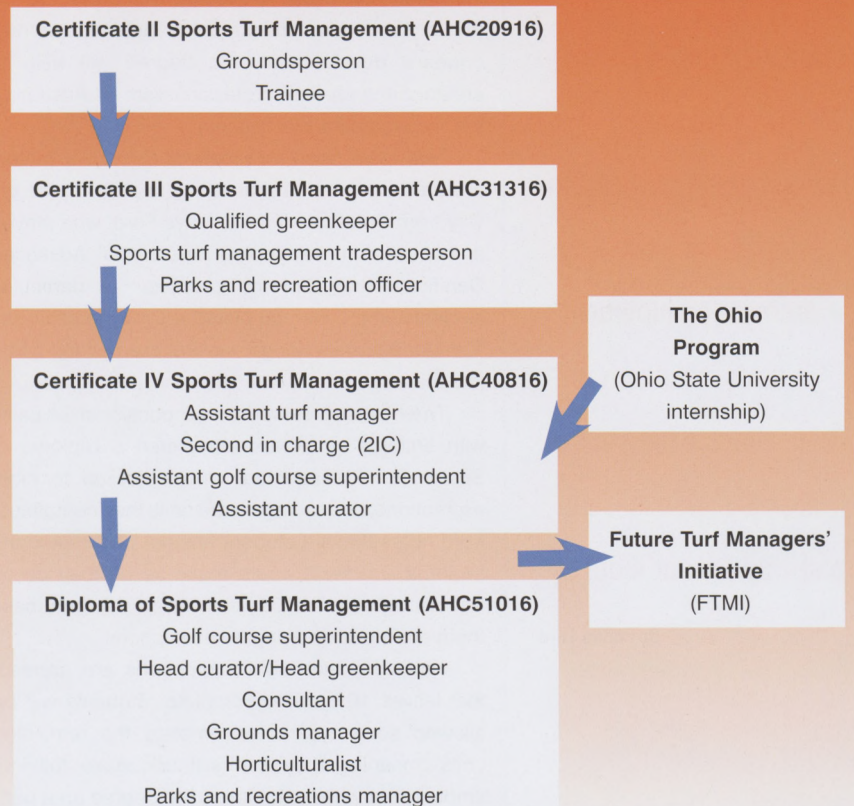
- **Simone Staples** (AGCSA): simone@agcsa.com.au (03) 9548 8600.
- **Albert Sherry** (Co-chair NTEWG): albert.sherry@tafensw.edu.au (02) 4936 0215.
- **Hugh Gardner** (Co-chair NTEWG): hugh.gardner@iinet.net.au 0418 245 557. 📞



As part of the review, all units of competency are being assessed to determine where improvements can be made and find any noticeable deficiencies

SPORTS TURF MANAGEMENT CAREER PATHWAY

As part of the training package review process, a pathway, opportunity and job role outline was developed





SPORTS TURF MANAGEMENT BACHELOR DEGREE TO LAUNCH IN 2019

Melbourne Polytechnic (formerly NMIT) was the first TAFE College in Australia to introduce post-apprenticeship training in turf. In 1987 it started the Advanced Certificate in Turf before adding a Diploma level course in 1990. This pioneering path is set to continue with the announcement that it will be offering a new sports turf management degree starting in February 2019, a first for the Australian turf industry.

The 'Bachelor of Agriculture and Technology, majoring in Sports Turf Management', will be offered via partnership with fellow Melbourne-based institution La Trobe University. According to Dr Phillip Ford, the driving force behind the new course's development, the degree will help to enhance the level of professionalism of Australia's turf management practitioners.

"We have been very careful to craft a course and delivery method that allows a pathway all the way from Certificate II or III," says Ford, who played a key role in developing the earlier Advanced Certificate and Diploma courses. "In particular, students who have completed a Diploma of Sports Turf Management will get several exemptions going into the degree."

The new degree course will consist of 24 units, with entrants who have completed a Diploma of Sports Turf Management eligible for up to eight exemptions, depending on the units they completed. Ford notes that if a student has not undertaken the Diploma course, it would make sense they do so first through the TAFE system which will then make them eligible for the degree exemptions.

Assuming that eight exemptions are granted, that leaves 16 units to complete. Students will be allowed seven years to complete the remaining units, meaning they can still undertake full-time employment while completing the degree on a part-time basis.

Dr Phillip Ford says the addition of the new Bachelor degree in sports turf management will help to enhance the level of professionalism of Australia's turf practitioners

The course can be studied via different means. Students can either undertake the traditional face-to-face mode of study (to be mostly done at Melbourne Polytechnic's Epping and Fairfield campuses) or using the 'blended delivery' mode, where lectures are viewed online and practical work is done on selected weekends. This latter mode, while a more difficult way to study, makes the course a viable option for rural or interstate students. Ford adds that the face-to-face time commitment is similar to the current Diploma course, with a degree student expected to devote a further eight hours per week for study and assignment work at home.

The degree includes three turf-specific units ('Turf construction and drainage', 'Turf for sport' and one other to be determined), two turf-specific research projects/trials, nine generic agronomy units and two electives. The two electives allow students to branch out into areas of special interest such as human resource management, business studies, communications and marketing.

Under the Commonwealth Supported Funding scheme, the cost per unit will be between \$1100 and \$1300 with student loans available. For more information visit www.studyassist.gov.au or Google 'fee help study assist'.

"This qualification will provide a sound programme for future Australian turf managers," says Ford. "Whether students go on to complete a career on the tools or move into alternate employment in sales, research or consultancy, the course provides an excellent pathway for our industry."

"Potentially, a turf manager could enter the industry as an apprentice, carry on to the Diploma and then transition into the Degree. It's possible, in fact, to then do an Honours year (which is basically research), then a Masters and then a PhD. With a growing need in the Australian turf industry for tertiary-trained personnel, this new degree course will help elevate our profession and its professionals to new heights."

For more information about the Bachelor of Agriculture and Technology, majoring in Sports Turf Management', contact Dr Philip Ford, PhillipFord@melbournepolytechnic.edu.au, or Mark Burchell, MarkBurchell@melbournepolytechnic.edu.au. Alternatively, contact the Melbourne Polytechnic Turf Department on (03) 9269 8823.

This qualification will provide a sound programme for future Australian turf managers. Whether students go on to complete a career on the tools or move into alternate employment in sales, research or consultancy, the course provides an excellent pathway for our industry.

Dr Phillip Ford



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ATM's HR expert Vicki Crowe looks at the issue of workplace bullying and what to do if it rears its ugly head at your facility.

Above: Everyone has the right to be in a safe workplace free from violence, harassment and bullying. If you feel you are being bullied, don't sit on it and hope it will go away – report it immediately



Standing up

One of the biggest issues with understanding a person's claim that they are being bullied is that it's subjective, often emotive, and some say linked to issues that occurred in childhood that have been triggered. Depending on your personality, what upsets you often doesn't upset another person and it can be difficult to understand their perspective.

From the bullying investigations I have undertaken, wanting to control others appears to be a common theme with bullies. It can be tricky to know how to deal with bullies. Some experts say to stand up to them, others say ignore them. No matter which approach you take, dealing with bullies can be exhaustive, time-consuming and non-productive in the workplace.

The Fair Work Commission (FWC) states that the action must be repeated and that the behaviour creates a risk to health and safety (this includes mental health). A one-off incident is not considered to be bullying.

If you have someone bullying others in the workplace, deal with it quickly as it will only escalate and can lead to a stress claim or action in the FWC.

WHAT IS BULLYING?

You may be surprised with what bullying looks like. By definition, workplace bullying is verbal, physical, social or psychological abuse by your employer or manager, another person or a group of people at work. It includes;

- Repeated hurtful remarks or attacks, or making fun of your work or you as a person;
- Sexual harassment, like unwelcome touching and sexually explicit comments and requests that make you uncomfortable;
- Playing mind games, ganging up on you, or other types of psychological harassment;

- Excluding you or stopping you from working with people or taking part in activities that relates to your work;
- Intimidation (making you feel less important and undervalued);
- Giving you pointless tasks that have nothing to do with your job;
- Giving you impossible jobs that can't be done in the given time or with the resources provided;
- Deliberately changing your work hours or schedule to make it difficult for you;
- Deliberately holding back information you need for getting your work done properly;
- Pushing, shoving, tripping, grabbing you in the workplace;
- Attacking or threatening with equipment or any other type of object that can be turned into a weapon; and
- Initiation or hazing – where you are made to do humiliating or inappropriate things in order to be accepted as part of the team.

REASONABLE MANAGEMENT ACTION

According to the Fair Work Act 2009, bullying does not include reasonable management action carried out in a reasonable manner. Reasonable management action may include;

- Performance management processes;
- Disciplinary action for misconduct;
- Informing a worker about unsatisfactory work performance or inappropriate work behaviour;
- Directing a worker to perform duties in keeping with their job;
- Maintaining reasonable workplace goals and standards. A manager is entitled to carry out actions and give directions that are consistent with managing the workplace. However, any reasonable management actions must not only be reasonable but must also be conducted in a reasonable manner. If not, their behaviour could still be considered to be bullying.

REPORT IT

Everyone has the right to be in a safe workplace free from violence, harassment and bullying. If you feel you are being bullied, don't sit on it and hope it will go away. Report it to your manager or another person in authority that you trust. If they don't act upon it, you can apply to the FWC for an order to stop the bullying.

Bullying can only be dealt with by the FWC if the person is still working for the company. If you are a manager or the employer, you have a legal responsibility under Occupational Health and Safety and anti-discrimination law to provide a safe workplace. Employers also have a duty of care for all employees' health and wellbeing while at work. For further information on how to handle bullying in the workplace, visit <https://www.fwc.gov.au/disputes-against/anti-bullying>

Source: Australian Human Rights Commission

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Every turf manager engaging contractors has EHS responsibilities for both the contractor and anyone else that could be affected by the contractor's activities



Sharing the load

Working with contractors presents unique environmental, health and safety (EHS) challenges. Every superintendent or turf manager engaging contractors has EHS responsibilities for both the contractor and anyone else that could be affected by the contractor's activities.

Remember, your contractors may be at particular risk if, for example, they are strangers to your workplace and unfamiliar with your EHS policies and procedures, site hazards and risks. If something happens, you could be liable unless you have implemented a programme of contractor management.

It's not all one-way traffic though and contractors have their own legal EHS responsibilities too. In this article we aim to help superintendents ensure that everyone understands the shared role required to be played in ensuring health and safety and environment protection when engaging contractors.

DUTY OF CARE

Most superintendents and turf managers will engage an independent contractor at some point, but many are oblivious to the duties they owe these contractors and the duty the contractor owes them. It does not matter how the person comes to work at your golf club or turf facility, if they are contractors, subcontractors or self-employed people, including the people who work for them, they all come under your responsibility. It is therefore imperative that your contractors are effectively engaged and then managed.

In all jurisdictions, workplace safety legislation states independent contractors engaged to undertake work for your business are considered to be workers of your business. This means that you have a primary duty of care to any contractor you engage and to any workers they may have working for them. You must ensure their health and safety, so far as is reasonably practicable, and you must also ensure their activities do not breach workplace safety and environmental legislation.

Where there are multiple parties working on your site, the role of each party needs to be determined from the beginning. If this is overlooked and an

incident occurs, the regulators will examine who the duty holders are under the legislation, what that duty was and what steps were taken or not taken to prevent the incident. The result – lost time, lost resources and stress as everyone involved starts playing the blame game.

Another common mistake many businesses make is engaging a contractor and then leaving them to their own devices. This effectively delegates all safety responsibility to the contractor. This is now an offence. Businesses that operate under the harmonised model work health and safety legislation (WHS Act) are now specifically prohibited from transferring all safety responsibilities. The legislation renders any such attempt as void. No matter how cleverly worded a contract may be, any clause within a contract that attempts the following will be deemed void and therefore unenforceable;

- Exclude, limit or modify the operation of the WHS Act;
- Exclude, limit or modify any duty owed under the WHS Act; or
- Transfer to another person/entity any work health and safety duty owed under the WHS Act.

WHAT SHOULD YOU BE DOING?

When looking to engage a contractor, the lowest price should not be your primary consideration. It may be that in some instances the cheapest contractor has the best safety record and evidence of an excellent safety management system. But if they don't, and you select a contractor based purely on price, it will be difficult to argue that you took all 'reasonably practicable' steps to ensure a safe work environment when engaging the contractor.

Once a contractor does come on board, the WHS Act requires that you consult with that contractor about the specific health and safety issues associated with the work and your site. In particular, you need to work with them to identify and minimise risks. It's then your job to monitor and communicate with your contractor to ensure they are doing what they said they would.

So, when anyone is working at your facility under a contract, agreement or other documented arrangement, prior to engagement you should;

ATM's compliance expert Terry Muir examines the important considerations superintendents and turf managers need to be aware of when they engage contractors at their facility and the EHS responsibilities of the respective parties.



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- Verify that the contractor is qualified, licensed and authorised to carry out the work.
- Assess the contractor's ability to perform the required work safely and efficiently.
- Inspect the tools and equipment the contractor will use to ensure they are suitable for the work and are well maintained. If you cannot inspect the tools or equipment directly, at least review evidence of their fitness for use, such as checking their latest maintenance record.
- Ask the contractor what training they have received in risk assessments.
- Review the contractor's site environment and safety plans and documents.
- Request that the contractor identifies safety issues with the work you require them to perform.
- Review the contractor's processes for safety induction, supervision, monitoring and risk assessment.
- Check the contractor's references.
- Obtain copies of their policies and procedures and insurances.
- Obtain evidence from the contractor regarding their history of;
 - Workers compensation claims;
 - Lost time injuries (i.e.: injuries that have resulted in a worker being unable to report to their next shift);
 - Medical treatment injuries; and
 - Operational safety (e.g.: details of prohibition).
- Verify the contractor's willingness to submit to regular monitoring and supervision.
- Review the contractor's environment and safety management system.

Remember, you owe the same duty of care to your contractors' workers as you do to your own workers. You are also responsible for safety and environmental hazards that exist on your premises. Therefore, it is important not to adopt the 'hands off' approach when working with contractors believing that you can remove yourself from liability in cases where contractors cause work-related injuries and pollution incidents to themselves, their employees or to third parties.

The duty of care ensures safety and health and environmental responsibilities are shared by everyone at your workplace. You will need to be clear about what you want your contractors to do, and they should be asked how they will do their work safely and with minimal risk.

It's not all one-way traffic though. Contractors are not absolved of their duty of care to their own workers and others in your workplace just because they are retained by you. If you have a contractor, they are required to:

- Comply with their obligations under work health and safety and environment legislation and the contract-specific environment health and safety requirements;



- Consult with you in relation to work health and safety duties and obligations to determine how shared responsibilities will be managed;
- Demonstrate that they have an effective EHS management system;
- Provide information on how health and safety and environmental risks have been eliminated or mitigated in work being undertaken by them;
- Comply with the procedures that you have implemented to protect workers' health and safety and the environment;
- Report all incidents that have affected the health and safety of people and the environment; and
- Provide sufficient information to allow you to monitor contract-specific EHS performance.

ENGAGE AND MANAGE

Contractor selection ultimately comes down to a due diligence process that ensures the right contractor has been chosen for that job. Yes, your contractor too is responsible for their own safety and supervising their employees ensuring they work safely. However, you and the golf club/turf facility (the principal) has significant level of control of work activity and you must establish the necessary degree of contact with the contractor specifically in areas of environmental health and safety risks associated with the work.

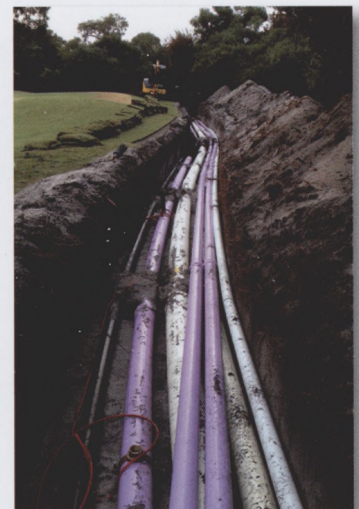
Both you and the contractor must have their own environment, health and safety systems in place. You must also ensure that your contractor receives all appropriate information regarding any risks or hazards known to you to enable the contractor to determine if or how these risks may affect their ability to do the job safely.

Importantly, the engagement of contractors does not generally result in poor environmental, health and safety outcomes. It is poor contractor engagement and management that can result in pollution events, workplace injury, and possible workplace safety violations that you could be liable for.

Most turf managers will engage a contractor at some point, but many are oblivious to the duties they owe these contractors and the duty the contractor owes them



Once a contractor comes on board, the WHS Act requires that you consult with them about specific health and safety issues associated with the work and your site



Golf courses can play a significant role in protecting and promoting bee populations

Bee positive



PHOTOS: IDRIS EBANS/COLIN WINTERTON



ATM's resident environmental expert Kate

Torgersen looks at how golf courses can play an important role in protecting and enhancing local bee populations.



This time of year is when we see an increase in bee activity with the warmer weather and flowers in bloom. Throughout this article we look at what options can be done to reduce the risk to golfers without calling in the pest controller, how important bees are and the role that golf courses can play to help their survival.

In researching this article I was surprised to find very little information available about bees on Australian golf courses. That's compared to the wealth of literature that can be found on international courses where it almost seems common practice for clubs to have beehives on site.

Type 'bees on golf courses' into Google and you will see the results are plentiful, with international courses participating in beekeeping initiatives, managing beehives as part of their regular maintenance and providing out of play and wildflower areas to encourage bee populations. Even chemical company Syngenta has a dedicated initiative called Operation Pollinator which helps restore pollinators in agricultural, golf and other landscapes by creating essential habitats.

By contrast, scroll down through the list of search results and the first mention of bees on Australian golf courses is a forum asking about the ruling if your ball happens to come to rest under a swarm of bees!

Bees are vital to our existence as they help to pollinate most of the crops we eat and many that feed

farm livestock. In fact, nearly two-thirds of Australia's agricultural production benefits from honey bee pollination. When we think of bees the majority of people instantly think of the European honey bee, but Australia also has over 1500 species of native bee with a small number of these (approximately 10) stinger-less.

Despite their prevalence, bee populations are always under threat whether it's through pests and diseases, intensive farming practices or the destruction of their natural habitat. And it's the latter where golf courses can play a significant role, especially in an urban environment where they are often some of the last remaining open green spaces.

To back up that very point, between 2012 and 2014 the AGCSA, in conjunction with the University of Melbourne, conducted a project which examined the biodiversity benefits of urban golf courses (see the article 'Green havens' which appeared in ATM Volume 16.5, Sept-Oct 2016, p6-12). As part of the study, researchers looked at native bee populations on 13 Melbourne golf courses and compared them to those found in nearby residential and park reserve settings.

Using a combination of sweep nets and coloured pan traps, researchers caught over 1000 individual bees and identified at least 30 different species of native bee. When compared to nearby residential areas and nature reserves, golf courses on average supported a greater number of different bee species.

Furthermore, researchers sampled these 'nature reserves' to see if more intact remnant habitats supported a greater number of bee species. Instead,

When a hive or swarm has been located and is a threat, don't call in the pest controller. Contact a local beekeeper who can come and remove them

they found that golf courses provided the most important refuge habitat for native bees in the urban landscape. This is probably due to the wide variety of nectar-bearing plants found within golf courses and because of their greater levels of maintenance (e.g. irrigation) which may increase food resource availability.

THINK BEE-FORE YOU ACT

Increased bee activity this time of year obviously is a safety hazard for golf course superintendents and turf managers to consider. But before you grab the phone and call your nearest pest controller, think twice about your options. There are many alternatives you can choose that will not only save money but also contribute to promoting bees.

Posting information on your website or in a regular newsletter notifying members that there is a higher risk of bee activity at this time of year is a good way to raise awareness among the membership (especially those who may have allergies).

Usually when people see or hear bees they immediately think danger. However, bees are just like any other animal. They will only attack if they feel threatened. Swarming bees are very docile and are not inclined to sting provided they are left alone and a few common sense precautions are taken.

When a hive or swarm has been located and is a threat, rope the area off and place a sign informing people of the danger (you may have a similar



procedure in place already for other dangerous fauna) and contact your local beekeeper.

Beekeeping has become more popular these days and it is very likely that you will have one nearby that you can call upon. Where possible they will relocate the bees for you to add to their hives and, if you're lucky, may even supply you with a few jars of honey! If you are unsure of a local beekeeper, there are many websites that you can source this information from, such as:

- **Aussie Apiarists Online**
www.aussieapiaristsonline.net
- **Apiarist Association**
www.vicbeekeepers.com.au
- **Western Australian Apiarists' Association**
<https://waas.org.au>
- **The Beekeepers Club**
www.beekeepers.org.au

The Western Australian Golf Club has nine hives on course and is looking to expand that number heading into this summer

Just one of the many obvious benefits of having hives on your course. Many golf clubs that collect honey from their hives sell it in the pro shop or clubhouse bar



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BUNKER
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Colin Winterton has kept bees at Medway Golf Club for more than 25 years



It was through one of these that I came across my local beekeeper. He now comes out a few times a year to collect any swarms we have on the course and relocates them to one of his several hives. Instead of paying for a pest controller to come and kill the bees, the club is saving money and as a bonus I get a nice supply of honey.

HIVES OF ACTIVITY

There are a number of turf managers around Australia and New Zealand that have hives on site and who are actively encouraging bees through the promotion of their native habitat. You will be amazed at how many clubs are collecting honey from their hives and selling it in the pro shop or clubhouse bar!

Many might be reluctant to place hives on site due to potential safety concerns, but talking to long-serving Medway Golf Club superintendent and beekeeper extraordinaire Colin Winterton, if properly managed and with a bit of common sense they provide wonderful benefits.

Colin has been a beekeeper most of his life and for the past 25 years has had a varying number of hives on his course in Melbourne's inner west. He currently has seven active hives which are located well out of play. Honey that is produced by the hives

is sold to members who on a daily basis will ask him how his bees are when out on the course. Colin also has hives at various other locations around Melbourne, including the 5th floor of the Rialto Tower in the CBD. The honey collected from these hives is used for high teas in the tower's restaurant.

One important factor Colin stresses for those wanting to keep beehives on their course is the need to know what you are doing. Whether it's you, a fellow staff member or a club member, he recommends undertaking one of the many beginner beekeeping courses which are available nowadays. Managing beehives can be time consuming, especially during the honey season, but as Colin attests for him he is at his most relaxed and stress-free when interacting with the hives and becomes totally absorbed in their activity.

John Spraggs, director of agronomy at Royal Wellington Golf Club in New Zealand, has a total of 28 hives on his course and is currently looking to expand that number as results over the past 12 months have been very positive. The club provides the site while a local beekeeper provides his skills and the hives.

Idris Evans, superintendent at The Western Australian Golf Club in Perth, is also looking to expand the number of hives he has on his course. Evans currently has nine hives which were installed about five years ago after contacting a local beekeeper. To stop the bees from swarming heading into summer, Evans is looking at adding a few more hives in the coming months.

"I wanted the hives on course as I think it's important to show that the golf course is helping to improve the environment," says Evans. "We have a local beekeeper who maintains them and the honey produced by the hives is sold in the clubhouse. The lady members love it!" 🐝

If you are looking to keep hives on your course it is recommended to undertake a beginner beekeeping course



A TO Z OF BEES

Bees are remarkable creatures. Ask any apiarist and they will happily regale you with facts and figures of these wonderfully industrious insects. Here are just a few;

- A standard-sized beehive typically contains between 10,000 and 60,000 bees.
- A queen bee, on her mating flights, will mate with a dozen or so drones (male bees), but then never mate again during her life. After mating, she is capable of producing up to 2000 fertilised eggs every day (in good conditions) for up to five years.
- The male bee (drone) hatches in spring, with its sole purpose being to mate with the queen on her mating flight at which point it dies. If still in the hive in autumn, it is expelled from the hive to die as it only consumes precious honey stores. It performs no tasks in the hive and needs to be fed by the worker bees.
- To make one kilogram of honey, a colony

of bees will collectively fly about 40,000 kilometres.

- Each worker bee (who are incidentally all female and perform all necessary tasks in the hive) can make around one teaspoon of honey in its lifetime (just six weeks). It is not all surplus, as it is used to feed the brood, regulate hive temperature and personal consumption. A productive hive on good conditions can store 20kg of surplus honey in a month. A good backyard hive may produce 30-50kg in a season.
- When worker bees are searching for food, they follow a meandering path. However, they are able to return to the hive in a straight line (hence the term 'bee-line') due to their unique navigating skills. When they reach the hive they perform a waggle dance on the combs to tell other worker bees how far and which direction to go.

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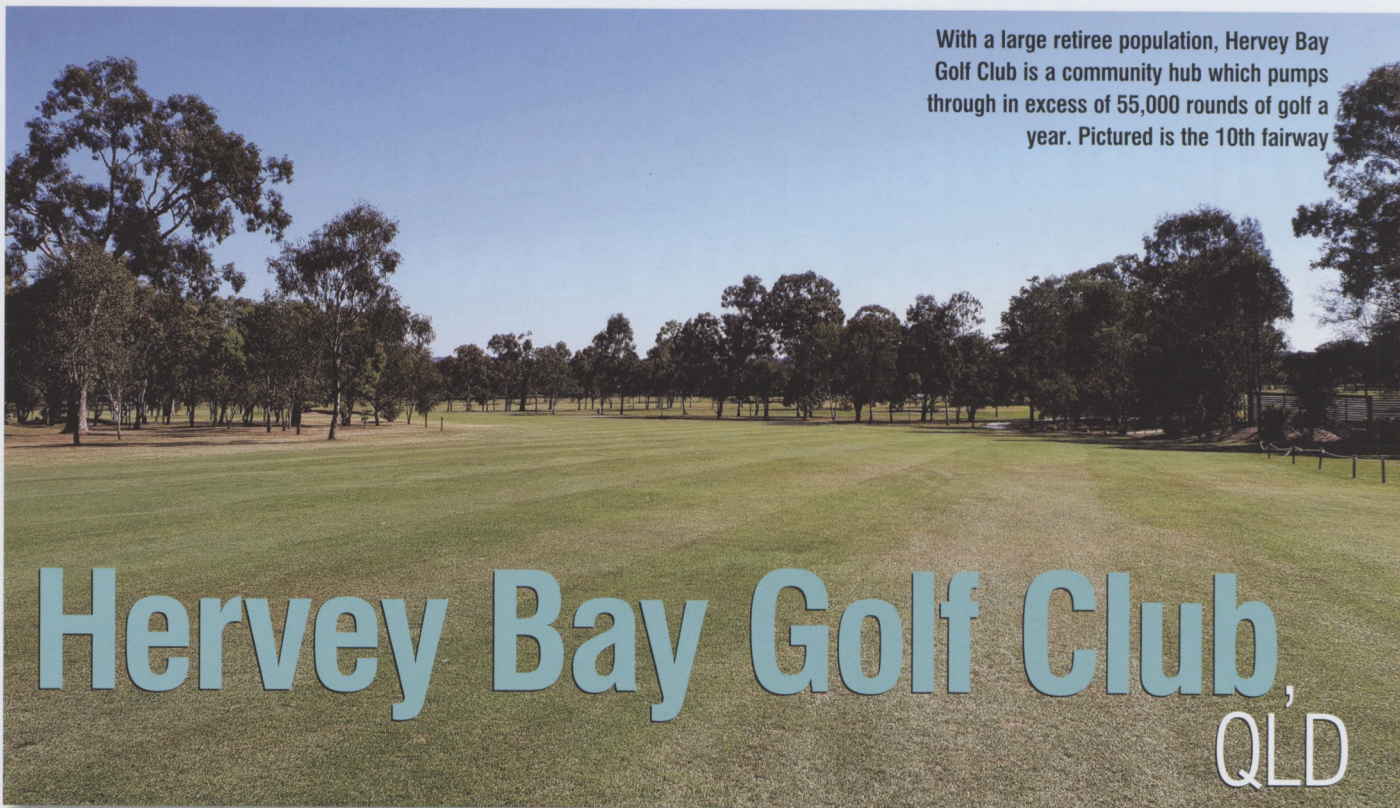
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With a large retiree population, Hervey Bay Golf Club is a community hub which pumps through in excess of 55,000 rounds of golf a year. Pictured is the 10th fairway

Hervey Bay Golf Club, QLD

Course superintendent at Hervey Bay Golf Club for the past five years, Peter Fraser is continuing a family tradition of working in the turf industry.

Superintendent: Peter Fraser (35).

Family: Wife Kristy, kids Tyler (11), Kye (6) and Kaylee (3).

Social media: On Facebook.

Years as a superintendent: Eight.

Association involvement: AGCSA member five years, GCSAQ.

Turf management career: Sanctuary Cove Golf & Country Club, Qld (apprentice and worked up to 3IC); Ocean Shores Country Club, NSW (greenkeeper then superintendent, 18 months); Coraki Golf Club, NSW (superintendent three years); Hervey Bay Golf Club, Qld (superintendent 5.5 years).

Qualifications: Certificate III in Sports Turf Management.

Major hobbies/past-times: Going to the gym, camping, golf and family time.

Where in Australia is Hervey Bay Golf Club and what is the club/township famous? Hervey Bay is about a 3.5 hour drive north of Brisbane on the Fraser Coast. It is most known for Australia's best whale watching experience and also the gateway to Fraser Island. It is a major tourist town and relies heavily on the tourist trade.

Tell us a bit about your background and how you came to be a superintendent. My love for the job all started with my dad being the golf course mechanic at Sanctuary Cove Golf & Country Club on the Gold Coast, which he is still after 30-plus years. I have been around this industry from a young age and have grown to love working on golf courses, so when I graduated high school I was offered an apprenticeship at Sanctuary Cove.

Once completed, I worked my way up to 3IC and with no option to progress I decided to move on and got a greenkeeping job at Ocean Shores Country Club. Not long into that job the super left and I was offered my first superintendent's role. I stayed on for a year and then decided to see a bit of Australia with the family. When I got back I got a job at a small country nine-hole course at Coraki in northern NSW. I was on my own for three years there and decided I wanted more so when the Hervey Bay job came up I applied and the rest is history.

The Hervey Bay crew (from left) comprises Rodney Newton, superintendent Peter Fraser, Tony Frankland, assistant superintendent Andy Wood, course volunteer Ron Raverty, Damien Ogilvie and Kody Duncan. Absent is volunteer Michael Tappenden





The Hervey Bay course is heavily tree-lined with root encroachment causing mounting issues for Fraser

Who were some of your early mentors and what did your early postings teach you about the industry and turf management? I learnt a lot from previous supers Dean Henderson and Darryl Edwards and assistant at the time Scott Calder at Sanctuary Cove, especially in regards to course presentation and staff management. I was always taught if the job can be finished on the day, stay and finish it.

How did the job at Hervey Bay GC come about and what do you like most about being the superintendent there? It was advertised on AGCSA website. I had been to Hervey Bay lots of times as a kid camping on the foreshore, so when it came up I jumped at the chance. It is always a challenge here and now there are a lot of projects underway and in the planning stages so there is never a dull moment. I have a great crew of guys who know what needs to be done and they also embrace the different projects that are on the cards.

Give us an overview of Hervey Bay GC and some of its unique characteristics from a course perspective. Our greens are small and with the front nine being more tree-lined than the back you have to play target golf. We have 40 bunkers all of which are greenside. We have no water carry holes on the front nine but a number out the back along with plenty of dogleg holes.

What are some of the unique features about Hervey Bay GC from a turf management perspective? Being a tree-lined course one of our main issues over the past few years has been tree root encroachment in fairways, tees and some greens. Combined with below average rainfall means those areas are getting the moisture sucked out of them, so I am in the process of exploring different options to combat this issue.

Is it an easy/hard facility to manage? What's the most challenging aspect? It has its moments.

With a high retirement age population, a lot of our members have their own carts which means plenty of cart damage. Also keeping enough water on the course is a battle – I am pumping out more than I can put in at times. We have a competition every day of the week so we have to plan very carefully with spraying fairways etc.

Take us through your turf management operations there. What changes have you implemented in terms of managing the course during your tenure as superintendent? When I first started here I instituted a biological fungicide programme so my staff and I were less exposed to chemicals. I have been slowly removing common couch from the greens and increasing them back to the original sizes and shapes as well. The use of Primo is been introduced on greens, tees and fairways, as well as gypsum and fertiliser applications on the fairways. Looking ahead, I'm hoping to level out some tees and dethatch the fairways more often as we have a major issue with grain and thatch.

Any special environmental considerations that you have to incorporate into the management of the course? Our course has a lot of wildlife which we have to be conscious of (e.g.: kangaroos,

Hervey Bay GC boasts 8000m² of Tidwarf greens which are renovated twice a year in February (solid-tined) and September (hollow-tined). Pictured is the 3rd





Six greens, including the 7th pictured, have been recently extended back out to their original size with Fraser trialling a *zoysia matrella* collar on three of these to try and keep common couch from encroaching into the Tifdwarf greens



Hervey Bay GC is currently upgrading its fairway drainage infrastructure



One of the projects Fraser has undertaken during his time as superintendent was the construction of a 700m² Tifdwarf nursery

cockatoos, corellas and even had the odd koala and jabiru). When we do any tree work our local tree loppers are always making sure there is no wildlife in the trees. If so it gets relocated or the tree stays.

What are some of the major challenges facing Hervey Bay GC both from a turf and club management perspective? From a turf management point it is probably the amount of cart use on the course; it will always be a problem due to Hervey Bay being a retirement town. The club is putting money into cart paths at tees and greens at the moment so eventually the course will be fully pathed.

Another would be water. Like a lot of clubs I am lucky that everything gets watered apart from rough (we have an endless supply of treated effluent), but since I have been here I have only experienced one proper 'wet season'. Constantly applying treated effluent and getting no rain really pushes our surfaces, fairways especially.

Outline any major course improvement works recently completed and/or highlight any ongoing or future works. There have been a lot of projects completed in last couple of years including construction of a 700m² Tifdwarf nursery, six green extensions (including *zoysia matrella* collars on three of them) and numerous cart path installations. We are now concentrating on fairway drainage and have recently completed an upgrade to our drainage lines on the 11th and 14th fairways. The existing 90mm ag

lines running down the sides of these fairways have been replaced with 225mm PVC lines with laterals. Holes 4 and 5 will have the same done in the next 1-2 years which will mean we can get golfers back on the course sooner and not have to close for days. We are also doing a lot of beautification works on the course such as cleaning up gardens, constructing new ones and mulching areas with trees to cut down on mowing.

The weather and climate is always a great leveller for a course superintendent. How has Mother Nature treated the course in recent times? As mentioned earlier, for most of my duration here it has been dry. The summer of 2016-2017 was the worst with basically no rain all summer. We then had algae block up all sprinklers and with that came the loss of a lot of turf, mostly on fairways. We also had a mini tornado rip through one section of the course uprooting a lot of trees and closing the course for close to a week. Last summer was finally a wet one and we had plenty of rain which again closed the course several times.

The one product I couldn't manage my course without is... gypsum and Tri-smart wetting agent. Gypsum for the sodium and Tri-smart is a great all-year-round wetting agent, especially in summer.

What are some pros and cons of being a regional superintendent? The only drawback is not being able to attend industry days in the cities. Aside from that, everything else is great!

Are expectations of course presentation and conditioning any less than that placed on your metropolitan counterparts? I don't think so because I was taught at a resort course and I try and bring that here. We also have a lot of members that have moved here from other prestigious clubs Australia wide so they have similar expectations to that.

Do you have to be more resourceful as a regional superintendent? Not sure about being more resourceful, but for me I don't have a full-time mechanic so we do it all ourselves (I'm lucky to have been taught by the best). In saying that, the club is now in a position that we can turn over our equipment more regularly than before which means less down time. There are a lot of small business owners at the club who are always willing to help out.

Do you use volunteers to assist with the management of the course and how important are they to your operations? We have numerous volunteers that help in the gardens and on the course. We have our own plant nursery which was set up and run by John and Janice Andrewartha for 25 years and also on the garden crew is Sandra



A mini tornado ripped through the Hervey Bay course in late January 2016, forcing the closure of the course for almost a week

and Kath. On the course I am lucky enough to have three regular volunteers – Ron Raverty, Michael Tappenden and Dave Phillips – who do everything from tee divotting, blowing cart paths and wick-wiping through to helping with renovations, green extension works and turfing. Their help is very much appreciated.

If you could change one thing about your job as a regional superintendent what would it be and why? Not a lot really. My staff are great, the committee is very supportive and the members are friendly; it's a great place to work!










How important are the relationships you have with other course supers/trade reps? Very

important. I'm always swapping advice or seeking advice from other supers and reps.

What have you got in your shed, what's your favourite piece of kit and what's on the wish list? The shed currently houses 3 x Toro 3150s, Toro 1750 Multi Pro, Toro 7200, Toro 4000-D, Toro Propass, 2 x Toro Workman utilities, Toro 5610, Toro 3500-D, John Deere 3235c (fairway), 2 x John Deere tractors, John Deere 1200A bunker rake, Mustang 2044 skid steer and two utes. The Multi Pro 1750 wins hands down as favourite machine because when I started here we used to spray by hand using a 1000L tanker. We have just ordered a Ventrac which will replace our 3500-D and also be able to do a lot more other tasks as well.

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◀ Above: After a spate of dry summers, the summer of 2017/2018 was a wet one for Hervey Bay, with 305mm in February alone

Right: Fairways are granular fertilised twice a year and gypsum applied every two months to combat sodium levels

Do you think regional/country superintendents have a better work-life balance than their metro counterparts? I can't answer for the metro guys, but I have a great work-life balance. There are times that it feels like you live at work, but hey, it's all part of it.

Favourite spot on your course? The 11th tee – a great elevated par 4 hole – and the 16th green because it overlooks the dam and down the long par five 13th.

What do you think is the most challenging aspect of a superintendent's role today? Paperwork! Says it all really...

What gives you the most job satisfaction? Seeing the end result of your plans and the hard work put in by everyone. Also the members and visitors enjoying the course and the positive feedback they give.

Most pleasing/rewarding moment during your time as Hervey Bay GC superintendent? That would have to be this year's Pro-Am with all the great comments on the course from the pros that come every year. 🏌️‍♂️



AT A GLANCE – HERVEY BAY GOLF CLUB, QLD

Course specs: Total property area is 60 hectares. We have 8000m² of Tifdwarf greens, 1ha of Queensland blue couch tees and 12ha of blue couch/common couch fairways. I have extended six greens back out to their original size and am trialling *zoysia matrella* collars to try and keep common couch encroaching into the greens. It is working well in that respect, but now need to try and keep the common couch out of the zoysia.

Members/rounds: 804/55,000 (not including social).

Major events: Fraser Coast Legends Classic, Hervey Bay Open and Mid-Amateur, 2019 Wide Bay Open.

Annual course budget: \$353,000 (not including wages).

Staff structure: Peter Fraser (superintendent), Andy Wood (2IC), Damien Ogilvie and Rodney Newton (greenkeepers), Kody Duncan (2nd year apprentice), Tony Frankland (gardener/groundsman), Ron Raverty and Michael Tappenden (both volunteers)

Climate/Annual Rainfall: Hot and humid summers and usually mild winters with an average annual rainfall of 860mm.

Soil types: Greens are a sandy loam and everywhere else is a wollum (heavy soil/clay) so when it is dry it's dry and when it is wet it's wet – there is not really any in between.

Water sources/irrigation system: Treated effluent for most of the course and town water



Just another picture perfect day on the Fraser Coast. Pictured is the 16th green

for the putting green because of its proximity to the clubhouse. We have a Rain Bird irrigation system with dual row on fairways and ring main for tees and greens. Rain Bird 700 electric valve-in-head sprinklers with satellites running off a Nimbus central control system. Three 22kW submersible pumps with an Amiad dual filter.

Cutting heights/regimes: Greens 3mm in summer (four days a week) and 3.5mm in winter; tees and collars 8mm summer and 9mm winter, with fairways 15mm year-round.

Renovations: Greens renovations are carried out twice a year. In February we solid tine, verticut, fertilise and topdress. September is a 12mm hollow tine, scarify, fertilise and heavy topdress. Before both renovations soil tests are carried out and amendments applied. Tees are solid tined and scarified shortly after, fairways are aerated and this year will be either scalped down or scarified.

Major disease pressures and how you combat them: Before I started as superintendent the main disease issues with the greens was fusarium. As soon as I started I implemented a biological monthly programme and my greens are the healthiest they have ever been and fungicide applications have dramatically reduced. With the tees and fairways, dollar spot is our main issue in the winter months, especially in the shaded areas.

Nutrition management: Year-round, apart from when we renovate the course, I have a set monthly foliar programme for the greens which consists of fertiliser, wetting agent, potassium silica, manganese, biological fungicide and root stimulant. I adjust the amount of nitrogen I put out throughout the year and make sure I put out plenty of potassium due to the course receiving a high amount of traffic. Tees are granular fertilised at renovation time then foliar fertilised throughout the year.

Fairways are granular fertilised twice a year with foliar applications before big events. I also apply gypsum to the fairways every two months to combat the sodium in the soil due to lack of rainfall and use of effluent water. I have been treating the fairways every two months now for a year and have seen a dramatic decrease in sodium in the soil, so I must be doing something right!



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International sports supplementary lighting business MLR has launched a new lighting rig specifically designed for golf courses, the first of its kind in the sports turf industry. Unveiled in mid-September in the UK, MLR has adapted its stadium lighting systems technology to develop the compact 'Orn' rig to provide lighting solutions for problematic golf course greens and fairways.

"MLR is proud to launch the world's first supplementary lighting rig designed specifically for golf," says MLR general manager Hermann Sather. "There's a great deal of pressure on greenkeepers to produce quality surfaces all year round, and the Orn can be a crucial weapon in that battle. This is our first venture into the golf market, but it won't be our last. Expect more exciting developments in the near future!"

A 4m-long single span light rig, the Orn is compact and easy to move around the course to spot treat problem areas. It is ideal for assisting in improving turf health in shaded areas, areas which receive poor light during winter and high traffic areas which struggle to recover. Weighing 320kg, it can be towed and is also light enough to be moved by hand. It can be disassembled in less than 30 minutes and due to its compact size is easy to store when not in use.

With a 24m² illumination footprint (4m long x 6m wide), the Orn is 1.7m high and has been designed

to be closer to the ground than conventional stadium rigs so as to minimise light spillage. The rig's mechanical structure can support a maximum of three spans, meaning it can be extended by one or two additional light booms. The Orn can be powered via 3-phase mains or a small portable 6kW generator and delivers a DLI (Daily Light Integral) of 25.6mol/m²/day.

Working with its global distributor Bernhard and Company, the Orn joins MLR's range of supplementary lighting rigs that have been servicing a multitude of sports stadiums since 1998. Steve Nixon, director for Bernhard and Company, says the addition of the Orn rig to its portfolio is an exciting development for the company.

"By combining our strong experience and knowledge of the golf market with MLR technical expertise, we are bringing a unique product that will revolutionise the way turf professionals manage difficult growth areas around their golf course," says Nixon.

In Australia, the Orn rig will be available through Bernhard and Company's Australian distributors Ventrac Australia. For more information contact Chris Stig on 0419 258 566 or email chris@ventracaus.com.au. In Queensland it will be available through Turfcare Solutions; contact Paul Lierse on 0425 280 305 or email tcsqld@gmail.com.



FLAGSTICK CREEPING BENTGRASS NOW AVAILABLE

AGCSA Bronze Partner Advanced Seed has been Australian distributors for Seed Research of Oregon for well over 10 years and is pleased to announce that the company's latest creeping bentgrass variety Flagstick is now available in Australia.

Flagstick was developed by screening for superior dollar spot resistance over many years and locations in both greens and fairway trials. It is the result of 20 years of continual research and this long-term development ensures Flagstick will have superior performance.

Flagstick is a versatile creeping bentgrass with high density and rapid tillering to keep out *Poa annua*. It has a fine leaf texture, a bright, dark green colour and has excellent resistance to many important turf diseases such as anthracnose, red thread, brown patch and dollar spot.

Flagstick can be used for seeding or sodding golf course greens, tees and fairways. It can be used for interseeding existing stands of creeping bentgrass to reduce inputs. Flagstick shows superior performance in close cut greens, tees or fairways and blends well with other Seed Research of Oregon varieties such as 007, SR 1150 and Tye. **For more information on Flagstick, contact Advanced Seed on (03) 9462 0340 or visit www.adseed.com.au.**

CHANGE OF OWNERSHIP FOR BROWN BROTHERS ENGINEERS

AxFlow, a Sweden-based family owned group, announced in mid-September that it had acquired AGCSA Bronze Partner company Brown Brothers Engineers. The companies affected by the change in ownership are Brown Brothers Engineers Ltd, Brown Brothers Engineers Australia P/L and Kelair Pumps Australia P/L.

AxFlow is the fluid handling solutions business group within Axel Johnson International. They specialise in the marketing, distribution and provision of complete sales and engineering services for high quality fluid handling equipment. The AxFlow Group is active in 26 countries, has approximately 700 employees and an annual turnover of 200 million Euro. Its acquisition of the three companies represents a major expansion into Australasia.

Current owner Ted Mace says that despite the change of ownership, effective from 1 October 2018, it will be business as usual with the goal to ensure that the transition is as smooth as possible. There will be no changes to the existing team and management, apart from a title change for CEO John Inkster who will become managing director.

"I am glad to hand over the ownership to AxFlow, with its long-term ownership view and strong values," says Mace. "It will present new opportunities for the group and its employees and be a reliable partner for our customers for many years to come."

Adds Ole Weiner, AxFlow Holding CEO: "We see a very good match between the Brown Brothers Engineers and AxFlow management cultures. This is crucial to our ambition to keep people with local expertise in place, while giving the acquired company the opportunities that come with being part of a larger group."

CUT HOLES LIKE A IPRO



AGCSA Bronze Partner Dint Golf Solutions is now the exclusive distributor in Australia of the iPro holecutter manufactured by UK-based BMS Products.

The iPro, used by more than 300 golf courses worldwide, is now more ergonomic with new anti-vibration custom moulded grips, giving the user a more dexterous feel while providing a solid grip when pounding the unit.

New modified blade top and super smooth material helps to eliminate hammer contact issues and drives the blade easily without compacting the rootzone. A bulls eye level built into the top handle ensures perfectly aligned holes are cut every time, while the auto-locking handle system means the holecutter is balanced to carry straight after cutting.

Also available with the iPro holecutter are an optional adjustable depth stop gauge which bolts into place and enables any user to consistently cut to the correct depth each time. There is also an optional docking station which protects greens from the holecutter's sharp edges and prolongs the life of the blades when transporting or storing in the shed. **For more information on the iPro holecutter, contact Dint Golf Solutions on (02) 9700 8113 or visit www.dint.com.au.**

HERITAGE SEEDS' PREMIER 3 KICKING GOALS

Heritage Seeds has launched its new turf perennial ryegrass variety Premier 3. The next generation of a long-standing Australian turf favourite, Premier 3 boasts fast establishment and proven wear tolerance, making it an excellent choice for sportsfield surfaces.

"Premier 3 is the latest product to come out of the Barenbrug breeding programme and responds to customer demand for a good-looking, dense

The iPro holecutter is used by more than 300 golf courses worldwide and is now available in Australia through Dint Golf Solutions



◀ **The next generation of a long-standing Australian turf favourite, Premier 3 ryegrass boasts fast establishment and proven wear tolerance, making it an excellent choice for sportsfield surfaces**

turf with proven wear tolerance for use on high-traffic sporting arenas,” explains Heritage Seeds turf portfolio manager Matt Merrick. “Innovation is a major driving force for the Barenbrug Group and we are continuously improving our grass varieties by applying new genetics and technologies to ensure that our customers can grow with confidence.”

With high endophyte, Premier 3 displays strong persistence and resistance to insect pests. It also has excellent disease and heat tolerance, and its deep green colour means it also ranks highly on visual appeal.

“This particular cultivar builds on the characteristics which made Premier II a leading ryegrass choice in Australia for over 20 years,” says Merrick. “Premier 3 has been independently tested in both Victoria and Queensland to ensure its suitability for Australian climates and has been a consistent top performer in these trials.”

Agronomist John Neylan (Turfgrass Consulting & Research) has been undertaking an independent assessment and statistical analysis of the ryegrass

trial at Heritage Seeds since it was seeded 18 months ago. Neylan notes that Premier 3 was among the best varieties for germination and seedling vigour and has been consistently amongst the top performers for turf quality and density. He adds that Premier 3 ryegrass has also been statistically amongst the best ryegrass cultivars for both winter and summer turf quality and density.

For more information about Premier 3, email Matt Merrick at mmerrick@heritageseeds.com.au or contact your local Nuturf representative.

KEEP HEDGES IN TRIM WITH SYNGENTA PGR



Recent trials have demonstrated that Syngenta's new plant growth regular Trimit can help improve the appearance and maintenance requirements of hedges in landscape areas. Trials with Trimit undertaken by Dr Sheldon Navie, vegetation manager at IVM Group, has shown that a single application can reduce hedge regrowth by up to 90 per cent.

This is due to the regulator's innovative mode of action – an early gibberellic acid inhibitor which suppresses the growth of terminal shoots for up to 12 months, while encouraging the plant's axillary buds to grow. The result is not only denser, greener

INDUSTRY APPOINTMENTS



NUTURF NABS NEAL

AGCSA Gold Partner Nuturf Australia announced the appointment of **Chris Neal** to the role of Territory Manager – NSW effective from 10 September.

Neal arrives at the company having spent the past 19 years at Bonville Golf Resort just outside of Coffs Harbour, including the past 11 years as superintendent. The club earlier this year hosted the inaugural Australian Ladies Classic tournament to great acclaim.

“Chris's experience in turf management is at the highest level possible and he is a great addition to the Nuturf team,” says Nuturf's national sales and operations manager **Andrew Melville**. “He will be a great resource for our customers and all turf practitioners in the northern NSW region.” **Neal can be contacted on 0417 428 501 or email chris.neal@nuturf.com.au.**



PROSSER TO AID ADE

Former long-standing Commonwealth Golf Club superintendent **Mark Prosser** has been appointed as golf territory manager for Melbourne-based Jacobsen distributor ADE Turf Equipment. Prosser resigned as superintendent of Commonwealth in May after more than 19 years and started his new role in mid-August.

“When I left Commonwealth, I knew that I wanted to stay in the industry,” says Prosser. It was important for me to still be involved in golf and talking to and helping out superintendents. I have known Tim (Coram, managing director ADE Turf Equipment) for some 20 years and this role ticked all the boxes for me.”

Prosser is based out of ADE's Chelsea Heights premises and can be contacted on 0400 533 050 or email mark@adeturf.com.au.

hedges that remain uniform for longer, but also healthier plants that can better withstand drought and other high-stress conditions. Using Trimmit also has the added benefit of reducing the need to prune, delivering significant savings in labour, clipping disposal, noise invasion and risk management issues.

"I have taken a vast number of measurements on plants treated with Trimmit and the difference is obvious," says Dr Navie. "Many of our clients trim large numbers of hedges along busy roads. Working in these areas comes with an inherent level of risk and usually also requires lane closures, traffic control and/or night works – all of which add to the cost of undertaking these activities.

"Trimmit has the potential to significantly reduce the frequency of required hedging in these areas, reducing the cost of managing the vegetation, the time spent by workers in these higher risk environments and the impact on road users.

"An application of Trimmit for the hedges and Barricade herbicide for weed control – at the same time – should mean that vegetation management

workers do not need to return to these areas for extended periods."

To find out more about how Trimmit can help with your hedging needs, contact your Syngenta agent or call 1800 022 035.

OUTCROSS 9060 LANDING SOON

AGCSA Platinum Partner Toro Australia is set to launch the all-new Outcross™ 9060, a revolutionary, turf-friendly machine that delivers on the benefits of both a tractor and a super-duty utility vehicle. Interested turf managers are being encouraged to register interest with their Toro rep now for what the company says will be an invaluable machine in the long standing battle turf managers face to 'do more with less':

"This machine is a time-saving, easy-to-use, multi-purpose, turf-friendly workhorse that will bring you year-round flexibility, consistency and productivity," says Brian Goodridge, Toro's Equipment Product Manager. "It's the first machine of its kind to be purpose built for the management of fine turf."

JACOBSEN LAUNCHES NEW TR SERIES TRIPLEX MOWERS

Textron Specialized Vehicles Inc. has launched the new Jacobsen TR series of reel mowers. The Jacobsen TR series features two new triplex cylinder mowers that will replace the existing TR-3 and Tri-King machines. Created with usability in mind, the new machines are built on a common platform for ease of servicing and operation, and are offered in both standard and premium models.

The standard TR320 model is 3WD and utilises a 24.8hp Kubota diesel engine. The cutting units on the TR320 can be raised to a vertical position, boasting the narrowest transport width in its class for access to narrow areas and ease of storage.

The TR320 also features a switch-operated cutting unit lift and lower system, an easy-to-use transmission pedal with a mechanical interlock for transport and mow speed control, and an analogue display screen.

The premium TR330 model is also 3WD and utilises the same 24.8hp Kubota diesel engine. In addition to the great features of the TR320, the TR330 has integrated AdaptiShift™ technology, which allows cutting units to move side-to-side to mow hard-to-reach areas while keeping operators safe.

The TR330 also features a mechanical suspension seat with arm rest for superior comfort and a joystick control for lifting and lowering cutting units. Electronic control systems, including an interlock speed control system and a digital display screen, are

included on the TR330 for intuitive diagnostic feedback and functionality.

According to Richard Comely, international product development director for Jacobsen equipment, the new TR series range has been developed to suit a range of applications and budget requirements. The TR320 and TR330 models are ideal solutions on sports fields, golf course maintenance, light municipal applications and fine turf areas.

"The TR320 is our standard triplex cylinder machine and has been built to provide an option for customers who may have a restricted budget or who simply want a machine with standard functionality," says Comely. "The TR330 is a premium

machine which has many fantastic features, such as electrical systems which provide instant feedback to the operator and on-board diagnostics for ease of servicing and maintenance. The addition of AdaptiShift is also a huge benefit for end-users and will allow them to mow hard-to-reach areas."

The new TR320 featured as an integral part of the Jacobsen fleet at Le Golf National in France which recently hosted the 2018 Ryder Cup. Superintendent Alejandro Reyes had a number of TR320s in operation, employing them to prepare the fairway collars.

For more information about the new Jacobsen TR series of cylinder mowers, contact your Jacobsen distributor or visit www.jacobsen.com



Jacobsen has released two models as part of its new TR Series cylinder mower range. Pictured is the TR320 standard model

NSWGCSA 

Above right: Long Reef Golf Club hosted a NSWGCSA walk 'n' talk event in late July

Above: Eastlake Golf Club superintendent Nathan Bradbury has taken over as acting NSWGCSA president

Under recent circumstances, I find myself filling the role of acting president of the New South Wales Golf Course Superintendents Association. Only completing three years as a board member, I didn't foresee myself holding such a position, but I do feel that I can deliver the desired outcomes to make the NSWGCSA a strong and supportive association.

With my elevation to acting president, further changes within the board ranks have seen **David Somerville** (Bankstown Golf Club) move to acting vice-president. Along with David's support and that of the other dedicated board members, we will strive to ensure we improve the overall offer from the association. This may be through additional technical support/articles, educational walk 'n' talks, greater membership offers and enjoyable golf days/events.

I'd like to sincerely thank the board of directors, members and sponsors for their support and understanding in recent times. The association has also committed itself to ensure a close working relationship with the AGCSA and general manager **Mark Unwin**. This relationship will help deliver the required outcomes (as mentioned above) for our members and sponsors.

This is the first ATM report for some time from the NSWGCSA and already this year the association has hosted a number of successful events. Nearly 150 attended the Annual Ambrose Day held at an immaculate Royal Canberra Golf Club (superintendent **Ben Grylewicz**), with the golf, dinner and entertainment proving a great success.

Peter Donkers (Long Reef Golf Club) hosted a walk 'n' talk in late July sponsored by Globe Growing Solutions. Around 50 attendees enjoyed a BBQ breakfast as Peter discussed his recent maintenance facility relocation along with ongoing



changes to the course. **Ron Duffy** (North Ryde Golf Club) followed this up with a similar walk 'n' talk session in late September.

Our next (and biggest) event will be the annual Rube Walkerden Day and AGM to be held at Stonecutters Ridge Golf Club on Wednesday 31 October. Stonecutters is quite a challenging layout which in previous years has hosted NSWPGA golf events. Course superintendent **David Aplitt** and his team always deliver outstanding results, ensuring major tournaments and events like ours are successful. I urge all members to come along to Stonecutters for what will no doubt be another successful day.

Finally, on behalf of all members, I would like to wish St Michael's Golf Club superintendent and fellow NSWGCSA board member **Russell Fletcher** a speedy recovery following his shock heart attack in early September. Russell, who only a few days earlier was representing the NSWGCSA at the annual state presidents gathering with the AGCSA in Melbourne, had an episode while out on his usual Sunday morning bike ride. He was duly transported to The Sutherland Hospital where he underwent immediate surgery to remove a blockage from his artery. The operation to install a stent was successful and Russell is now recuperating. We look forward to seeing you back soon mate.

NATHAN BRADBURY
PRESIDENT, NSWGCSA

TURF QLD



As we enter spring, the turf industry in South-East Queensland has suffered considerably with high levels of frost over the winter months causing shortages of supply. Obviously this will pick up during the warmer months as growth rates and production increases, however, at the time of writing this there is a shortage of natural turfgrass.

Turf Queensland has just finished a large face-to-face assessment of our industry across the state from Mossman in the north to the border in the south and those producers out west. It is pleasing to advise that the Queensland natural turfgrass production industry covers a total of 2725 hectares. It returns a GDP to the state of Queensland of \$327 million per annum while employing over 700 people.

The industry has been working heavily on water and energy use which in turn has assisted in waste

reduction of 10.5 per cent and increased yield of 14.5 per cent. The industry has invested heavily over the years in increased utilisation of technology both in machinery and product with an investment per farm of \$1.7 million over the past five years.

The turf industry in Queensland has been hit with both the red imported fire ant issue in the southeast of the state as well as crazy ants in North Queensland. Both of these pests are requiring considerable investigation. The turf industry currently has a number of pest and disease research and development projects being undertaken, in particular couch mites and couch smut. We await the outcomes of these with interest.

JIM VAUGHAN
TURF QUEENSLAND

It definitely has been dry in Melbourne these past three months which I'm sure all the footy players and fans are ecstatic about. Mother Nature also gave the ski fields a massive dump this winter which I was pumped about as well, along with the tens of thousands of Melbourne supporters who were up there. While the ski fields may have been deserted as the Demons made their Grand Final charge, no doubt there will be a late rush to catch some powder after they bowed out in the prelims!

In September it was great to meet with all the state superintendent association presidents and AGCSA chief executive Mark Unwin. The meeting was held to plan and discuss strategies that will help the states and national association continue to support our members in what is currently a challenging climate for golf course managers.

For the past two years, the VGCSA has been part of the Victorian Golf Industry Awards night and it was a privilege to honour two of our best again in August. The award categories presented were the Superintendent Recognition Award, received by Thirteenth Beach Golf Links superintendent **Steve Hewitt**, and Apprentice of the Year, which went to **Dechlan Turkington** (Royal Melbourne Golf Club).



Above: Kew Golf Club hosted the VGCSA's September education day

The hard work of greenkeeping staff and course managers often flies under the radar, so the recognition given to Steven and Dechlan in front of the whole Victorian golf industry was great for our association and its members.

It has also been wonderful to see the healthy level of member attendance at our recent meetings. Involvement continues to grow here in Victoria with numbers above 100 for the past three education meetings in 2018, including the most recent at Kew GC (host superintendent **Cam Hall**). The VGCSA committee tries its best to keep topics as relevant as possible by engaging and listening to member feedback.

While our guest speakers are experts in delivering constructive information to broaden knowledge, I also know everyone who attends these education meetings will tell you it is the course walks and the information shared during morning tea, lunch and after the events that everyone enjoys most. A massive thanks to all our guest speakers, committee and attendees who play a vital role in the success of these events.

Steven Hewitt (left, Superintendent Recognition Award) and Dechlan Turkington (below, Apprentice of the Year) were officially recognised at the Victorian Golf Industry Awards



BARRY PROCTOR
PRESIDENT, VGCSA



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Byron Bay Golf Club is nearing the end of a multi-year project to convert all its fairways across to Wintergreen couchgrass. Pictured is the 1st

It has been a very busy few months in Queensland with lots going on around the traps, an AGM and some very successful education days. With a drier than average winter, many courses in Queensland are under the pump to keep their turf in a strong position going into what looks like being a very hot and dry summer.

The GCSAQ recently held its AGM at the beautifully presented Noosa Springs GC, with the following board elected;

- **President:** Paul McLean (Sanctuary Cove)
- **Vice-president:** Shaun Cross (Byron Bay GC)
- **Treasurer:** Stuart Campbell (Maroochy River)
- **Secretary:** Garry McClymont (Twin Waters GC)
- **Committee:** John Halter (City GC), Phil Soegaard (Lakelands GC), Brendan Clarke (Atherton GC) and Matt Holmes (e-par).

For the record, **Keith Johnson** (Keperra GC) walked away with the spoils. A big thanks to the boys from Toro for donating the prizes yet again.

Greenway Turf Solutions held its annual 2IC education day which was again a success with more than 50 attendees benefitting from;

- A practical session on soil analysis interpretation;
- An in-depth look at beneficial bacteria and their role in soil and plant agronomy;
- Information on what happens when a disease sample arrives at the laboratory for identification;
- Developing preventative fungicide programmes for southeast Queensland conditions.

The day finished off with **Adam Mills** talking about stepping up to the role of superintendent at Royal Queensland Golf Club and his first year experiences in the job. There was good discussion after the sessions with a BBQ and drinks providing an opportunity for the next generation of turf managers to interact with their peers.

The Northern Rivers Golf Day was held at Maclean Golf Club with 50 players representing nine clubs and TAFE NSW. **John Causley**, his staff and an army of volunteers are to be commended on the condition of the golf course in the extreme dry conditions they have been experiencing. Thanks to all the sponsors again for making this day a success and **Shane Heaney** (Ocean Shores CC) for coordinating the event.

AROUND THE TRAPS...

It has been a busy time for a number of GCSAQ members, while for others it is about to get busier. GCSAQ vice-president **Shaun Cross** and the crew at Byron Bay are nearing the end of the long process to re-grass fairways. The 1st fairway was the last full fairway to be converted, leaving only half the 7th to go. Due to this hole requiring rectification because of major drainage and playability issues, the grassing process will be completed in spring next year once redesign and reconstruction of the fairway occurs from 135 metres out. The green and surrounds will be completed next winter.

Elsewhere, Teven Valley Golf Club owner **Paul Gumbleton** is working his way through the new Craig Parry design being constructed at Teven, just outside of Ballina in northern NSW. Paul, formerly the superintendent at Monash CC in Sydney, is undertaking this work himself with help from his trusty shaper mate Bob from down south. To date he has reconstructed and grassed four new TifEagle greens and is in the process of turfing all the other newly shaped playing surfaces with Zeon zoysia.

RACV Royal Pines Resort is hosting the 2018 Australian PGA Championship from 29 November to 2 December. Course superintendent **Lincoln Coombes** is looking for volunteers to help with the preparation of the championship golf course. This opportunity would suit sports turf managers/apprentices that are interested in furthering their career and gaining some experience working at one of Australia's iconic golf resorts in full tournament preparation mode. If you would like to be a part of this, please email lincoln_coombes@racv.com.au.

GCSAQ sponsor Greenway Turf Solutions recently hosted a successful 2IC education day



And speaking of tournament preparations, Royal Queensland Golf Club will be the venue for the first ever 'GCSAQ Sportsman's Lunch'. The event will be held on 5 November and will be headlined by course designer and former pro **Mike Clayton** and PGA rules guru **Andrew Langford-Jones**.

MAN DAY HEADS TO ROCKY

The GCSAQ has run two workshops this year to help promote mental health awareness among members. The first of these was at Nudgee Golf Club in April, while the latest was held at Rockhampton Golf Club in September. The latter meeting also provided an opportunity to take an association education day to a smaller regional area.

In the past, GCSAQ education days have been held in metro areas such as the Gold Coast, Brisbane, Sunshine Coast and Cairns. It is hoped that as membership and awareness grows in regional areas, superintendents in these areas will interact with their colleagues in metro areas more, sharing information for the benefit of all.

Chaired by GCSAQ president Paul McLean, the meeting's main aim was to relay information on mental health, as well as provide an open forum to discuss issues common to superintendents and course staff everywhere.

Matt Holmes (epar) presented on mental health legislative requirements of golf clubs. Among the topics Matt covered included the identification of



various mental states and the requirements of golf businesses in handling staff that may have mental health issues in the workplace. He also provided answers to some common questions backed up with real-life cases in the workplace.

Also presenting was **Simon Santosha** from Men and Family Counselling and Consultancy, who discussed men's mental health, family and general wellbeing counselling, along with practical strategies for dealing with mental health issues for individuals and staff in the workplace.

The current GCSAQ committee is committed to bringing such days to regional areas more often.

PAUL MCLEAN
PRESIDENT, GCSAQ

Course reconstruction works continue apace at Teven Valley Golf Club in northern NSW

TURF NSW

It has been a busy few months for Turf NSW with a successful integrated pest management (IPM) workshop conducted in late August with IPM Technologies in conjunction with the Turf NSW AGM.

Growers and industry representatives discussed the role IPM can play in a pest management programme together with 'hands on skills' in monitoring beneficial pest populations. A simple plan was identified by the group to control priority pests including mites. Further visits will be undertaken with turf producers and the wider industry in the coming months to investigate further research around biological, cultural and chemical control options.

Turf NSW congratulates the re-election of the executive and new members to the Turf NSW committee. The full committee is;

- **President:** Paul Saad (Southern Cross Turf)
- **Vice-president:** Steve Vella (A View Turf)
- **Treasurer:** Anthony Muscat (Greener Lawn Supplies)
- **Committee:** Patrick Muscat (Musturf), Neale Tweedie (Grech's Turf Supplies), Joe Muscat (Greener Lawn Supplies), Paul Saliba (Qualturf) and Troy Franks (Dad 'n' Dave's Turf).

- **Non-voting members:** Josh Stephenson (Windsor Rural) and David Raison (Greenspace Turf Cooperative)

Turf NSW has also been helping producers with information on the drought, particularly in regional areas. Growers are also reminded that new legislation for manual hand stack harvesters came into effect on 1 October.

Finally, planning for the Turf NSW Grass Roots Field Day on 30 October 2018 at Evergreen Turf is well underway. To run from 10am-1pm, the day will focus on soil preparation, understanding turf varieties and feature a variety of demonstrations on harvesting turf, washing turf, instant play turf and the use of compost to aid wear and tear and improve water use efficiency. Lunch is included. The day is targeted at landscapers, landscape architects, specifiers, golf and sports turf professionals.

Please RSVP to Matthew Plunkett on 0434 147 988 or info@turfnsw.com.au, or go to the website www.turfaustralia.com.au/events by 25 October.

MATTHEW PLUNKETT
IDO, TURF NSW

ON THE MOVE



AARON BANKS: From assistant superintendent to superintendent Bonville Golf Resort, NSW.

GLENN BEAULCERC: From superintendent Logan City Golf Club, Qld to superintendent Oxley Golf Club, Qld.

PETER DUNN: From Yowani Golf Club, ACT to assistant superintendent Federal Golf Club, ACT.

SHANE GEORGE: From superintendent Links Shell Cove, NSW to assistant superintendent Concord Golf Club, NSW.

GARETH HAMMOND: From assistant superintendent NSW Golf Club, NSW to superintendent Terrey Hills Golf Club, NSW.

CHRIS HOWE: From assistant superintendent to superintendent Concord Golf Club, NSW.

SHANE MCDONALD: Departed as superintendent Oxley Golf Club, Qld.

MARK PARKER: From superintendent Concord Golf Club, NSW to superintendent New South Wales Golf Club, NSW.

STA SA



Keynote speaker Kim Syrus entertains (above), while Damian Hough discusses his management practices at Adelaide Oval



As another year goes by, almost 100 guests were privileged to a variety of insightful presentations at the annual STA South Australia Turf Seminar held in mid-August at Adelaide Oval.

Thanks to **Ben Page** (Cricket Australia) and **Scott Patching** (SANFL) for presenting on the growth of cricket and Australian Rules football in South Australia. It is fantastic to hear both sports are strengthening despite the competition from alternative options such as computer games and social media. In particular, the significant increases in women's participation have been pleasing.

The management of venues and playing surfaces becomes critical to cope with the rates of growth. Ensuring we are securing more venues and venues are female-friendly will be a challenge the industry needs to address.

STA SA president **Gerry Charlton** provided a passionate speech on TAFE SA's decision to abandon the Certificate III in Sports Turf Management and the lack of government funding in this sector. Gerry, with support from other peak industry bodies, has sought for the reinstatement of funding and a reconsideration of this decision.

Keynote presenter this year was none other than **Kim Syrus**. Kim talked about his journey from a qualified horticulturalist starting out at a rose nursery in Myponga to his rise as a well-known media personality. Put a microphone or camera in front of Kim and he will do the rest.

Kim is clearly passionate and was honest about the horticulture industry and provided information

about modern trends affecting our industry. Kim spoke about water as a key issue and how its management is critical to the garden industry. Gardens provide so much value for health (mental and physical), aesthetics, cooling and the economy which policymakers need to recognise.

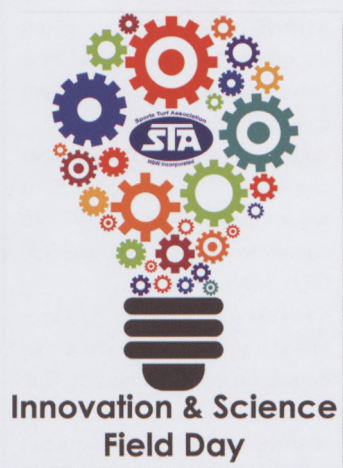
Jim Sinclair from SafeWork SA spoke on the importance of workplace safety and the assistance his organisation can provide to the turf industry. Having to contend with managing large machinery, herbicide and pesticide applications, recycled water and plumbing requirements, player safety, as well as working outside of normal business hours, the WHS risks turf managers face are far greater than many other industries. It's great to know the support is there from SafeWork SA.

There was some great interaction with **Shannon Andrews**, senior policy officer from the Department for Environment and Water, about groundwater allocations and the implications of this. It's pleasing to hear the Department will be providing plenty of opportunity for consultation on the allocations.

After the presentations it was inspiring to step foot onto the greatest sporting venue in the world and listen to head curator **Damian Hough** give us some insight about the management of Adelaide Oval. Thanks also to Damian for accepting a nomination to sit on the STA SA committee and Adelaide Oval Stadium Management Authority for supporting the day.

TINA HAMDEN
SECRETARY, STA SA

STA NSW



STA NSW is hosting an Innovation & Science Field Day on 4 December at Sydney University

The STA NSW committee recently got back to its grassroots and lent some expertise to the team at Broken Hill Council. The council reached out earlier this year for some advice on preparation for their Alma Oval upgrade after continued issues with drainage and coverage on the surface of their wicket square.

The project was carried out over five days and we got to utilise my favourite piece of machinery, the 'wicket stripper'. The young team at Broken Hill were grateful to have the legendary **Graeme Logan** share his knowledge and we are really pleased with the results.

STA NSW held the inaugural 'W201 Wicket Accreditation Programme' at the SCG on Tuesday 25 September. Thanks to **Justin Groves**, **Adam Lewis** and **Johnny Noafal** (all SCG), **Greg Davidson** (Cricket Australia) and the great **Doug Bollinger** for their knowledge and support. We are looking forward to taking the 'W101' programme to regional areas in 2019.

On 4 December, we will be hosting what we believe is the first of its kind in our industry – the STA NSW Innovation & Science Field Day. The event will be at Sydney University and will showcase the very latest in machinery & chemistries. We will have a Nano Bubble injector, GPS sprayers, robotic line markers, hybrid turf, Field Scout technologies, Air2G2, along with new chemistries. And due to its prevalence, we have also added a session on ground pearl. Go to the STA NSW Facebook page to book your spot.

As this publication is released, we will have just wrapped up our AGM and election of our committee. I am not expecting many changes to the faces and with this dedicated team we look forward to continuing to provide a community for the sports turf industry in NSW.

CHRIS CHAPMAN
PRESIDENT, STA NSW

TURF AUSTRALIA



Research and development in turf is seeing some strong projects at the moment that will provide benefit for the wider industry. Currently, turf grower levy funds are supporting research into couch smut and turf mites.

The University of Queensland is managing the 'Development of an integrated disease management plan for Couch smut' project (TU17002) with the research team headed up by **Dr Andrew Gerring** and **Dr Nga Tran**. The project will look at a number of different angles to find a solution to the fungus for the turf industry, including its life cycle, current prevalence in the industry, resistance screening and control options. The team has already identified that there are aspects of the disease life cycle that are poorly understood, particularly transmission.

Entomologist **Jessica Page** and **Dr Paul Horne** (both IPM Technologies) are heading up the 'Integrated Pest Management of phytophagous (plant-feeding) mites on turfgrass' project (TU17003). Workshops have been held in Queensland and New South Wales which are the first steps in understanding the issues faced by turf producers specifically with mites.

Turf Australia is about to undertake the largest industry survey ever conducted to gather production information. The levy-funded 'Turf Industry Statistics

2017-2018 to 2019-2021' project (TU17005) will identify the current size of the turf production industry, variety production, value of turf, the markets for that turf, employment within the industry and future investment. We have a great industry but really lack solid data to help drive further investment.

There are a few other projects being reviewed by Hort Innovation at the moment and Turf Australia will keep the industry updated on the outcomes of existing and new projects.

Planning for 2019 events is well underway and we look forward to an active year of networking and educational opportunities, as well as the introduction of a new event – **Women in Turf**. Women play a very big role in the turf production industry, particularly with many businesses being family owned. Whether the role is running the office, looking after orders, accounts and staff management, or a hands-on roll on the farm, or both, the value that women bring to the industry is immense. Turf Australia has identified that an event specifically for women in the turf industry would provide a great opportunity to build a stronger community.



As part of a current turf levy funded research project on mites, workshops were held in Queensland and New South Wales to get an understanding of the issues they cause turf producers

JENNY ZADRO
MARKET DEVELOPMENT MANAGER,
TURF AUSTRALIA

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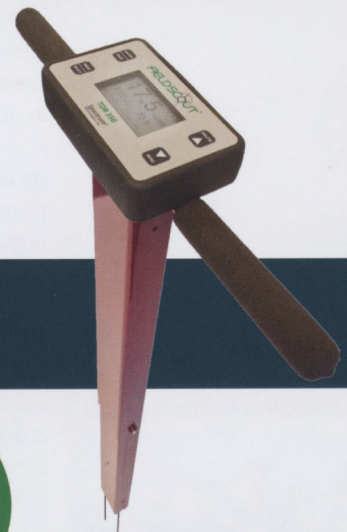
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STA VIC



Above right: The panel of city council representatives, which included Roger Barbetti (Bendigo), Marc Carson (Wyndham) and Paul Cotter (Geelong), discussed a wide variety of management issues

Above: The MCG proved the perfect venue for the STA Victoria's annual Sports Turf Seminar in late July. Capping it off, the arena's giant digital scoreboards showcased the association's major sponsors

John Shannon at his best during the STA Victoria Pitch Preparation Day held at Melbourne Grammar School



The STA Victoria's biggest annual event, the Sports Turf Seminar, was held on 25 July 2018 at the home of sport, the iconic MCG, proudly sponsored by Toro/Dawn Mowers/AgPower. The STA Victoria AGM was held prior to the start of the education sessions, with the election of the executive and general committee for 2018/19.

President **Danny Edmunds** welcomed new committee members **Steve Cole** (Lilydale Instant Lawn) and **Daniel Sacco** (Urban Maintenance Systems) and also thanked **Grant Greenway** (Endeavour Turf Professionals) who retired from the committee after many years of service.

The 'G' sparkled on the day, such an outstanding venue and a fabulous reflection of what our industry stands for. Capping it off, the digital scoreboard showcased our major sponsors' products. Our member sponsors were jubilant with the interest in many of their products from the delegates. It is a great forum to expose companies to a dedicated quorum of turf professionals. Thank you to all sponsors and members who attended the day, helping to make it a memorable and informative event.

Michael Salvatore (MCG Arenas Operation Manager) opened the day with a history lesson of the MCG. That was followed by an update from **John Neylan** on the STA Victoria-funded research project 'Compare possible hours of use for different sports field construction types and maintenance inputs'.

Of great interest to delegates was the panel of city council representatives which included **Roger Barbetti** (Bendigo), **Marc Carson** (Wyndham) and **Paul Cotter** (Geelong). Our committee put together a list of questions from issues noted by our panel, with discussion surrounding;

- Capital upgrades (priorities, funding and documentation);
- Council monitoring and recording hours of use and any restrictions on clubs;
- Mowing heights of warm-season grasses in summer;

- Managing of seasonal changeover due to reducing length of seasons; and
- Programmes for sportsfield lighting upgrades.

Danny Condran (Dawn Mowers) gave a rundown of future Toro products, while **Erik Kinlon** (HG Sports Turf) spoke about the organisation's history and latest projects. The construction and importance of subgrades was explained by **Paul Curry** (Sporteng) before **Mike De Luca** (Syngenta) presented on a good programmed approach in sportsfield management.

John Shannon took questions after showing the 2017 Pitch Preparation Day video recorded at Flack Park in Port Melbourne (more on the 2018 event below). **Grant Greenway** from Endeavour Turf Professionals discussed asset auditing and performance monitoring of sports grounds.

Following lunch, our Women's Sporting Panel then took the stage, consisting of **Cathryn Fitzpatrick** (coaching talent specialist with Cricket Victoria), **Gulcan Koca** (community football co-ordinator, Melbourne Victory) and **Georgia Walker** (inaugural captain of the Southern Saints – St. Kilda's AFLW team). The girls spoke about their experiences playing at an elite level and what they see for the future of the codes and women in sport. AFL legend **Leigh Montagna** closed out the day with a Q&A session outlining his career at St Kilda.

From feedback to date, the MCG as a venue for this event was well received and so we are happy to announce that next year's Sports Turf Seminar will again be held there on Wednesday 10 July, 2019. We would love to hear from you if you have ideas for speakers/topics for any future events – please email STA Victoria vic@sportsturf.asn.au.

Our very popular Pitch Preparation Day was held again at Melbourne Grammar School's Flack Park facility in Port Melbourne on 11 September 2018. In excess of 100 people attended from across Melbourne and Victoria. We thank our major sponsors for the day – Mentay and Sustainable Machinery – and also thank Melbourne Grammar School for the use of their fabulous grounds.



Far left: STA Victoria committee member Mark Doyle assists Marcus Jackman with cylinder mower set-up

Left: Scarifiers, brushes and groomers were all demonstrated as part of the Pitch Preparation Day

This year the weather was kind to us with a full programme compiled and executed by **John Shannon, Chris Cay, Brad Baptist** and a passionate team of helpers. Many of the delegates were returning for the second year in a row.

John split the attendees into two groups for the day and subjects covered included all you need to know when building, preparing and maintaining a quality cricket pitch. Simultaneously, the STA Victoria committee seized the opportunity to hold a workshop to plan the future direction and events for the next 12 months.

Finally, the STA Victoria's research project on the hours of use for different sports field construction types and maintenance inputs is now entering its final phase. The 2018 winter assessment has been completed which makes six assessments in total over the past 18 months. The winter assessment has provided several important observations as follows;

- Encouraging late summer growth and high turf density in couchgrass and kikuyu is critical in maintaining a good winter playing surface. The traffic loads and subsequent turf thinning have appeared to increase compared to 2017.
- A well-constructed sand-based field, even with a moderate level of maintenance, provides the highest use sportsfield surface.
- While the winter was relatively dry, the soil-based fields still have very limited hours of use due to the increase in soil moisture compared to the sand field.

A final assessment is planned for late November 2018 so as to assess spring growth rates and turf recovery. All previous reports and milestone updates relating to this STA Victoria project can be viewed online at www.vicsportsturf.asn.au.

STA VIC COMMITTEE



With springtime well and truly upon us now, we are already starting to see the effects of turfgrass growth in our parks and recreational areas.

The usual flush of turf growth is a difficult balancing act for maintenance contractors and facility managers to achieve. The increased mowing requirements come at a time when most teams are scrambling to change over codes and prep cricket blocks etc.

I was recently involved in a meeting with a selection of other stakeholders regarding the development of what will be New Zealand's first 'IS-rated' (Infrastructure Sustainability) sports park. The Scott Point Park in Auckland is looking to set the standard for sports park innovation and sustainability across New Zealand.

The project will feature a number of multi-use platforms with a mix of natural turf, hybrid and synthetic surfaces being considered at the concept phase. The key difference of this development is that it must demonstrate a reduction in the reliance of potable water, minimise carbon emissions, optimise carbon sequestration and promote technologies that utilise renewable energy sources. More about the project can be read at www.isca.org.au.

Aside from this exciting development, there are a number of other key venues around the



country looking at embarking upon resurfacing projects and in doing so utilising modern turfgrass reinforcement technologies such as hybrid systems. These systems are having an increasing relevance across the centres as they allow councils to offer all the benefits of a 'natural turf' surface whilst facilitating increased playability and operational hours (when managed and maintained in line with supplier guidelines).

The recent completion of McLean Park in Napier with reinforced turf has further demonstrated the value of this technology when it comes to utilising facilities (in particular regional stadiums in the provinces) for more than 'just sport'.

A reinforced surface allows the stakeholders to host multiple events across the community sector and in so doing increase the economic viability of their facility, as well as promote the relevance of their region to the rest of the country and overseas visitors.

The recent completion of McLean Park in Napier with reinforced turf has further demonstrated the value of this technology when it comes to utilising facilities for more than just sport

**WILL BOWDEN
COMMITTEE, STANZ**

After a long stint out of the presidential spotlight (and thanks to a classic stitch-up at the recent AGM), I have accepted the president's role for the TGCSA after riding shotgun to **Mark Johnson** (Ulverstone Golf Club) for the last five years.

Mark has been a tremendous president for our association and unfortunately had to step down after taking on the role of general manager at his club last year. Mark's passion, people skills and leadership has left the TGCSA in a very healthy position moving forward and we trust that we can keep the association heading in the same direction. The new TGCSA committee is;

- **President:** Phil Hill (Barnbougle)
- **Vice-president:** Tony Smith (Launceston GC)
- **Secretary:** Danny Gilligan (Tasmania GC)
- **Treasurer:** Gary Byard (Tam O'Shanter GC)
- **Committee:** Brian Dunn (University of Tasmania Stadium), James Pyke (Mowbray GC), Dylan Knight and Tom Filtness (both Kingston Beach Golf Club).

The TGCSA annual state conference and AGM was held at Tamar Valley Resort in August and I can most certainly say that it was once again very successful. A huge thank you to Toro/Pellows Saws and Mowers for being the major sponsor for our event. A classy group of keynote speakers captivated the audience with their presentations which covered a good cross-section of most turf management areas.

Tony Hemming (Optus Stadium) led off with a very interesting presentation on the construction and grow-in of Australia's newest multi-purpose arena. **Rod Hinwood** (Ellerston GC) followed in the afternoon session on day one and gave us an insight into the past, present and future of one of the country's most exclusive golf courses. In true Roddy style it was a very entertaining presentation.

Day two was kicked off by **Rob Savedra** from Melbourne's Wesley College. Rob's topic 'Rising

from adversity' was a wake-up call to us all when a fire destroys a big part of your establishment and the long road to recovery that is required. **Charlie Giffard** (Indooroopilly GC) was our last fly-in and as Charlie would say we 'left the best until last'! Charlie's presentation made a big impact on what can happen in a major flood event and the clean-up that followed – what a monumental task!

Other presentations which made for a very successful conference were given by **Nathan Tovey** (e-par), Total Ag Solutions (Kubota/Baroness range), **Brett Chivers** (Globe Growing Solutions), **Peter Kirby** (Adama/Nuturf/Serve-Ag) and **Nadeem Zreikat** (Colin Campbell).

A huge thank you must also go to **Dan Docherty** (Syngenta) for presenting on tools to create efficiencies within the workplace, as well as presenting our TGCSA Apprentice of the Year Award to **Bryce Walsh** (Royal Hobart Golf Club). As many will know, Bryce went was named joint winner of the AGCSA Graduate of the Year Award at the New Zealand conference in June as well. Congratulations to Bryce and of course his mentors **Steve Lewis** (superintendent) and **Gareth Kelly** (2IC).

The TGCSA conference was extremely well supported with around 80 delegates and trade representatives and a small trade show which doubled as the venue for happy hour at the end of the opening day. The President's Dinner followed where we were entertained by **David Fox** (Hawthorn Football Club, Tas) who gave us an insight into the benefits and forward movements of Hawthorn in Tasmania. It was a great night and thanks to everyone involved for making it a success.

AROUND THE TRAPS...

- **Isaac Jones** has been promoted to superintendent at Ulverstone Golf Club;
- **Tony Smith** (superintendent Launceston GC) continues with stripping the organic matter out of his greens (4, 5 and 15 are done);
- **Chris Hay** has migrated north from Kingborough Twin Ovals to take a position on the crew at University of Tasmania Stadium (formerly Aurora Stadium);
- **Neville 'Mooch' Coulson** (Toro Pellows Saws and Mowers) is retiring. Well done Mooch!
- **Geoff Stephens** (ex-Toro WA) has purchased a share in Pellows Saws and Mowers. Good luck Stevo!
- Arm End Golf Development near Hobart has been given the green light for effluent water supply.

The next TGCSA event will be in Hobart in mid-November sponsored by Serve-Ag.

PHIL HILL
PRESIDENT, TGCSA

ON THE MOVE

BARRY PROCTOR: From superintendent Cranbourne Golf Club, Vic to superintendent Woodlands Golf Club, Vic.

LIAM SPOONER: Appointed superintendent Secrets Golf Club, WA.



ROD TATT: Appointed superintendent Mount Lawley Golf Club, WA.

KIM TONKIN: From superintendent Penfield Golf Club, SA to assistant superintendent Mt Osmond Golf Club, SA.

WADE WILLIAMS: From assistant superintendent to superintendent Federal Golf Club, ACT.

SIMON WORK: From assistant superintendent Mt Osmond Golf Club, SA to superintendent North Adelaide Golf Links, SA.

ANDREW WRIGHT: From superintendent Gisborne Golf Club, Vic to superintendent Brighton Public Golf Course, Vic.

CLARIFICATION

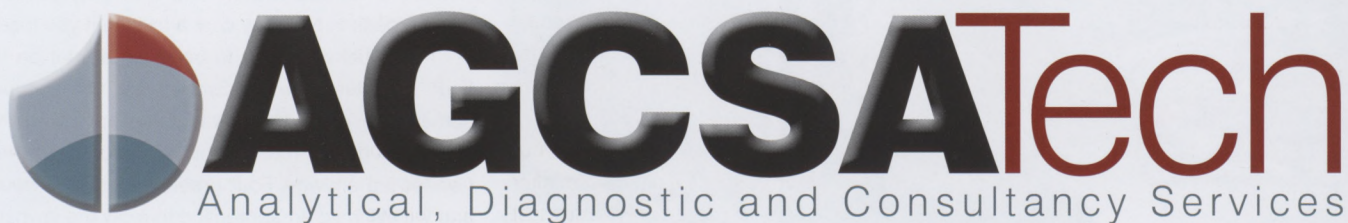
In the July-August 2018 edition (Volume 20.4), Australian Turfgrass Management Journal carried an article titled '**Three decades of excellence**' (p22-26) on 2018 Excellence in Golf Course Management Award winner Mark O'Sullivan from Roseville Golf Club. O'Sullivan contacted ATM shortly after publication wishing to clarify that during the major course works mentioned in the article, there were many people and companies involved.

As referred to in the article '**Roseville set to bloom**' (p68-69, ATM Volume 11.4 - July-August 2009), the following people were significant contributors to

the Roseville water storage and course redesign project:

- The late **Ron Hayden**, who was a driving force behind the project as the greens chairman and committee member who attended weekly site meetings and liaised with the board;
- **Jim Wilcher**, from Golf by Design, who was the project manager and designer for the water storage and course redesign; and
- **Jason Seagg**, the club's general manager at the time, who kept the members informed on how the work was progressing and negotiated with councils and governments.

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If you can't laugh at yourself then you should consider a career change - Rob Bradley

Australia is full of introduced pests – rabbits, foxes, cane toads. For the past 30 years the Australian turf management fraternity has had to put up with another... Kiwi-born Rob Bradley who has just clocked up a quarter of a century as Curlewis Golf Club superintendent.



Rob Bradley - brand ambassador

The black sheep

I still think my father, Bob, a life member of the New Zealand Golf Course Superintendents Association, wanted me out of the country so I didn't lower New Zealand golf's new-found level of professionalism. My homeland's loss was Australia's gain and this year I've notched up 25 years as course superintendent at Curlewis Golf Club on the Bellarine Peninsula and 30 years in Australia! I've taken an Australian's job, taken an Australian wife (now ex), own a piece of Australian terra firma and got punished by having Australian children!

I have always said don't ask my opinion because I will give it and that upsets some people (maybe some might by reading this). But sometimes there is no point beating around the bush and giving everyone a ribbon for 'turning up' and 'trying hard'. So, having been asked, somewhat foolishly, by a fellow countryman to reflect upon my time on the wrong side of the Ditch, here are some of the lessons I have learnt and stories from along the journey. As they say, proceed at your own risk...

WHO THE HELL EATS SHARK?!

I arrived in this country with a job offer from the great nomad Phil Knight who was then superintendent at The Lakes Golf Club in Sydney and who knew my dad from his time working at Shandon Golf Club in Wellington. It was 1988, Australia's Bicentenary, and I recall the tall ships coming into Sydney Harbour and thinking the entire population of NZ was there watching them! How big was this country?!

Life was good back then. VB was \$16 a box, a schooner set you back \$1.80 and you could buy smoko all week and it still didn't cost more than \$20.

There were a few weird things of course. What the hell was with this 'scallop' thing in NSW – they are potato cakes or fritters! And where was the blue cod – who the hell eats shark?! And don't play golf for a jug like back in NZ, they cost a fortune if you lose!

I was lucky enough to be given a spot on the floor of Peter Frewin's Sydney flat until I found somewhere else, which was quite apt given that after drinking VB most nights the floor was where I ended up anyway. Four greenkeepers in a house and we still paid an apprentice to mow the lawns!

As the new kid, it was a rite of passage to be pranked. On one of the first weekends we had a BBQ with a fire and my flatmates started ripping the palings off the fence to chuck on the fire. As a naive Christchurch boy I wondered what the hell was going on. Firstly, it was a balmy 17 degrees – why did they need a fire? – and secondly, what about the bloody fence?! I found out the next day that the fence was being pulled down and rebuilt.

And so it started. Pete got the gig at Barwon Heads and I graduated from off the floor. Some 18 months later I followed Pete to Barwon Heads as his assistant and then moved down the road to Curlewis four years after that. The interview involved a nine-person sub-committee. I was offered the job and accepted it, but then had to wait for the sub-committee to go back to 'the committee' before it was all ratified... how big was the committee?!

Back then the 20-minute drive from Barwon Heads to Curlewis was like going back 20 years. I clearly recall my father saying, 'Don't accept the job first up. Ask for a look in the shed first'. I stated this to the secretary who flatly said, 'If you look in the shed you won't take the job.' I thought, 'How bad could it be? Surely it couldn't be any worse than the course I did my apprenticeship at?' It was!

On my first day I arrived to find a sheep tied up out the front of the shed – what is it with this Kiwi thing and sheep?! But I knew at least I had a staff that had a sense of humour (it was humorous wasn't it?)

As the Aussie mantra goes, it's 'good to be the boss' and I've certainly picked up some of those great sayings you learn as a greenkeeper...

- One stuff up a day is okay as long as nothing dies (grass or person);
- You are doing this job again because you are very good at it or very bad... you decide!
- While you are doing this you're doing nothing else;
- Start at the beginning, finish at the end;
- Eight hours in a day, you have six hours left (never really got that one, but use it on the apprentice anyway);
- If the chemical applied does not work, just add another 'breath' next time (i.e.: tip in some more product, but just one short breath's worth though);
- Just bury it – I won't be there when it causes problems again (problem was I was); and

- A slab of VB will negotiate anything in Victoria, from small to big favours.

If you can't laugh at yourself then maybe a career change is needed and at Curlewis we have a, politely put, 'stuff up' shelf of which I can claim to own a few items. Among my contributions is a fellow worker's jacket that I cut into a few pieces when I jumped on the fairway mower and took over from him. It wasn't until I turned at the end of the fairway and looked back and realised, it looked like a runway for night flying was laid out, but at least the lines were straight! Sprinklers, wiring, flagsticks, rakes, members' golf balls, even clubs adorn the shelf, not all mine though. Price of admission to the shelf is a box of amber.

WIKILEAKS OF GREENKEEPING

A rep in Victoria, who shall remain nameless, and I used to sit and share stories on the things that have happened throughout our careers and some of the wonderful stories that our industry has a knack of generating. He wrote a memoir which is a bit of a laugh to read and it's still floating around the traps. My stories are only a few of the many that superintendents could add to, but here are a few that have tickled the funny bone...

- A bloke in Sydney, fertilising by fishmouthing greens in the nude to win a bet, was sprung by a group of unsuspecting lady members. He finished the green off as if nothing had happened...
- The sun-loving groundsman who mowed in the nude away from the boss's sight, but somehow would get an all-over tan (big effort mowing fairways backwards!)
- On those hot days in Victoria, the front end loader makes for a great diving board (it would be a 'silt testing' operation for managers reading this...)
- A course in Geelong gave one of the staff notice and he took a mower out on to a busy road, got off it and threw the keys in the bushes. Always better to give someone notice at the end of the day...
- A superintendent asking for a bigger coring tine, so I suggested a post hole digger (Frewin never took me to another Vic supers meeting after that).
- A work experience kid (now a superintendent) gave one of my older staff a face full of tomato sauce. It would have been two weeks later and 6.30am when priming the diesel pump that he got a size 9 up the backside straight into the dam;
- The staff member hand-scarifying a green was left with the hand grips only in his hand as the scarifier took off into the distance, stopping 100m away;
- In-house irrigation is good fun except if you have someone lay out all the fairway pipe and fittings, reducers etc and then not glue any reducers in,



or worse, have volunteers turn up unannounced and back fill your trenches (no wiring in) when you are having smoko.

- Making a ute out of an old Falcon by cutting the roof off and bending back. It had no brakes so we had a brick on a rope. It ended up we had bricks all around the course in strategic spots to stop the car rolling. This was superseded with an off-road buggy before the club finally bought us a golf cart, the first step on the road to professionalism.
- Telling a golfer to pull his head in and basically go away (polite term) and finding out he is the next president...

At Curlewis I have seen the good, the bad and now the better. From a club that was once struggling financially, we are now apparently one of the fastest growing in Australia (I just keep moving the boundary pegs out and adding another foot to each golf hole to keep this title!). With our future plans including accommodation and continued work with chainsaw and sawmill on the course side, it's a ride I did not think I would see when I started here quarter of a century ago. 🙌



When he turned up for his first day at Curlewis 25 years ago, a sheep was tied up outside the front of the shed. Nowadays Bradley has to put up with a goat named Morwood (see ATM Vol 18.4)

Bradley has never been one to shy away from putting shoulder to wheel, or a drum in this case. Kiwis may recognise the resemblance to Colin 'Pine Tree' Meads



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