MANAGEMENT

The Moonah Monster

2003 Australian Open Preview

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- → Olympia Fields Behind the Ropes at the 103rd US Open
- → Research
 Poa Seedhead
 Suppression

20th Australian Turfgrass Conference Trade Exhibition now open for bookings!

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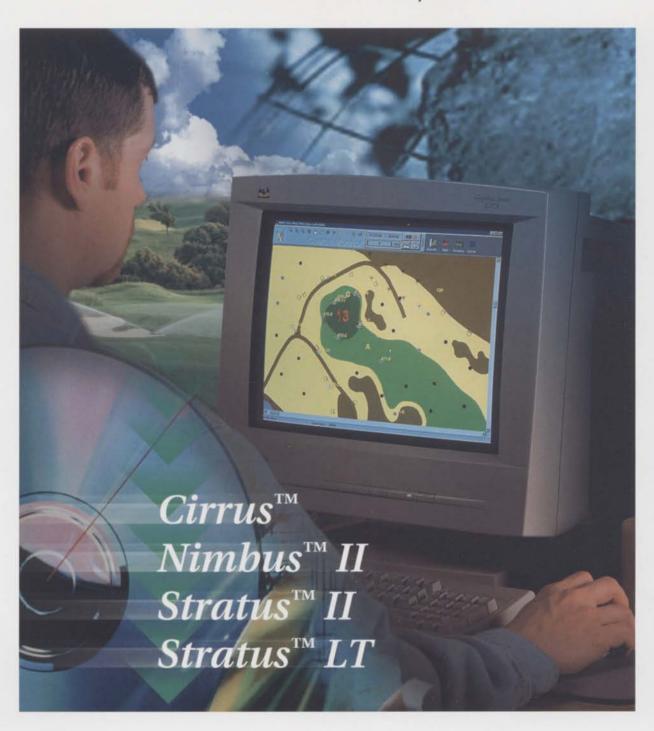
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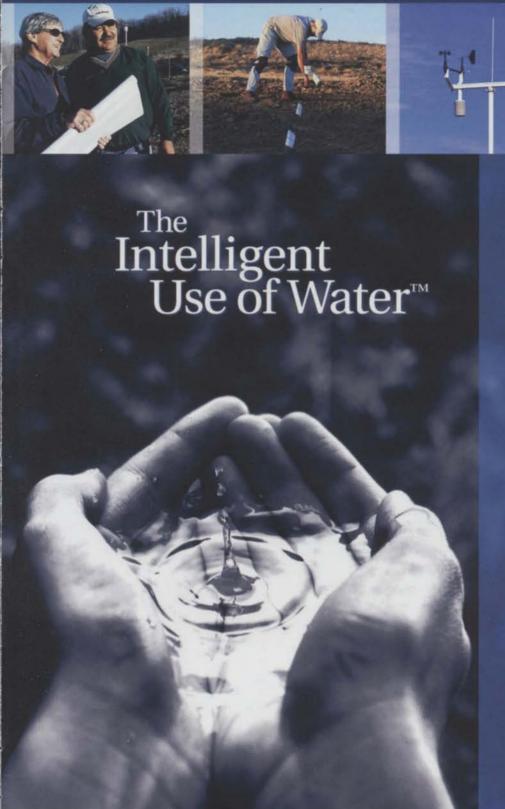
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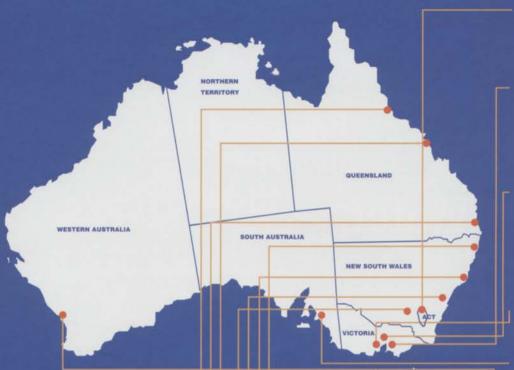


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cover

Hole No.8, The Hut, Moonah Links Open course. Moonah Links hosts the 2003 Australian Open from 18-21 December.

Photo: Courtesy of Moonah Links.

special features

Leigh and the Leviathan

Following the controversy surrounding the unplayable greens at last year's Australian Open, all eyes focus on Moonah Links which plays host to its first Australian Open in December. ATM catches up with Moonah superintendent Leigh Yanner as he prepares to showcase this unique course.



International Internships

Overseas internships are playing an increasingly important role in the education of budding turf managers. ATM examines some of the internship programs available and what opportunities they present.

International Turfgrass Society Mid-term Meeting AGCSATech manager John Neylan reports on his trip to the UK in July where he attended the mid-term meeting of the International Turfgrass Society. While there Neylan also visited a number of key sites including Old Trafford, the hallowed ground of soccer giants Manchester United.









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research

Field Testing PGRs and Wetting Agents for Poa Seedhead Suppression

Researchers in Illinois tested plant growth regulators and wetting agents for their ability to suppress annual bluegrass seedhead formation on golf courses in the Chicago area.

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A little piece of history

in Texas, about the early evolution of turf management.

The piece outlined all the major milestones in the turf industry from the production of the very first reel mower in the 1830s through to the first powered vertical cutting machine

Beard's article reminded me of an interesting snippet I had read earlier this year in a book by English sports writer Ian Stafford called 'In Search of the Tiger - A Golfing Odyssey

The book details Stafford's hilarious journey from golfing novice through to semi-decent hacker, and along the way he receives from and plays with a heap of pro golfers and celebrities, Tiger included

Anyhow, one of his many rounds is played at the Richmond Golf Club in the outer southwest suburbs of London. As an aside, his

laying partners included the drummer from Iron Maiden and lead suitarist from Thin Lizzy who is a member at Richmond.

Now back in 1940 when Hitler commanded the Luftwaffe to bomb ondon into submission, the Richmond Golf Club was forced to issue if few temporary rules due to the extreme circumstances.

Among them included this gem – "5. A ball moved by enemy action may be replaced, and it lost or destroyed, a ball may be dropped, not nearer the hole without penalty". Then there is "3. The position of known delayed action bombs are marked by red lags at a reasonably, but not guaranteed, safe distance therefrom".

the course, under the stewardship of young Leigh Yanner,

In this edition of ATM we catch up with Leigh and look at what far reaches of the world to take a look at the role of internship programs and some of the Aussies currently on their big OE

Also keep an eye out for Stephen Marsden's piece on his experiences at this year's US Open, as well as a few new additions

As a last minute news flash, the Australian Open championship has been rescheduled to the new dates of 18th - 21st December due to a clash with the Davis Cup Final. The AGCSA will still be lved with the event and looks forward to your involvement with the course quality officials program.













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President's Pen

With spring now upon us, I am sure everyone is shaking off the winter chills and looking forward to the renovation period and warmer days to get everything up and running. For the AGCSA, the coming months will be just as busy, kicking off in October with the roving workshop series.

The workshops will focus on the preparation of water management plans, which is a hot topic within the industry at present. With a number of state governments and water authorities enforcing tighter restrictions, these workshops will provide invaluable information and I urge all superintendents to attend the sessions in their respective states.

Co-hosting the workshops will be AGCSATech manager John Neylan and Geoff Connellan, principal lecturer at Burnley College, University of Melbourne. A run-down of dates and venues appears in the News section of the magazine.

The NSW workshop will also coincide with the launch of the much-awaited manual Improving the Environmental Management of NSW Golf Courses.

The Australian Open at Moonah Links draws ever closer with superintendent Leigh Yanner and his team working hard around the clock to have the course and facilities in top condition.

The AGCSA's Course Quality Officials program will again run during the tournament and nomination forms will be sent out soon. Those interested can register by getting in touch with the AGCSA. This is a great opportunity for superintendents and groundstaff alike to be involved in Australia's foremost tournament.



Mark Couchman, AGCSA President

Following on from the forum held at the Adelaide conference, a national turf education working group has been formed to look into the issues raised during the conference.

The 15-strong committee, headed by former AGCSA Board member Rob Macdonald, boasts a tonne of expertise and held its first meeting in September. We look forward to its findings and recommendations in the future.

It is hoped the committee will increase communication between all parties and work towards creating a degree of national consistency.

Planning for the 20th Australian Turfgrass Conference is well underway with the recent release of the trade exhibition brochure.

The Melbourne conference will be the key turf industry event of 2004, bringing together many facets of the turf industry, including the Turfgrass Association of Australia and the Australian Turf Equipment Technicians Association.

In what will be a new-look format, the education and tradeshow formats will be partly integrated. Conference speakers will hold post-session discussions within the tradeshow, while turf mechanics will conduct education sessions on the tradeshow floor.

Dedicated conference sessions will be held for turf managers covering golf, bowls, racing, sportsfields, cricket wickets and turf mechanics, and delegate numbers are expected to rival that of the Millennium Conference.

Finally, the AGCSA website revamp is nearing completion and if all goes to plan should be up and running by late November. A few minor changes will also be made to Australian Turfgrass Management magazine over the course of the next six months. Rather than expand on these, I will be interested to see if readers notice them and provide feedback and ideas.

Enjoy the magazine.

Mark K Couchman President, AGCSA Course Manager, Cromer Golf Club



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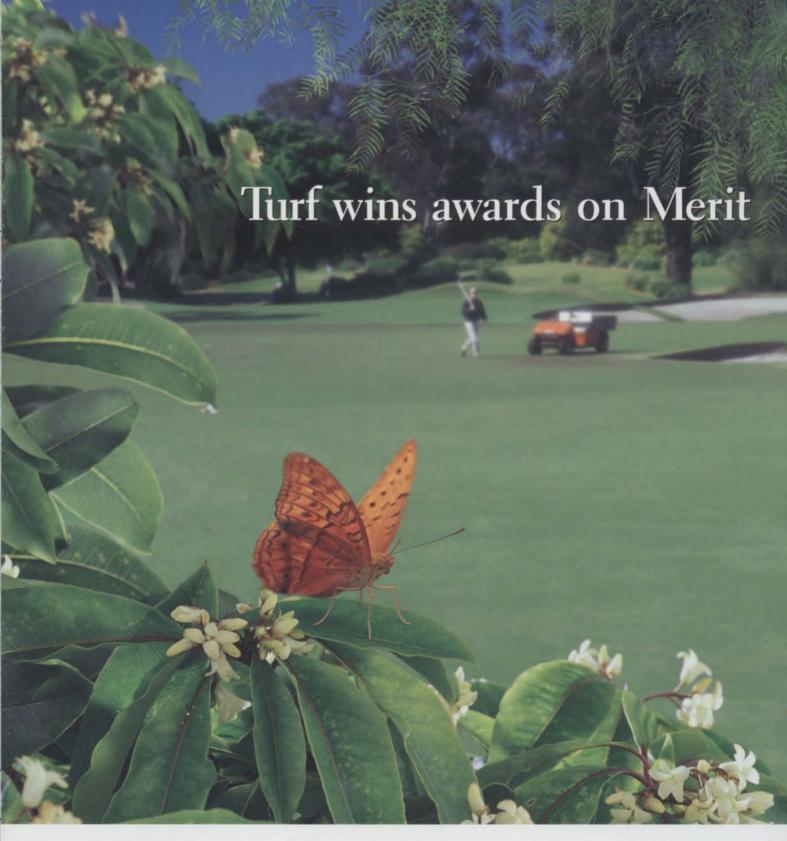
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Leigh and the Leviathan 2003 Australian Open – Moonah Links

BRETT ROBINSON



The 18th green at Moonah Links where the 2003 Australian Open will climax on December 21

After the dramatic events surrounding the 2002 Australian Open at the Victoria Golf Club, all eyes will focus on Moonah Links in December as the monster course prepares to host its very first Australian Open.

ATM Editor Brett Robinson catches up with Moonah superintendent Leigh Yanner and discovers the Open course is the least of his worries as the countdown begins to Australian golf's showcase event.

It still rankles. There was Leigh Yanner, Moonah Links superintendent, one under through 14 holes of what designer Peter Thomson calls the Leviathan, home of this year's Australian Open.

Four holes and plenty of cursing later, Yanner finishes with a seven over par 79. The Moonah monster had bit.

That scenario will likely be played out time and time again come the Open in December and Thomson has already predicted carnage. So to is Yanner.

"It's set up for modern-day golf," says Yanner of the par-72 behemoth which has been his home away from home since January 2002.

"The philosophy of the course is a little bit different to other Australian golf courses where we've got bunkers in the middle of the fairway. It's not just a matter of planting the ball straight down the middle.

"It's a thinker's course; it's got the natural undulations, the strong winds. It can be friendly or it can be your worst enemy."

For someone who is about to showcase his course to Australia and the world, Yanner (30) appears remarkably relaxed, especially considering that all eyes will be on the as yet untested Mornington Peninsula course following last year's remarkable and embarrassing events at the Victoria Golf Club.

In fact, preparing the Open course for the tournament is the least of his concerns. Source of all his headaches and sleepless nights is the mass of ongoing construction work which has all come to a head over the past couple of months.

The neighbouring Legends course and hotel complex are to be fully operational by November 1, while the clubhouse was due to open in the first week of October.

"I'm pretty comfortable with how the Open course is looking at the moment," says Yanner.

"The course is set up for a tournament and the greens won't need the intense management to get them up to speed. "The greens are naturally quick – currently 11 feet – which is good. In fact the greens are our strongest asset.

"We will be dictated by what sort of spring weather we get. If we get a good spring, the course will be in superb condition, but if we get a harsh spring with a lot of frost and a lot of cold weather, it won't be as good as we had hoped.

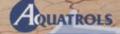
"We're on average a good four degrees cooler than the Melbourne courses and that means a lot in spring. We've already had some heavy frosts which have burnt the fairways a bit.

"The course came through the winter quite well. We've been lucky to have a late autumn and after the dry winter we've been getting some spring rain which has helped us out dramatically.

"But by no means will it be at its absolute best. The golf course is still maturing and like any it will only improve with time and changes."

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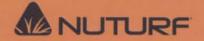
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Moonah Links superintendent Leigh Yanner



The approach to the 1st hole at Moonah Links

Unique setting

Yanner joined Moonah after a lengthy stint at one of Melbourne's renowned sandbelt courses Metropolitan.

After serving his apprenticeship at the Kingswood Golf Club, Yanner moved to the Oakleigh-based course in 1994 where he worked his way through to foreman before taking over the assistant's role when Stephen Newell left for Kooyonga.

Under the stewardship of Richard Forsyth, Yanner spent three-and-a-half-years as assistant before moving to Moonah, which at the time was under the auspices of Greenmaw.

"I was certainly excited to get the job, particularly with the role this course and complex will play in the future of the Australian golf industry," says Yanner.

"It's becoming quite a prestigious golfing area down here and it's a great opportunity. The job has only grown since I started."

In time it is hoped that Moonah Links will become recognised internationally as the headquarters of Australian golf and the home of the Australian Open. As such, the arrangements with the AGU provide for the Open to be played at Moonah at least every three years.

The AGU has agreed to relocate to the 196hectare development at Moonah, while the Australian Institute of Sport's (AIS) golf academy will also be eventually based there.

Moonah is certainly a unique course, carved through pastureland which Thomson describes as the best piece of natural land he has ever seen for the playing and viewing of championship golf. Length is the strength of the Open course and combined the with natural elements means tournament officials will have the luxury of not playing the course at its full length. In these days of courses being eaten alive by huge hitting pros wielding the latest technology, that is a rarity.

The course starts off relatively innocuously before two monster par fives present themselves - No.2 and No.4. Depending which way the wind blows, a number of the subsequent par fours will be treacherous, while the 185m 17th, which Thomson rates as one of the world's greatest par three holes, is designed to separate the men from the boys.

"I love the par fives, particularly the 18" which is a great finishing hole," says Yanner.

"The course has been set up so that the 17" will play a big role. It's the breaker. It has a huge, undulating green and if you don't make the green the ball can roll 30m away. It is set up as a hole where you can win or lose the tournament."

The Moonah Links crew

Yanner currently has a staff of 18 which includes two assistants Scott Calder (Open course) and Nathan Bennett (Legends course). As the new facilities come on board – the complex will have a total of 45 greens once the AIS moves in – staff numbers will increase, with over 20 on-course and a separate body corporate crew.

Staff numbers will rise to the mid 20s for the Open and Yanner also has the services of three overseas greenkeepers, one from St Andrews in Scotland, an Irishman and a Kiwi.

"The crew has been fantastic, particularly with all the work that is going on here," says Yanner.

"It's going to be a great time for the young guys. They all know there's an onslaught of work about to happen. They're excited but it's just a matter of trying to keep a lid on it."

History in the making

The 2003 Open will be uncharted territory for Leigh and the leviathan. The course is a mere baby having been in play for just 22 months, while Yanner has little history to fall back on in preparing the course.

"The biggest difference is that at Metropolitan you had the history to guide you," says Yanner, who helped prepare Metropolitan for the Australian Open in 1997.

"You could look back and see how the turf was going to perform, where you needed to improve from previous years, and areas that you had to keep an eye on.

"Everything here at Moonah is so brand new that everything has to be put together. There's more planning involved. "For example, Spring Dead Spot has been a major concern in the past, but in two years time if we have the same issues as we did this year then I know how to better manage it.

"Also, when Greenmaw left last October everything was taken – all the fertiliser and mechanical records – so we basically had to start from scratch again."

In moving from the private set-up at Metropolitan to the public-access Moonah facility, Yanner has had to make a number of adjustments as necessitated by the different conditions and turf surfaces.

"At Metropolitan you have the tree-lined fairways, you didn't have the winds that you get down here, and there were drainage problems," says Yanner.

"Down here you have soils that are very free-draining, high pH levels and the extreme winds – sand just blows out of the bunkers constantly. So the challenges are different.

"You also have different sand types and grass varieties. The only variety we had at Metro that we have down here is Wintergreen on the tees. That has to be grown and treated differently. Fertiliser management is also very



The par five 4th, which at 557m is the second longest hole on the course

different as we can apply more water here.

"One advantage here is there are not as many disease issues due to the drying winds. However, with the high pH soils, nutrients are tied up and with large fairway areas – one of our fairways measures four hectares – ideal preparation is difficult because of the cost."

Overseas experience

In preparation for November, Yanner journeyed to the UK in July, spending 11 days visiting some of world's most famous links courses, including St Andrews, getting a first-hand look at preparations for the British Open at Royal St George's.

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"What we're trying to produce at Moonah is unique to Australia, so it was a good opportunity for me to see how they prepare their courses," says Yanner.

"They've been preparing courses like this for hundreds of years, so it was good to discuss with them and see what philosophies they try and reproduce, and where they're heading.

"They seem to be going back to a lot of old-fashioned techniques. They use very little nitrogen, fertilisers or chemicals, yet their turf condition from my point of view wasn't exactly splendid. It was extremely natural and that's the way they maintain it.

"I picked up a few things regarding preparing the course for the Open, but more so for future reference.



The 13" fairway, 9" and 12" greens



AGCSA Advisory Role for Open 2003 Australian Open – Moonah Links

The 2003 Australian Open at Moonah Links heralds the beginning of an ongoing advisory arrangement between the Australian Golf Union (AGU) and the AGCSA.

The working relationship is the result of last year's debacle at the Victoria Golf Club where the opening day's play had to be cancelled due to unplayable greens.

In the past the AGU has traditionally relied on a golf club to present them with a tournament course, and placed their faith and trust in the club to produce championship conditions. Unfortunately things came unstuck in dramatic fashion at Victoria.

In a bid to ensure an incident like that doesn't happen again, the AGU and AGCSA formalised an agreement earlier this year whereby the AGCSA would work in an advisory capacity regarding the agronomic aspects of preparing the Open course.

Since April, AGCSATech manager John Neylan has been part of this advisory panel which consists of Moonah designers Peter Thomson and Michael Wolveridge, AGU chief executive Colin Phillips and Moonah Links superintendent Leigh Yanner. The collaboration takes the form of regular course inspections which examine any problematic or contentious areas on the course. Yanner and Neylan discuss turf agronomics, while discussions are also held in relation to tee and pin placements, the strategies for each hole and general tournament issues.

"We've talked a lot about the general philosophy of the golf course which is to have a course which is not necessarily groomed to within an inch of its life, but something that is in part affected by nature and has that links feel and presentation about it," says Neylan.

"It's not going to be emerald green from tee to green and the weather will have a significant impact."

The arrangement mirrors that of the USGA which has a full time tournament agronomist Tim Moraghan who is responsible for monitoring the US Open and US Amateur courses up to five years out from the tournament.

It is hoped the arrangement here will develop along similar lines and evolve over future years.

"I would like to see it develop into something like the USGA set up," says Neylan,

MOONAH LINKS - OPEN

Par: 72

Length: 6822m

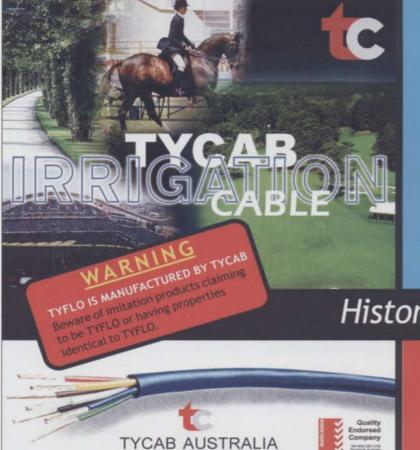
Tees – Wintergreen couch

Fairways - Legend couch

Greens - A1 bentgrass

Rough - Phalaris

1. 339m - Par 4	10. 385m Par 4
2. 517m - Par 5	11. 202m - Par 3
3. 371m - Par 4	12. 374m Par 4
4. 557m - Par 5	13. 491m - Par 5
5. 174m - Par 3	14. 355m - Par 4
6. 449m Par 4	15. 424m Par 4
7. 167m - Par 3	16. 411m - Par 4
8. 428m - Par 4	17. 185m - Par 3
9. 411m - Par 4	18.582m Par 5



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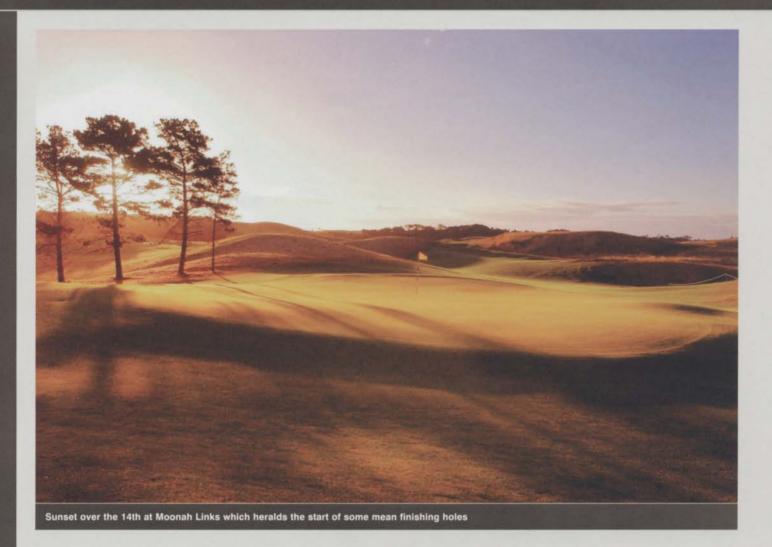
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who is quick to quash any sentiment that the role undermines the authority of the superintendent.

"There has been a lot of scuttlebutt around the industry that this role is overseeing the superintendent. It's nothing like that and should be seen as something positive.

"It's a support structure from both sides. If the superintendent is looking to achieve something, or if a situation arises where he can't achieve certain things that the AGU would like, the role we're playing can provide that feedback to the AGU and give them a rational explanation or an independent opinion as to why certain things can or can't happen.

"At the start I guess the committee was all thinking along different, lines but through the regular inspections we are starting to come to a common end which is positive.

"Certainly under no circumstances do we direct what the superintendent should or shouldn't do and it's not what the AGU expects us to do."

Yanner says that while the arrangement is in its infancy, it has worked well to date and he has consulted Neylan on a number of issues.

"It's good to have a sounding board," says Yanner. "John and I have a good rapport and we're on the same wavelength. It's good to have that support there."

Bi-monthly inspections began in April and as the tournament draws closer the committee is expected to meet on a more regular basis. The course will also be closed one week out from the tournament.

Like Yanner, Neylan holds little concern over the state of the greens in the lead up to Australian golf's showcase event and is confident the events of last year will not be repeated on the Mornington Peninsula.

"From a turf point of view, what happened at Victoria last year was an absolute tragedy," says Neylan.

"It made the turf management industry look very amateurish. It was very unfortunate. Was it avoidable? Only those that were involved will ever know.

"As far as Moonah is concerned, rain, hail or shine the greens are always excellent. In actual fact the greens are the least of the worries down there.

"The greens are naturally quick and the turf won't need to be overly stressed to get up to acceptable speeds. If it's really dry and windy they will be able to keep a bit of water up and be confident the greens will still play well.

"The concern for that particular site is conditioning the couchgrass fairways and there have been a few disease issues over winter.

"A lot will depend on the early spring growth, and the weather will be a fairly big determinant because it is relatively early in the season for most golf courses to have their couchgrasses really well conditioned."

Neylan says the turf condition is ticking along and will form a good base for what should be a very interesting tournament.

"It's fair to say the course is still maturing and probably over the next couple of years it will continue to improve," he says.

"It's only had 22 months conditioning following construction and there are still areas where the turf needs to mature and thicken up.

"But it won't be an issue. If the wind blows strong enough down there, that will be a big enough issue!" *



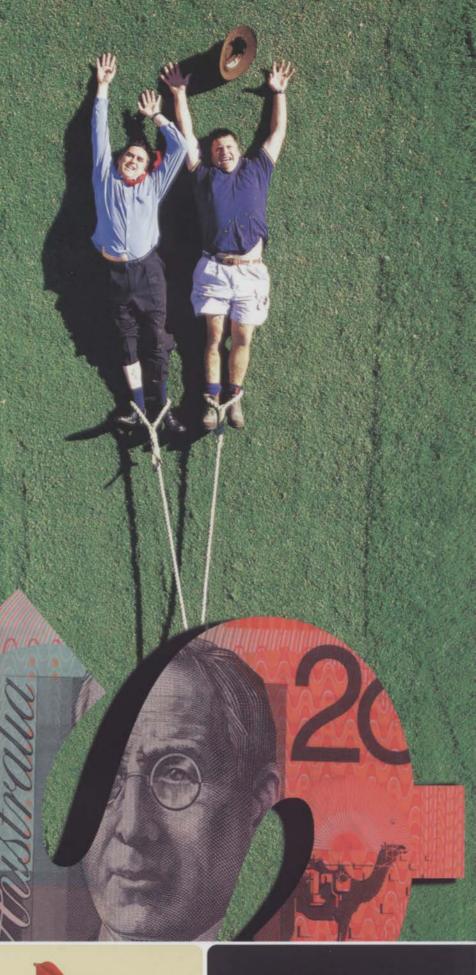
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OLYMPIA FIELDS

INSIDE THE ROPES AT THE 10310 US OPEN



In June, Stephen Marsden experienced every golf course superintendent's dream – preparing a course for one of golf's four Majors. What follows is Stephen's diary from the 103rd US Open tournament held at the Olympia Fields Country Club, Illinois where Aussie professional Stephen Leaney finished second behind first-time Major winner Jim Furyk.

I first met up with Dave Ward, superintendent at Olympia Fields Country Club in 1998. We roomed together while attending a 'Rain Bird Select Superintendents Advisory Council' meeting in North Michigan. It was there I discovered he was to host the 103° US Open.

Almost five years later I found myself on a plane headed for Chicago to spend 10 days preparing the course for the USGA's premier tournament. Dave greeted me upon landing and looked extremely calm for someone who was about to showcase his course to the golfing world in less than a week.

On our way to the Ward family home – my base for the next 10 days – Dave brought me up to speed with preparations, outlining some of the challenges he had with weather and vandals in the tournament lead-up.

Unseasonably cool temperatures in spring and a very heavy frost less than two weeks out, had sent the entire golf course white and into dormancy.

With greens still partially frozen, the club then had its golf cart store broken into by vandals who took them for a joyride across six greens. Damage was done, but fortunately the cool start had kept the greens hard which helped protect them from serious damage.

Before settling in at Chez Ward, we paid a quick visit to Olympia Fields. The enormity of the infrastructure and set-up quickly hit me. I won't describe it, because I can't. The course looked a picture and the realisation of what I was about to be a part of suddenly struck me.

DAY ONE - FRIDAY, 6 JUNE (5am - 7pm, 14hrs)

Didn't sleep a wink. Arriving at the maintenance compound at 5am for the first of many early morning meetings with senior staff, I was introduced to the team.

Olympia Fields has a unique management set up with two superintendents, Dave Ward and Kevin West.

After setting up the day's work plan, it was then passed over to the Mexican workforce. Dave updated the team on set-up progress, including the construction of TV towers and the layout of spectator ropes. All Dave's information was translated into Spanish by John Lamkin, assistant superintendent of the North Course, for the mostly non-English speaking workforce.

In the morning I headed out with John to remove the netting/shadecloth from the tees ahead of the mowers. In the afternoon I was asked to cut greens and I must admit I felt a little pressure. This job normally went to regular staff members and it had been eight months since I cut my last green. I headed out with 'JJ', a Mexican employee, and we cut greens 5, 12, 13 and 14 using a John Deere 180 (18" cylinder mower).

DAY TWO - SATURDAY, 7 JUNE (5am - 8pm, 15hrs)

Again, my morning assignment was the same. Once the mowers had cut each tee, the netting was put straight back on. This morning KJ Choi was out practising.

Once the tees were all cut I met up with the guys spraying tees. A light mix of liquid NPK and chelated iron, Chipco Signature and Primo, was applied as a tank mix to the tees. The same mix was applied to greens and fairways.

All greens were cut twice in the morning, along with a single roll. In the evening, greens were all double cut. Mowing height was 2.7mm. The decision was made to lower the cutting height on the greens. The greens were in excellent shape and took the lower height adjustment very well.

As part of the tournament set-up, Steve Nixon, a technician from Bernhard and Company (Grinding Systems), came on board. Steve quickly picked up that the wiehle rollers on the walk behinds were up to 8000/inch out, meaning they were oval and not round. Immediately the entire walk behind fleet (approx 50) for greens and tees were brought into the workshop to have their rollers ground.

DAY THREE - SUNDAY, 8 JUNE (5am - 9pm, 15hrs)

After the morning staff meeting, I was assigned to cut the three practice tees with the John Deere 280 (28" walk behind). After that I went out onto the South Course to cut fairways with intern Steven Clark from England. It was very interesting seeing the South Course with its more conservative and traditional style of bunkering.

Immediately adjacent to the maintenance facility was a large marquee set up for all 115 groundstaff volunteers, and at 4pm Dave kicked off a volunteers meeting with an update on the current course set-up including mowing and grooming routines.

Hours of work for all volunteers would be 4am-7.30am and 4pm-9pm. In between we were free to watch golf. Dave quickly emphasised that the weather would dictate our hours. In the worst-case scenario we would be working all night! He also spoke of how Monday, Tuesday and Wednesday were just as much practice days for us as they were for the players.

We were then given our assignments for the week. I was to measure green speeds and paint cups on holes 10-18, and would be working with Matt Harstad, assistant superintendent at the nearby Ravisloe Country Club, and Canadian superintendents Frank Vargas and Sheldon Stanley.

We were also to work with Tom Meeks, the USGA's director of rules and competition, each morning with pin positions. Tim Moraghan, the USGA's director of championship agronomy, also came down to pass on information and also to show us the US Open Trophy. Of course seeing it wasn't sufficient – I had to hold it!



Stephen Marsden and the US Open Trophy

DAY FOUR - MONDAY, 9 JUNE (3.30am - 9pm, 16.5hrs)

Today would be our first practice day. Security at the course had stepped up, with police manning every entry/exit point and bomb sniffer dogs checking all vehicles.

Our morning meeting kicked off at 4am with coffee and donuts - the famous Crispy Creams. Also (and this is no joke), 15,000 ice creams had been ordered for our marquee. I soon discovered after a couple of days that Dave was an ice-cream junkie.

The hole-changing teams (a team on each nine) gathered to go through procedures for hole changing and painting with John.

OLYMPIA FIELDS COUNTRY CLUB - 103*** US OPEN

Layout:

36 holes (North Course - host course and South Course)

Staff:

Eight senior staff (year round) Fifty-five (seasonal)

Volunteers:

Sixty (mostly superintendents and assistant superintendents)

Grass types:

Greens

(L-93 creeping bentgrass. HOC 2.1mm Thursday-Sunday)

Tees

(Pennlinks creeping bentgrass. HOC 6mm)

Fairways

(Penncross/Poa. HOC 8mm)

Intermediate rough

(Bluegrass/Rye/Fescue. HOC 30mm)

Rough

Bluegrass/Rye/Fescue. 112mm)

Equipment:

John Deere (lease agreement).
Additional support of approx.
\$U\$500,000 worth of John Deere equipment and a John Deere technician.
Bernhard cylinder and bottom blade grinding equipment and technician.

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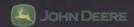
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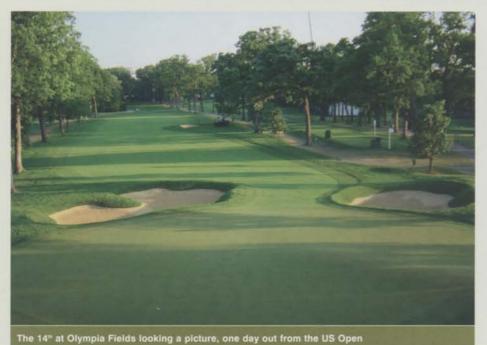
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OLYMPIA FIELDS

INSIDE THE ROPES AT THE 103** US OPEN



The paint used was the 'hole in white' cans,

mounted on the adjustable plate.

It was interesting to note that the cup setter was not used due to the depression it often leaves in the surface. The cup was pushed in by hand and an old front roller cut in half with bevelled ends was used. The roller was placed under foot and then rolled over the cup.

The USGA had marked up the practice round pin positions. Monday practice locations were marked with a white dot, Tuesday red and Wednesday yellow.

Tiger Woods teed-off in the earliest possible time slot, 6.30am. This is usual so he can avoid/minimise the circus that follows him. But his early start was obviously common knowledge.

The morning routine for course preparation consisted of mowing greens (eight people), tees (8), fairways (7), whipping clippings from fairways (6), changing pin positions (6), rolling greens (2), hand-raking bunkers (12), walking paths from tees to fairways (4), mowing approaches/collars (4), range set-up (4), workshop (5), supervisors (5), divoting tees (6) and divoting fairways (10).

In the afternoon I was assigned to broom the greens. Any sand splash from bunkers during the day's practice was swept off first. There were two teams of five leap-frogging one another ahead of the mowers. Using moderately stiff-bristled hand brooms, we went across each green at a 3-9 direction. Some of the players were still out on course, with Tom Watson commenting to us that he was very impressed with the course.

DAY FIVE - TUESDAY, 10 JUNE (3.30am - 9.30pm, 17hrs)

A few dramas today, but Dave handled them like a seasoned pro. First he received a call from host broadcaster NBC to let him know that an oak tree at the rear of the 5th green was impeding camera shots and would need to be cut down!

If that wasn't enough, that night we discovered a security guard had driven over the 5th green in a golf cart! Unbelievably, this would happen a second time, this time on the 6th!

Despite these annoyances Dave calmly dealt with them and ploughed ahead.

Stimpmeter readings this morning averaged out at 11'9", a slight increase on yesterday. The height of cut on the greens was dropped to 2.4mm after a trial run on the putting green. All greens were double cut up and down on the same pass.

DAY SIX - WEDNESDAY, 11 JUNE (3.30am - 9.30pm, 17hrs)

The early morning starts were starting to take their toll and even the prospect of a Crispy Cream donut didn't make it any easier to roll out of bed.

Today was the last practice day, and despite being happy with things Dave was hoping for some dry weather to firm up the greens. They were not hard enough and during practice the players were not being challenged.

The process of changing pin positions, painting and measuring greens speeds certainly generated interest from the early morning spectators. I would have loved a dollar for every time we were asked what speed the greens were running!

In the afternoon I got the call to cut greens 5, 12, 13 and 14 with 'JJ'. I was pumped!
Cutting greens on the eve of the US Open - it doesn't get better than this!

DAY SEVEN - THURSDAY, 12 JUNE (3.30am - 9.30pm, 17hrs)

GAME ON! Day One of the 103rd US Open.

At 6.45am we meet up with the Tom Meeks and Mike Davis (also from the USGA) to set up tee markers at the 10th. The first players were off at 7.30am at the 1th and 10th. It was interesting to see them paint a white dot below the tee marker, so as to ensure the location was not lost if the marker became a souvenir.

Pin positions were marked after much deliberation, and Friday's hole location was also marked. Green speeds had picked up, with 12'8" the average reading. The forecast was also improving, although I was quickly learning that Chicago weather was more changeable than Melbournel

That afternoon I was out with John, an Olympia Fields intern, lightly hand watering bunker faces, the turf edges and sand faces. We were one of three teams doing this. Greens were all double cut and double rolled. Wiehle rollers on the greens mowers were removed and changed over to smooth prior to mowing.

DAY EIGHT - FRIDAY, 13 JUNE (3.30am - 8.30pm, 16hrs)

Our morning meeting focused on some of the scores that were posted during the first round, most notably Tom Watson's 65.

Again we met up with Tom and Mike at the 10th. It was interesting getting their perspective on things as we went around. They were certainly very happy, with nothing but praise for the job Dave, Kevin and the team had done to prepare the course. Green speeds increased slightly to a 12'9" average.

In the afternoon I cut greens 1, 11, 12 and 18. It was a thrill to cut them earlier in the week, but to cut them, particularly the 18th, during the tournament was a real highlight.

DAY NINE - SATURDAY, 14 JUNE (4am - 9.30pm, 16.5hrs)

Due to the later tee times over the weekend, the decision was made to double cut and double roll first up. Once all greens were completed they would be given another cut and roll. The greens would be cut and rolled a total of five times today.

Afterwards, I caught up with Dave on the 16th fairway to do a radio interview with Chicago radio personality Spike O'Dell who was intrigued why I had travelled all the way from NZ.

With the recent damp conditions and low temperatures, green speeds had dropped slightly from yesterday's reading of 12'9" to

OLYMPIA FIELDS

INSIDE THE ROPES AT THE 103^{KB} US OPEN

12'5". Dave decided to trial the mowing height at 2.1mm on the practice green. The green came up great with no markings from the mower. This would be the final mowing height.

Tournament leader Jim Furyk was at 10under at the end of play, and it was quite evident the greens were drying up as the day went on. A new mowing height and another day of good weather would see the course bite back.

My afternoon job was to assist with ball mark repair and fluffing up the rough around the greens where player traffic and equipment access had trampled it down.

DAY TEN - SUNDAY, 15 JUNE (4am - 11am, 7hrs)

After a brief meeting, we headed on course for the final time. The greens looked fantastic and recorded 13'9".

As we finished up on the 18th green, we all had smiles from ear to ear. The pressure was off and we had done well! It had been an intense week and it was time to reflect.

The golf course ended up getting its own back today with only four players finishing under par.

My last job for the event was to collect the tee markers after the final group, before they became souvenirs. Finally we grabbed a group photo to capture what will be a lasting memory, and the highlight of my turf industry career to date.

As the final group of Jim Furyk and Aussie Stephen Leaney approached the final green, all the greens staff walked down the fairway behind them in what is a US Open tradition, the perfect end to an incredible 10 days.



ACKNOWLEDGEMENTS

I would like to thank Dave Ward and Kevin West and the great team at Olympia Fields Country Club for giving me the opportunity to assist them. The course conditioning was a credit to them, and after years of preparation and hard work they can be very proud of the course they presented. A special thanks also to William Ormerod at Kinloch Golf Resort who gave me the time off after just six months in a new position. Stephen Marsden is currently construction

superintendent at the Jack Nicklaus-designed Kinloch Golf Resort in Taupo, New Zealand. His previous positions include two years as superintendent of the 36-hole London Golf Club in England and eight years as superintendent at the Lakelands Golf Club, also a Jack Nicklaus signature design. Stephen was also regional superintendent for ClubCorp (Australia).

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Early morning on the King's course at Gleneagles in Scotland

ATM Editor Brett Robinson examines the value of internships and their role in furthering the careers of up and coming turf managers.

I t was Dene Goldsack, winner of the 2003 AGCSA Distinguished Service Award, who perhaps summed it up best.

Upon accepting his award at this year's 19th Australian Turfgrass Conference in Adelaide, the South Australian icon commented how he was blown away by the professionalism and commitment that AGCSA Graduate of the Year winner James Dalton had exhibited.

During his award presentation, Dalton outlined his definite career objectives, including how he was in discussion with the Royal and Ancient Golf Club of St Andrews to work there in 2005.

As Goldsack observed, the superintendent profession has evolved greatly over the past 30 years. Nowadays, an arsenal of products are available to assist turf managers prepare world-class surfaces, while conferences, publications and the Internet have helped expand the superintendent knowledge pool.

The range of options available for up and coming turf managers has also grown, and

completing a turf management diploma is now commonplace.

However, in the modern competitive job market more and more are looking to get that certain edge which will enhance their career prospects, so it is not surprising the overseas internship is becoming an increasingly popular option.

Stars and Stripes

Perhaps the most well known avenue is the Ohio State University Agricultural and Horticultural Internship program.

Established in 1979 by Mike Chrisman, it covers all facets of the agriculture and horticulture industries, with 5000 interns from 34 countries having gone through the program since its inception.

The program offers internships for single greenkeepers between the ages of 19 and 27, which entail upwards of 18 months work experience and the option of three months study at the university.

Currently, between 20 and 30 Australians are working on US courses with over 120 international interns going through each year.

Interns are placed on the world's best courses. For example, Adam Mortimer from the Brisbane Golf Club is currently at Pine Valley in New Jersey, consistently rated the No.1 course in the world by Golf Magazine and Golf Digest.

Most of the courses involved in the program are east of the Mississippi, with students experiencing some of the best cool season grass courses in the north before moving south for the winter.

Most of the international interns hail from the UK, but Australians have been involved since day one and, not surprisingly, have developed a reputation as being among the hardest workers.

The Ohio program isn't heavily advertised and is more word of mouth around the industry. This, according to the program directors, is more in an attempt to ensure that only those with the desire and commitment to further their career apply.

Australian coordinator for the Ohio program is Thirteenth Beach assistant superintendent David Goldie, himself a former Ohio intern at the Harbour Town course, South Carolina.

Goldie believes the Ohio program and internships in general are without doubt the best way to get a foothold within the industry.

"It's really just the whole experience of working in a different environment and getting an insight into the way they run things there," says Goldie.

"One of the big advantages of the program is that interns get to work with different turfgrasses. You can move from an inland all-bentgrass or all-Kentucky bluegrass course down to an all-bermudagrass coastal course. They also get to experience the over-sowing process, which is something we're not exposed to in Australia.

"In most cases they are working on courses with huge budgets (up to \$US2 million) and staff numbers of 20 or more. Most will experience the pressure of preparing for a major tournament, as well as working with the latest machinery and turfgrass technology."

Communication is an increasingly important facet of the modern superintendent's job and Goldie says that working with different cultures, particularly the large Mexican and African American workforces employed at US courses, equipped him with more effective communication skills.

"On top of that, it's great for the CV," adds Goldie. "Not so much that you've gained these



new skills, but the fact that you have been prepared to go overseas and leave your comfort zone to further your career. It shows you're committed to your career and a lot about your aspirations."

Despite all the information available through tertiary courses and over the Internet, Goldie believes internship programs will continue to play an important part in the future development of those coming into the industry.

"We Australians pride ourselves on our practical experience and that is why the American superintendents will prefer an Australian intern rather than someone straight out of a US college," Goldie says.

"Because Aussies have that hands-on experience, they can be sent out to work, whereas they're used to taking on guys who have taken stuff off the Internet or out of textbooks.

"They may know the agronomy of the turf better, but they need their hands held for 12 months which is not what they want in the short term.

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Australian intern Angus Mahoney collects cores at Oakmont



Interns hard at work on the 6th green during the renovation season at Oakmont

"At the end of the day, greenkeeping is one of those trades where a guy will gain more respect if he has gone out there and experienced it hands-on."

The Highland Fling

While Ohio ranks as one of the better-known internship schemes, a number of international golf courses run private internship programs. Every year since 1992, Gleneagles has offered student placements on the Gleneagles

Excellence in Golf Award Scheme (GEGAS).

Initially set up to take mainly UK-based turf graduates, the scheme has broadened to include European students, and, more recently, Australians and other internationals.

Currently calling Gleneagles home are two 24-year-old Aussies, Dave Cassidy and Pete Foreman.

Cassidy, already a qualified greenkeeper from Sydney's Mona Vale Golf Club, travelled to the UK to broaden his work and life



Gleneagles intern Dave Cassidy mows the 1" green of the PGA Centenary course during the Diageo Championship in June

experiences, and after contacting Gleneagles superintendent Scott Fenwick was awarded a place on the program.

Foreman, who served a four-year apprenticeship at Adelaide's Belair Park Golf Club, ended up at Gleneagles after a 10-month placement at the Westchester Country Club in Rye, New York, through the Ohio program.

The Gleneagles complex boasts three championship courses – The King's course, The Queen's course and PGA Centenary course – and sits on an 850 acre site one hour north of Glasgow, Scotland.

There are two maintenance facilities, with the main central compound caring for the King's and Queen's courses, as well as the short par three 'Wee' course. The PGA compound looks after the Centenary course, venue for the European PGA's Diageo Championship and the 2014 Ryder Cup. Interns swap between compounds during their stay.

Cassidy was initially placed at the PGA compound with three other students from Austria, Germany and England. For four months Cassidy slotted into the day-to-day running of the PGA Centenary course under the guidance of head greenkeeper Pete Pattenden who manages 16 full-time employees and six seasonals from March to September.

During his time, Cassidy was involved in preparations for the Diageo Championship, his first major tournament experience.

Foreman was placed in the other compound alongside students from France, the Netherlands, and Spain. This facility has 24 full-time staff, six seasonals and three full-time mechanics. Alan Patterson runs the compound and is assisted by deputies Hugh Stewart and Mike Doris.

As the peak golfing season nears an end, interns begin the theory component of their year, with each completing an individual assignment. The assignments are then presented to the golf courses and estates director and program sponsors in late January.

The theory sessions include visits to many famous golf clubs and other top sporting venues and stadiums throughout the UK.

Cassidy and Foreman continue a strong tradition of Australian involvement in the program and after completing the program hope to emulate their fellow countrymen who have secured senior positions on courses overseas.

Once such ex-GEGAS student is Steve Johnson who after spending a stint as superintendent at the Riffa Golf Club in Bahrain, moved on to his current position as superintendent of the Nanea Golf Club in Hawaii, the first all-seashore paspalum course on the American island.

From India to Egypt

The opportunities that internships can open up are vast. For Melbourne's Sean Griffin, an internship sparked what ended up being a 10-year stint working at some of the world's more exotic golfing destinations.

In 1991, Griffin was accepted on the Ohio program and placed at the Coral Ridge Country Club, a 36-hole facility which doubled as the head office of the Robert Trent Jones design and construction company.

For a period of two years Griffin was involved in all aspects of turf management

from the construction of an 18-hole championship course through to the preparation of an LPGA Tour event.

Griffin was hooked on the experience and after a brief respite in Australia, headed to India where he took up a position as construction superintendent at the Royal Palms Golf Course, designed by Melbourne's Pacific Coast Design.

"When arriving in India, I thought 'What the hell am I doing here?' "recalls Griffin. "It smelled and the poverty was shocking."

The project was situated in Bombay near the famous Bollywood Film Studios. A cast of thousands made up the construction team with the greens and all feature work done manually.

The experience gave Griffin his first taste of construction methods under third world conditions. It also introduced him to some of the unique hurdles encountered in such places.

"One evening I received a phone call telling me that an elephant had wandering across the 15" green which had just been planted!"

After finishing at Royal Palms and a further year at the Arabian Sea Country Club in Pakistan, Griffin took up the superintendent's position at the Emirates Golf Club in Dubai, United Arab Emirates.

"The two worlds of Pakistan and the UAE could not have been further apart," Griffin recalls.

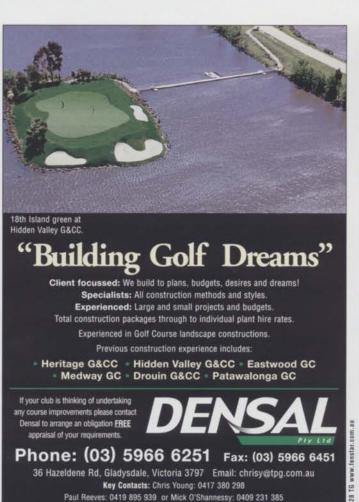
"The city of Dubai was spotlessly clean and the infrastructure first class. Having been in construction, the chance to concentrate purely on maintenance was a pleasant change.

"The course was managed by mostly British expatriates with unlimited funds to keep the course in excellent condition year round. I had a staff of 551"

In 1998, Griffin got the chance to prepare for the course for the Dubai Desert Classic, a tournament in which Aussie Steve Allan finished second to Jose Maria Olazabal.

From Dubai, Griffin moved down the coast of the Persian Gulf to the Abu Dhabi Golf Club. At that time the course had been under construction for six years and had been ready for play for three.

Griffin's role was to set up a team to see the course open within six months of his arrival. This included arranging personnel, budgets, machinery and all maintenance programs for the 36-hole facility.





After four years in the UAE, Griffin accepted the superintendent's position at the Gary Playerdesigned Cascades Golf Club five hours south of Cairo, Egypt, in 2001.

The 18-hole facility lay on the shores of the Red Sea and during his time Griffin oversaw the construction of a par-three academy course.

"The differences in staffing levels would amaze most Aussie superintendents," says Griffin on his experiences working in Asia and the Middle East.

"We had a large number of greenkeepers, but you have to take into consideration many different factors such as education, machinery availability, growth rate of the turf and climatic conditions.

"My main concern at Cascades was water consumption and availability, which influenced my decision to plant the academy course with seashore paspalum. We also fitted a pump station which gave us the ability to irrigate the turf with a salt water/desalinated water mixture, which cut our irrigation costs considerably."

If Griffin had his time again he says he wouldn't change a thing.

"Having worked as an expat superintendent over the last decade, I have found it to be

challenging, educational and a great life experience," he says.

"The advantages far outweigh the disadvantages. The challenges you encounter are what make the experience unique – the different climatic aspects, different turfgrass varieties, communication difficulties.

"Perhaps the biggest thing I gained from it was to respect different cultures and people's beliefs."

As far as Griffin's initial internship experience, for a young man aged 23 he believes it was a great foundation and stepping stone.

"The amount you learn is far greater than you will ever do in Australia, mainly because they do things on a large scale and with big budgets," Griffin says.

"The internship gave me a great deal of knowledge about what you can achieve in the industry overseas.

"In my opinion, you cannot get a better education, see the world and make some great friends along the way.

"I would recommend it to any turf manager. If it's not for you, Australia will always be here waiting when you return."

In the next edition of Australian Turfgrass Management magazine, Adam Mortimer from the Brisbane Golf Club, currently on the Ohio program, will give us an exclusive look behind the gates at the world's number one ranked golf course Pine Valley. One not to miss!

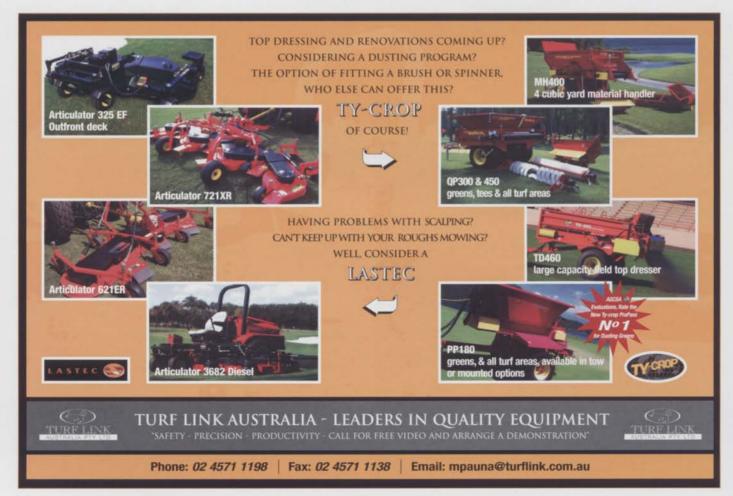


The Par 5, 9* on the PGA Centenary course, Gleneagles





The 5th and 9th holes at the Cascades Golf Club in Egypt





Angus Mahoney (second from right) with US Amateur champion Nick Flanagan (second from left)

Brisbane's Angus Mahoney has been based at the Oakmont

Country Club for the past seven months as part of the Ohio intern

program, during which time he has shared a joke with Arnold

Palmer and witnessed young Australian Nick Flanagan make

golfing history.

pened in 1903, Oakmont has hosted seven US Opens and four US Amateurs. This year is its centenary and in August hosted the 103rd US Amateur, its 16th major. I was placed with three other interns, two from England and one from New Zealand.

Boss at Oakmont is John Zimmers, who was much younger than I expected.

Considering the pressure he is under, John is a great superintendent and had a wealth of experience to share, having worked with some of America's finest.

From my first day, it was all go. We started straight into an aeration program, two weeks of 12-hour days. Everything was precise and we used Ryan hand corers with quad tines. After doing that twice, we hand-broomed the sand into the holes.

We then scarified greens with Mataway hand scarifiers. At the same time the fairways were cored and deep-tined. Tees and approaches were also done using this method.

The course officially opened in late April, so everything was geared towards that and the US Amateur. In the lead up to the tournament we carried out a lot of tree trimming and removal.

Seeding work was also a high priority. The bunkers, too, were all levelled and depths checked. We fly-mowed all 200 bunkers every week and rotary mowed the backsides down to the flats so the rough units didn't leave wheel marks.

During the two weeks of the US Amateur we did our standard 80 hours plus 126 hours overtime. Our days started at 3:45am and we started mowing when there was just enough light to see the lines. All up, there were 100 workers during the US Amateur, 40 from Oakmont and 60 volunteers.

I'm not allowed to discuss green speeds but the USGA told us to slow them down! All I can say is they exceeded 13.5'. Greens were triple cut and double rolled, double cut and single rolled in the afternoon.

Fairways were cut twice a day, while the approaches, tees and intermediate rough were cut once a day. At one stage we cut greens five times and rolled three times in a 12-hour period.

I went out to watch Aussie Nick Flanagan play and was lucky enough to meet him on the practice green on Saturday. I brought along my lucky mascot, "Priscilla" a blow-up kangaroo draped with an Aussie flag, to give him a boost. Nick was really surprised to hear that I was working there.

Nick won the title after beating American Casey Whittenberg on the first hole of a sudden-death playoff. Considering how difficult the course was set up, Nick is a true champion. To become the first foreigner in 100 years to win the tournament was phenomenal, and I am proud to say that I was a part of history that week.

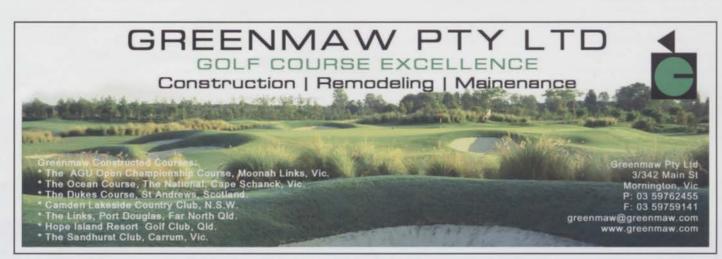
The week before, Arnold Palmer, a former winner of the US Amateur, came to play the course. One of the caddies found me and dragged me over to have a chat with the legend. It was such a highlight talking to such a modest man. He made fun of my accent, but I laughed it off and told him the girls over there loved it!

I had no idea when I first signed up for the program that I would meet so many people and be involved at such a high level. It's intense and you need to be fully committed.

Don't ask for a tournament course unless you are willing to give it your all. The program may give you the opportunity to step foot on some of the world's best golf courses, but once you are there it is up to you to keep Australia's good reputation alive.

Anything is possible in America. You just have to make sure you work damn hard to achieve it." – Angus Mahoney ...

Footnote: Since writing this, Angus has departed Oakmont and is now bound in Florida.



COUCHGRASS MANAGEMENT

In this AGCSATech Update,
John Neylan outlines the
establishment of a new
hybrid couchgrass evaluation
trial in association with
Dr Don Loch, and discusses
patch diseases and how
they can be minimised.



HYBRID COUCHGRASS TRIALS

Over the past few months AGCSATech has been in discussion with Dr Don Loch of the QDPI regarding the set up of an evaluation trial to assess the new couchgrass hybrids, as well as some seashore paspalums and zoysias.

This will consist of a replicated trial at the Redlands research station where all the intensive evaluation will take place, as well as field trails throughout Queensland, northern New South Wales and Victoria.

The field trials will be predominantly on golf courses and maintained under local conditions and maintenance regimes. This will provide an extensive database of information on the management requirements and performance characteristics of these new grasses.

The species and varieties to be evaluated are;

- · Tifeagle (Georgia)
- · MS Supreme (Mississippi)
- Tifdwarf (Standard)
- · 328 (Standard)
- Champion dwarf (Texas)
- · Flora Dwarf (Florida)
- TL-2 (FNQ Selection)
- · Sea Isle 2000 (Paspalum vaginatum)
- · Zoysia matrella (cv. Facet)

The trial locations that have been identified give a good cross-section of the climatic conditions experienced on the eastern seaboard of Australia.

Each site will have at least one unique variable that will add to the knowledge pool (e.g. FNQ – high humidity, high rainfall and low light; Victoria – long winter dormancy etc).

A funding application has been made to Horticulture Australia, with the industry component coming from participating golf clubs, Queensland Bowls, and the Queensland Turfgrass Foundation.

These trials will be very important for clubs that are contemplating changes to the new couchgrass hybrids or are unsure if these grasses have a place under their maintenance regime.

Couchgrass Collection Nursery at Lakelands Golf Club

Forty-three new couchgrass plants were incorporated into the trial site at Lakelands Golf Club in August as part of the continuing couchgrass selection program.

The individual plants had been collected from Queensland golf courses over the previous 12 months as 9mm plugs and grown on before being planted into the trial area as 50mm plugs at 1 metre centres. These plugs will be allowed to grow with monthly extension measurements being taken, as well as overall colour, density and quality ratings.

Six of the previous 32 plants that were originally planted in the collection program have been selected and will be incorporated into the greens program that is to be undertaken in conjunction with the QDPI.

It will be interesting to see how locally collected genotypes perform in relation to the new USA-bred ultradwarfs and to the industry standards such as Tifgreen and Tifdwarf.

It is anticipated that the greens project will be implemented at Lakelands Golf Club around October with seashore paspalums and zoysias also being incorporated into the trial.

Patch Diseases

During this past winter AGCSATech has received disease samples of couchgrass from several states that have been affected by various patch diseases.

















Horticulture Australia

In most cases the symptoms are similar, in that it is initially a circular patch up to 30cm in diameter with the inner part of the ring being bleached and deterioration of the leaf tissue.

Depending on the fungal organism, the ring can extend to about 50cm in diameter, with the outer part of the ring being dead and recovery of the grass inside the ring. In other situations there is a blight over the entire surface of the ring and complete deterioration of the leaf tissue.

When the roots of affected couchgrass patches are examined under a microscope, a fungal root rot is often observed. Affected roots are blackened and rotten, and dark fungal hyphae can be seen growing along the surface of rotting roots.

Research in the USA and Australia over the past 15 years has shown that these fungi are responsible for a variety of patch diseases, including bermudagrass decline, Spring Dead Spot, Summer Patch and Take-All patch.

Causal pathogens include Gaeumannomyces, Leptosphaeria and Magnaporthe (Sterling and Sterling, 2002). It has also been our observation that Rhizoctonia can be involved as well as Drechslera and Leptosphaerulina as leaf blights.

In a research project sponsored by the Queensland Golf Union and Horticulture Australia, Sterling and Sterling (2002) studied the fungi that occurred on 328 hybrid couchgrass golf greens in Queensland. The aim was to find out which fungi were most common and determine whether they were responsible for disease problems.

Fungal isolates that were identified included those belonging to the Gaeumannomyces-Phialophora (Take-All) group and Leptosphaeria spp. (commonly associated with Spring Dead Spot).

Pathogenicity tests using Tifgreen 328 hybrid couch grass cuttings showed that within one month of inoculation, some of the isolates in the Gaeumannomyces-Phialophora group produced symptoms on roots similar to those seen in plants collected from the field.

The work of Sterling and Sterling (2002) also suggested that where the plant has to cope with stress factors such as low mowing heights, high temperatures or heavy traffic, the symptoms are more strongly expressed as a "patch". However, in low stress areas the disease can be present, but the symptoms may never appear.

Gaeumannomyces spp., Leptosphaeria spp. and Rhizoctonia spp. can be very difficult and expensive to control on broadacre couchgrass and cultural techniques become a significant factor in disease management.

It is important that the plant is healthy in the autumn before going into dormancy, and there is adequate soil phosphorus and potassium available for good root health.

In the summer, management practices that stimulate strong root growth should be employed, while irrigation management is also a key factor. Over-watering must be avoided by not subjecting turf to excessively dry conditions.

Controlling soil compaction and thatch accumulation are also very important in stimulating strong root growth and reducing the conditions that favour the disease.

Renovation of greens in very hot and humid weather can also be problematic, particularly if they continue to be subjected to low cutting heights and high usage. Low cutting heights as the couchgrass goes into dormancy can also weaken the root system and make it more susceptible to disease infection.

On fairways, the following techniques have proven to be successful in minimising the impact of disease;

- · Thatch control a lack of renovation is a big issue.
- Vertidraining high traffic areas during winter with needle tines.
- Applying magnesium and iron during winter.
- Applying minimal nitrogen in the summer.
- Raising cutting heights in autumn.
- Minimising the number of mowings during winter.

Another factor over the past few years that appears to have influenced the appearance of disease is water quality, in particular high salinity and sodicity. Water quality is another stress element that weakens the plant and makes it more susceptible to disease infection.

There are no clear-cut curative treatments and a proactive approach is very important, in particular a regular renovation and cultivation program that optimises turf health. #













1	2
3	4
5	6

- 1. The initial 32 collected specimens at the Lakelands Golf Club couchgrass selection program, of which six have been chosen to go into the greens project
- 2. One of the six collection specimens to be included in the greens project
- 3/4. The additional 43 collection specimens planted at Lakelands Golf Club
- 5. Spring Dead Spot symptoms seen on a hybrid couchgrass fairway
- 6. An example of leaf blight



Field Testing Plant Growth Regulators and Wetting Agents for Seedhead Suppression of Annual Bluegrass



Poa annua flowering under unmowed, greenhouse conditions

Chemical seedhead suppression can help maintain the colour and playability of fairways, as well as the speed and trueness of putting greens. Also, many superintendents feel that by reducing seed set and the annual contributions to the seedbank, other chemical and management programs used to reduce or eliminate annual bluegrass from cool season turfs may become more effective.

their findings.

There is also a great deal of interest in trying to preserve the purity of newly renovated turf by keeping nearby annual bluegrass from contaminating the renovated site (e.g. a resurfaced putting green).

Many of the annual bluegrass biotypes inhabiting Illinois golf courses have a winter annual life cycle. That is, these biotypes germinate from seed in autumn, overwinter in a vegetative state, flower and set seed in the spring, and then decline or completely die-out during the heat of summer.

S uperintendents in northern Illinois have been trying to suppress spring flowering of annual

reduces putting speed and smoothness of greens

bluegrass (Poa annua) for many years. Heavy

seeding causes objectionable turf colour and

in early to mid spring. Three golf course sites

wetting agents in April and May of 2000-02,

including both green and fairway height turf.

were treated with plant growth regulators and

Where annual bluegrass is a significant component in a turf, profuse seeding may occur in late April through May (October and November in Australia), which can become objectionable for several reasons. First, profuse seeding can turn an annual bluegrass contaminated green or fairway almost white in colour, prompting questions about the health of the grass.

Second, putting greens with significant annual bluegrass populations provide very poor putting surfaces during spring flowering. Third, heavy seeding of annual bluegrass contributes to the "seedbank" in surface soil and thatch layers, thus promoting the long-term survival and spread of the species.

There is also a growing body of evidence that suggests heavy seeding may not be beneficial for the near-term survival of flowering annual bluegrass. Seed production may divert photosynthate away from vegetative tissues to the flowers, resulting in reduced root depth and shoot growth after seeding. Annual bluegrass that hasn't set seed (e.g. in treated plots) is usually better able to survive summer stresses than plants that have flowered and set seed (2).

Techniques to Inhibit Annual Bluegrass Flowering

So, how do you reduce or suppress annual bluegrass seed-set in spring? Several herbicides and plant growth regulators are known to inhibit seeding of *Poa* species and other grasses, including older products like maleic hydrazide, mefluidide, and endothall, (see Table 1). However, most products used in annual bluegrass programs have problems with consistency of seedhead suppression, length of time seedheads are suppressed, or phytotoxicity.

Also, application timing and stage of plant growth is critical for best seed inhibition, and calendar dates for application may vary widely from year to year.

Researchers supported by the Chicago District

Golf Association tested plant growth regulators

and wetting agents for their ability to suppress

formation on three golf courses in the Chicago

area. Here Randy Kane and Lee Miller outline

annual bluegrass (Poa annua) seedhead

Historically, the best results for seedhead suppression on annual bluegrass fairways have been found using mefluidide (Embark) (1, 5). However, timing and phytotoxicity problems have limited its use, especially on greens-height turf.

Many superintendents have tried early spring applications of gibberellin inhibitor plant growth regulators (PGRs) such as paclobutrazole (Trimmit) or flurprimidol (Cutless) to try to slow the encroachment of annual bluegrass into bentgrass turf. They reported some seedhead suppression following early season treatments, but seedhead suppression usually is not the primary goal of these applications.

A few adventurous superintendents have also used the wetting agent Aqua-Gro L (5) to limit spring flowering of annual bluegrass, and have found that Aqua-Gro is less phytotoxic than Embark, but provides more variable results. (Note that Aqua-Gro L is no longer manufactured.)

Preliminary field tests have suggested that ethephon (Proxy) has good activity for annual bluegrass seedhead suppression (4). Proxy is a

Table 1. Chemicals that have been used for annual bluegrass seedhead suppression

Trade Name	Common Name	PGR Mode Of Action		
'MH' or SlowGro	Maleic hydrazide	Type I cell division		
Endothal	Endothall	Type I cell division		
Embark	Mefluidide	Type I cell division		
Prograss	Ethofumesate	Type I (?)		
Enhancer, Trimmit	Paclobutrazole	Type II GA inhibitor		
Cutless	Flurprimidol	Type II GA inhibitor		
Primo	Trinexepac-ethyl	Type II GA inhibitor		
Proxy	Ethephon	Ethylene effects		
Agua-Gro L	NA (wetting agent)	Unknown		

new PGR for the turf market, but has been available in agriculture applications for years. Proxy may be safer and have more timing flexibility than Embark, and could be a potential substitute for Agua-Gro L.

Proxy reportedly has the tendency to make treated turf lighter green to yellow-green, but this can be counteracted to some extent with iron. Also, tank-mixes of Proxy plus trinexepac-ethyl (Primo) have shown good results with less turf discolouration.

Products Tested and Application Techniques

Three golf course sites were treated with PGRs and wetting agents in April and May of 2000-02, including both green and fairway height turf. Initial treatments were timed to coincide with flowering of the earliest annual bluegrass biotypes. Individual plots were 3.7-4.6m² in size and were replicated two or three times depending on space available.

Proxy was tested alone and in tank mixes with Primo and Trimmit. Single and multiple applications of Proxy were made at 160-240ml/100m² rates. Primo was applied alone and in tank mixes at 4-8ml/100m². Trimmit was

applied at rates ranging from 4.5-6ml/100m². Aqua-Gro L has been tested for a number of years on putting greens at 260ml/100m², usually with follow-up applications at 130-260ml/100m² one week later.

The wetting agent Cascade was also included in the study to see if a different type of wetting agent chemistry could inhibit seedheads (note that the manufacturer makes no claims of seedhead control). Embark (turf and ornamental growth regulator formulation)

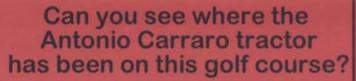
at 42ml/100m² was included as a standard, and to test for phytosafety on greens-height turf.

Summary of Results from Early Studies

A general overview of field test data from Chicago area trials in 2000-01 on greens-height turf can be found in Table 2. Note that the per cent seedhead inhibition is an average of several tests, and results can vary greatly with weather conditions, application timing, and annual bluegrass biotypes present in treated areas.

Table 2. General overview of annual bluegrass seedhead suppression by PGRs and wetting agents for tests conducted in the Chicago suburbs 2000-01. Data shows a percentage reduction in seedheads compared to untreated plots.

			% Seedhead Suppression		
Product	Applications	Rate/100m ²	May 10	May 24	June 1
Aqua-Gro L	3	260ml, 130ml, 130ml	55	50	25
Cascade	2	130ml	25	0	20
Trimmit	2	6ml	0	0	0
Primo	2	4-8ml	0	15	0
Proxy	1-2	160-240ml	80	85	80
Proxy+Primo	1-2	160ml + 4ml	80	85	80
Embark T&O	1	40ml	90	95	80







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Field Testing Plant Growth Regulators and Wetting Agents for Seedhead Suppression of Annual Bluegrass





1.Embark T&O can cause discolouration and thinning of greens height creeping bentgrass

2.General overview of field test layout, which also shows several darker plots following treatments with wetting agents

3.Close-up view of heavy Poa annua seedhead formation



Embark is consistently the best flower suppressor, but phytotoxicity (primarily on creeping bentgrass) remains a major concern in northern Illinois. Phytotoxicity of Embark treatments was expressed as a dark blue-green to brown colour, with some thinning of the stand. Once warmer weather arrived, colour and turf density recovered.

Proxy and Proxy + Primo treatments provided seedhead suppression approaching that of Embark. In some cases, suppression with split applications of Proxy lasted longer than single Embark applications.

However, higher rates or repeat applications of Proxy caused yellowing and thinning of treated turf, especially at greens height. Note that repeat Proxy applications were made only seven to 10 days apart. Less discolouration has been observed in other tests if the interval between applications is 28-35 days (4).

Tank mixing Proxy with Primo appeared to reduce the discolouration and thinning of turf, although further testing will be required to confirm the effect.

Of the other products/rates tested, only Aqua-Gro L exhibited significant seedhead suppression, and the effect was short-lived and inconsistent from site to site and season to season

The anti-gibberellin growth regulators
Primo and Trimmit did not appear to inhibit
seedhead formation, and in some situations,
these treatments appeared to have more
seedheads than check plots. This effect could
be due to stunting of the seed stalk to the
point where the seedheads remained below
the cutting height and were not removed
by mowing.

Observations from 2002 studies

For 2002 greens-height trials, we concentrated on Proxy alone or in tank mixes with Primo or Trimmit (see Table 3 and Figure 1).

We also began a second set of treatments a week later than the first to see if a later application was as effective as a well-targeted first application.

You can see that the Proxy and Proxy + tank mixes did not perform as well as in the previous two years. On certain rating dates, the level of seedhead suppression was hovering around 50 per cent, with the best levels around

Table 3. Percent of annual bluegrass seedhead suppression on putting green turf by Proxy alone and in tank mixes with anti-gibberellin PGRs (2002 studies). Data shows percentage reduction in seedheads compared to untreated plots.

			% Seedhead Suppression			
Product	Rate/100m2	Application	May 10	May 24	June 1	
Proxy	160ml	April 18	75	56	40	
Proxy	160ml	April 24	8	44	48	
Proxy + Primo	160ml + 4ml	April 18	83	74	52	
Proxy + Primo	160ml + 4ml	April 24	33	78	68	
Proxy + Trimmit	160ml + 4.5ml	April 18	42	70	68	
Proxy + Trimmit	160ml + 4.5ml	April 24	16	74	40	



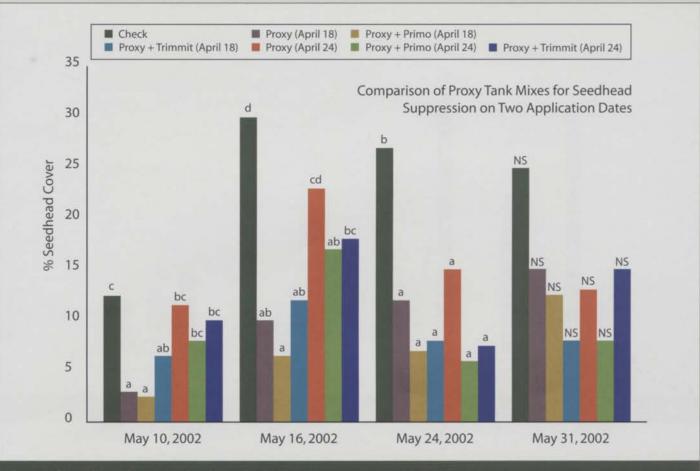


Figure 1: Comparison of Proxy tank mixes for seedhead suppression on two application dates

70 per cent suppression. Previous tests were around 90 per cent.

Variability in seedhead suppression with PGRs is common (3, 5) and may be due to differing weather and application timing parameters, as well as the variability of annual bluegrass biotypes. Proxy treatments applied a week later than the supposed target date still

performed well once the time lag was taken into account.

Finally, we took a look at some Proxy tank mixes sprayed on a mixed annual bluegrass/ creeping bentgrass fairway (see Table 4 and Figure 2).

Taking the Proxy rate up to 240ml/100m2 improved the seedhead suppression, and no

noticeable phytotoxicity was observed at this rate when tank mixed with Primo at 7.5ml/100m².

Proxy does not have a separate label rate for fairway treatments or a recommended rate for putting greens on the 2002 pesticide label. It is likely that some broader uses and application rates will appear on future labels.



Field Testing Plant Growth Regulators and Wetting Agents for Seedhead Suppression of Annual Bluegrass

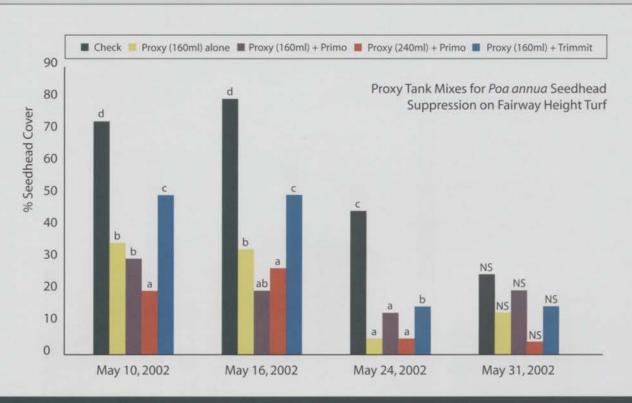


Figure 2: Proxy tank mixes for Poa annua seadhead suppression on fairway height turf

Table 4. Percent of annual bluegrass seedhead suppression on fairway turf – 2002. Application date for all treatments was April 23, 2002. Data shows percentage reduction in seedheads compared to untreated plots.

			% Seed	dhead Supp		
Product	Rate/100m2	May 10	May 16	May 24	May 31	June 7
Proxy	160ml	52	59	89	48	54
Proxy + Primo	160ml + 8ml	59	75	80	20	31
Proxy + Primo	240ml + 8ml	73	78	89	88	92
Proxy + Trimmit	160ml + 9ml	32	38	33	40	0

Conclusions

After three years of testing products for annual bluegrass seedhead suppression, some conclusions can be reached.

- The most consistent seedhead suppression follows treatments with mefluidide or ethephon, although both chemicals have limitations regarding application timing or possible phytotoxicity.
- Embark can cause discolouration and thinning of bentgrass following cold weather, but remains the best product for seedhead suppression, especially on fairways where some phytotoxicity is tolerable.
- Proxy can be nearly as effective as Embark for seedhead suppression, but results are variable from year to year and from site to site.
 Proxy can also cause some objectionable

- colour and growth effects, but tank mixes with Primo or other PGRs may alleviate some of these problems.
- If Proxy (+Primo) applications are made early in spring, a follow-up application four or five weeks after the first may be beneficial to maintain the seedhead suppression into June (December in Australia).
- Wetting agents gave inconsistent results, and, at best, were approximately 50 per cent as effective as mefluidide or ethephon.
- Anti-gibberellin PGRs such as paclobutrazole and trinexepac-ethyl did not significantly reduce seedheads in our studies.
- Seedhead suppression can be highly variable from year to year or site to site because of weather fluctuations, application timing, and annual bluegrass variability.

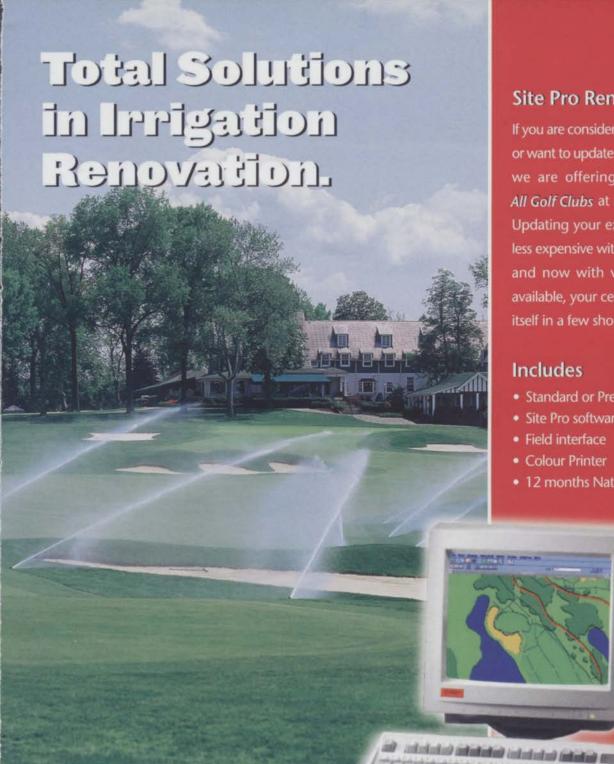
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This project was supported in part by a grant from the USGA Green Section. Randy Kane is director of turfgrass programs, and Lee Miller is manager of turfgrass research at the Chicago District Golf Association.



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INTERNATIONAL TURFGRASS SOCIETY MID-TERM MEETING





The translucent stadium roof at Old Trafford allows partial light to filter through to the turf, helping reduce the impact of shade

The translucent stadium canopy at Old Trafford, Manchester United's home ground

In July, AGCSATech manager John Neylan attended a mid-term board meeting of the International Turfgrass Society (ITS) in Wales. During his week-long visit to the UK, John, a board member of the ITS, visited a number of turfgrass research and sporting facilities, including the renowned Sports Turf Research Institute and Manchester United's hallowed home turf Old Trafford.

The ITS is the principal organisation representing turf researchers from around the world, conducting a research conference every four years which provides an important gathering of turf researchers for the presentation of new science in turf.

The ITS mid-term board meeting was held at Llandudno, Wales to discuss various constitutional aspects of the ITS, the 2005 conference in Llandudno, and the proposed Chile conference in 2009.

The meeting was a great experience, not only by being involved with the ITS but also to have the opportunity to spend time with several leading turf researchers. As part of the meeting agenda, we visited sites for the conference technical tour, which provided an excellent opportunity to visit several interesting turf areas.

Old Trafford - Manchester United

This facility is quite remarkable, being the largest soccer venue in the UK with a seating capacity of 68,000. It is typical of modern stadiums, with spectator seating configured to provide "close to the action" viewing in comfort.

The consequence of this is that the stands are close to the field and shading is a major management issue. This stadium has translucent roofing which provides improved light penetration, however, the playing surface still needs to be resurfaced up to twice a season.

The field was reconstructed several years ago to the StrathAyr system and was reconstructed again at the end of the 2002/2003 soccer season where a fibre sand rootzone was installed.

The field has been sodded with thick sod grown on the fibre sand rootzone medium

which is used in about 50 per cent of Premier League pitches in England.

One interesting aspect of pitch preparation for match day is that they water the field immediately before play so the ball will skid through, which is apparently how the players like the surface. If both captains agree, the field can also be watered at half-time.

Manchester United's Training Facility -Carrington

Manchester United's training facility is an amazing complex and is typical of the facilities for most Premier League outfits. It has two main buildings - one for junior development and the other for the professionals -with indoor training facilities, a gymnasium, swimming pool and administration amenities. There are 12 turf pitches and a synthetic pitch (for junior use) for training purposes.

The fields are a 70:30 sand/soil rootzone mix over a gravel drainage blanket and then sand slit. The pitches are perennial ryegrass and two of them are heated using sub-soil hot water pipes. The facility is maintained by six groundsmen and the condition of the turf was very good. Given the value of the players everything has to be perfect.

Royal Liverpool Golf Club - Hoylake

This golf course is a classic links course and is the second oldest in England behind Westward Hol in Devon. It hosted the very first amateur championship in 1885 and is set to host the 2006 Open championship.

The turf is maintained with the minimum of water and fertiliser applications. In the days preceding our visit, the weather had been particularly hot (temperatures in the high 20's to low 30's) and dry and the course was certainly parched. They use about 10 megalitres (2 million gallons) of water a year and most of this is applied to the greens (mostly by hand).

The fertiliser program consists of about 480 grams of nitrogen/100m2/yr, most of which is applied in one go. No phosphorus is applied on the course and the fairways receive no fertiliser except for topdressing with a sand/soil mixture.

Topdressing is a big part of links management and the greens are heavily topdressed about three times a year with two tons of topdressing/green/application. The average size of greens is about 650-680 square metres.

The turf on the greens is predominantly bentgrass with Poa annua. The fairways consist of the native bentgrasses and fine fescues that dominate the links land.

The week we visited was the week of the Open at Royal St. Georges, and Royal Liverpool had the same links look as the Championship course. When you inspect a links course there is a real feel that you have to compete with what nature provides, with minimal influence of the hand of man.

Sports Turf Research Institute (STRI), Bingley

I was fortunate to visit the STRI which is the pre-eminent turf research facility in the UK and Europe, and leads the world in the assessment and evaluation of sporting surfaces. The STRI has an extensive research program including;

- Using recycled glass for rootzone construction. This trial is part of a large program in the UK to increase waste recycling. Trials to date have shown that the use of recycled glass is a viable alternative to sand. The program also includes the use of recycled glass as bunker sand.
- Poa annua control in turf. This is as much an issue in the UK as it is in Australia. At the STRI, the emphasis has been in ryegrass soccer pitches with ethnofumesate at 5Ll/ha applied four weeks after seeding being an effective treatment.
- · Evaluating the value of organic biostimulants. As with most of the world's experiences, the STRI has found no measurable benefits from the 16 it has trialled to date.
- Fertiliser trials. The STRI has undertaken numerous trials and one observation has been that ammonium sulphate can deter Poa annua invasion, compared to controlled release fertilisers (CRF). The relationship is due to the acidifying effects of the ammonium sulphate, whereas the CRF is not acidifying and "feeds" the shallow surface roots of Poa annua.







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See "International Internships" - page 20 in this issue

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A new washing plant at Burdett's Site in Langwarrin, Victoria, has the capacity to wash and sort around 220 tonnes per hour. Andrew Burdett said the plant could blend different types of sand to meet specifications as required and also had the ability to cut material into different lines and divert to separate stock piles.

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INTERNATIONAL TURFGRASS SOCIETY MID-TERM MEETING

- The handling of green waste in turf. This is being investigated with composting used as a method of green waste disposal.
 Composting is undertaken using 1000L bins that handle 12 months of clippings from greens. The end product contains about two per cent nitrogen and is being used on fairways and sports fields.
- Undertaking cricket wicket research by evaluating 61 ryegrass cultivars under wicket preparation conditions and wear.
- Working with Wimbledon to control Poa annua in the predominantly ryegrass courts.

We also inspected the turfgrass cultivar evaluation trials that include bentgrass, ryegrass

and fine fescues. The results of these trials are published in a booklet that is the "industry bible" for selecting turfgrass cultivars in the UK.

Institute of Grassland and Environmental Research (IGER) - Aberystwyth, Wales

At IGER I met with Dr Danny Thorogood who is a turfgrass breeder and ITS board member. Danny is currently conducting ryegrass and bentgrass breeding programs, and it was a good opportunity to discuss with him what we are currently doing with the AGCSATech bentgrass collection.

The IGER bentgrass program started in 1996 and has concentrated on evaluating native bentgrass populations, which in many ways is

similar to what we are doing with the AGCSATech trials.

The ryegrass program is exploiting a staygreen gene that is responsible for reducing or stopping the senescence of the lower leaves of the plant during winter. The overall result is a ryegrass that is more winter-hardy.

The stay-green gene is also being exploited in intraspecies crosses with tall fescue. The purpose of this program is to develop a more stress tolerant ryegrass, with stay-green characteristics and the summer stress hardiness of tall fescue.

I inspected the ryegrass, fine fescue and bentgrass trial plots, as well as the breeding chambers where the crosses are made. The breeding chambers allow crosses to be made without pollen contamination from wild bentgrass populations.

The visit to IGER was invaluable in getting a better insight into what is involved with plant breeding and cultivar production. It has reinforced the need to develop a commercial relationship with a seed production company to take our bentgrass program further.

Links Golf Courses

Aside from visiting Royal Liverpool, I also dropped into two other links golf courses in Wales, Aberdovey and Borth & Ynyslas.

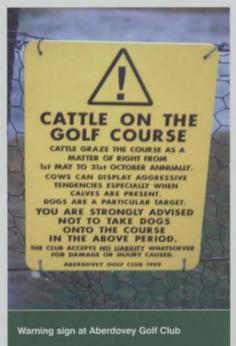
The fascination for me regarding links golf courses is the conversion of natural grasslands into a golf course. All the courses are dominated by natural bentgrass and fine fescue on a narrow strip of land between the sea and arable land. The complete naturalness of the landscape is the most striking feature.



Seed production greenhouse at the Institute of Grassland and Environmental Research (IGER) in Wales



Breeding chambers at the IGER facility

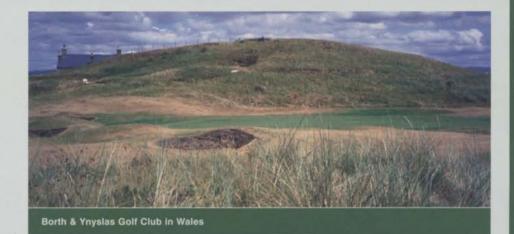


INTERNATIONAL TURFGRASS SOCIETY **MID-TERM MEETING**

They were all dry and hard and low inputs are certainly the name of the game.

The presentation of the non-cut areas is interesting in that the grasses are allowed to grow unimpeded and therefore straying into the rough presents a major challenge.

The presentation of Royal St. Georges for the Open was identical to these golf courses and appears to be governed more by nature than man's intervention. #



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- Hydraulically powered
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- Walking beam suspension
- Fantastic for golf courses and contractors
- 2 cubic meter capacity (app)



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The Innovative Way



The Kingston Heath Golf Club's labour-saving

CORE ELEVATOR (Kingston Heath Golf Club)

The brainchild of Kingston Heath superintendent Martin Greenwood, assistant superintendent Bob Simmons and mechanic John Phelan, the core elevator was made in an attempt to reduce labour input and time in collecting cores from greens.

The machine is based on an old Jacobsen GK 1V greens mower that was no longer used regularly.

Being a good, lightweight prime mover and having the hydraulics to drive a number of components, the trio set about adapting the machine to the tune of about \$1200 over a two week period.

The elevator comprises three main components:

- The elevator frame is made up of aluminium plates (to keep weight down) with matched rollers and a moulded conveyor belt. The top roller is hydraulically driven by the mower's original cylinder motor, with its speed governed via the back-lap valve. The belt is able to move in both forward and reverse directions which can be handy to clear blockages.
- The core collector and hydraulically driven power broom is a highly modified cutting unit that windrows and then sweeps the cores on to the machine's conveyor. The original cylinder lift mechanism has been retained and after much finetuning works well.
- The lift frame is carefully designed to pivot the elevator frame as the power broom clears the green allowing good clearance for transport.

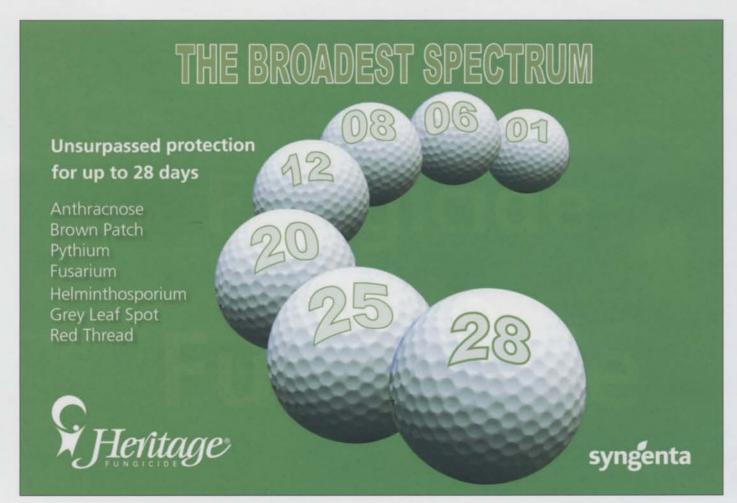
The result? A job that once took five or six staff members up to an hour to complete, now takes four members a little under 20 minutes – one to drive the machine and three with wheelbarrows following behind to collect the cores as they come off the conveyor.

The core elevator has been in use at Kingston Heath over the past two seasons and has also found employment at other nearby courses.

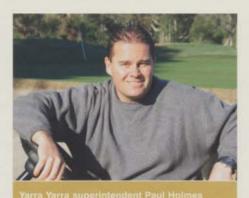
Syngenta recognises our innovative superintendents and is proud to present Martin Greenwood with a \$150 AGCSA book voucher.

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Send you stories and pictures through to: Brett at the AGCSA, Suite 1, Monash Corporate Centre, 752 Blackburn Rd, Clayton North, VIC 3168 or email brett@agcsa.com.au Ph: (03) 9548 8600



Super Spotlight



....

PAUL HOLMES (Yarra Yarra Golf Club, Melbourne, VIC)

Full Name: Paul David Holmes

Age: 35

Family: Married, two children Years as a superintendent: 11 Years as an AGCSA member: 10

Previous positions: Superintendent, Southern GC

Number of staff: 12

Course specs: Greens Poa/bentgrass; Fairways native couch; Tees Poa/bentgrass/fescue

Favourite piece of machinery/equipment & why? Radio controlled irrigation system. It creates an enormous amount of flexibility that you don't have with a standard system.

Most embarrassing moment as a golf course superintendent?

I had been a superintendent for six months and had a green become very ill just before a round of Division 1 pennants. So I painted the infected area green the day before and thought, 'Great, I'm off the hook'. On the Sunday we had heavy rain so I thought I had better go and see how the green was holding up. Upon my arrival I saw two VGA officials and two caddies surrounded by 20 onlookers, all scratching their heads. Holding green towels that were once white, they had used them to soak up some casual water which was on the sprayed area.

Funniest moment you have seen as a golf course superintendent?

One cold winter's day at the Southern Golf Club, I saw on old member, who was down to his last \$5 million, scrounging around the edge of one of the lakes looking for golf balls. All of a sudden he disappeared and after investigating found out he had slipped in. He was covered in

mud, had lost one of his shoes and broken his glasses. I don't think he was too amused as my assistant and I stood there laughing our heads off. Plans for the course over the next year?

New maintenance complex. Removal of cool season surrounds and change to couch. Tree removal and revegetation, and bunker restoration.

Best advice ever received about the job?
Don't worry about things that might happen.
Take steps to make sure they won't.

Career highlight as a course superintendent?
Being appointed Yarra Yarra superintendent and hosting the 2002 Ladies Australian Open.
If you could change one thing about your job

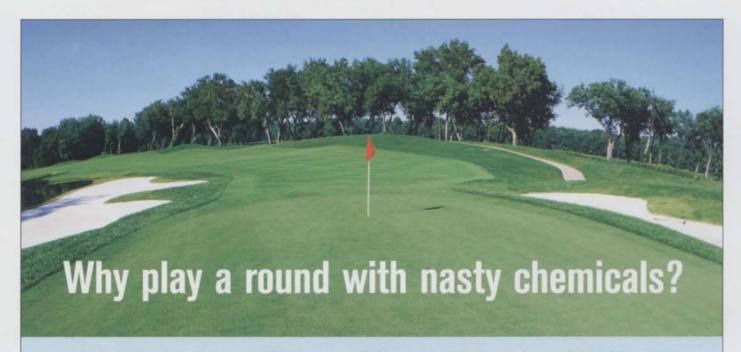
what would it be and why?

The time I spend away from my family.

Best part about being a course superintendent?

The satisfaction you feel at various times, whether it be on a Friday when the course is all groomed or when you have just completed a large project.

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The El Caballo Golf Resort set up which included 10 hectares of effluent treatment ponds, storage dams and three kilometres of open rock drains



Jeff Austen

SHOCK AS EL CABALLO CLOSES GATES

One of Australia's most unique golf courses, the El Caballo Golf Resort 60km east of Perth, has been forced to close its gates.

A combination of low rainfall in recent years, its positioning on the fringe of the harsh Wheatbelt region, and the closure of two abattoirs which supplied the course with effluent water for irrigation use, proved too adverse, with the course owners closing the course at the end of September.

Superintendent Jeff Austen, winner of the AGCSA's Claude Crockford Environmental Award in 2002 for his efforts at the Western Australian course, found out about the closure by accident after questioning the owners over plans to close the course two days a week.

"I had to force it out of the owner," a disillusioned Austen said.

"He told me that they were closing the golf course for play on Mondays and Tuesdays and I said 'Well, what's going on, are you going to close the golf course?', and he said, 'Well yes we are'

"Having been superintendent there for more than eight years, I thought they could have told me what the situation was, but they chose not to. There was no warning.

"I always thought it didn't look good, but it could have been handled a lot better than it was."

Over the past month, the course has been maintained at a bare minimum with Austen's remaining staff of two carrying out basic mowing programs.

At this stage the future of the site is uncertain, but it is understood that sheep will eventually graze the land.

El Caballo will go down as one of Australia's groundbreaking golf courses.

Since the mid 1970s the site on which the course was eventually built was the dumping ground for effluent water from two nearby sheep and cattle abattoirs.

However, due to encroaching housing estates and major environmental concerns effluent was finding its way into tributaries of the Swan River - the golf course was built as an environmentally responsible solution to the discharge of the effluent water.

With a number of environmental challenges to overcome, course construction began in 1994. Rather ironically, Austen joined as assistant to Mark Claes on April Fools Day in 1995

In total, some \$9 million was spent on course construction, including a dedicated waste treatment facility (10 hectares of aerobic and anaerobic ponds), three kilometres of open rock drains and two kilometres of subsurface drains with carefully designed mounds and swails which directed stormwater drainage to a system of lakes which held approximately 310.000m3

El Caballo's pioneering work using abattoir effluent water for irrigation attracted worldwide attention and at their peak the abattoirs were pumping nearly one million litres of untreated waste a day into the ponds.

Taking over as superintendent in 1996, Austen had to contend with increasingly drought-like conditions and temperatures which resulted in the loss to evaporation of nearly one third of the course's water supplies held in storage dams annually.

Due to Department of Environmental Protection licence conditions, irrigation wasn't allowed during the day because of potential health problems associated with the use of treated effluent. Also, restrictions on soil

nutrient loadings meant that Austen could only use low fertiliser application rates.

"It was a massive learning curve, but in hindsight I guess it wasn't the best place to have a golf course," Austen (33) said.

"If it had have been 20-30km closer to the coast it would have made a big difference. The ground water was very salty and the Wheatbelt soils are notorious.

"But it was the closure of the abattoirs which really killed it.

"It is a big shock, especially winning the Claude Crockford award in 2002 and trying to do the right thing there.

"But I think I can look at it positively and say that I got a lot out of it. I think the golf course was probably ahead of its time.

"It was best to walk away when I did," Austen said. "I couldn't watch it die. But. vou have to be positive. One door closes and another opens."

Despite his rapid departure, Austen has picked up a job as farm manager with Turf Farms WA where his focus will be promoting salt-tolerant species such as seashore paspalum.

"I guess one of my biggest claims to fame at El Caballo was working with salt-tolerant grasses such as saltene," Austen said.

"It will be a new experience and one I'm looking forward to. The company is growing a new variety called velveteen, which is a fineleaf paspalum, more so than saltene which we had good results with at El Caballo.

"When you had it [saltene] down to 2-3ml we had people playing who thought it was a bentgrass green and not paspalum. I think velvetene has great potential." &

Brett Robinson

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news

ROYAL ADELAIDE JUMPS 30 PLACES IN WORLD RANKINGS

The Royal Adelaide Golf Club has emerged as the biggest mover in Golf Magazine's list of the world's top 100 golf courses released last month.

The Seaton Park course, under the stewardship of superintendent Jeff Kaines, jumped 30 places from 80 to 50, and is one of four Australian courses to grace the biennial list.

Royal Melbourne's Composite course retains its ranking among the world's top 10 coming in at No.8 up from 10 in 2001, while fellow Melbourne club Kingston Heath has progressed seven places from 28 to 21. The New South Wales Golf Club in Le Perouse also gained ground, moving from its 2001 ranking of 47 to 43.

Royal Adelaide's jump was the biggest of any course in the list, with Kaines attributing that to two factors.

"We hosted the Australian Open in 1998 and I think that started a trend in the way we have maintained the course since," Kaines said.

"Also with Kooyonga hosting the Jacobs Creek Open, we have had more international visitors which has helped raise the exposure of the club

"The club's pretty proud [of the ranking] and it confirms that we're going in the right direction. It's also pleasing to break into the top 50 considering some of the budgets the overseas courses have to work with."

Of the top 10, Royal Melbourne, Muirfield and Shinnecock Hills were the only courses to improve their rankings, with Pebble Beach slipping the most from No.3 to No.7. Pine Valley and Cypress Point maintained their No.1 and No.2 rankings respectively.

Four new courses joined the list including the recently opened Kauri Cliffs course in Kaeo, New Zealand, which debuted the highest at 49.

Golf Magazine's World Top Ten

- 1. Pine Valley (USA) (1)*(1)**

- St Andrews Old Course (Sco) (5)(5) Pebble Beach (USA) (3)(3)
- 8. Royal Melbourne Composite (10)(9)

- 43. New South Wales (47)(43)

- ** 1999 ranking
 *** Newcomer to rankings #



New NSWGCSA president Craig Easton

EASTON, SOFIELD ELECTED STATE PRESIDENTS

Two new State Association presidents have been elected following recent AGMs.

Craig Easton from the Carnarvon Golf Club replaces outgoing NSWGCSA president and incoming AGCSA Board member Martyn Black, while Brad Sofield assumes the mantle of Western Australian president after Allan Devlin's two years.

Thirty-nine-year-old Easton has been superintendent at Carnarvon for the past 14 years and spent the past three years as treasurer of the NSWGCSA

He says the new-look NSW Board faces a number of major tasks heading into its first term, including tackling OH&5 issues, combating the rise of contract maintenance and the production of a workable desktop diary for superintendents.

Sofield has been superintendent of the Melville Glades Golf Club for the past four years and prior to that was assistant superintendent at Gosnells Golf Club for three years. He has served as secretary and committeeman on the GCSAWA over the past seven years.

Sofield (27) says the GSCAWA will be looking to further the progress made under Allan Devlin, with immediate focus on tightening up the constitution. #

DOME, SUNCORP RESURFACED FOR **RWC 2003**

Melbourne's Telstra Dome has received a major facelift in time for the 2003 Rugby World Cup with the laying of a new surface.

Dome contractors HG Turf ripped up 14,000 square metres of turf during September, a major exercise considering the total playing area of the Dome measures in the vicinity of 18,000sq m.

The process involved stripping the top 100mm layer of sand and Netlon before bringing in new sand, re-levelling the surface and laying the new Motz turf.

The Dome will host seven Rugby World Cup matches between October 11 and November 9, including the sell-out Australia v Ireland pool match and two quarter-final games. The New Zealand and Italy teams will be the first to test the new surface on October 11.

Meanwhile, in warmer climes, the controversy surrounding the much-maligned playing surface at Brisbane's Suncorp Stadium has escalated into a war between the Queensland Government and builders Multiplex/Watpac.

Since the revamped stadium re-opened in June, the playing surface has been the brunt of severe criticism, forcing the State Government to make the call in early September to rip up the entire surface and replace it in time for the Rugby World Cup.

According Brisbane's Courier-Mail newspaper, the cost of replacing the surface will be around \$1 million and just who foots the bill is the subject of intense debate.

The replacement turf, MegAyr, which was grown on the Sunshine Coast throughout the year as a back up for the original surface, was installed over a two week period, leaving groundstaff just three weeks to prepare the field before it hosts the first of nine World Cup fixtures. #

APPOINTMENTS

ACGSA President Mark Couchman has packed up and headed south, leaving Tewantin Noosa Golf Club to take up the newly created position of golf course manager at the Cromer his former course will be none other than GCSAQ president Jon Penberthy who will move over from Gainsborough Greens after an 11 year stint as superintendent.

Dean Leigh, former assistant at the Eastlake Golf Club, has been appointed as the new superintendent at Strathfield Golf Club, replacing Greg Ford who leaves after 12 years.

After eight years as superintendent at the Carbrook Golf Club on the southern outskirts of Brisbane, Martyn Hedley has resigned to take up a greenkeepers position at the

Yarra Yarra Golf Club, has recently joined the

Grant Chettleburgh has left his position as superintendent at the Sun City Country Club in

Craig Molloy has taken over the Eastlake Golf Club superintendents position vacated by been filled by Damian Curtis.





The Heritage Green Golf Club team will represent Australia in the world final of the John Deere Team Championship

HERITAGE GREEN WINS JOHN DEERE AUSTRALIAN FINAL

Newcastle's Heritage Green Golf Club will represent Australia in the world final of the 2003 John Deere Team Championship after winning the national final at the Royal Pines Resort in Queensland last month.

In a reversal of June's Newcastle qualifying round result, the Heritage Green team of Andrew Comerford, Mark Brittain, Jake Alexander and Troy Martin edged out the team from fellow Novocastrian club Tuggerah Lakes, made up of Steve Fisher, Alan Beaumont, Brian Grace and Mark Sullivan.

Playing a modified scramble event on the Gold Coast resort's East Course, Heritage Green finished three shots clear of Tuggerah, with the Goonawarra team of Matthew Miller, Pat Giles, Bryan Wearne and Mark Jackson finishing one shot further back in third.

The result means the Heritage Green team, plus a representative from their local John Deere Golf and Turf dealership, Sharpes Tractor Centre, travels to the Grayhawk Country Club in Scottsdale, Arizona, USA for the world final on Nov 12-15.

Developed as a way of building relationships within the golf and turf industry, the tournament brings together the four main decision makers within a golf club – the course superintendent, club captain/president, club manager, and golf professional.

The championship is also run in conjunction with the Australian Golf Course Superintendents Association, with John Deere contributing \$25 for each team that competes to the association for its various research projects conducted around the country.

Regional qualifying events were held between May and August, with the winner and runners-up at each event qualifying for a place in the national final. The results were;

Australian Final (Royal Pines Resort)

1": Heritage Green Golf Club - 55

2": Tuggerah Lakes Golf Club - 58

3": Goonawarra Golf Club - 59

Victoria (Cranbourne Golf Club)

1": Goonawarra Golf Club

2": Lang Lang Golf Club (Darren Green,
David Barritt, Brett Hall, Terry Perfrement)

South Australia (Gawler Golf Club)

1": Kooyonga Golf Club (Steven Newell,
Kingsley Robinson, Tony Oldfield,
Matthew Deans)

2"6: Flagstaff Hill Golf Club (Gary Day, Mike
Greening, John Wigglesworth, Troy Lane)

Newcastle (Nelson Bay Golf Club)

1": Tuggerah Lakes Golf Club

2"d: Heritage Green Golf Club

Sydney (Oatlands Golf Club)

1": Fox Hills Golf Club (Kenton Boyd,
Walter Fisk, Brad Harding, Justin Waring)

2"d: Richmond Golf Club (Ron Melville,
Steve McKinley, Steve Taylor, Dave Ecob)

Western Australia (Royal Fremantle Golf Club)
1st; Bunbury Golf Club
2st; Mandurah Country Club

Queensland (Redland Bay Golf Club)
1st; Lakelands Golf Club
2st; Gainsborough Greens

AGCSA WORKSHOPS

The AGCSA Roving Workshop series continues in October. The dates and venues are:

October 8: Brisbane (Brisbane Golf Club)
October 9: Sydney (Pennant Hills Golf Club)
October 13: Perth (Mt Lawley Golf Club)
October 14: Adelaide (Belair Park County Club)
October 27: Melbourne (Eastern Golf Club)

The Sydney workshop will coincide with the launch of the Improving the Environmental Management of NSW Golf Courses manual.



TURF TALES WITH SCOTTY - DRY PATCH DRAMAS'

SCOTTY- WE'VE GOT SOME DRY PATCH ON THE 4th - THE TURF IS DISCOLOURED AND SEEMS TO BE WILTING...

I'LL STOP BY THE SHED AND PICK UP THE SOIL PROBE. SEE YOU IN FIVE, RICK. GEEZ - SHE'S DRY / THIS SOIL ISN'T WETTING EVENLY. WE NEED TO GET HYDROFLO II ON QUICKLY, TO GET THE WATER BACK INTO THE ROOT ZONE. LET'S DO THE OTHER GREENS WHILE WE'RE AT IT.



HYDROFLO II IS GREAT!
- IT'S SO EASY TO APPLY,
EVEN WHEN GOLFERS
ARE AROUND WE'LL JUST
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SO WE DON'T GET
PUDDLES ON
THE GREEN. GRUMPY
GOLFERS!

NO DRY PATCH NOW RICK . NEXT YEAR WELL PUT HYDROFLO ON IN SPRING BEFORE THE DRY PATCH GETS A HOLD.

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The Dakota Turf Contractor

ASPAC CONTRACTOR

ASPAC Golf and Turf has released the Dakota Turf Contractor in Australia, the first specifically designed high-capacity dump trailer for the turf market.

The Turf Contractor has a massive five tonne payload capacity, and with ground pressure kept to a minimum due to full width floatation tyres and walking beam suspension, it can be used in any weather with any load without fear of wheel rutting or turf damage.

"No other turf trailer to my knowledge combines floatation tyres and walking beam suspension," says Steve Lewis of ASPAC Golf and Turf

The Turf Contractor enables clients to embark on a number of construction jobs and shift turf, sand, tree limbs, woodchips, blue metal or any materials without damaging turf surfaces.

The Turf Contractor has a heavy-duty hydraulic ram to enable high dumping action for any sized loads, with the design of the chassis and tailgate enabling unloading without bending or scraping the tailgate on the ground. It also comes with two wheel brakes as standard.

The Turf Contractor is available from October 6, and anyone who wants to see it in action can phone Steve Lewis at ASPAC Golf and Turf on 1800 640 305 or 0419 009 234. .

NUTURF PRIMER SELECT

Primer Select is a new water management product for greens and tees. The improved formulation allows turf managers to select the rate and frequency of applications to match soil types and spray programs.

"The product allows the flexibility of safely tank mixing Primer Select with most products being

applied to greens and tees," said Adam Phelan, Nuturf's product manager for wetting agents.

Primer Select can assist superintendents when the quantity of water being applied to greens is limited.

"The new formulation of Primer Select enables a green to dry down to much lower moisture contents without the green becoming water repellent," Mr Phelan said.

"This means during hot, dry periods that greens can survive a lot longer until water is able to be applied again."

These and more benefits are backed by a performance guarantee.

"Aquatrols and Nuturf have conducted rigorous testing on the entire Aquatrols range of water management products and we are proud to be able to offer a money back performance guarantee on the range," Mr Phelan said. &



Do you want to be the first company to produce a commercial bentgrass variety that has been developed to use in AUSTRALIAN golf greens?



















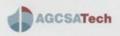
The AGCSA with support funding from Horticulture Australia is aiming to fill the gap in the commercial bentgrass varieties presently available for putting surfaces in southern regions of Australia. More specifically the research has aimed to identify ecotypes exhibiting a high turf quality, grown under a low input maintenance regime and well adapted to Australian conditions.

AGCSATech began the project in October 2001, collecting samples of off-types from putting greens in Victoria South Australia, QLD, WA and NSW that exhibited; high density, fine leaf texture, good disease tolerance, good drought and heat tolerance and a high quality putting surface.

We now seek an Expression of Interest by seed producers/ plant breeders/ to further refine and develop the selected material into a new Australian bentgrass variety that is suited to Australian conditions. Being adapted to Australian conditions will ensure that this variety requires less inputs in terms of water, pesticides and management which will lead to more economically viable and environmentally sustainable management of bentgrass putting greens in Australia.









Horticulture Australia

If you would like to receive an Expression of Interest Paper please contact AGCSATech by the following means;

Ph: (03) 9548 8600 Fax: (03) 9548 8622

Email: agcsatech@agcsa.com.au



AGRICHEM BOUGHT BY SYNDICATE

A private investment syndicate headed by Australian businessman Campbell Olsen has bought out Brisbane-based liquid fertiliser company Agrichem.

As the major shareholder, Olsen has taken over as chief executive, a position held by Gary Atrill since the untimely death last year of Agrichem founder Frazer East. Atrill is expected to become the new general manager of national and international operations.

Olsen's decision to invest in Agrichem followed six months of due diligence, and he is looking to expand Agrichem's Australian and international markets. He said the growth would be largely driven by new investments in product development and innovation.

According to Agrichem's national sales manager, Owen McCarron, the change of ownership would deliver a healthy injection of capital into the business.

"We will be able to ramp up our crucial R&D work," he said. "The more trials we can establish, the more we can tailor products to meet the requirements of our diverse agricultural and horticultural crop markets."

The buy-out comes less than a month after Agrichem announced it was joining forces with Nuturf to create a new distribution network to service professional turf markets nationally, including golf courses, bowling clubs and sporting fields.

Nutrition product manager with Nuturf in Brisbane, Paul Spencer, said the company would start distributing Agrichem's chelated minor nutrient formulations and other specialty liquid fertilisers from this month.

NUTURF DISPATCH

Nuturf has a patented technology product that can reduce turfgrass water requirements.

Dispatch is a novel, new generation wetting agent that ensures course water usage is maximised. The product enables water to rapidly penetrate into the rootzone, thus minimising runoff, leaching and loss to evaporation.

Less water used means less money spent on pumping, water treatment and irrigation costs.

"Dispatch will reduce water used on the course, which is good news for golf course budgets and the environment," said Nuturf product manager for wetting agents, Adam Phelan.

The product has been extensively researched and numerous field trials have proven water savings of up to 50 per cent.

"Dispatch was intensively tested and trialled in high-stress conditions by Aquatrols, the technological leaders in turf soil surfactants," Mr Phelan said.

"They put the product under extreme drought conditions and it continued to perform remarkably well."

Dispatch was launched at this year's 19th Australian Turfgrass Conference in Adelaide where Dr Stan Kostka, director of research and development for Aquatrols Corporation, presented a paper on advanced surfactant technology for water conservation and maximisation of irrigation efficiency

The trial product mentioned in his paper is now available in Australia as Dispatch.



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And If You Play Golf, You're My Friend	\$ 25.00	Organic Control of Weeds	\$ 17.60
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Best Golf Course Management Practices Biological Control of Weeds	\$ 44.00	Practical Greenkeeping Proceedings – 2002, 18th Australian Turfgrass Conference	\$ 20.00
Bird Conservation on Golf Courses	\$ 66.00	Proceedings – 2002, 18th Australian Turfgrass Conference	\$ 25.00
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Color Atlas of Turfgrass Weeds	\$ 187.00	Salt-Affected Turfgrass Sites - Assessment & Management	5 152.90
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Controlling Turfgrass Pests	\$ 220.00	Sports Fields	5 170.50
Creeping Bentgrass Management	\$ 127.05	Sportsturf Protection Manual - The Complete	
Cricket Grounds	\$ 132.00	Guide to all Turf Protection Products	\$ 220.00
Cricket Wickets – Science vs Fiction	\$ 78.00	Sports Turf & Amenity Grasses	\$ 85.00
Crop Weeds	\$ 71.50	Sports Turf - Science, Construction & Maintenance	\$ 159.50
CSIRO Handbook of Australian Weeds	\$ 55.00	Spotting Soil Salting	\$ 27.50
Destructive Turf Insect	\$ 155.00	Superintendents Handbook of Financial Management	\$ 88.00
Destructive Turfgrass Insect - Biology, Diagnosis & Pests	\$ 163.90	The Care of the Golf Course	\$ 104.50
Discovering Donald Ross	\$ 187,00	The Committed to Green Handbook for Golf Courses	\$ 33.00
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Drainage for Sportsturf and Horticulture	\$ 38.50	The Good Doctor Returns	\$ 49.50
Ecological Golf Course Management	\$ 137.50	The Life & Work of Dr. Alster Mackenzie	\$ 135.00
Effluent Water for Turfgrass Irrigation (leaflet)	\$ 5.50	The Links	\$ 132.00
Encyclopaedia of Australian Plants Vol 1	\$ 99.00	The Mathamatics of Turfgrass Management	\$ 88.00
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Encyclopaedia of Australian Plants Vol 5	\$ 143.00	The Spirit of St. Andrews	\$ 71.50
Encyclopaedia of Australian Plants Vol 6	\$ 143.00	The Turfgrass Disease Handbook	\$ 121.00
Encyclopaedia of Australian Plants Vol 7	\$ 143.00	Tree Basics	\$ 16.50
Encyclopaedia of Australian Plants Vol 8	\$ 143.00 \$ 8.80	Tree Maintenance - 7th Edition	\$ 115.50
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Human Resource Management for Golf Course Superintendents	\$ 88.00		
International Turf Management Handbook IPM Handbook for Golf Courses	\$ 209.00 \$ 137.50		
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Masters of the Links	\$ 60.50		
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146 A T M



Ecological Golf Course Management

By Paul Sachs and Richard Luff, 2002 (Sleeping Bear Press)

In the old world of turfgrass maintenance, keeping turf as healthy as possible was seen as the first line of defence against problems, with particular attention paid to soil fertility, soil structure and organic matter.

In the 1950s and 1960s that all changed, with many books and articles published on turfgrass maintenance espousing the use of the newest and most powerful chemicals to combat even the slightest of problems.

Now in the 21st Century we find the industry has almost come full circle. The arsenal of chemicals once available is either being slowly restricted from use through legislation or banned altogether, while many turf managers are adopting increasingly eco-friendly cultural practices.

This book by American authors Paul Sachs and Richard Luff explores the vast array of ecological golf course management principles and examines biological and botanical pest controls, plant stress management, compost production and use, natural disease suppressants, biological fertility management, soil, leaf tissue and water analysis, and the ecological impact of conventional pesticides and cultural practices.

The book provides information substantiated by scientific research as well as anecdotal and empirical evidence provided by superintendents and turf managers. Luff himself is a former superintendent and is currently general manager of the Sagamore Hampton Golf Club, which has been maintained ecologically since 1962.

Having respect for the ecosystem that sustains turf is a message which resounds throughout the book, with the authors believing that while the system nature provides cannot be improved upon, it can, to a certain degree, be persuaded to produce a better landscape.

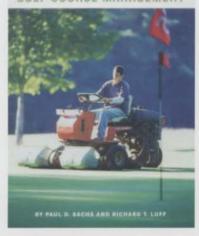
What the authors propose in the book is to partially or perhaps completely liberate the modern superintendent from chemical dependence by suggesting methods that don't adversely affect the game or the appearance of the course, but dramatically reduce the need for pesticides and other chemicals.

While not claiming to provide a precise formula for every course, the book presents alternatives and information that should enable superintendents to consider or even invent different ways of solving problems that may

include some botanical or biological biocides, changing cultural practices, or just cultivating a healthier and more biologically active ecosystem.



ECOLOGICAL BOLE COLIRSE MANAGEMENT



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state HEPORTS



GCSAC

Once again we head into spring with high hopes for a good growing season and just the right amount of overnight rain to keep the courses ticking along. What we want and what we'll get, however, are two completely different things.

First, I would like to thank those who took the opportunity to experience the Black Turf Equipment/Nuturf country turf tour through northern NSW.

This trip was a great way to showcase some of the lesser known country courses and was an eye-opener to what some of these guys are producing with limited budgets and staff.

Our first stop was Maclean Golf Club where superintendent Blair Littlechild has recently opened the course up to 18 holes. With two full-timers, one part-time staff member and plenty of voluntary help from members, this course was in great condition.

The following morning we teed off at the impressive Yamba Golf and Country Club. The course has a number of major works projects on the go, including the installation of a new irrigation system and club house extensions worth \$1.6 million. The course was a credit to superintendent Andrew Smith and his staff.

From there we went on an educational visit to a worm farm that has reduced Lismore Council's solid waste going to landfill by 75 per cent.

Casino Golf Club was the next port of call where superintendent Mick Greber, the club champion for the past six years, is no longer allowed to change holes for the championships as members feel it would give him an unfair advantage. The course was again immaculately presented and one I really enjoyed.

Judging by comments, the trip was highly successful and I would encourage superintendents to join in next year.

The GCSAQ is helping organise a three-day seminar next year involving the PGA, QGU, Secretary Managers Association, Women's Golf Queensland and the Association. Rod Cook is on the organising committee which has staged a scoping workshop at the Royal Queensland Golf Club.

This initiative is intended to produce solid outcomes and if the goodwill displayed at the first meeting was anything to go by, it should be productive.

At our August golf championships, defending champion Ian Black (Nambour Golf Club) was knocked off his perch by Mark McDonald (Horton Park Golf Club).

Scott McKay (North Lakes Golf Club) won B-grade, while bad Ben Tilley (Twin Waters Resort) won the worst golfer on a countback from Dave Morrison (Hills) and Mark Couchman (now Cromer Golf Club). An intriguing AGM followed with the committee elected for this year being;

President:

Jon Penberthy (now Tewantin Noosa Golf Club) Vice President:

Barry Cox (Ocean Shores Country Club)

Secretary:

Ben Tilley (Twin Waters Resort)

Treasurer:

Rod Cook (The Grand Golf Club)

Committee

Graham Sims (Pacific Golf Club)
Dave Morrison (Hills)
Scott McKay (North Lakes Golf Course)
Colin Caulfield (Pine Rivers Golf Club)

Thanks go to Chris Goopy (Keperra Country Golf Club) who stands down this year after gaining a daughter and losing an appendix, as well as Pat Pauli (Horton Park Golf Club) who has served the GCSAQ over many years.

Upcoming events include the November turf research fundraiser at Brookwater Golf Club where superintendent David Lunardelli is already toughening up the course for the premier ambrose event of 2003.

Jon Penberthy
President, GCSAQ



NSWGCSA

On Monday, 25 August the NSWGCSA held its AGM at the exclusive Bonnie Doon Golf in Sydney's eastern suburbs.

It was more than pleasing to see 56 members attend and participate in the day's activities despite the damage-inflicting gale-force winds which wreaked havoc across the east coast of the state the night before.

This year formed the end of a successful three year term for the previous board and at the meeting all positions were vacated and new members elected. The new committee consists of;

President:

Craig Easton (Carnarvon Golf Club)

Vice President:

Richard Kirkby (Pennant Hills Golf Club)

Junior Vice President:

Mervyn Hayward (Cypress Lakes Golf Club)

Secretary Treasurer:

Wayne Hawley (Bexley Golf Club)

Directors:

Guy Thomas (Newcastle Golf Club)
Michael Bradbery (Manly Golf Club)
Scott Lane (Oatlands Golf Club)
Darren Jones (St Michaels Golf Club)
Andy Hugill (Mona Vona Golf Club)
Scott Riley (Penrith Golf and Recreation)

Charismatic outgoing president and current AGCSA Board member Martyn Black (Castle Hill Country Club) was farewelled and honoured for his unprecedented contribution and service, while silent achiever and Board stalwart Scott McLaurin (Kiama Golf Club) was also honoured.

I'd also like to take this opportunity to thank Michael Waring (Royal Canberra Golf Club) for his contribution as board member over the past three years.

Guest speaker for the day was courageous amputee downhill skier Michael Milton who provided a wonderful video presentation and open forum discussion.

Despite never faltering once while travelling 183kmph down a steep, snow-covered slope, Michael unfortunately demonstrated the difficulties an amputee can have negotiating a freshly polished wooden floor by performing an unrehearsed half somersault with pike followed by an unceremonious thud. Thankfully he was unhurt.

The new Board has a number of unprecedented industry-specific issues to tackle, but none more pressing than initiating proceedings to produce a State-ratified industry-standard Occupational Health and Safety task risk assessment manual to complement the current Management Systems Procedure Manual.

The next NSWGCSA field day will be held in conjunction with M.Collins & Sons, sand and soil distributors. This day has been designed to educate and inform attendees on the delicate processes involved in the refining and developing of specified soil blends intended for greens construction or general usage.

Attendees will witness extraction procedures at the pit right through to the delivery at the golf course. The tour will also incorporate golf courses constructed by and using specialised soils, and will also provide some valuable insight into the day-to-day operations of the soil and sand industry.

Craig Easton
President, NSWGCSA



VGCSA

As the long-awaited stage two water restrictions become a reality in Melbourne it is interesting to observe the realities that come from such a ruling.

Turf growers have rightfully banded together to lobby the Victorian Government for concessions. The VGCSA has agreed to support that side of the turf industry with any leeway they deem fit to assist us all in procuring added water in this season's plight.

From the Victorian Golf Association's turf advisory board, all discussions are centered on sustainable grasses for different surfaces in drought conditions. Again, the VGCSA is involved.

In all, every golf club and turf related business is reviewing its situation and/or policies to use water more efficiently.

From a personal point of view, my club Riversdale has spent over \$1 million to increase its water storage capacity, with ponds constructed within the creek system that runs through the course.



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I believe there is much to be gained out of this trying period from Government-level awareness of our industry through to the smallest of businesses running with sustainability in mind.

Outside of the issues relating to water, or the lack of, the VGCSA held its annual country meeting in August at the beautiful Murray Downs Golf Club in Swan Hill.

Course Superintendent Andrew Abbott had the course in excellent condition for the 50 odd members who played golf or went on the course walk.

Our thanks also to Jim Murtagh from WorkSafe Victoria for his presentation on the requirements we all face relating to staff and equipment safety.

The VGA turf advisory board met again in August under the new chairmanship of Brian Leskey, a long standing VGA committee member.

The aim of this meeting was to review the warm season grass varieties situated at Metropolitan Golf Club. Don Loch from the Queensland Government's Department of Primary Industries offered an overview of the plots with some interesting plant types showing promise. We look forward to the results of these trials, which are expected to conclude in two years.

The next VGCSA meeting will be held at the Eastern Golf Club in late October, hosted by superintendent Clayton Howell. The day will consist of a trade day type format with Textron conducting proceedings in the morning. After lunch the AGCSA will assist us to formulate an educational session. Further details will be forthcoming.

Michael Picken President, VGCSA. #



What a great winter we have just come through! Adelaide experienced its coldest winter in 13 years, above average rainfall fell, water restrictions continued to take a toll, and we even had a dumping of snow on my patch.

And to top it all off, some famous dead singer was seen wandering around Adelaide in June! Who said the life of a superintendent was uneventful!

I digress. Water restrictions for those drawing from the Murray River and mains supply have been in place for some time now.

The restrictions placed upon these clubs by the State Government have been done so without any input from the industry, and as a result targets set out by SA Water have been almost counter-productive if taken to the letter of the law.

Not surprisingly, the recent superintendents and club managers seminar at McCracken Country Club focused on water, its supply, quality and application to the golf industry.

It was an outstanding success with two-way dialogue between government and local body agencies giving all who attended a clearer understanding of what is required from our industry in regards to responsible water use for the future.

Following the seminar, a working group has been set up under the SAGA banner, including superintendent, club manager and SAGA representatives.

This group is to consult with the powers that be and put our case for responsible water use in a way that achieves government targets, but also allows the turf professional to use water allocations in a way that is best for clubs to survive times of restrictions.

This will hopefully lead to legislation which will be fair and workable for all concerned.

Our most recent superintendents meeting was held at Adelaide Shores on August 27, Paul Morley and Digby Grayson the host superintendents.

Paul and Digby showed the gathering over the course, with particular interest taken on weed management, tee construction and greens management.

Our next meeting will be a day trip to Balaclava and Clare golf clubs on October 28.

A joint twilight meeting with Turf Grass Managers SA (TGM) and the SAGCSA is set down for November at Royal Adelaide Golf Club. This we hope will be a sign of things to come, with joint meetings held at different times during the year. A date is yet to be confirmed.

Peter Harfield President, SAGCSA &



TGAA (ACT & Surrounding Region)

Turf managers throughout the district, and probably throughout NSW, are welcoming spring with mixed emotions.

After a good post-renovation period with excellent results, turfies are preparing for a possible extended drought that may continue to affect much of NSW.

Currently within the ACT, public/private recreational and sporting grounds must adhere to a 20 per cent reduction in town water consumption used in reticulated systems to irrigate turf.

What this mean for turf managers is the need to format viable water reduction plans which can be implemented while maintaining quality playing surfaces.

In local Association news, the recent AGM held at Gold Creek Country Club was an informative night enjoyed by all.

Guest speaker was Canberra Raiders NRL coach Matt Elliott, who shared his long experience with rugby league and gave attendees a serious and sometimes comic view of playing and coaching the game at the highest level.

During the presentation of the auditors report, it was shown that the TGAA (ACT) was unable to make any profit for the last 12 months due to a number of commitments and obligations. Many thanks must go to committee members who continue to provide an invaluable service, and we welcome any new committee members.

Canberra's local sporting arenas will soon be hosting two big sporting events. One is the Masters Games and the other is the Rugby World Cup. Don't miss out seeing these two spectacles being played on quality Canberra turf surfaces.

Till next time agrostologists,

Justin A K Haslam Committee, TGAA (ACT & Surrounding Regions) ...



The Victorian Greenkeepers Association held its annual seminar and AGM at the Horticultural Institute of Victoria in mid-August with 70 members attending.

Michael Arbon from Melbourne Water spoke on the use of recycled water for sports turf, while Ron McCartney from Sportsturf Consultants outlined important information on the treatment for rhizoctonia.

Former AFL coach David Parkin enlightened greenkeepers on dealing with committees and personal motivation. His experience as an AFL coach was useful as he was employed and sacked by committees and was put under extreme scrutiny and pressure from club members to perform.

A great lunch was provided and drinks were put on thanks to Chris Newman and David Sharp from Globe Australia.

Brendan Brown was awarded Greenkeeper of the Year, while Ray Thorne won the distinguished service award for his work with the VGA over the years. Congratulations to them both.

President Doug Agnew spoke on the dramatic changes in the game of lawn bowls, in particular the popularity of narrow bias bowls and the demand from bowlers for faster greens and year-round play.

He commented that bentgrass greens cannot provide this and that greenkeepers would need to look at changing one of their greens to a faster running couchgrass type or face the prospect of clubs eventually changing to a synthetic surface. Discussion followed with a number of greenkeepers outlining success stories they have had with couchgrass greens.

Yallourn Bowling Club greenkeeper Darren Martin spoke of his experiences in successfully installing a new Tifdwarf green at his club. They removed their synthetic green, installed a grass one and played all winter.

The committee presented the annual report and outlined current and future projects such as research on synthetic surfaces.

Doug Agnew President, VGA

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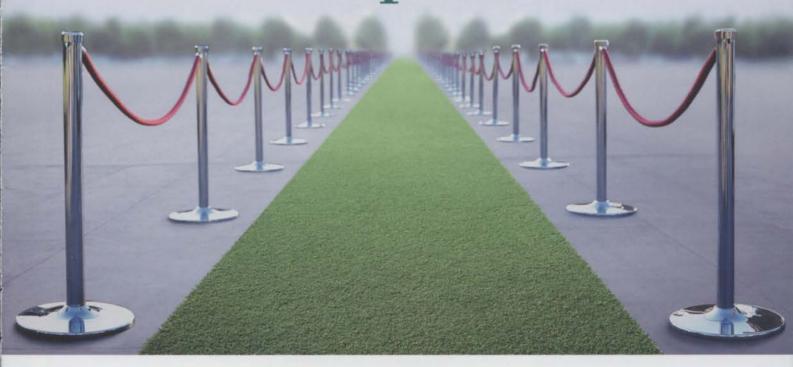


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TGAA (Vic)

The Victorian TGAA held its AGM on August 26 at the Riverside Golf Club, which included a seminar on future trends in turf. The seminar was supported and run in conjunction with presentations from the NMIT turf department and Chipco.

As you may be aware, there are significant changes occurring in how horticultural education is provided in our training facilities both at a state and federal level. The seminar focused on these changes and how they affect all in our industry.

NMIT lecturer John Shannon kicked off proceedings with a presentation covering the history of the NMIT turf training facility at the former Parkville campus, and an overview of how the NMIT runs the turf management contract at two Melbourne golf courses.

As part of the NMIT training curriculum, students now have the benefits of specific on-site training in a variety of turf construction projects at the Riverside and Altona Lakes golf clubs.

John also gave an overview of the construction works carried out by students at Riverside, as well as an introduction to the development of the new educational facility at Fairfield.

The next presentation was given by Chipco's Craig Wood, who outlined new herbicide products we are likely to see in the near future.

Craig gave a précis of the results from several long term trials that indicated the potential benefits of these new herbicides, particularly in the maintenance of suitable warm season, drought-tolerant sports surfaces.

This issue continues to dominate our industry in Victoria like no other, so it was encouraging to hear that registration of these products is not too far away.

Following the seminars, a new committee was elected with Anthony Urh Henry retaining his position as president. The remainder of the committee is made up of;

Vice President: Jim Marchbank

Treasurer: Bill Turner Secretary: Ian Beel

Activities SC Chair: Alan Leach Marketing SC Chair: Allan Stobbie Education SC Chair: Gavan Hagen Membership SC Chair: Michael Holohan

I would like to take this opportunity to thank Rob Sundblom and Cameron Henley for their outstanding contributions they have made to the TGAA during their time on the committee.

Both have retired from committee activities to concentrate their energies elsewhere. Rob and Cameron have been outstanding in their work for the TGAA, and will both be sorely missed. We wish them all the best.

Several challenges confront the incoming committee - membership, marketing, activities and education. We welcome the input of new committee members Alan Leach and Gavan

Hagen and look forward to working with them to develop the organisation.

The other major news is that as of September, for two days a week, we now have a manned office at Clayton North. Simone Staples will be available for assistance on all TGAA-Vic matters. At the moment it is planned that Simone will be in the office on Tuesdays and Thursdays. We will also have meeting facilities available at this site. These are moves that will greatly improve the efficiency of our organisation.

Our new contact details are; TGAA, Suite 1, 752 Blackburn Road, NORTH CLAYTON, 3168. Phone: 03 9548 9327 Fax: 03 9562 8353

Our new e-mail address will be advised on our web site in the near future.

Jim Marchbank Vice-president, TGAA (Vic) #



GCSAWA

As this is my first official president's report, I would like to sincerely thank outgoing GCSAWA president Allan Devlin (Secret Harbour Golf Club) for his services over the last few years.

Some great projects have been undertaken with Allan at the helm, most importantly the development and completion of the OH&S Manual for Golf Club Employees and the Environmental Waste Audit which is nearing completion.

Allan has also helped foster further relationships with other State associations (NSW), which has resulted in the sharing of resources with particular projects. Good interstate networking is the key to sound industry development and national unity.

The GCSAWA AGM and local superintendent's presentations held at Cottesloe Golf Club in August were well attended. In terms of feedback, it was a little disappointing to discover the distribution of the OH&S Manual for Golf Clubs had not extended beyond the clubhouse administration desk drawer.

To those club's who do not acknowledge the importance of health and safety documents, or providing necessary information to your superintendent, you do so at your own peril.

On a positive note, a new National Turf Education Working Group has been formed to address the issues raised at the education forum held during the Adelaide conference.

Glenn Cross, Steve Dargie, Rob Macdonald and myself attended the forum and these gentlemen have volunteered to fill positions on behalf of TAFE and industry in WA. A primary issue being addressed is the standardisation of training packages across Australia allowing qualifications to be transferable.

My feelings coming out of the forum were there was a lot of negativity from some corners towards the development of such packages. Why is this so? Maybe the actual training of students to best prepare them for the industry is not their main focus.

Finally, we all talk about inclement weather patterns around the country - too dry or in some places, too wet in others. Unfortunately for Jeff Austen, the yearly pressures from extreme water restrictions due to insufficient supply from the scaled-down local abattoirs and poor rainfall has forced the permanent closure of El Caballo Country Club.

To Jeff and his staff, we wish you all the best in the future and share some of the disappointment of losing this unique site with you and all those who were involved in its construction.

No doubt the sheep will replace the golfers soon enough.

Upcoming events include the Melbourne Cup luncheon at the Joondalup Country Club on November 4 and the GCSAWA family Christmas bowling championships (tba).

Brad Sofield President, GCSAWA

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Guy Thomas, Superintendent Newcastle Golf Club

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