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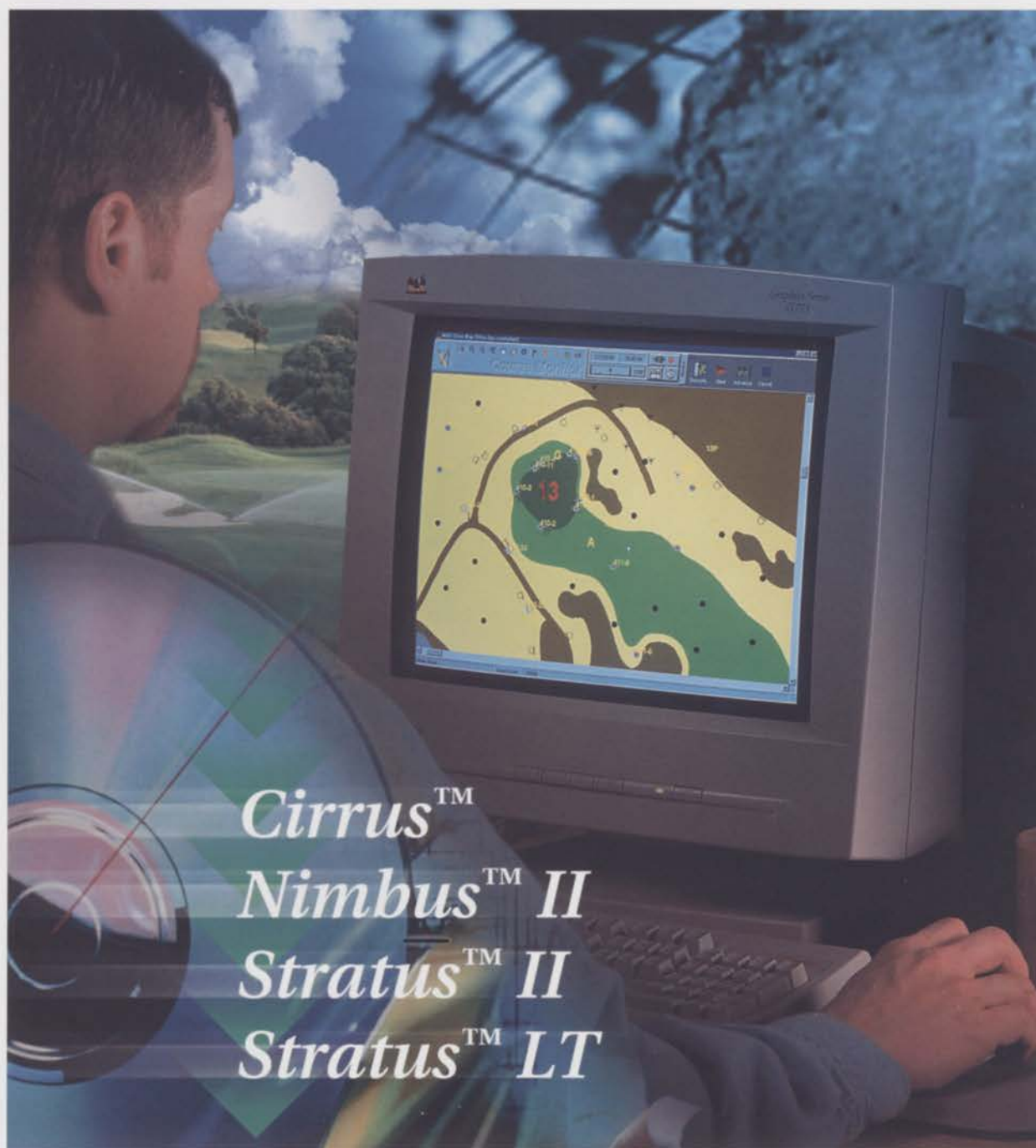
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The finish at Metropolitan Golf Club which plays host to the AGCSA Golf Championships during the 20th Australian Turfgrass Conference in Melbourne this month.

Photo: Brett Robinson

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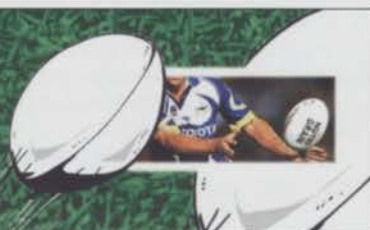
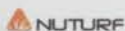


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## Caught in a Trap



BRETT ROBINSON  
EDITOR

Bunkers. For the average golfer they can be purgatory while for the superintendent a source of never-ending headaches.

As individual holes have developed reputations, personalities and histories of their own throughout the world of golf (Amen Corner at Augusta National and the 16th at Cypress Point spring to mind), bunkers too have become famous in their own right. The Road Hole and Cartgate bunkers are icons of The Old Course at The Royal and Ancient, while Oakmont Country Club is home to the unmistakable Church Pew bunkers.

Perennially ranked the number one course in the world, Pine Valley Golf Club in New Jersey also boasts one of golf's most famous sand traps – Hell's Half Acre. The name is a misnomer as the beast is actually 1.2 acres of sand and brush. Like all other bunkers on the course there are no rakes because designer George Crump wanted it kept that way. He thought that beautifully manicured bunkers didn't make his course as punishing, a laugh really considering the course has a reputation for being one of the most gruelling.

It's on this note of bunker maintenance that golf course architect Ross Watson, superintendent Daryl Sellar and AGCSATech manager John Neylan team up for this edition's main feature. The expert trio pose the question whether bunkers are in fact hazards or playing surfaces, and whether maintenance expectations have become unattainable and unsustainable. A great read and one which will certainly raise a few questions in the minds of superintendents across the country.

If you haven't guessed it by looking at the front cover it's conference time again, and this edition of ATM will act as the official guide for the 20th Australian Turfgrass Conference which returns to Melbourne. In the middle of this edition you will find a comprehensive 20-page conference guide previewing the week-long event and the many events which make this the industry's premier gathering of the year. There is also a handy conference program and a full listing of companies exhibiting at the mammoth tradeshow.

Elsewhere in this edition, Mark Browne downs tools to look at priming the workshop over the winter months, while we give you an update of the treated effluent trials at Barwon Heads Golf Club following the completion of the second irrigation season.

Enjoy the magazine and I look forward to catching up with you all in Melbourne.

Brett Robinson  
Editor

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# President's Pen

With the focus of this edition on the 20th Australian Turfgrass Conference and Trade Exhibition, I would like to focus this President's Pen on the people that make the AGCSA tick. To this end, the President's Pen will, in the next edition of ATM, be replaced by an AGCSA report. This report will focus on issues relevant to the operations of the AGCSA and will give readers a better perspective of what the AGCSA is doing in line with its strategic plan and policy.

As with any organisation, the AGCSA is dependent on many different and variously qualified people, committed to their work. As the Board changes or the strategic plan moves forward, people need to be flexible. It would be very fair to say that the current staff, (and with no disrespect to any past employees), have certainly over the past year been able to perform their respective duties to a standard that for many members goes unnoticed. As an association that really only gets together once a year at the national conference, for the average member not a lot would seem to change.

However, for me and for anyone that has worked closely with the AGCSA staff, we as members probably do not give the staff the kudos they deserve.

John Neylan and Andrew Peart (AGCSATech), Scott Petersen (business development manager), Fiona McPadden (events manager), Phil Horsburgh (accounts), Brett Robinson (ATM editor) and recent recruit Jane Phelan (membership services and administration) have combined very effectively to achieve the goals of this great association.

Keeping all aspects on an even keel, as well as developing new strategies and opportunities, has been Steven Potts. In the 12 months since his first conference, Steven has been able to put together many new projects and has a great proactive approach to the way the association is heading. So with this background, when you next receive the magazine take the time to read about what is going on at the AGCSA.

In closing, I would like to thank a few people and organisations. First, to the current Board



Mark Couchman, AGCSA President

members, their families and clubs, thank you for the great efforts and sacrifices made over the past year. To my own family - Yolanda, Amii, Bianca and Haylee - I thank you for your consideration and understanding. And finally, to both Cromer and Tewantin Noosa golf clubs, thanks for your personal support over the last year.

Please enjoy the magazine and for those coming to Melbourne I hope you have a great time.

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



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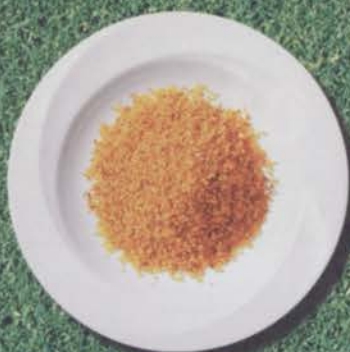
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# The Hazards of Being a Hazard!



The distinctive bunkering on the Par 3 15th at Kingston Heath

**Bunkers are an integral component of golf course design providing both an aesthetic dimension and a challenge that can be a curse to both golfers and maintenance staff. Here, golf course architect Ross Watson, AGCSATech manager John Neylan and superintendent and scratch golfer Daryl Sellar look at the role of the modern day bunker and whether maintenance expectations have become unattainable or at the very least unsustainable.**

In recent years bunkers seem to have invoked more discussion (or should that be criticism) and comment among golfers than any other part of the golf course. Golfers seem to be most concerned with bunkers being too soft and that buried lies are making shot play too difficult.

The challenge for golf course superintendents has been that as grass surfaces get better they are expected to produce equally high quality playing surfaces in the bunkers, often to an unrealistic and unsustainable standard. Consequently,

sand selection, bunker construction and rejuvenation, and on-going maintenance have become significant budgetary items.

Bunkers are defined as hazards and according to the Rules of Golf a bunker is "a hazard consisting of a prepared area of ground, often a hollow from which the turf is removed or replaced with sand or the like."

In several books on golf course architecture there are interesting remarks concerning hazards in general and bunkers specifically.

MacKenzie (1920) refers to hazards in the following terms: "The majority of golfers look upon hazards as a means of punishing a bad shot, when the real object is to make the game interesting."

Hunter (1926) in his book on links golf states that, "... hazards are risks and penalties must come to those who take risks and fail". He goes on to say that "without hazards, golf would be but a dull sport, with the life and soul gone out of it".



Hurdzan (1996) discusses in detail the purpose of bunkers and that they are not strictly used as hazards and can serve any of the following functions:

- Strategy
- Retaining (*keeps the ball from worse fates*)
- Safety
- Directional (*defines direction of play*)
- Aesthetic

He also describes the effects that various sand types have on shot selection but also makes the observation that "... the lie one confronts is often a matter of luck".

The consistency of bunkers is another issue. Many factors affect consistency or performance including shape, size, drainage, irrigation coverage and prevailing winds which combined make each bunker unique (Hartwiger, 2001).

Hartwiger suggests that bunkers are inherently inconsistent because of these factors and that golf is a game of inconsistencies. He further states that golfers have to adjust their game to counter the many challenges on a golf course and the conditions of bunkers is but one of them.

So, are we searching for something that was never to be and have the expectations become unattainable or at the very least unsustainable? Following are the views of a golf course architect, a golf course superintendent and a technical expert that hope to throw some light on the topic.

#### FROM THE DRAWING BOARD - AN ARCHITECT'S PERSPECTIVE Ross C. Watson



Ross C. Watson

Bunkers are without doubt the most common, the most interesting and the most debatable of all the hazards in golf. And the key word here is "hazard".

In modern golf where beautifully groomed courses are beamed into living rooms around the world almost daily, it appears

that bunkers have been neutralised in terms of being realistic hazards.

Today we often hear commentators refer to shots finishing in bunkers as being "a good result". This is the case often as bunkers are so

perfectly manicured that top players make a mockery of the recovery shot. It seems more importance is placed on beauty rather than purpose which surely is to defend par by placing a premium on shot making.

The origin of the bunker dates back more than 500 years, or so we are told, either to Prestwick or St Andrews in Scotland. In fact, the beginnings are shrouded in mystery with some historians suggesting that golf actually began in Holland.

Most will agree, however, that the very first bunkers were not designed, they simply happened, and we know for certain that golf was first played on "sandy links land" (dunes) grazed by sheep and rabbits. In bad weather sheep took refuge behind hummocks and in protected hollows, in good weather the surrounding areas were grazed.

So as golf began it was natural to plot the most interesting routes between, over and around the ungrazed areas (hazards) terminating at flattish areas among rabbit warrens where the cup and flagstick were duly placed.

Slowly, these refuge areas where grass did not flourish evolved into the bunker as we know it today. The metamorphosis took place



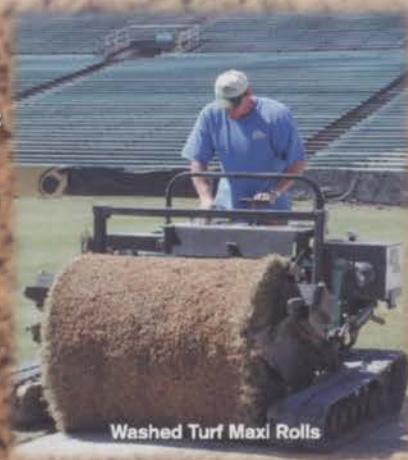
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# The Hazards of Being a Hazard!



Bunkers are without a doubt the most common, most interesting and most debatable of all the hazards in golf

firstly as a result of the action of the sheep and weather with further fine-tuning by golfers endeavouring to "hack" their way back to the grazed areas (fairways).

This natural process of evolution had the effect of locating bunkers precisely where golf balls tended to congregate. Such bunkers, students of the game will argue, are often the most perfectly placed.

On this point it is worth noting a few thoughts from the forefathers of golf design. As mentioned earlier, Dr MacKenzie said the real object of hazards was to make the game interesting.

Much earlier, the highly regarded John L. Low was quoted as saying;

*"No hazard is unfair wherever it is placed. It ought to be unnecessary to point this out, as it should be perfectly obvious that a hazard is*

*the wrong spot to place one's shot. I do not suggest that some situations are not more interesting for hazards than others, but the whole object of golf is to place one's shot and it is obvious that if a player has put his ball in a hazard he has chosen the wrong spot. This principle particularly applies if the hazard is visible, and if there is room to one side or the other to avoid it.*

*The great object in placing hazards is to give the players as many thrills as possible. On many inland courses there is not a thrill in the whole round, and yet on most of the championship courses one rarely takes a club out of the bag without having an interesting shot to play."*

These thoughts reflect the essence of what is now commonly referred to as "strategic design

principles" which most modern-day designers practise, although this has not always been the case.

Beyond its humble beginnings and very early in its development, golf by design became somewhat penal in the sense that bunkers and other hazards were placed across the line of play at intervals with little or no option to skirt around the edges.

Additionally, other bunkers were placed along the edges of fairways and often in unsighted locations, so that in the end anything less than a perfectly struck shot was severely penalised. The bunkers were also very deep with little or no hope of forward progress, in fact in many instances the only chance of escape was backwards towards the tee.

This penal style of golf became unpopular and over time gave way to strategic golf. Dr MacKenzie has been given much credit for



## The Hazards of Being a Hazard!



This behemoth at the Stuart Appleby-designed The Sands, Torquay swallowed over 660 tonnes of sand

popularising strategic design but in fact, by his own admission, there was no better example of strategic design than the Old Course at St Andrews.

In simple terms, strategic golf by design places bunkers and other hazards on or very near the ideal line of play with ample space to the side for the less gifted or less ambitious. Those who successfully negotiate the risky path to the hole will be rewarded with much easier approach shots, as is the case at St Andrews. In order to create the most excitement it is

paramount that bunkers are highly visible, aesthetically pleasing and fearsome.

In the modern context, the purpose of bunkers extends beyond shot making strategy. The sites designers are given these days for the most part cannot be compared with the "beauties" of yesteryear. They are often degraded with little or no natural features and there are boundary issues and integration with residential areas to be considered, not to mention the hurdles to be jumped in the approval processes.

Bunkers are often used to direct play away from potential danger zones with no reward at all for flirtation, almost the diametric opposite of strategic design.

Designers also use bunkers like the wicketkeeper in cricket, placing them to cut off balls from rolling onto adjacent fairways and tees. In remodelling work in particular, bunkering is more of a balance between creating pleasurable excitement and steering golfers safely around the course.

Either way, the importance of bunkering in any course design should not be underplayed and remains the designer's best opportunity to give each course its individuality, charm and, most importantly, popularity.

We see many bunker styles in modern golf course design and in some instances designers are best known by their particular signature style. Then, on the other hand, there are many designers who vary their bunker styles to compliment each site and set each course apart as a unique entity. Inevitably, the best bunkers are those that excite but are sustainable.

The questions of grassed faces versus highly visible sand faces, flat sand bases versus dished bases, intricate shapes versus simple shapes, big versus small and playability should be analysed in the context of the specific environment, end user profile, and maintenance budget.

If the balance isn't right from the outset and the style opted for not sustainable, bunkering will evolve, mostly badly, in response to the original imbalance. This wastes money and can potentially compromise design integrity, continuity and flow.

On the matter of playability, it will be generally agreed that a well designed strategic



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# The Hazards of Being a Hazard!

Table 1: Brown and Thomas (1986)

Criteria	Recommendation	Reason
Particle size distribution	0.05-0.1mm - <5% 0.1-1mm - 78-100% 1-2mm - <15% >2mm - <2%	Sands reported to be satisfactory were typically in this size range, although clay and silt should be <3% as this lessened the incidence of crusting and set up (i.e.; formation of a thick crust as deep as the water penetrates).
Particle shape	Angular - good Sub-angular - fair Round - poor	Angular sands require greater pressure to force the ball into the sand and thus had fewer buried lies. They were also more stable on bunker faces.
Colour	Generally whiter sands are preferred	Aesthetically preferable, however, they stress that white sands can glare and that play conditions are more important.
Crusting	None - good Slight - fair Predominant - poor	Crusting was undesirable as it leads to poor ball lies and deceptive shots.
Penetrometer resistance (kg/cm <sup>2</sup> )	>2.4 - good 1.8-2.4 - fair <1.8 - poor	A penetrometer reading >2.4 is desirable as it lessens the likelihood of plugging or buried balls.
Set up	None - good Slight - fair Predominant - poor	Set up was undesirable as it led to undesirable ball lie (i.e.; too high).

bunker should at least impart some degree of penalty when in it, and provoke thought when it comes to options for avoiding it and escaping it once in it. Without these characteristics the value of the bunker will be greatly diminished.

The type of sand and presentation are subjects of eternal discussion and criticism. There are those who feel bunkers should not be raked at all and that plugged balls are all part of the game.

Often bunkers are rendered more penal by the golfers themselves in the way they rake to the edges and blast towards the target effectively digging a hole. On this note, groundstaff who reverse this process in the manner of their maintenance will be well regarded.

In regard to sand quality we are constantly in search of the perfect bunker sand;

- Good colour, white but not too glary
- Firm but not too hard
- Soft but not too fluffy
- Free draining

It is difficult to find such a sand, so to overcome deficiencies we apply wetting agents, gelling agents, we place geotechnical fabrics on bunker faces, we mix sands and organics. We go to inordinate lengths to make the bunker more playable forgetting perhaps that after all it is a hazard.

I certainly do not advocate that we give up on playability and gleefully commit all players to purgatory on every miss-hit. But in the end for the bunker to retain its true importance in the game of golf there must be a sensible degree of understanding and balance between playability, purpose, sustainability and of course aesthetics.

## FROM THE LAB – A TECHNICAL PERSPECTIVE

John Neylan



John Neylan

The key issues raised by clubs concerning bunkers relate to drainage and sand selection. As new courses are constructed and older courses remodelled, achieving dry and firm bunkers has been a priority. Where bunkers are constructed on fine

textured or poorly drained soils, drainage is obviously critical, however, there is also the challenge of holding sand on bunker faces.

The traditional roots of the game of golf started on links land with natural sands being the key element and bunkers were natural creations dug out of the native soil.

The indigenous sand on the classic Australian "sand belt" golf courses has an intrinsic

Brown and Thomas (1986) developed a set of standard test procedures by sampling 42 bunkers

Table 2: AGU/ATRI bunker sand specification for Australian golf courses (1995)

Criteria under test	Recommended value
Particle size distribution	Inland courses 0.2-1.0mm Coastal course 0.1-1.0mm
Particle shape	Angular
Surface crusting	< 1.0 kg/cm <sup>2</sup>
Angle of repose	>30°
Material composition	Silica
Ball plugging	>2.5 kg/cm <sup>2</sup>
Hydraulic conductivity	> 25cm/hr
Colour	Light without glare

The AGCSA has adopted AGU/ATRI specifications for bunker sand selection



## The Hazards of Being a Hazard!



Bunker construction at the Bonnie Doon Golf Club in NSW

"something" that provides an ideal bunker. It is a combination of particle size grading, the depth and consistency of the sand and the presence of an almost unperceivable amount of fine organic matter that assists in binding and packing of the sand. It is this something that we try to replicate when importing materials.

The greatest challenge on golf courses constructed on clay soils is the sharp contrast between the clay and sand. This shear plane makes it almost impossible to hold sand on the bunker face without some form of artificial binding.

In my experience the greater the departure from the native sand environments, the more problems arise from erosion, poor drainage and plugged lies. Consequently, in these environments bunker maintenance is considerably greater.

The selection of sands for bunkers has been a major challenge for golf courses in recent

years as bunkers are renovated and golfer expectations increase. To aid the selection of suitable sands, there have been guidelines developed to assist in this process.

Brown and Thomas (1986) developed a set of standard test procedures based on sampling 42 bunkers that were categorised by golfers as good, satisfactory or poor. By testing particle size distribution, drainage rate, ball penetration, crusting and particle shape, a specification was developed (Table 1).

In 1995, the Australian Golf Union (AGU) and the Australian Turfgrass Research Institute (ATRI) completed a project based on Australian soils and produced a set of guidelines for bunker sand selection (Table 2). The Australian Golf Course Superintendents Association (AGCSA) has adopted the specification prescribed in the AGU/ATRI report.

Having tested many sands from around Australia, the most noticeable problem has been trying to achieve acceptable ball penetration. In our testing, ball penetration has rarely exceeded 1.8 kg/cm<sup>2</sup> and is frequently around 1.6 kg/cm<sup>2</sup>. According to the selection criteria these sands will not have sufficient resistance to ball penetration and ball plugging is more likely to occur.

On occasions when a sand meets the criteria for ball penetration resistance, the sand has an excess of silt and clay, it crusts severely and the drainage rate is unacceptably low. Sands with a wide spread of particles exhibit greater particle interpacking and increased resistance to ball penetration, however, this can also result in a low drainage rate.

Most sand sources in Australia tend to have a very narrow particle distribution and this is the main factor contributing to the high drainage rate of the sand and unfortunately the lack of packing and resistance to ball penetration.

The other influence on particle packing is the shape of the individual soil particles. Sands that are angular exhibit good interpacking and good resistance to ball penetration. Conversely, rounded particles exhibit poor interpacking and tend to be loose and unstable (an experience often observed when these sands are used for greens construction).

Unfortunately our testing indicates that many Australian sands consist mostly of rounded particles and this is contributing to the problems of plugged lies and a lack of "holding" on bunker faces.

Where sands do not have the natural resistance to ball penetration, moisture content appears to be critical in counteracting it to some degree. As these sands dry out they become looser and less stable, particularly after there has been some play in the bunker and the sand is loosened by foot traffic. Dry winters in particular can be problematic because there is no irrigation to stabilise the sand.

Deep working or overworking of the sand is another factor to avoid if possible as this also

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# The Hazards of Being a Hazard!



Many hours are spent by groundstaff manicuring bunkers to meet with the demands of members and televised tournament coverage

can destabilise the sand. Hand watering and hand raking bunkers may in part counteract the instability and improve the playability of the bunker.

There are also binding agents that are worth evaluating which glue the sand particles together and assist in reducing their instability.

On clay soil sites, some form of artificial containment system is virtually essential if sand faced bunkers are to be maintained.

Two distinctly different soil types cannot be expected to bind successfully without some form of artificial aid.

Bunkers are in part hazards and there is an element of risk and reward associated with them. To some degree there is an element of luck in what the golfer will find when an errant shot goes into a bunker.

If bunkers are presenting a "problem" they can be improved at a cost and how much are members prepared to pay to avoid what is possibly the occasional bad lie.

## FROM THE SHED - A SUPERINTENDENT'S VIEW

Daryl Sellar



Daryl Sellar

It is more than well documented how the game of golf has undergone significant changes. Equipment is the most obvious area of change for golfers, but a more subtle change has been in the area of course maintenance and the expectations that have resulted.

Improved turf varieties, maintenance equipment, and turf management knowledge have all led to dramatic advances in the presentation of golf courses around the world.

With it has come an expectation of the golfer for better quality playing surfaces in terms of greens, fairways and tees.

With many lounge rooms now saturated with the images of tournament golf year round,

the weekend golfer has grown to expect that, to some degree at least, this is how his or her course should look when they venture out for their weekly challenge.

There is some debate over who drives the charge in improving course standards.

Is it the avid golfer or is it those entrusted with the maintenance of the course, whose pride and egos keep them striving for that extra edge?

But nonetheless, when one stops to look at how far the standard of course playability has come since the game's humble beginnings, it is quite staggering (even a little frightening?).

So where does the topic of bunkers fit into this discussion? Well, I have been asked to present perhaps the most conflicting of views. That of someone entrusted with their maintenance, and also from the golfer's perspective.

At Glenelg Golf Club we have 94 bunkers, predominantly revetted faced, but of varying dimensions. They are built from native sand,



effectively a hole in the ground with minimal drainage requirements.

The revetting sod is a mixture of Santa ana and common couch, while the sand is a natural dune sand, orange in colour, and of a fine texture. Although relatively easy to construct, they have their own unique maintenance challenges, but what bunkers don't!

Like all maintenance crews, we are constantly striving for more efficient methods of maintaining our bunkers, through the use of growth regulators, herbicides, different styles of rakes, raking techniques, face maintenance and irrigation.

The practices involved in maintaining and preserving the integrity of the bunker's design

are complex, time consuming, and at times futile in the battle against where nature wants the sand to be. And yet we soldier on, at times adding amendments to faces in an effort to get sand to defy gravity, while at other times moving hundreds of kilograms of sand that golfers have raked out of place.

We consolidate faces, ensuring the ball rolls to the base of the bunker, where the lie should be not too hard, but not too soft, preferably flat, and consistent with the rest of the bunkers on the course. And don't forget, we also like them to look good.

Why so much time on maintaining hazards? The answer to that was made clearer to me a few years ago when, after a lengthy meeting,

I was able to clarify that the group of golfers I was talking to viewed bunkers as a playing surface, not a hazard at all.

The result of this thinking, which I am sure is not unique to Glenelg, is the following;

- Bunker maintenance - 3110 man-hours per year
- Greens maintenance - 2122 man-hours per year.

We spend more time maintaining hazards than we do our greens. Considerably more.

So, how have we come to this? Bunkers were originally wind swept hollows sought by

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# The Hazards of Being a Hazard!



"The majority of golfers look upon hazards as a means of punishing a bad shot, when the real object is to make the game interesting" – Alastair MacKenzie

sheep for protection from the elements; no formality, and certainly no maintenance. Surely at a time when the term sustainability is so readily used in golf course maintenance policies, there is an opportunity to make some savings in time and money here?

But is it that simple? What are the repercussions of reducing maintenance on bunkers? Obviously there could be the reallocation of resources to other areas of course maintenance, but there are far greater implications of such a dramatic change in priorities.

## Appearance

Suddenly the razor-sharp edges and "polished" sand faces would become a thing of the past. Uniformity of sand colour may be lost, as well as the crisp raking patterns within the bases. Sand may have to stay where nature moves it by wind, rain or gravity, rather than continually being reinstated to original design.

## Design

Many of the bunkers constructed today are reliant on regular maintenance to achieve the desired "look". It may be that architects will be challenged to consider bunkering of a style that looks more appropriate when left a little rough around the edges.

Surrounding grass selection plays an important role here too. Some very new courses have adopted this approach with spectacular results.

## Number

Pre-MacKenzie courses were likely to have between 150-200 bunkers, a concept that the good Doctor frowned upon. His attitude is said

to have been to use fewer, well placed bunkers to enhance the strategy of a hole. This concept rings true today, especially considering the limited resources of many clubs.

## Playability

Through the formative years of the game, it was a question of luck as to what lie you would have in a bunker. Today anything but a perfect lie is frowned upon and in need of urgent attention. A diversion of resources away from bunker maintenance would see a little more luck come into the game, as the playability of bunkers would lose some of its consistency throughout the course.

## Golfer attitudes

Perhaps the biggest challenge of all. To educate golfers to appreciate the game for its lack of predictability, the very thing that makes it unique, and that the "restoration" of bunkers as true hazards is an important part of ensuring the sustainability of many golf courses. It is not uncommon for the modern tournament golfer to prefer to finish in a bunker than many other lies, because of their skill at recovering from what are generally very consistent lies. Is this the right message to be sending to the weekend golfer, rather than bunkers being viewed as something to escape from?

It is all well and good for me to put forward these views, but how would I react when it is my ball that finishes in a heel mark on a down slope and costs me two shots? Would I be cursing my bad luck? Absolutely! But would it kill me to be reminded that I should not have been there in the first place? No!

I am no different to any other golfer, I suspect, in that I would have to alter my game plan a little and develop a more strategic approach to my round to avoid the possibility of such rotten luck – the very concept that Dr. MacKenzie and his colleagues advocated years ago was the essence of the game itself.

Golfers may also have one other added responsibility with a change in attitude towards bunker maintenance – etiquette. It would be the responsibility of the golfer to repair any damage for any following player rather than assuming greenkeepers will perform their duty.

As the figures above suggest, bunkers can have a major impact on course maintenance, and the question needs to be asked, 'Is this right?'.

There is a lot to consider with any significant change to bunker maintenance standards, and it would take some courage to implement. But it may well be that a move to the past could be a positive step forward. 🏌️

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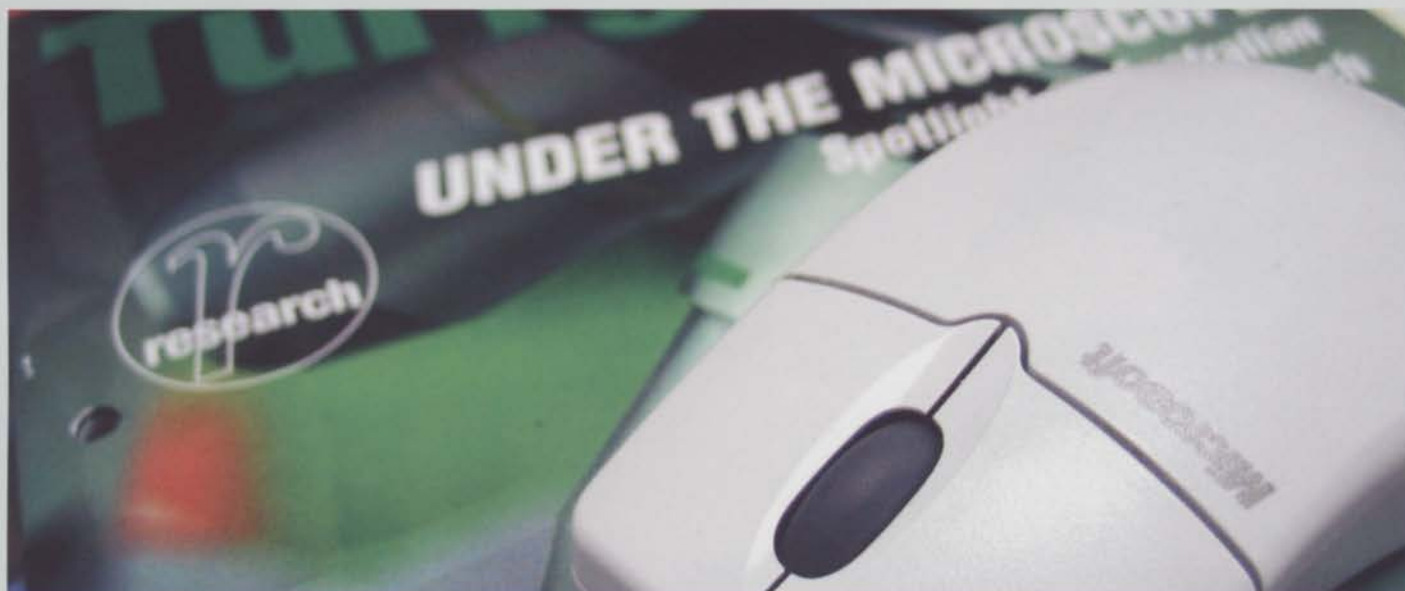


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# Turfing the Net – [www.agcsa.com.au](http://www.agcsa.com.au)



Log on to the new-look AGCSA website. It's just a mouse click away

At the end of March, the AGCSA launched its long awaited revamped website to provide an improved avenue to communicate with and service its members. For those not familiar with the new-look website, ATM takes you through a comprehensive step-by-step guide to this fabulous online resource for the turf industry.

For years now the Internet has become the single most innovative medium revolutionising the way in which people and businesses communicate.

For not-for-profit associations like the AGCSA, which services a wide and varied membership body of superintendents, bowling greenkeepers and turf managers, the Internet has become an increasingly important tool to disseminate information and provide enhanced membership services.

Following some major staff changes at the AGCSA during 2003 it was decided to upgrade the website. A specialised company was contracted to design the new website and after plenty of tinkering the AGCSA is proud to present the final product.

Aside from a funky new look and easier navigation, the new site boasts a number of new features which many members will come to appreciate.

The new look seems to be dragging the punters in. In the first three weeks of going online the new-look website attracted well over 6000 visits and an amazing 123,736 hits. During the month of April there were an

average 300 visits a day, with the maximum at one stage approaching 600.

What follows is a beginner's guide to the various sections of the AGCSA website and how members can maximise the benefits of using this online resource.

## Home Page

As soon as you log on to [www.agcsa.com.au](http://www.agcsa.com.au) you will notice right away the considerable changes in layout and design.

The menu bars, which on the old website were located on the left hand side, are now situated at the top of the page. The photos of the courses rotate so if you don't see your course send us in a top snap and we'll include it within the montage.

The home page includes all the latest AGCSA news and events, the latest classified ads and job notices, as well as a members section and the all new online auction.

Along the bottom of the home page, click on the various icons – footy tipping, AGCSATech, Australian Turfgrass Conference and Australian Turfgrass Management magazine – to go direct to their dedicated sections.

At any time during your navigation of the site, clicking on 'home' will return you to the AGCSA home page.

## Members

This is one of the new and exciting features of the website which has been incorporated to allow the association to better service its members.

This is a strictly members-only section of the website for current financial and life members of the AGCSA. Simply click on the 'members' menu button which takes you through to a log in page. Your user name is your membership number and your initial password is your email address (for those unsure, contact the AGCSA). If you are a first time visitor, change your password once you have logged in.

One of the primary functions of this section is to enable members to view their account status with the AGCSA in regards to membership dues or conference and workshop fees, with the option of being able to settle online.

Sure to be a hit are the bulletin boards. Simply click on the link and you will be taken



through to a separate page where you are presented with a series of categories ranging from 'around the traps' and 'conference and workshops' through to 'renovation techniques', 'turfgrass diseases', 'environmental management' and 'OH&S'.

Such a facility provides the perfect forum for superintendents and turf managers who have any queries or tricky questions to post them online and receive almost instant feedback from others within the industry. In time it is hoped there will be real-time online forums with industry experts answering all your queries.

With the advent of the Nuturf NRL and AFL tipping competitions, the bulletin boards provide the perfect organ through which to slag off your opponents and their pathetic tipping prowess. Just remember to keep it clean.

As well, on the main members page there is a direct link to the footy tipping section, while clicking on the 'weather' menu button will take you straight to the Bureau of Meteorology website.

#### About Us/Contact Us

Self explanatory. The About Us page gives a brief history of the AGCSA, its key areas of operation and the association's three main

mission statements. From this page you can also access information about the AGCSA Board of Directors and fabulous AGCSA staff members, including email contacts. A dossier on each staff member is in the pipeline which will be sure to generate a few laughs.

The Contact Us page provides you with all the relevant contact details (phone, fax, email, postal address) to get in touch with the AGCSA.

#### Accreditation

If you are a member and want to find out more information about the AGCSA Accreditation Program (AAP) this is the page to come to.

#### AGCSATech

Over the past four years AGCSATech has provided superintendents and turf managers with expert diagnostic services for the myriad of turfgrass problems encountered around Australia.

Headed by respected agronomist John Neylan and technical officer Andrew Peart, AGCSATech has grown to be an industry leader and on the new-look website you can find out what services are provided, obtain information about providing samples and download technical articles.

Under 'services', you can find out information on the diagnostic services offered by AGCSATech. These include soil nutrient and physical analysis, plant tissue analysis, disease and pest identification, nematode identification, water analysis and turf advisory and project management. Each includes a brief on the service provided and what is required in terms of samples and sample sizes. Under 'mailing details' you will find contact information to send samples as well as contacts for John Neylan and Andrew Peart.

Also available in the AGCSATech section is John Neylan's regular AGCSATech Update which is included in every edition of Australian Turfgrass Management magazine. These articles are available to download in PDF format and cover a range of topics from AGCSATech's bentgrass variety trials through to turfgrass issues affecting the industry.

#### ATM Magazine

The AGCSA's flagship publication, Australian Turfgrass Management magazine (ATM) has developed a reputation as the leading commercial turfgrass magazine in Australia. Not surprisingly therefore, it takes up a considerable number of pages on the new-look website.

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The new-look AGCSA website is set to improve the association's ability to service its members and the wider turf industry

The main ATM page states the aims of the magazine and provides a full list of downloadable articles from the most recent edition. Also there is an extensive archive which contains a full back catalogue of ATM editions right back to Volume 1.1 published in 1999 (many may remember the sensational cover photo taken by then honours student Trent Penman of an endangered Green and Golden Bell frog perched on top of a golf ball!).

This archive is a first class resource for superintendents and turf managers looking for information and provides a superb reference tool for up and coming turf managers and university students. All articles are downloadable in PDF format.

From the ATM section you can also subscribe online to the magazine. Simply hit the 'subscription' button, fill out the form and hit submit. In fact the very first electronic payment made through the new-look AGCSA website was an ATM subscription.

For advertisers there is comprehensive information about ATM including publication schedules, advertising rates, advertising material specifications and contact details for production enquiries.

The current year rate card can also be downloaded.

#### Auction

The brainchild of AGCSA business development manager Scott Petersen, the online auction is where members can bid for products made available to the AGCSA by its family of generous sponsors.

The products up for auction are well below retail price and all money raised through the sale of these goods will be put into projects that support turf industry graduates and apprentices.

To make your bid, just click the 'make a bid' icon on the home page, enter the amount you wish to bid and who knows, you could be the owner of some pretty cheap products.

#### Awards

The AGCSA Awards has become an annual fixture over the past six years and in this section you can view profiles on past winners of the four major categories – Claude Crockford Environmental Award, Graduate of the Year, Excellence in Golf Course Management and the jewel in the crown, the Distinguished Service Award.

While it is too late for the upcoming conference in Melbourne, in future years you will be able to download the awards nomination brochure.

#### Bookshop

The AGCSA boasts a comprehensive range of turfgrass related books, publications and videos which are all available for purchase online. The bookshop section is broken down into specific categories ranging from general turf publications through to specific categories such as irrigation and pest management.



Clicking on one of the categories will bring up a current list of stock held by the AGCSA. Each book has a small blurb summarising content, author details and pricing, while those books that have appeared in Australian Turfgrass Management magazine have a full and comprehensive review attached.

To purchase any book online simply add the book to your shopping cart via the 'add' icon. Once you've finished selecting your order hit proceed, fill out the order form and submit it. Easy as.

## Calendar

Provides a yearly outlook of turf industry events from national conferences and AGCSA workshops through to state association events and major tournaments.

## Classifieds

Just like the Trading Post but more direct. If you have a piece of machinery to sell then this is the place to do so. On the left hand side of the page are specific categories. For those wanting to place a classified ad on the website, click the 'add a classified' link. Fill in the details, upload a photo of the piece of equipment for sale and hit 'submit'.

## Conference

Without a doubt, the highlight of the turf industry calendar is the week-long Australian Turfgrass Conference which is put together by the AGCSA in conjunction with other turf industry associations.

For all those delegates attending this month's conference in Melbourne, this section is a must visit. For those that haven't registered yet you can download a registration brochure which not only includes price details but gives a comprehensive conference program. Potential delegates can also register for the conference online. Just click the 'online registration' menu button and fill out the form.

This section, along with the 'latest news' part of the website, will contain up to date information of any news or changes to conference proceedings.

For those businesses exhibiting at the conference trade show, the dedicated 'trade show' section provides the latest information as well as the exhibitor's information pack which can be downloaded as a PDF.

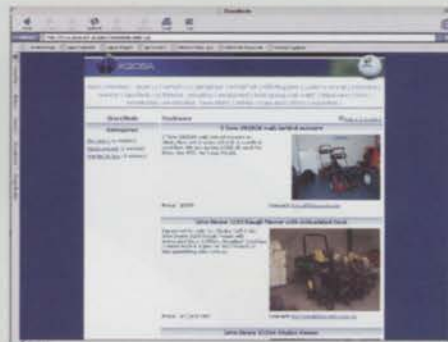
## Education

Improving the education of members is one of the AGCSA's key roles. Here you can read about the recently formed National Turf Education Working Group and view its progress in helping create a more uniform turf education pathway.

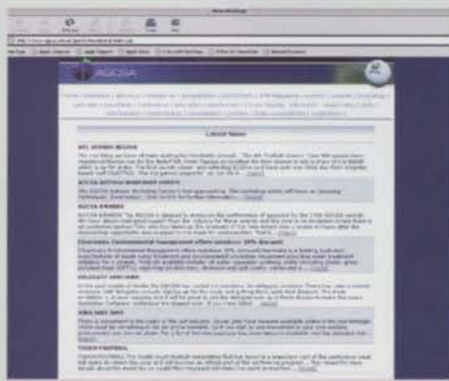
You can also download reviews of previous AGCSA workshops, while there is contact



AGCSA Homepage



AGCSA Classifieds



AGCSA Latest News



AGCSA ATM Magazine and Subscriptions

information regarding the Ohio State University internship program for up and coming turf managers looking to further their careers overseas.

## Employment

The area of employment contracts has become an increasing minefield for superintendents and turf managers in recent times. The AGCSA has recognised this and has devised a guide to help organisations employ a superintendent or turf manager.

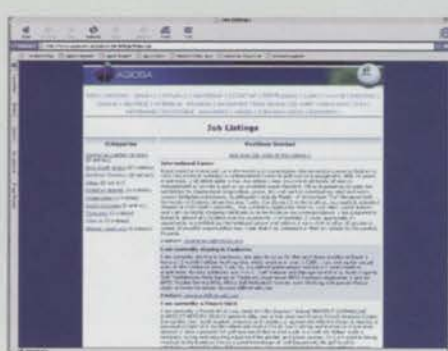
Also available for downloading is a sample employment contract, a must in today's working environment. For those superintendents and turf managers who haven't a contract (and you would be surprised by the number who don't) then this is a must visit page.

From the employment section you can also head to the Job Watch page. See below.

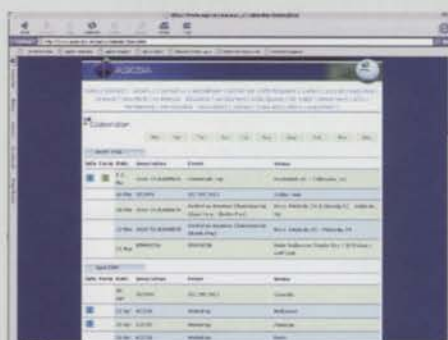
## Footy Tipping

Do we really need to explain this section? Since the advent of the Nuturf AFL and NRL tipping competitions there has been an unprecedented amount of traffic through the AGCSA website. The competitions have become the talk of the turf industry and given rise to an even bigger level of inter-state rivalry.

Clicking on the footy tipping menu button will take you through to the intro page from

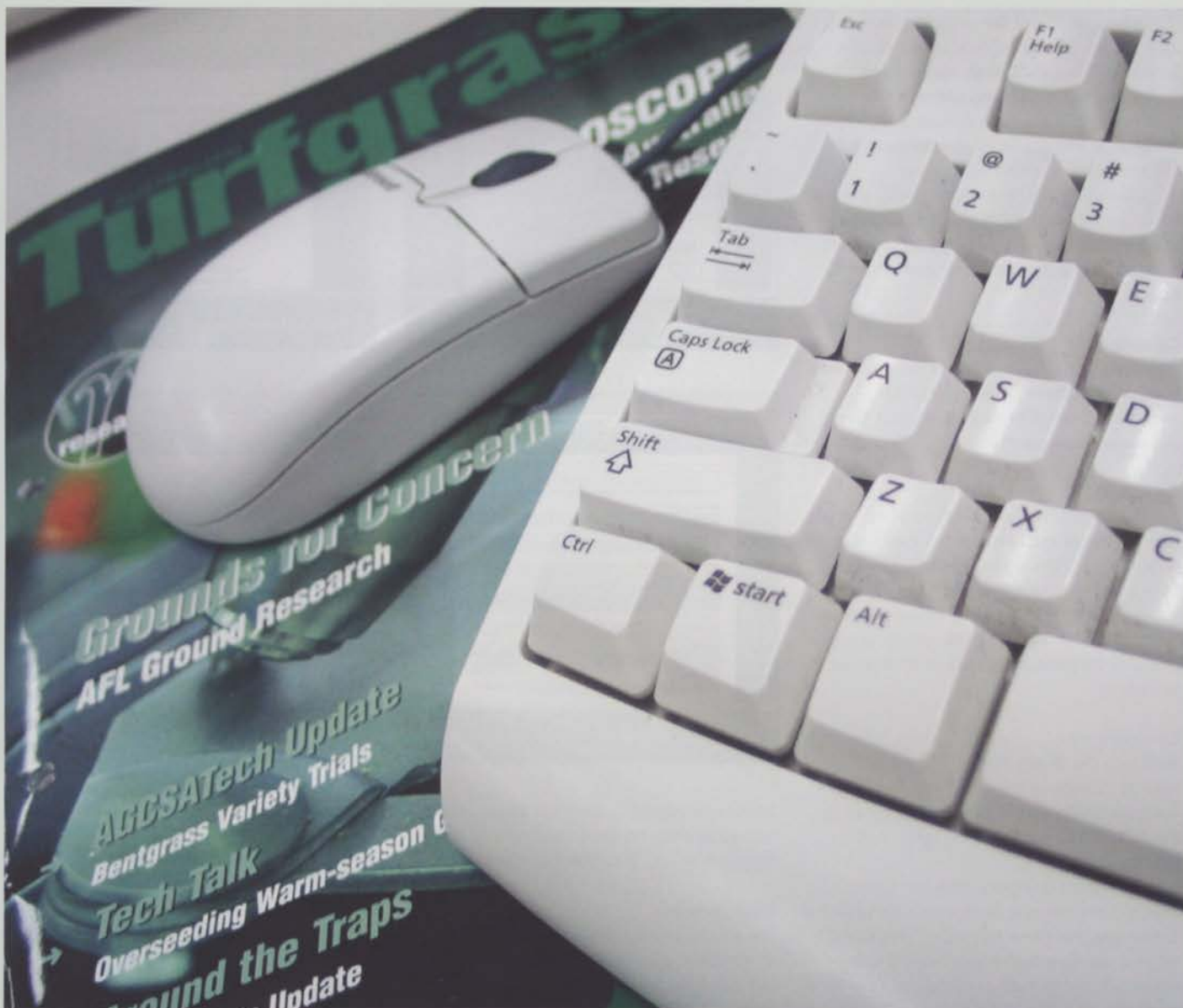


AGCSA Job Listings



AGCSA Turf Events Calendar





The website contains a full ATM back catalogue and a special members only section

which you can go into the respective AFL and NRL competitions. Here you can make your selections for the next round of matches, access a full range of stats on all the match-ups and check out to see how the opposition is faring.

And remember, for those who have yet to join up, it's not too late even though it is mid season. With the emphasis on weekly prizes there is still plenty of the fabulous left to be given out. You'd be a fool to miss out.

#### **Job Watch**

If the footy tipping section has been the most popular section of the website since going online, then the Job Watch section has run a very close second. Job Watch has burgeoned over the past six months and is now regarded

by many as the best place to advertise turf industry positions and to view current openings.

Job listings are conveniently broken down by State. All you have to do is choose the State you are interested in and up will pop all jobs that have been posted with the AGCSA. Those adverts at the top are the most recent.

Those clubs and organisations wanting to post a job advert can simply click on the 'add your job listing to this category' link. Upload your job description and don't forget to include your contact details.

#### **Latest News**

Again, pretty self explanatory. This section provides a list of recent news to come from the association, whether it is to do with the conference or other industry events.

#### **Links**

Provides links to other turf industry associations, international superintendent associations as well as turf research links and general golf-related links.

#### **Membership**

Wanting to join the AGCSA? Then this is the page to go to. Here you can read about the benefits of being an AGCSA member, the categories of membership and pricing and information about joining the various state superintendent associations. To make life simpler, you can now apply for membership online. Simply fill out the form and submit.

#### **Merchandise**

For the fashion-conscious superintendent or turf manager, a quick perusal of the merchandise



section is a must. From here you can purchase official AGCSA clothing and pay online.

The AGCSA recently updated its stock with some snappy new items of clothing which are now available. The procedure to purchase an item of AGCSA clothing online is similar to ordering a book. Just add what you want to your shopping cart and once you've finished buying up the store fill out the order form.

## Newsletters

As well as producing Australian Turfgrass Management magazine, the AGCSA also publishes a bi-monthly newsletter called AGCSA Action. The newsletter alternates between editions of the magazine and provides members

with information on upcoming association events.

Regular features of the newsletter include a report from AGCSA chief executive Steven Potts, a book review, an AGCSATech update as well as information on any association happenings such as conferences and workshops.

## Policies

For those with a constitutional bent, this section outlines the association's constitution and code of ethics.

## State Associations

Were it not for the state superintendent associations where would the AGCSA be? This page provides you with current contact

details for the various state associations right around Australia. Where applicable there are links to their websites.

## Supporters

Being a not-for-profit organisation, the AGCSA relies on its family of generous sponsors and supporters. This page shows those companies which support the association and useful links to their company websites.



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THE CONFERENCE / June 21-25 / 2004



# 20th AUSTRALIAN TURFGRASS 2004 CONFERENCE



→ Official Guide

Melbourne Exhibition & Convention Centre



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# 04

### 20th Australian Turfgrass Conference Preview

## AGCSA WELCOME



AGCSA president  
Mark Couchman

On behalf of the Australian Golf Course Superintendents' Association (AGCSA) I would like to take this opportunity to welcome everyone to the 20th Australian

Turfgrass Conference in Melbourne.

After the success of the AGCSA's annual conference in Adelaide last year, the conference returns to Melbourne after a four year absence and, along the same lines as the Millennium conference, this year also represents a joint conference that encompasses other associations and companies that all

form part of the Australasian turfgrass industry. To our major sponsors and supporters - Horticulture Australia, Toro, Textron, Nuturf, Syngenta, Rain Bird, John Deere and all the exhibitors, the AGCSA takes this opportunity to also welcome you to Melbourne and we hope that your week is as successful as it can be. Your support of this event only helps to magnify its success.

The AGCSA Board and staff hope that the international and local speakers that have made themselves available this week are able to enlighten and educate all those in attendance in respect to their chosen subject matter.

In respect to the golf management stream it is great to have Dr Robert Carrow (University of Georgia) and Dr Bruce Clarke (University of New Jersey) with us this week and I am sure that Professor Ron Duncan (Turf EcoSystems) will also add greatly to the

content of the week. It is also nice to have Jim Moore (USGA) back here in Australia and I am sure that along with the local speakers and the local fraternity that we can make the overseas visitors' brief stay in this great country a memorable one.

To all finalists in the AGCSA Awards, congratulations and good luck for the week.

Probably the greatest thing about any conference week is the ability to network with peers, renew old acquaintances and to make new ones. Have a great time in Melbourne and please enjoy. 🍷

Mark K. Couchman,  
President, AGCSA.



## ATETA WELCOME



ATETA president  
John Haines

On behalf of the Australian Turf Equipment Technicians Association (ATETA) I would like to welcome all delegates to the 20th Australian Turfgrass Conference in Melbourne.

The ATETA appreciates being involved in this conference as it provides a great opportunity for members of the turf mechanics community to receive the latest information as well as to socialise with members from other states.

The ATETA section of the conference consists of two days of education sessions

followed by a bus tour on the third day. The lectures conducted by John Deere, Toro and Textron will be hands-on workshops.

Also presenting will be Wynns, Silvan, Wurth, Enware and Procus, and in between there will be plenty of time to wander around what should be a fantastic tradeshow.

All indications are that the tradeshow will be one of the best yet and it will be interesting to see what new products will be on offer.

The ATETA will be represented at the tradeshow, and all states will be represented. Membership forms will be available for prospective members to join.

I encourage members and those who want to become a member of this great association to come and visit our stand - No.22 - to have a chat about what we do and how we can help you.

The bus tour on day three (Friday) will take in Holden's engine plant in Port Melbourne before heading to Silvan Australia for lunch and plant tour.

The final stop of the day will be at the Melbourne Cricket Ground maintenance facility. There will also be a conference dinner held on Wednesday.

All ATETA members and non-members are most welcome to attend what we hope will be a most informative and interesting conference.

I hope to see you there.

Have a great conference. 🍷

John Haines  
President, ATETA/VTETA





Welcome to the 20th Australian Turfgrass Conference guide which forms part of this edition of Australian Turfgrass Management magazine.

ATM will act as the official conference guide for the turfgrass industry's premier event in 2004. Over the course of the next 20 pages we will provide you with a comprehensive preview of the week-long event which returns to Melbourne after four years. The preview

includes a full rundown of events during conference week, a look at the two major golf championships, as well as a wrap of the prestigious AGCSA Awards. We have included an easy reference conference program which covers all four education streams, social functions and events that make conference week such a special occasion.

One of the highlights of the week is the bumper trade exhibition which features over 80

of the turf industry's leading companies, including 25 who will be exhibiting in Melbourne for the first time. In the second part of the conference guide there is a comprehensive nine-page listing of exhibitors and what each will have on display during the two days.

So it's all here for you. Enjoy the conference and make sure you get the most out of what is set to be a fantastic week.

**Brett Robinson, Editor, ATM**

## TGAA WELCOME



**TGAA president,  
Anthony Uhr-Henry**

On behalf of the TGAA committee I would like to welcome all delegates and exhibitors to the 20th Australian Turfgrass Conference. With so many wonderful speakers spread

across the different streams all delegates can look forward to excellent professional development opportunities, as well as keeping abreast of the latest product developments by visiting the Trade Exhibition.

I would just like to highlight some of the real areas of interest within the Sportsfield Management Stream.

On Tuesday afternoon John Neylan and David Aldous will be covering the area of ground hardness, sportsfield injuries and turf safety audits.

This subject has been in the media lately, and is of great concern to all sportsfield curators as the threat of legal liability, duty of care and user safety is a common theme that we are dealing with daily.

It is hoped that a representative of the AFL may also join John and David during this session to give us a perspective of what is expected at the elite level.

With the assistance of Graden Industries, celebrity speaker for the Cricket Wicket Seminar is Chris Wood who is a ground/pitch inspector for the English Cricket Board.

With the English domestic season in full swing, we really appreciate the effort Chris has made to attend this conference.

Therefore I urge all members to make the effort to attend what should turn out to be a most informative seminar.

The rest of the program is very self explanatory and I am sure most will agree quite comprehensive.

Please come and visit us at our stand - No.20. Come and introduce yourself to Simone and myself, feel free to give us some suggestions and feedback on the conference, get some information on what's coming up or just buy a souvenir.

Whatever you do while in Melbourne have fun and enjoy. 🍷

**Anthony Uhr-Henry  
President, TGAA (Vic)**



## VGA WELCOME



**VGA president  
Doug Agnew**

On behalf of the members of the Victorian Greenkeepers Association I wish to welcome everyone to the 20th Australian Turfgrass Conference in Melbourne.

We appreciate the invitation to participate at this conference as it is a great opportunity for greenkeepers to receive information from international speakers and mix with turf professionals from around Australia and the world.

The Victorian Greenkeepers Association was established 93 years ago and was formed to support greenkeepers and

encourage the exchange of ideas, information and new developments.

Over the past few years we have started conducting our own research to help bowling clubs and our members.

One project is a study to find the best treatment for rhizoctonia disease in bentgrass greens and the other a comprehensive study into the comparisons of synthetic surfaces and natural grass greens.

Bowling greenkeepers across Australia are under threat from clubs who want to replace their turf greens with synthetic surfaces.

The report found that 85 per cent of all bowlers prefer bowling on grass, while detailed financial analysis showed no significant cost difference between grass and synthetic.

Greenkeepers in southern Victoria are undergoing a few changes such as encouraging clubs to change their grass from bentgrass to dwarf type couch to compete with the

synthetic surfaces. This study will form the basis of one of our workshops during conference week, a must-attend for bowling greenkeepers.

Enjoy the conference and I look forward to catching up with those coming from out of town. 🍷

**Doug Agnew  
President, VGA**





# Welcome to Melbourne!

MELBOURNE

04

## 20th Australian Turfgrass Conference Preview

**It's winter, it's June and that means one thing for the turf industry - conference time. ATM looks forward to this year's massive 20th Australian Turfgrass Conference in Melbourne, previewing keynote speakers and the range of social functions which make this a not-to-be-missed event.**

After a hiatus of four years, the Australian Turfgrass Conference returns to Melbourne for what is set to be one of the biggest turf industry gatherings since the Millennium conference.

As with the 2000 conference, which was also hosted by Victorian capital, the 20th Australian Turfgrass Conference will bring together all facets of the turf industry. The AGCSA has worked in conjunction with the Australian Turf Equipment Technicians Association (ATETA), the Victorian Greenkeepers Association (VGA) and the Turfgrass Association of Australia (TGAA) to formulate a comprehensive week of education and festivities.

Four management streams are on offer at this year's conference - golf course, sportsfield, turf mechanics and bowling greenkeepers. At the beginning of May, just under 500 delegate registrations had been processed and with plenty of time remaining it is expected that over 800 will descend on Melbourne.

### Please Welcome...

Six keynote speakers have been brought from around Australia and the United States for the general conference sessions which cross all streams except turf mechanics.

Kicking off proceedings on Tuesday is University of Georgia's Dr Robert Carrow who will present a paper entitled 'Cutting edge strategies for water conservation'.

Dr Carrow has conducted key research into turfgrass environmental and soil physical chemical stresses, turfgrass water conservation and climatic based water, salinity and stress monitoring. He has also played an important role in the release of new couchgrasses, tall fescue, and seashore paspalum.

Dr Carrow has also published many turfgrass books and his editorial partner in a number of these is Professor Ron Duncan who will also be presenting at the conference. Originally hailing from the University of Georgia and now working out of Turf EcoSystems, Prof Duncan has been involved in many areas of research including breeding and genetics of edaphic and abiotic environmental turfgrass stresses on tall fescue and seashore paspalum. Prof Duncan will give a talk on 'Irrigation quality assessment and amendments'.

Also coming across the Pacific from the United States is Dr Bruce Clarke from the University of New Jersey. Holding several key positions at the university, including director of centre for turfgrass science and professor of

plant pathology and extension specialist in plant pathology, Dr Clarke's keynote address will look at the influence of management practices on turfgrass diseases.

The United States Golf Association's Jim Moore makes a welcome return Down Under to present a range of talks at this year's conference. Moore, the director of construction education at the USGA, will advise delegates on the latest changes to USGA greens construction specifications.

Heading the list of Australian keynote speakers are Terry Muir and Ray Young. In light of the recent Warringah Golf Club verdict in which a golf club and superintendent were heavily fined for a pesticide spill, Muir's presentation on the application of systems based environmental management is a must for all superintendents and turf managers.

Young, director of Young Consulting Engineers, will host workshops on stadium construction and management.

From Tuesday afternoon each stream breaks into its own program. The following is a quick rundown on some of the highlights from each.

### Golf Course Management

Respected architect Ross Perrett will present a keynote address on golf course design and the modern game, while Alex Glasgow from the New Zealand Sports Turf Institute will talk on organic matter levels in turf.

As well as their main presentations, the keynote speakers will conduct a series of workshops including those on seashore paspalum (Prof Duncan), managing new bermudagrasses and bentgrasses (Jim Moore), climatic based irrigation systems (Dr Carrow) and anthracnose management practices (Dr Clarke).

Graham Little will talk on the construction of washdown facilities, Syngenta's Mark Zajac



Robert Carrow



Bruce Clarke



Ron Duncan



Terry Muir



Jim Moore



Ray Young



returns again to discuss insect management, while John Neylan and Moonah Links superintendent Leigh Yanner will conduct a workshop on their Australian Open experiences.

On Wednesday, the AGCSA will hold its AGM. The president's post and one Board position will be voted on. On Thursday, golf management delegates will get the opportunity to listen to presentations made by winners of the AGCSA Awards, while the final education session will involve a panel discussion by all keynote speakers.

### Sportsfield Management

The popular Cricket Wicket Seminar will be the highlight of the sportsfield stream with English Cricket Board ground/pitch inspector Chris Wood as guest speaker.

The seminar will be held over Wednesday and will feature talks from Andrew Peart (AGCSATech), Brian Way (NZSTI), Mark Zajac (Syngenta), Ron Makin (City of Manningham), Alex Glasgow (NZSTI) and Karl Johnson (Westpac Park, NZ). The seminar will end with an open forum discussion.

Other major presentations include David Aldous' talk on sportsground injuries while John Neylan (AGCSATech) looks at the issue of turf surface safety audits.

### Turf Mechanics

A series of hands-on workshops from Toro, John Deere and Textron will be among the highlights of the turf mechanics stream, while the likes of Wynns, Silvan, Wurth, Enware and Procus will also conduct lectures. The ATETA will host its AGM on Thursday.

### Bowling Greenkeepers Management

A main focus for bowling greenkeepers at the conference will be the recently released study into natural vs synthetic surfaces conducted by the VGA and Sport and Recreation Victoria. Sally Jeavons from @ Leisure will talk about this wide ranging study which has created much interest within the industry.

Phil Ford (NMIT) will present a talk on beneficial nematodes, Jim Moore (USGA) will discuss hybrid ultradwarfs and Dr Clarke will conduct an open forum on Take-all patch.

### Teeing Up

For the golf course management stream, conference week will literally tee off with the hosting of the AGCSA Golf Championships on the Monday at Metropolitan Golf Club. This event is only open to superintendents.

For remaining conference delegates, do not despair. The AGCSA Corporate Cup will also be staged on the Monday at Commonwealth Golf Club which is open to all delegates. To be involved simply call the AGCSA.



Superintendents will vie for the handsome AGCSA Golf Championships trophy

### Conference Tours

Two post-conference tours have been organised for the golf course management stream and will take in six of the finest courses Victoria has to offer. The first tour will take in classic sand belt courses Huntingdale (Mike Freeman), Metropolitan (Richard Forsyth) and Australia's No.1 ranked Royal Melbourne (Jim Porter).

The second tour heads down the Bay, stopping first at Patterson River Country Club (Michael Riordan) before visiting the Mornington Peninsula, stopping at The Dunes (Mark Gahan) and Moonah Links (Leigh Yanner) which hosted last year's Australian Open.

Also on Friday, the turf mechanics stream will conduct a day-long tour which will take in Holden's engine plant in Port Melbourne, Silvan Australia's plant and the maintenance facilities at the Melbourne Cricket Ground. The TGAA has organised a tour of the Telstra Dome for its sportsfield management stream which will take place on Thursday.

### Trade Exhibition

AGCSA's business development manager Scott Petersen has done a sterling job to pull together what is set to be one of the biggest and most innovative trade exhibitions the industry has ever seen.

And he has done all this while in the middle of selling his house and battling for Olympic qualification!

Wednesday and Thursday are the days to jot down. Plenty of surprises abound.

### Cheers

While a large emphasis is placed on furthering the education of turf industry members, conference week also has a huge social element and many conference delegates will agree that the week is the best time to renew old acquaintances and meet new members of this great industry.

The Welcoming Cocktail Reception to be held at the Telstra Dome (all fully registered delegates in either of the streams are eligible to attend this function) on Monday will kick off the week in style. A footy theme will prevail for the evening and all delegates are urged to sport their team's colours – all codes accepted, even union!

The week officially concludes with the Conference Dinner on Thursday at Melbourne Park. This is a great opportunity to wind down and relax after a hectic week.

Partners of conference delegates have not been left out and there is a dedicated partners program which includes a winery tour and a shopping excursion.

For a full rundown of the week's events flick forward a couple of pages to 36 and 37.

### It's Not Too Late

Although the conference is now just a few weeks away, there is still time to register. Log on to [www.agcsa.com.au](http://www.agcsa.com.au) to download a registration brochure or fill out an online registration form, or call the AGCSA office to get one posted.

Any queries about the conference program or registration contact the AGCSA on (03) 9548 8600 and talk either to Fiona McPadden (events manager) or Jane Phelan (administration and membership officer).

Delegates can also register at the actual conference although it is preferable to do so before conference week. A registration desk will be set up with eftpos and credit card facilities.



Melbourne will host the 20th Australian Turfgrass Conference



# 2004 AGCSA Awards - And the Winners are...

MELBOURNE

04

20th Australian Turfgrass Conference Awards

## ATM previews the four major awards to be handed down at the 2004 AGCSA Awards ceremony during the 20th Australian Turfgrass Conference.

The AGCSA Awards kicks off proceedings at the 20th Australian Turfgrass Conference in Melbourne, and will be hosted prior to the Welcoming Cocktail Reception at the Telstra Dome on Monday, 21 June.

The awards represent the ultimate in recognition for members of the golf turf industry and as in previous years four individual awards will be handed out – Distinguished Service Award, Excellence in Golf Course Management, Claude Crockford Environmental Award, and Graduate of the Year.

Toro has come on board in 2004 as the naming sponsor for the Graduate of the Year and joins other industry heavyweights Scotts Australia, John Deere and Bayer Environmental Science as the awards' major sponsors.

### DISTINGUISHED SERVICE AWARD 2004

Presented in partnership with Scotts Australia In a fitting move at the 2003 Adelaide conference, South Australian icon and industry veteran Dene Goldsack was bestowed the AGCSA's Distinguished Service Award.

Goldsack, the former greenkeeper at Blackwood Golf Club, joined a long list of respected individuals including 2002 joint winners Peter Sawyer and Doug Robinson, Neil Adams, Vince Church, Bill Powell, Peter Martin and Peter McMaugh. During the Melbourne conference another well-respected and iconic figure within the turf industry will be added to that fine list.

Without a doubt the premier award to be handed down at this year's awards, the AGCSA

Distinguished Service Award is bestowed by the AGCSA Board to recognise an individual that has made a lasting impression through their contributions to the Australian golf turf industry.

The award takes into consideration all aspects; the direction and inspiration handed down to generations of golf course superintendents, involvement at state and national levels, education, communication and research.

AGCSA Board members have remained tight-lipped about potential candidates for this year's award, but if the past three years are anything to go by, then the award recipient could come from within the state that hosts the conference.

### Distinguished Service Award - Previous Winners

- 2000 - Peter McMaugh
- 2001 - Professor Peter Martin
- 2002 - Peter Sawyer and Doug Robinson
- 2003 - Dene Goldsack
- 2004 - ?

### AGCSA CLAUDE CROCKFORD ENVIRONMENTAL AWARD 2004

Presented in partnership with Bayer Environmental Science

Environmental stewardship has taken on huge significance for the golf course industry in recent times and this year's Claude Crockford Environmental Award will be presented amid the backdrop of what has been a landmark year.

For the 2004 Claude Crockford winner, this award perhaps takes on greater significance given the dramatic ruling against the Warringah Golf Club handed down by the NSW Land and Environment Court last September.

The club was fined a record \$600,000 while the former superintendent was sentenced to 250 hours community service and fined \$50,000 for their parts in a pesticide spill which killed 4.16 tonnes of bird and marine life in Manly Lagoon, Sydney.

Such was the public backlash over this unfortunate, yet highly preventable incident, golf courses have been placed under increasing scrutiny when it comes to environmental responsibility. Winning the Claude Crockford Environmental Award will provide a huge fillip



2003 Distinguished Service Award winner Dene Goldsack (centre) with Scotts Australia's Martin Morgan (left) and AGCSA president Mark Couchman



for the superintendent and be something that staff and the golf club as a whole can be proud of.

Since its inception six years ago, the Claude Crockford Environmental Award has become one of the most highly sought. Selection criteria include the demonstration of a commitment to sustainable land management, long term planning, community involvement and overall environmental stewardship of the golf course and its surrounding environment. Protection of indigenous plant and animal populations, restoration of habitat and a desire to protect sensitive areas are also highly regarded aspects of this award.

#### AGCSA Claude Crockford Environmental Award – Previous Winners

2000 - Ben Tilley (Beewah Golf Club)  
2001 - Andrew Baker (Sanctuary Cove Golf Club)  
2002 - Jeff Austen (El Caballo Golf Resort)  
2003 - Darren Watson (Horizons Golf Club) and Spiros Skaftouros (Growling Frog Golf Course)  
2004 - ?

#### AGCSA EXCELLENCE IN GOLF COURSE MANAGEMENT – 2004

Presented in partnership with John Deere

If the number of golf course projects in progress at the moment throughout Australia is anything to go by, the AGCSA Excellence in Golf Course Management award will be hotly contested this year.

Launched in 2001, this award has taken over the proud tradition of the previous AGCSA Fellowship Award. The name has been refined and selection criteria adjusted to make it more suited

to the modern golf course management industry.

As the name suggests, this award aims to recognise a golf course superintendent for achieving excellence in golf course management. This award will be bestowed upon a superintendent who has achieved a high standard of golf course presentation and/or construction within the previous two years.

Idris Evans (Western Australian Golf Club) was the 2003 recipient of the award, having been nominated twice, and beat home the equally impressive Michael Riordan who has transformed the Patterson River Country Club in Melbourne. Who knows, maybe Riordan will be among the finalists again this year.

#### AGCSA Excellence in Golf Course Management – Previous Winners

2000 - Allan Devlin (Secret Harbour Golf Club)\*  
2001 - Mark Gahan (The Dunes Golf Links and Thirteenth Beach Golf Links)  
2002 - Gary Bass (Croydon Golf Club)  
2003 - Idris Evans (Western Australian Golf Club)  
2004 - ?

\* then known as the AGCSA Fellowship Award

#### AGCSA GRADUATE OF THE YEAR AWARD – 2004

Presented in partnership with Toro Australia

As 2003 Distinguished Service Award winner Dene Goldsack commented during his award presentation in Adelaide, "I can't get over how professional the industry has become".

Goldsack's comments were made shortly after 2003 Graduate of the Year winner James

Dalton from the Thirteenth Beach Golf Club gave an impressive and detailed presentation which not only outlined his achievements but also his future aspirations within golf course management. "I was just blown away by his knowledge," Goldsack said.

With the rise of dedicated turf education courses in recent times, the calibre of graduates increases from year to year which makes this award one of the most difficult to judge. This award is special in that it gives an indication of where the future of the industry lies. Today's recipients will be tomorrow's superintendents and will ultimately go on to play a major role in the development and direction of the golf course industry. For the lucky graduate, the award provides a huge boost, helping to launch their career in the best possible way.

The structure of the Graduate of the Year Award has altered for 2004. Nominees now come directly from the individual state association awards programs with finalists and winners from each state facing off for national recognition.

An outstanding field has again been nominated for what is arguably the most anticipated award during conference week and the judging panel will consider the graduate's academic achievements, career aspirations, ambassadorial skills and how winning the award will assist the graduate in meeting their career aspirations. A bit like Miss World, without the swimsuit parade!

2003 winner Dalton staved off the challenges of a healthy field of nominees, edging ahead of fellow finalists Craig Birrell (Royal Adelaide Golf Club) and Nick Kinley (Wembley Golf Club).

#### Graduate of the Year - Recent Winners

2000 - Brett Barsby (Royal Queensland Golf Club)  
2001 - Scott Carruthers (Pennant Hills Golf Club)  
2002 - Glenn Dawson (Federal Golf Club)  
2003 - James Dalton (Thirteenth Beach Golf Club)  
2004 - ?

At the time of going to print the list of nominees for each award had yet to be finalised. Finalists and winners will appear in Volume 6.4 of Australian Turfgrass Management magazine. 🌱



Winners, finalists and award sponsors from the 2003 AGCSA Awards





# AGCSA Golf Championships - Can Sellar Master Metropolitan?

MELBOURNE



20th Australian Turfgrass Conference Preview

04

For superintendents playing in this year's AGCSA Golf Championships, there is only one question – can anyone scupper Sellar? ATM previews the showdown at Melbourne's stunning Metropolitan Golf Club and the AGCSA Corporate Cup.



Can Daryl Sellar secure his fourth consecutive AGCSA Golf Championships?

With extensions to his wardrobe complete, Glenelg superintendent and perennial champion Daryl Sellar heads to Melbourne on the hunt for his fourth consecutive Toro Red Jacket.

Sellar winning the AGCSA Golf Championship has become a bit like Brisbane dominating the AFL, and in Adelaide last year he collected his third consecutive jacket with a two shot victory on a soggy Royal Adelaide.

But as St Kilda has shown in the 2004 AFL, Brisbane's grip on the premiership could be loosening, and no doubt a number of superintendents, particularly the band of Victorians, will be hell bent on scuppering Sellar's intentions of donning yet another Toro tailored Red Jacket.

After last year's tournament Sellar told ATM, "I hope to defend it next year although a few of the Vic boys seem pretty intent on doing something to me to prevent me from doing so. I'll need eyes in the back of my head".

With a winning streak to match that of the Tiger himself, Sellar has proved to be a formidable opponent in recent years. However, ATM has it on good authority that the near-scratch golfer could be primed for the taking in 2004.

Apparently the sticks haven't seen much daylight in recent months, meaning the door could be left open for a number of hopeful superintendents who will be looking to do a Phil Mickelson and win their first jacket.

After shooting a 78 to finish third on a countback last year, Mona Vale Golf Club's Andy Hugill could be a threat to the Sellar mantle, while former champion Martyn Black from Castle Hill Country Club could be the dark horse. In his first year as an AGCSA Board member, Black has been south of the border a few times and believes he now has the knack of the Victorian greens.

Metropolitan Golf Club will be the venue for Sellar's attempt to make it four in a row, a course that has been under the stewardship of Richard Forsyth for the past 10 years. As always Forsyth will have the course in peak condition for the tournament and for those who haven't played on the famous sand belt giant will get the opportunity to see why it was ranked sixth in the Australian Golf Digest's Top 100 Australian courses earlier this year.



While Sellar will be feeling the heat from a hungry field, the teams' event will also be closely contested as Victoria defends its title on home soil. Last year's team of Brett Balloch (Anglesea Golf Club), Peter Jans (Sanctuary Lakes Golf Club), Steve Lo Iacono (Cowes Golf Club) and Red Jacket holder Colin Cowden (Rosedale Golf Club) staved off the challenge of defending champions NSW and Western Australia to win Victoria's first ever teams title. Jans capped off a superb day for the Vics by winning the stableford trophy with 38 points.

For superintendents competing in the 2004 AGCSA Golf Championships, there will be the Toro Golf Champions function held at the Telstra Dome the night before the tournament, which this year will be held on the Monday (21 June).

#### AGCSA Corporate Cup

A large contingent is expected for the Corporate Cup which will be played at the Commonwealth Golf Club (superintendent Mark Prosser).

With the inclusion of the bowling greenkeepers, turf mechanics and sportsfield management streams at this year's conference, the Corporate Cup gives all conference delegates (including those exhibiting at the tradeshow)

the opportunity to have a round of golf at one of Melbourne's top sand belt courses.

The Corporate Cup was held for the first time last year with the honour going to a Kiwi – Andrew Combe from the Nelson Bays Golf Club – who finished one point ahead of Wes Giddings from the Dubbo Golf Club.

For those wanting to play in either the AGCSA Golf Championships or AGCSA Corporate Cup, complete the relevant sections in the conference registration brochure or contact the AGCSA on (03) 9548 8600.



Who will be wearing the Red Jacket?

#### HOLE BY HOLE – Metropolitan and Commonwealth


Hole	Metropolitan	Par	Commonwealth	Par
1	380m	4	303m	4
2	138m	3	466m	5
3	387m	4	390m	4
4	472m	5	348m	4
5	382m	4	376m	4
6	469m	5	531m	5
7	201m	3	182m	3
8	476m	5	376m	4
9	395m	4	131m	3

OUT 3300m 37 3105m 36

10	418m	4	503m	5
11	154m	3	373m	4
12	360m	4	408m	4
13	180m	3	444m	5
14	476m	5	325m	4
15	427m	4	147m	3
16	319m	4	364m	4
17	393m	4	307m	4
18	433m	4	404m	4

IN 3160m 35 3275m 37  
OUT 3300m 37 3105m 36

Total 6460m 72 6380m 73

 Bayer Environmental Science

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Chipco Rovral GT controls Dollar Spot and a range of other turf diseases within 24 hours – and in most cases keeps working for 14 days. Mixed with Chipco Signature, Chipco Rovral GT will also beat the stress of Summer Decline. So for performance that outstrips other turf fungicides, insist on Chipco Rovral GT.

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**ROVRAL<sup>GT</sup>**

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Available from  **NUTURF<sup>®</sup>**



# Conference Program

MELBOURNE

04

## 20th Australian Turfgrass Conference Program

### GOLF COURSE MANAGEMENT STREAM

#### → SUNDAY 20TH JUNE

8.00am  
Awards Judging

7.00pm  
AGCSA / Toro Golf Championships Function  
MCG

#### → MONDAY 21ST JUNE

6.00am  
AGCSA / Toro Golf Championships  
Metropolitan Golf Club

6.00am  
AGCSA Corporate Cup  
Commonwealth Golf Club

6.15pm  
AGCSA Awards Presentation Ceremony  
AGCSA Welcoming Cocktail Reception  
Telstra Dome

#### → TUESDAY 22ND JUNE

**John Batman Theatre**  
8.00am – 8.45am  
Cutting Edge Strategies for Water Conservation  
Dr Robert Carrow, University of Georgia

8.45am – 9.30am  
Irrigation Quality Assessment and Amendments  
Prof Ron Duncan, Turf EcoSystems

9.30am – 10.00am  
Morning Tea

10.00am – 10.45am  
Application of Systems Based  
Environmental Management  
Terry Muir, Environmental Business Solutions

10.45am – 11.30am  
Influence of management practices on turfgrass diseases  
Dr Bruce Clarke, University of New Jersey

11.30am – 12.15pm  
Question Time

12.15pm – 1.15pm  
Lunch

1.15pm – 3.00pm  
Latest Changes to the USGA Greens Specifications  
Jim Moore, United States Golf Association

3.00pm – 3.30pm  
Afternoon Tea

3.30pm – 4.15pm  
Golf Course Design and the modern game  
Ross Perrett, Thompson and Perrett

4.15pm – 5.00pm  
Organic Matter Levels in Turf  
Alex Glasgow, New Zealand Sports Turf Institute

#### → WEDNESDAY JUNE 23

8.00am – 9.00am  
**Workshop 1A**  
Latrobe Theatre  
Seashore Paspalum  
Prof Ron Duncan, Turf EcoSystems

**Workshop 1B**  
You Yangs 4 and 5  
Stadium Construction and Management  
Ray Young, Cardno Young Pty Ltd

9.00am – 10.00am  
**Workshop 2A**  
Latrobe Theatre  
Managing new Bentgrass and Bermudagrasses  
Jim Moore  
United States Golf Association

**Workshop 2B**  
You Yangs 4 and 5  
Climatic Based Irrigation Systems  
Dr Robert Carrow, University of Georgia

10.00am – 1.00pm  
Trade Exhibition - Morning Tea - Lunch

1.00pm – 2.00pm  
**Workshop 3A**  
Latrobe Theatre  
Washdown Bays  
Graham Little, Clearmake Industries

**Workshop 3B**  
You Yangs 4 and 5  
Anthracnose Management Practices  
Dr Bruce Clarke, University of New Jersey

2.00pm – 3.00pm  
**Workshop 4A**  
Latrobe Theatre  
Australian Open Experience  
John Neylan AGCSA & Leigh Yanner Moonah Links

**Workshop 4B**  
You Yangs 4 and 5  
Insect Management  
Mark Zajac, Syngenta

3.00pm – 5.00pm  
Trade Exhibition - Afternoon Tea

5.00pm – 6.30pm  
Hospitality Suite - Melbourne Exhibition Centre  
AGCSA Annual General Meeting

#### → THURSDAY JUNE 24TH

8.00am – 9.00am  
**John Batman Theatre**  
AGCSA Award Winners Presentation

9.00am – 11.00am  
Trade Exhibition - Morning Tea

11.00am – 12.00pm  
**John Batman Theatre**  
AGCSA Award Winners Presentation

12.00pm – 3.00pm  
Trade Exhibition - Lunch

3.00pm – 5.00pm  
**John Batman Theatre**  
Panel. Can the world afford Golf?  
All Keynote Speakers

6.30pm – 12.00pm  
Conference Dinner  
Melbourne Park

#### → FRIDAY JUNE 25TH

8.00am  
Turf Tours  
• Huntingdale Golf Club, Metropolitan Golf Club,  
Royal Melbourne Golf Club  
• Moonah Links, The Dunes Golf Links, Patterson  
River Country Club

### SPORTSFIELD MANAGEMENT STREAM

#### → MONDAY 21ST JUNE

7.00pm  
Welcoming Cocktail Reception  
Telstra Dome

#### → TUESDAY 22ND JUNE

8.00am – 8.45am  
**John Batman Theatre**  
Cutting Edge Strategies for Water Conservation  
Dr Robert Carrow, University of Georgia

8.45am – 9.30am  
**John Batman Theatre**  
Irrigation Quality Assessment and Amendments  
Prof Ron Duncan, Turf EcoSystems

9.30am – 10.00am  
Morning Tea

10.00am – 10.45am  
**John Batman Theatre**  
Application of Systems Based  
Environmental Management  
Terry Muir, Environmental Business Solutions

10.45am – 11.30am  
**John Batman Theatre**  
Influence of management practices  
on turfgrass diseases  
Dr Bruce Clarke, University of New Jersey

11.30am – 12.15pm  
Question Time

12.15pm – 1.15pm  
Lunch

1.15pm – 2.15pm  
**Corryong Rooms 4 and 5**  
Sportsground Injuries  
Dr David Aldous, University of Melbourne



2.30pm - 3.30pm  
Corryong Rooms 4 and 5  
Turf Surface Safety Audits  
John Neylan, AGCSA

3.30pm  
Afternoon Tea

→ **WEDNESDAY 23 JUNE**  
**CRICKET WICKET SEMINAR**  
Bellarine Rooms 2 and 3  
8.00am - 8.45am  
Outfield Amendments Presentation  
Andrew Peart, AGCSA

9.00am - 9.45am  
Turf Management Environmental Issues  
Brian Way, New Zealand Sports Turf Institute

9.45am - 10.15am  
Morning Tea

10.45am - 11.30am  
Disease Management  
Mark Zajac, Syngenta

11.30am - 12.00pm  
Preparing Wickets for One Day World Cup  
in South Africa  
Ron Makin, City of Manningham

12.00pm - 12.30pm  
Celebrity Speaker - Chris Wood (ECB)

12.30pm - 1.30pm  
Trade Exhibition - Lunch

1.30pm - 2.15pm  
Condition Capture for Sportsfields  
Alex Glasgow, New Zealand Sports Turf Institute

2.15pm - 2.45pm  
Turf Wicket and Outfield Preparation  
Karl Johnson, Westpac Park NZ

2.45pm - 3.15pm  
Turf Wicket / Sportsfield Open Forum

→ **THURSDAY 24 JUNE**  
Corryong Rooms 4 and 5  
8.00am - 8.45am  
Instrumentation and Methods for  
Turfgrass Water and Salinity Monitoring  
Dr Robert Carrow, University of Georgia

8.45am - 9.30am  
Latest strategies for managing salt affected sites  
Prof Ron Duncan, Turf EcoSystems

9.30am - 10.45am  
Trade Exhibition - Morning Tea

10.45am - 11.30am  
Preparing for Commonwealth Games  
Tony Ware, MCG

11.30am - 12.15pm  
Olympics / World Cup Experiences  
Graeme Logan, Stadium Australia

12.15pm-12.45pm  
Stadium Construction  
Ray Young, Cardno Young Pty Ltd  
12.45pm - 2.30pm  
Trade Exhibition - Lunch - Afternoon Tea

2.00pm - 4.00pm  
Telstra Dome Tour

6.30pm - 12.00pm  
Conference Dinner  
Melbourne Park

## TURF MECHANICS STREAM

→ **WEDNESDAY 23RD JUNE**  
Hospitality Suite - Melbourne Exhibition Centre  
8.30am - 10.30am  
Textron Hands On Workshop

10.30am - 1.00pm  
Trade Exhibition - Morning Tea - Lunch

1.00pm - 1.40pm  
Wynns Oils Lecture

1.40pm - 2.20pm  
Wurth Lecture

2.20pm - 4.30pm  
Toro Hands On Workshop

6.30pm  
ATETA Conference Dinner

→ **THURSDAY 24TH JUNE**  
Hospitality Suite - Melbourne Exhibition Centre  
8.30am - 9.20am  
Enware Lecture

9.20am - 11.00am  
Trade Exhibition - Morning Tea

11.00am - 12.00pm  
Silvan Lecture

12.00pm - 1.00pm  
Trade Exhibition - Lunch

1.00pm - 3.00pm  
John Deere Hands On Workshop

3.00pm - 4.00pm  
Procus Lecture

4.00pm - 5.00pm  
ATETA Annual General Meeting

FRIDAY 25TH JUNE  
All Day Bus Tour

11.30am - 12.15pm  
Question Time

12.15pm - 1.15pm  
Lunch

1.15pm - 2.15pm  
You Yangs 1  
Synthetic v's Natural Greens  
Sally Jeavons @ Leisure

2.15pm - 3.15pm  
You Yangs 1  
Beneficial Nematodes  
Phil Ford, NMIT

3.15pm - 3.45pm  
Afternoon Tea

4.00pm - 5.00pm  
You Yangs 1  
Insect Management  
Mark Zajac, Syngenta

→ **WEDNESDAY 23RD JUNE**  
You Yangs 1  
8.00am - 9.00am  
Washdown Bays  
Graham Little, Clearmake Industries

9.00am - 10.00am  
Environmental Risk Assessment for Turf Industry  
Terry Muir, Environmental Business Solutions

10.00am - 1.00pm  
Trade Exhibition - Morning Tea - Lunch

1.00pm - 2.00pm  
Seashore Paspalum  
Prof Ron Duncan, Turf EcoSystems

2.00pm - 3.00pm  
Open Forum - Take All Patch  
Dr Bruce Clarke, University of New Jersey

3.00pm - 5.00pm  
Trade Exhibition - Afternoon Tea

→ **THURSDAY 24TH JUNE**  
9.30am  
Conference Tour  
Melbourne Exhibition Centre

6.30pm - 12.00pm  
Conference Dinner  
Melbourne Park

NB: Program subject to change without notice. 🗨️

## BOWLING GREENKEEPERS MANAGEMENT STREAM

→ **MONDAY 21ST JUNE**  
6.00am  
AGCSA Corporate Cup  
Commonwealth Golf Club

→ **TUESDAY 22ND JUNE**  
8.00am - 8.45am  
John Batman Theatre  
Cutting Edge Strategies for Water Conservation  
Dr Robert Carrow, University of Georgia

8.45am - 9.30am  
John Batman Theatre  
Irrigation Quality Assessment and Amendments  
Prof Ron Duncan, Turf EcoSystems

9.30am - 10.00am  
Morning Tea

10.00am-10.45am  
John Batman Theatre  
Application of Systems Based Environmental Management  
Terry Muir, Environmental Business Solutions

10.45am - 11.30am  
John Batman Theatre  
Influence of management practices on turfgrass diseases  
Dr Bruce Clarke, University of New Jersey



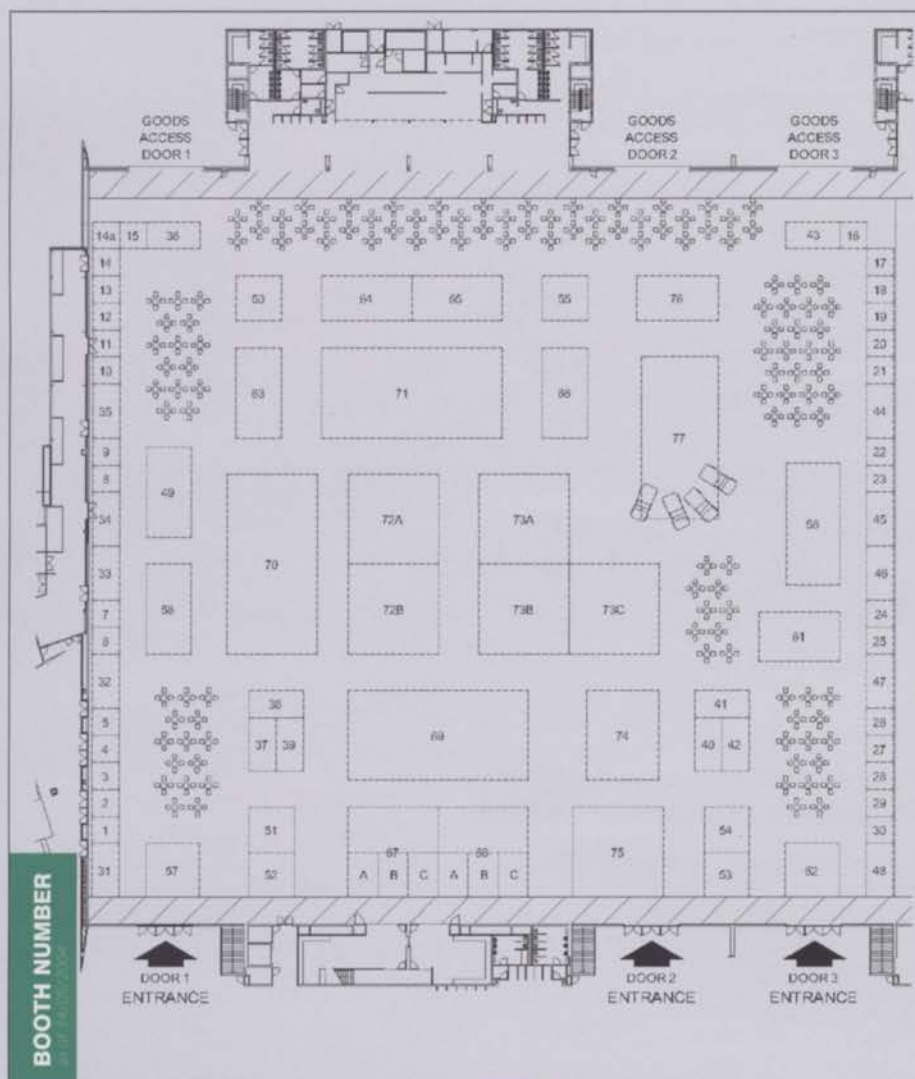


# Conference Floor Plan

MELBOURNE



20th Australian Turfgrass Conference Floorplan and Listings



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- 65 Golf and Bowling Machinery
- 66 ASPAC
- 67 Internet area
- 67A Kennards Groundcare Hire
- 67B Floratine
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- 68A Turf Farms WA
- 68B Imperial Oil and Chemical Co.
- 68C Adelaide Seed
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- 70 John Deere
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## COMPANY

- 1 Foley Grinders
- 2 Clearmake
- 3 HG Turf
- 5 Triangle Filtration
- 6 Turfcraft International
- 7 T2 Green Solutions
- 8 SportsTurf Consultants
- 9 Enware
- 11 The Groundsman
- 12 Densal
- 13 Telstat
- 16 NMIT
- 17 Ohio State University

- 18 Paton Fertilisers
- 19 Environmental Business Solutions
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- 74 Country Club International
- 75 Vacant
- 76 Turf & Irrigation
- 77 Chipping area



# 20th Australian Turfgrass Conference

## Tradeshow Exhibitor Listings



### AGCSA

#### Booth No.44 and 23

The Australian Golf Course Superintendents Association was formed in 1981 to further the profession of golf course management in Australia and the Pacific Rim. Since that time the association has grown steadily in size and now boasts over 700 members from all states of Australia, New Zealand and around the Pacific.

The AGCSA helps promote the profession of golf course management, provides continuing educational opportunities to members and provides support services and information for superintendents to assist them in their professional development.

Visit the AGCSA booth during the trade exhibition to find out more about joining the association and the benefits of being a member, surf the new-look AGCSA website and peruse the extensive range of turfgrass books and merchandise.

Copies of the AGCSA's flagship publication, Australian Turfgrass Management magazine, will be available, while ATM editor Brett Robinson will be on hand to discuss ideas and issues.

AGCSATech manager John Neylan and technical officer Andrew Peart will also be present to inform delegates of AGCSATech's ongoing work and help out with any queries about the host of diagnostic services AGCSATech offers.

So make sure to drop by booth 44, and say giddyay to the friendly AGCSA staff.

### AAAC TURF CENTRE

#### Booth No.57

##### K&B Adams Turf

K&B Adams Turf will have a large range of products on display including fertilisers, fungicides, insecticides and herbicides for all your turf maintenance needs. The suppliers of these products have been established over the past 35 years. Our qualified staff will be on hand to answer any queries and supply product information.

##### Colin Campbell Chemicals

K&B Adams is also proud to represent Colin Campbell Chemicals at the conference this year. The association between the two companies has been built over 30 years with expert advice and solutions for all management needs.

Colin Campbell Chemicals is a supplier of a wide range of turf protection products including insecticides, fungicides and herbicides. Campbell's will showcase product lines which have been built upon for over 40 years.

##### Aquaseeding

The Aquaseeding Group of companies are contractors and suppliers to the industry, and will display the latest technology and equipment to perform hydromulching,

hydrosprigging and straw mulching for amenity and sportsturf applications. Also on display will be the environmentally friendly Enviroguard spray-on weed mat.

##### Alliance Seeds

Alliance Seeds will display the Ozbreed range of improved native grasses, which are suitable for golf course beautification and general landscaping. They provide uniform size and colour with minimum water requirements. The range will include Little rev (*dianella rev*), Tas Red (*dianella tasmanica*), Tanika (*lomandra longifolia*), Kingsdale (*blue poa poiformis*) and Eskdale (*blue poa lab*). Our revegetation representative will be available to help out with enquiries.

### ACTIVE SAFETY

#### Booth No.43

Visit the Active Safety booth at the tradeshow where you will be able to find out information on:

- The Yakka range of work clothing, including the new Y-Generation range;
- Hi-Viz clothing;
- Headwear;
- Wet weather clothing - budget, heavy-duty and breathable styles;
- The Victor range of footwear, especially the Green Keepers Shoe for use on greens - no heel;
- Chemical handling products and gloves;
- Full face visors, safety glasses and goggles;
- Disposable overalls;
- Measuring jugs;
- Hand cleaner and skin care products;
- Tipezee drum tippers to suit 20-250 litre drums;
- Range of plastic taps to suit chemical containers;
- Storage cabinets, safety cans, spill control pallets and spill kits;
- Safety showers and eye washes;
- A complete range of turf industry signage, including how to order custom-made signs;
- First aid kits, both portable and permanent;
- Sunscreen and insect repellent;
- Hearing products and information on audiometric testing and noise level surveys;
- Safety mirrors;
- Respiratory products from full-face masks to disposable respirators;
- Key cabinets; and
- Safety matting, including entrance and anti-fatigue styles.

We will deliver anywhere in Australia or New Zealand.

### ADELAIDE SEED

#### Booth No.68C

Adelaide Seed has two new releases for the tradeshow. Riviera seeded couchgrass will be available for the first time in Australia in spring 2004. Riviera was ranked as the number one couch by NTEP for overall turf quality of all available varieties in the US, including vegetative varieties (1997-2001 data).

Riviera was developed by Oklahoma State University, led by Drs Taliaferro, Martin and Anderson. Riviera is a synthetic variety derived from intercrossing of three clonal parents selected on the basis of turf quality and transition zone adaptation.

Of all vegetative and seeded cultivars, Riviera ranked number one for overall turfgrass quality, spring greenup and drought tolerance. Riviera also ranked number one among the seeded cultivars for leaf texture and seedling vigour and among the very best in low seedhead formation and minimal scalping.

Grand Slam ryegrass is finer textured with a rich dark green colour that extends throughout the season. Its growth profile is more compact and aggressive tillering enables Grand Slam to maintain its density and appearance that weaken and disfigure other grasses. In NTEP testing, Grand Slam is the leading variety for overall performance under maintenance and mowing typical of golf course fairways.

### AGRICHEM

#### Booth No.54

Turf nutrition specialist Agrichem will be launching its new nutrition manual at this year's 2004 Australian Turfgrass Conference Trade Exhibition. The manual will be provided to turf distributors to assist in providing nutritional advice to turf professionals.

The manual provides an overview of the role of each of the major and minor elements and contains a section on nutritional deficiencies in turf, how to recognise them and how to treat them.

Agrichem will be distributing turf nutrition plans for both warm and cool-season grasses as well as turf nutrition information packs which contain excerpts from the nutrition manual. The free pack will be available for all turf professionals who visit the Agrichem stand.

Turf nutrition products which will receive particular focus at this year's trade exhibition will include;

- Ultratrain - Agrichem's slow release nitrogen solution with added urease and nitrification inhibitors; and
- Kelpak - the world's leading seaweed extract which promotes root development.



Agrichem will also be announcing the details of two exciting seminars for turf professionals and distributors. Guest speakers at the seminars will include leading Australian and US turf professionals.

For further details, please contact Agrichem's turf manager Ian Perryman on 0402 290 481.

## AGRITURF

### Booth No.48

Agriturf's two directors, Colin Wise and Russell James, hold a clear vision of the business they are in. As they say, "At Agriturf we support clients in providing excellent recreational and landscaping facilities through innovation, quality and environmental responsibility".

Since its inception in 1984, Agriturf has witnessed a change within society.

The population as a whole is greener, more aware, and most importantly, willing to adopt a proactive stance on environmental issues. An example being present attitudes towards the use of agricultural chemicals. Agriturf's response has been to employ management procedures able to critically evaluate all new products.

Agriturf distributes a range of advanced, innovative and environmentally responsible products including TerraCottem (the world's leading soil conditioner), Envirokelp (a superior liquid seaweed derived from Tasmanian bull kelp), Eco-Wet (the newest of the soil wetting agents), and Aqua-T (a superior biological formulation to improve water quality in ponds and dams).

Agriturf operates from a warehouse and office facility in South Penrith, NSW. The business currently employs seven staff, including the two directors. All staff understand the ethics and values under which the business operates and are committed to its long-term future.

They can be contacted on 1800 658 281.

## ANCO TURF

### Booth No.25

Anco has been supplying quality instant turf to Melbourne's golf courses, landscapers, city councils and home gardeners for over 26 years. With properties at Lyndhurst, Clyde, Fiveways, Cranbourne West and Torquay, Anco can service your turf requirements within 24 hours of ordering, utilising our fleet of four semi-trailers.

As well as producing the traditional turf varieties such as Santa ana couch, Wintergreen couch, kikuyu, tall fescue, Kentucky bluegrass/ryegrass blend and creeping bent, Anco is now growing two varieties of seashore paspalum - Sealsle 1 and Velvetine, and a new variety of buffalo, Sapphire. All Anco turf is produced on fumigated sandy loam soils to produce a turf free of any weeds.

Anco can supply and install your turf, no matter what quantity is needed, using either standard one square metre rolls or large rolls. Contract growing of bentgrass and cool-season grasses is also available.

For all your turf requirements, visit the Anco stand at the tradeshow and be sure to have a look at the Sealsle 1 that will be on display, or call our Lyndhurst office on (03) 9799 1370.

## ASPAC GOLF AND TURF

### Booth No.66

You can always rely on ASPAC Golf and Turf to show you something different, and 2004 is no exception. This year we will feature the Dakota 550 and Dakota 525 Turf Contractors, a specifically built turf trailer designed to carry large loads around the course without leaving a mark.

The Dakota Turf Contractors have full width walking beam suspension, floatation tyres and an ability to carry loads of up to 5000kgs which makes them ideal for golf course construction and day-to-day course work.

Naturally, Australia's most popular topdressers will be on display, with the Dakota 410 joined by the new Dakota 412 which has a two cubic metre capacity for greens, tees fairways, with the same electric controller that clients like so well on the smaller unit.

The new Groundsman turf cutter will make its Australian debut, an innovative design that enables you to change blade size to your requirements to cut 12, 14, 16 and 18 inch wide rolls. Of course we will have even more turf equipment on our stand and in our catalogues so stop by ASPAC Golf and Turf where you are sure to see something different.

## ATOM INDUSTRIES

### Booth No.46

Atom Industries is the manufacturer of Australasia's No.1 selling professional lawn edgers. Recently, Atom introduced a special purpose built Golf Bunker Edger that can trim bunkers up to eight times faster than traditional methods. Many years in development in conjunction with greenkeepers, this revolutionary designed bunker edger saves golf courses considerable time and money.

The Atom Golf Bunker Edger's highly manoeuvrable action gives it the ability to edge around tight bends and on uneven terrain, and leaves a sharp, clean finish around the bunker. Untidy and unsightly bunkers can be transformed into well maintained bunkers in just one pass.

The Atom Golf Bunker Edger is loaded with features including a long 17.25 inch blade that can cut to a depth of seven inches; a six-position height adjustment controlled from the operators position; a cleverly designed blade guard with protected 'viewports' allowing the operator to see exactly where he/she is edging; plus numerous other features.

The Atom Golf Bunker Edger is robustly built yet light in weight at just 11.5kgs making it easy to use. No carrying or bending is required, and it does not damage the green.

Atom Industries will be exhibiting the Golf Bunker Edger at booth No.46.

## BAYER ENVIRONMENTAL SCIENCE

### Booth No.52

The name Chipco has been synonymous with turf protection products throughout the world, including Australia, for many years. Now Bayer will be the brand that continues this tradition. Bayer Environmental Science, the speciality products division of Bayer Crop Science, has also been a household name and it is now set to become even stronger.

## Backed By Bayer

From this point, all Bayer Turf Protection products will carry the Backed by Bayer logo.

This is your assurance that the Bayer products you use meet the exacting efficacy and environmental standards set by regulatory authorities around the world, and, most importantly, have been through the field development work to ensure they work each and every time.

It means that turf managers who use Bayer products can be absolutely certain of the quality and integrity of the product and can also be guaranteed that they have been through the most extensive research and development.

Why Backed by Bayer? Because Bayer is the company that, in most cases, discovered the active ingredient and then completed many years of formulation development and rigorous field-testing.

We look forward to meeting you at Booth 52 in Melbourne. Let us explain what being Backed by Bayer really means.

## BETTER METHODS

### Booth No.34

If you come down to our booth today, you're in for a big surprise! Sorry, we have no teddy bears, but you will be surprised at what we have. New general manager Andy Knox has taken over from Dan McKerracher and as a result you can expect a new approach to marketing of BMS products and services.

### New Products

We will display the very latest additions to the Standard Golf range from the USA as well as some products of our own. Look out for a depth stop for the Turfmaster hole cutter, two new ball washers from Standard Golf, several new maintenance rakes, lutes, roller squeegees and spiked rollers.

### New Attractive Prices

Take time to compare our latest prices with the competition. You will be surprised to find that top quality goods need not cost heaps.

The strength of the Australian dollar allows us to pass on the benefits to the end user with some surprising price reductions.

2004 marks the beginning of a new era for Better Methods. New management, several new products in the pipeline, better awareness of customer needs and closer support for our distributors. Be sure to visit us at Booth 34 and be surprised.

## BIRD GARD AUSTRALIA

### Booth No.30

Bird Gard Australia has been keeping pest birds off agricultural, industrial and horticultural enterprises for over 10 years. Until quite recently our main weapon was electronic sonic (audible) bird repellers.

These artificial sounds block the birds' own communications and drive them to distraction. They leave for more serene surrounds. Harassment sounds are used exclusively on cockatoos, corellas, galahs etc. Results are excellent.

Distress calls are used on species such as ducks and seagulls. Results are on average less spectacular than with parrots and vary.



Laser is the most effective tool against aquatic species. Most ducks, swans, egrets, cormorants, ibis etc are instantly put to flight when "zapped" with our hand-held Bird Gard Laser. If the water areas where most aquatic birds spend the night are zapped regularly for a week or so, the birds will relocate to an entirely new area. The Laser, backed up with a sonic deterrent is the best way to keep birds off your premises. Nothing is perfect, but even an 80-90 per cent reduction in bird numbers is a significant improvement.

Bird Gard Australia has videos of the laser in action. See our agent at the exhibition or contact us on (07) 54436344.

## BROWN BROTHERS

### Booth No.31

Brown Brothers Engineers Australia Pty Ltd is an importer and distributor of Lowara pumps and pumping equipment, with sales offices in Sydney and Melbourne. Lowara Pumps was established in Vicenza, Italy in 1968 and is part of ITT Industries, a global engineering and manufacturing company. Lowara specialises in the manufacture of premium quality pumps and fluid handling equipment and is recognised world wide for quality, efficiency and reliability.

Brown Brothers specialises in the design and fabrication of purpose built booster systems particularly for golf courses in both New Zealand and Australia. Many of these booster systems include a Hydrovar variable speed drive. The Hydrovar is a microprocessor pumping system controller, but it does more than just change speed. It actually manages the performance of the pump to match a wide range of system conditions and requirements.

The Hydrovar software is designed specifically for centrifugal pump operation, control and protection. It can be set up to protect the pump from operating under various unfavourable conditions, eg: cavitation, operating against a closed head, low NPSH etc. The Hydrovar provides the golf course superintendent with flexibility of watering when required with substantial savings on installation, power usage and maintenance.

## BURDETTS SAND AND SOIL

### Booth No.47

Burdetts is a proudly owned and run Australian producer of washed sands, soils, aggregates and mulches available for maintenance, renovation and construction in the turf industry. We shall be sharing out stand with Fytogreen Australia and Drake Extrusion for which we are exclusive Victorian suppliers.

#### Fytogreen Australia - Hydrocell Flakes

Hydrocell Flakes is an air, water and nutrient absorbing biodegradable foam which reduces compaction and is ideal for high traffic areas, bunkers, tees, goal squares. Hydrocell Flakes hold both air and water to give spectacular growth with half the watering.

#### Drake Extrusion - Loksand Fibre

Drake Extrusion, the proud manufacturer of Loksand Fibre, invites you to see first hand why Loksand was chosen to stabilise the surface at Waikato Stadium (NZ). More recently, Chelsea Football Club at Stamford Bridge (UK) chose Loksand in the reconstruction of its

ground. Loksand should be your first choice for construction of stadium, sportsfields, racecourses, equestrian arenas and golf high wear areas.

## CLUB CAR

### Booth No.64

**Turf 1:** Our lightest utility vehicle and the most manoeuvrable in the industry.

**Turf 2:** The most functional vehicle in its class, perfect for the full range of maintenance tasks. Available in petrol or 48v electric. Total vehicle rated capacity of 545kg enables you to carry more.

**Turf 6:** Offers the maximum amount of payload (681kg) and cargo space in the Carryall Turf range. Cargo box is 1.79m.

**Turf 252 (XRT):** With the power, versatility and capacity of the Turf 2, the XRT offers four-wheel braking along with increased ground clearance. Heavy duty all terrain tyres.

**Turf 272:** Superior performance, rugged design and bucket seat comfort. The 272 delivers shift on the fly differential lock, pulling power to handle rough terrain and precise manoeuvrability to protect the delicate landscaping. Four-wheel hydraulic drum brakes and a 13hp (400cc) Kawasaki motor.

**Turf 472:** All the features of the 272 with the added bonus of four forward facing seats.

**Turf 294:** The all new 4x4 with IntelliTrak. An innovative breakthrough from Club Car creates a new standard for 4x4 performance. IntelliTrak senses and automatically engages four-wheel drive whenever it is needed. Available in 20hp Honda petrol or 20hp Kubota diesel motor.

## DAVID GOLF AND ENGINEERING

### Booth No.63

David Golf and Engineering is pleased to be exhibiting at the AGCSA Conference Tradeshow in 2004. David Golf and Engineering is Australia's largest manufacturer and distributor of golf course hardware, accessories and golf driving range equipment. Head office is based in Melbourne with offices in Sydney and Brisbane. David Golf has serviced the golf industry in Australia and internationally for 50 years.

Our golf hardware range includes ball washers, tee markers, flagpoles, hole cutters, putting cups, bunker rakes, flags, fairway and maintenance litter bins, and tee signage. Our golf driving range products include driving range mats, ball pickers, ball washers, ball dispensers.

David Golf and Engineering supplies to all golf courses throughout Australia. We also supply product to China, Fiji, Hong Kong, India, Indonesia, Japan, Malaysia, Singapore and Thailand. Come and visit us at Booth No.63 and see the release of the new David Golf ball washer. Also ask us about how to qualify for freight-free deliveries.

## DENSAL

### Booth No.12

Densal began its life back in the mid 1990s, hiring specialist equipment to golf course companies in the construction of the Sanctuary Lakes and Patawalonga golf courses. As the business grew with further

involvement in the Heritage and Hidden Valley constructions, the equipment fleet was increased substantially to include four dozers, 10 excavators, six bobcats, and an extensive fleet of specialist golf course equipment.

In 2000, Densal was successful in securing the contract to complete the Hidden Valley Golf Course construction, followed by a seven year maintenance contract. Today Densal's customer base has grown to include over 40 golf courses throughout Australia and South East Asia, with the latest project being the winning of the four year maintenance contract coupled with various 'fine finishing' construction works at the Growling Frog Golf Course near Melbourne.

The Densal team, which includes Chris Young (managing director), David Pulling (director), Paul Reeves (director and turf manager) Mick O'Shannessy (golf operations manager), recently appointed Growling Frog superintendent Wayne Dale and over 30 permanent staff, today brings over 200 years of experience in the turf construction and maintenance industries, with the ability to undertake projects from entire golf courses, through to minor reconstructions.

## DINT AUSTRALIA

### Booth No.55

Think DINT! Think professionalism, quality, service and innovation. Think Australian made. DINT Australia has been servicing the golf and turf industries for over 15 years and is part of the proudly Australian owned Dint Group which has been in operation since 1930. In this time, the company has built a formidable reputation for providing the highest quality, Australian made product, professionalism and service. No wonder DINT is leading the way.

The secret to the success of DINT lies in product development and innovation. Many of DINT's most popular products have been developed through a combination of research, industry knowledge and consultation with superintendents.

It is this willingness to listen, learn and develop which results in DINT products being the most innovative, most practical and most sought after in the industry.

In order to keep pace with the continual growth of business and product range, DINT has recently expanded operations. A new office caters for administration, warehousing and distribution, while the original plant focuses on production and engineering.

DINT will be unveiling a number of new products at the 20th Australian Turfgrass Conference on Stand 55 which will further add to an expansive product range. Think exciting new products. Think DINT!

## ENVIRONMENTAL BUSINESS SOLUTIONS

### Booth No.19

Environmental Business Solutions will be displaying an interactive software golf game based on a par 71 18-hole golf course. As you play the course you develop an environmental management plan.

We will also play a promotional video of the game which we call 'e-par'. We will also display a powerpoint presentation of golf course photographs which show environmental challenges.



## ENWARE AUSTRALIA

### Booth No.9

Enware Australia is now the Australian distributor of the Landa WaterStax Bioremediation Wash-Water Treatment System. The system is used extensively for water efficiency and environmental sustainability, with over 250 units installed around the world, including Australia.

Landa WaterStax is a low-cost, low-maintenance system for treating wash water in golf course and turf applications. Using bioremediation technology, the WaterStax economically removes oil, grease, hydrocarbons and grass clippings from wash water that is typically generated on the wash pad. The water can then be recycled or discharged either to the sewer or used for golf course irrigation.

Unlike filtration systems, which create a residue that must be disposed of properly, the WaterStax uses Baseline Bugs, a highly effective blend of microbes that literally consume and convert wastes to harmless water and carbon dioxide. Baseline Bugs is non-toxic and free of pathogens designed specifically for Australian conditions. It meets all current and proposed EPA regulations for biological treatment.

If you want a truly dedicated wash water system for golf course and turf industry applications, come and visit us at the stand or call Graeme Hansen on 0409 440 209.

## EVERGREEN TURF

### Booth No.58

Evergreen Turf has been successfully producing quality turf since 1982 from our farm southeast of Melbourne. We are building a reputation for embracing and delivering innovative and state of the art products and services.

Over the past three years, it has successfully branched into areas such as sports surface transformations. This section of the business focuses on converting cool-season sport surfaces to warm-season varieties. The specially designed machine shreds turf, plants stolons in rows and seals the material in the ground all in the one operation.

Also, Evergreen Turf has been selling new and second-hand machinery. Kesmac and Progressive equipment are among the world leaders for mowers, harvesters and forklifts. Having access to this range also enables Evergreen to provide second-hand machinery as an affordable alternative.

To complete the package, Evergreen Turf has the Stabilizer Reinforcing Products range. Stabilizer has been used recently at Dubbo and Coffs Harbour training tracks with excellent results and should be considered for all sand racing applications. Turf grids has been used in many successful applications including York Park in Tasmania and as part of the medium for drainage works at several Victorian country training tracks.

Call us today on 1800 677 655.

## FLORATINE PRODUCTS GROUP

### Booth No.67b

Floratine Products Group (FPG) is pleased to be entering the Australian and Asian golf market after a long and successful history in North America and

Europe. We look forward to learning about your unique part of the world in an effort to bring new technology and methods to superintendents.

FPG is focused on plant health. Through sound agronomic principles and applied scientific technology we help those charged with the care of plants with tools and knowledge to overcome specific challenges.

Our philosophy is simple; gather all of the pertinent laboratory data, evaluate utilising the latest in advanced diagnostic software, prescribe appropriate methods and materials, monitor results and adjust the plan as needed. The result is a plant that resists stresses and achieves healthy growth. By monitoring and adjusting the various inputs, FPG helps the plants caretakers achieve their objectives.

From a very scientific basis our evaluations identify the various missing elements that prevent plants from thriving and surviving. Combined with patented products that help the plant reach nutrient, oxygen, and water balance, the plant achieves its biological objective.

We will be developing a nationwide network of highly trained sales consultants, who in conjunction with FPG can help superintendents achieve success.

## FOLEY UNITED

### Booth No.1

Foley United, the world leader in reel grinding equipment since 1934, brings you the fastest and easiest to use grinders in the world. Coupled with our complete range of premium cutting edge accessories, Foley United brings you the most economical solutions for all your grinding needs.

Visit our booth to see the Accu-Sharp 605 Spin Relief Grinder. Designed for optimum operator safety and ease of use, this machine is the best combination of features and economy. This grinder is easy to set-up, simple to operate and is capable of reproducing the specifications that all the cutting head manufacturers advocate.

Several other products will be on display including, bedknife grinders, gauges, bedknife facing tools and backlappers.

Toro Australia is proud to be the Australian distributor of Foley United grinders and accessories. Contact your local Toro representative for further information on the Foley United range of products. We look forward to seeing you at Booth No.1.

You can also visit [www.foleyunited.com](http://www.foleyunited.com) or [www.toro.com.au](http://www.toro.com.au).

## GLOBE AUSTRALIA

### Booth Nos.14, 15 and 36

Globe Australia offers the widest range of turf maintenance products of any supplier. Chemicals, fertilisers, seed, safety equipment, application equipment, golf course accessories, tools, irrigation supplies, machinery, blades and spare parts are only a part of what we offer to the superintendent or turf manager. Globe runs eight full warehouse operations around Australia to make sure that products can be delivered where and when needed.

This year Globe will feature a variety of new products at the 20th Australian Turfgrass Conference.

Mosquito and biting fly control has become a major issue on many golf courses. Globe will present the equipment and the products to overcome the problem.

Stan Wells will be happy to keep superintendents up to date with developments in the Turf-Tec machinery range, FMC will launch some new and exciting chemistry and Bayer will be on hand to help explain the benefits of the new Destiny herbicide for ryegrass control.

Wayne Sear from Barmac also has a range of new and very useful products to discuss with visitors to Globe's stands - 14,15 and 36. Hortex, SST (the wetter and adjuvant people), Advanced Seeds and Yates will all be on call to help with your enquiries.

## GRADEN INDUSTRIES

### Booth No.61

Graden Industries has been very busy over the past 12 months with the release of new equipment as well as upgrades to existing machines. First, the new GBS 1200 Verticutter was launched late last year and made an instant impact. This tractor mounted unit produced immediate sales to customers.

Designed specifically for use on cricket wickets and tennis courts, but having uses for all types of sports turf, the GBS 1200 is a fine example of Graden responding to customer needs and requests.

Hitting the market now is the powerful Graden Contour. The articulated rotor housing on this pedestrian scarifier allows the blades to contour exactly to undulating turf surfaces such as golf greens, thereby ensuring an even depth of cut.

On the update front, the GS04 Scarifier, used at all the best courses around the world, now has two easy-to-fit update kits available. Another of our current machines, the Swing-Wing Scarifier, has had a more extensive makeover resulting in a model change from SW03 to SW04. The improvements make the machine more solid, quieter and easier to set up, as well as providing a more consistent depth of cut. Testing and fieldwork show this to be a better machine.

## GROW FORCE/NUTRI-GRO

### Booth No.39

**What's on?** Grow Force will show you how to maximize the potential of your turf, save water and deal with insect problems in an environmentally friendly and OH&S responsible manner. Testimonies of users will challenge you as they bear witness to a better way of greenkeeping.

**What is it?** The Nutri-Gro range are unique organically based turf care and protection products designed to make life easier and safer for the greens keeper. Nutri-Gro Plus is a 3-in-1, consisting of an APVMA registered organic insecticide for the control of Black Beetle and Army Worm plus an organically based fertiliser and wetting agent. The range also consists of granular products and a straight insecticide/wetter.

**Who are we?** Grow Force is a leading manufacturer and distributor of fertilisers to the agricultural, specialised turf and home garden marketplaces. Grow Force is a division of Ruralco Holdings Limited, Australia's largest independent rural merchant organisation, which was formed over 30 years ago and has operations in all states. Group turnover is in excess of \$600m per annum.



## GOLF & SPORTS TURF AUSTRALIA

### Booth No.53A

Golf & Sports Turf Australia is the country's premier specialist publication aimed at bringing expert, technical information to professionals in the turfgrass industry.

Since our inaugural issue in 1993, we have gained the status as Australia's best forum for innovative ideas of relevance to a range of government and private clients.

Our subscribers come from racecourses and municipal councils to schools, golf clubs and resorts. Every golf course in Australia receives a copy of Golf & Sports Turf Australia.

Our magazine has a broader readership of 6000-7000 readers who rely on our proven ability to present up-to-date information on new industrial products, key personnel changes, future trends and feature articles on all major Australian turf issues.

Valued contributors include Dr Peter Martin from the University of Sydney; Dr Kerry Harrington from Massey University, New Zealand; Dr. Richard Gibbs from Sports Surface Design and Management NZ; and technical articles from Sportsturf Consultants, Melbourne.

Our readers enjoy our easy-to-read coverage, the long-term relevance of articles and the knowledge that they are getting the best in modern turf news.

Lesley Hetherington from the Golf & Sports Turf team will be on stand 53A and looks forward to catching up with you.

## GWAZAE

### Booth No.67c

Ground probe aerators use compressed air to fracture compacted soils on the likes of greens, tees and fairways. We do this by driving a lance into the soil and releasing a shot of compressed air through the hollow centre. This lifts and aerates the soil without damaging the surface. Some benefits are better drainage, eased compaction, while areas do not have to be taken out of play to be aerated.

Liquids can also be injected at the same time. Probes can be driven as deep as 800mm or as shallow as 300mm. This system has been proving itself over the last four years in New Zealand and is now coming to Australia in September. If you would like more information please call 1800 421 371.

## HERITAGE SEEDS

### Booth No.38

Heritage Seeds is well entrenched in the Australian professional turf seed industry. As a research and development company, Heritage Seeds' focus is on breeding and selecting the best turf seed varieties to meet the requirements of the Australian turf manager. To help achieve this, Heritage Seeds draws upon its relationships with overseas breeding companies to obtain the best of the world's plant genetics.

Heritage Seeds has the largest seed research farm in the Southern Hemisphere, located at Howlong NSW. This is where trial and evaluation work is carried out on a wide range of species. Heritage Seeds does not rely on this alone and has a large involvement in ANTEP (the Australian National Turfgrass Evaluation Program, formerly AUSTEP).

Heritage Seeds is a leading seed company in Australia and prides itself on providing quality products to the marketplace. The results in the ANTEP trial further enhance this. Premier II and Barlennium ryegrass lead the way, with all our varieties being top performers.

I would like to thank you for your support and welcome you to come and speak with me at stand 38.

Please contact Matt Merrick 0413 442 811 for further information.

## HG TURF PTY LTD

### Booth No. 3

HG Turf produces and markets a range of turf varieties throughout Victoria. Varieties include fescue, bluegrass, ryegrass, kikuyu, couch and buffalo. Turf is supplied in standard rolls and maxi rolls, either with soil or washed free of soil.

HG Turf also designs and constructs stadia fields and is responsible for turf replacements at the MCG and Telstra Dome. You are most welcome to visit our exhibit at booth 3 where we look forward to showing you our range of products and imparting our expert knowledge.

## JACOBSEN

### Booth No.73B

Jacobsen will once again feature prominently at this year's 20th Australian Turfgrass Conference.

The LF3800 five-gang fairways mower will be joined by its bigger brother the LF4677, which delivers 3.93m width of cut through seven cutting units and which can be operated in five, six or seven gang configuration. The AR250 multi-deck rotary is also sure to attract attention as it delivers a reel mower type finish, but with reduced maintenance costs.

The star of the show, however, is sure to be the new revolutionary MagKnife, which is a system for attaching the bottom blade to a cylinder mower without any screws. This new system uses powerful magnets with a force exceeding 19kg together with special locating dowels to position the bottom blade firmly.

As any superintendent will confirm, the bottom blade is notoriously difficult to remove especially when up to 18 retaining screws have to be removed. When the new blade is fitted using the traditional system, tightening the screws distorts the blade, which then has to be ground true. MagKnife will reduce the time required to remove and replace worn or damaged bottom blades from hours to just minutes. Make sure you check it out.

## JOHN DEERE

### Booth No.70

John Deere is proud to be a part of the 2004 20th Australian Turfgrass Conference in Melbourne. We look forward to hosting you on our stand, where you will be able to see our comprehensive array of turf machinery, ranging from reel mowing equipment to specialty turf machinery and utility tractors.

While at the stand, you will be able to see the all-new C Series fairway mowers, designed for superintendents who place a high value on quality of cut, durability, serviceability, operator comfort and performance.

We will also be introducing the 3245C independent deck mower at the 2004 conference. The 3245C features five 21-inch 10-gauge rotary decks designed to deliver superior cutting performance on both warm and cool-season grasses.

In addition to the products on display, John Deere Credit representatives will also be on hand to provide financial options for either purchasing or leasing golf and turf equipment, and representatives from the parts and service departments will outline our unmatched after sales support.

We look forward to seeing you on the tradeshow floor.

## JSB - GIANNI FERRARI AUSTRALIA

### Booth No.56 and 60

Many of the new 2004 Gianni Ferrari products will be available to view at our stand (No.64) during the trade exhibition.

The all new high capacity Turbo 1, 2 and 4 are now here. Recent testing of these dynamic 25-35 hp units revealed performance levels 33 per cent better than 72" side discharge units.

The collection unit range has capacities from 500 litres through to 1120 litres. Up to five acres per hour and ten tons of grass and litter per day. These capacities and acreages are unmatched by any competitor.

The new Turbo 5 and Turbo 6 wide cut (rear discharge) in 2.1 metre and 3.2 metre configurations are innovative additions to the Gianni Ferrari range. Turbo 6 has received impeccable product endorsement as best new turf product at the European Eima show. Turbo 6 has 26 major innovations not available on other machines.

The patented ASAS (anti-skid, anti-scuff) allows perfect traction on the 4WD system, on slopes and on soft, wet grasses.

The VWW (variable working width) is a patented new system than allows independent side wing lateral shift via 75mm hydraulic rams. Superior trimming and passage into tight areas is possible without lifting the wing decks.

## MASTERSTROKE AUSTRALIA

Masterstroke has designed, developed and manufactured a range of synthetic golf grasses for different use.

### Pure-Pitch

Our Pure-Pitch grass makes a superb, realistic and long wearing tee-area. This can be used where grass won't grow or when a temporary tee is required.

Quick and easy to install, the Pure-Pitch tee area is reusable and makes managing these difficult areas simple and with minimal maintenance it ensures your resources are productively employed elsewhere.

### Pure-Putt

Pure-Putt greens offer realistic A-grade characteristics and are ideal for use as temporary greens, winter greens or practice chipping and putting greens.

Simple to install and with virtually no maintenance, you will have better management of your labour, cost effective solutions to ongoing problems and even happy members!

Masterstroke synthetic golf grasses are designed, developed and manufactured in Australia for local conditions and come with 60 months manufacturing defects warranty.



## McMAHONS

### Booth No.32

McMahons is the leading golf course construction company using 3D laser-controlled machinery. Machinery is controlled from 3D digital plans using GPS for bulk earthworks and ATS (Automatic Tracking System) for final trim and shaping. The operator has full vision and control of the construction requirements from the plans available on the screen in the cab. This information includes position, height, no-go areas, required travel paths, cross sections and cut and fill details. Accuracy of bulk earthworks is  $\pm 30\text{mm}$  while finishing works are  $\pm 5\text{mm}$ . Plans can be amended to accommodate changes.

CAD plans are precisely followed by the programs in the machines that guarantee the designers or architect's vision is followed exactly. There is no confusion with the wrong interpretation of a plan by operators causing areas to be reconstructed. Less on site checking is also required as any existing level or position can be checked using a roving unit.

The use of this equipment means a more accurate job, carried out quicker than with conventional techniques and also saves money.

This equipment can also be used on oval or racecourse constructions to accurately follow any design contours or to ensure uniform depth of topsoil and gravel over a base.

## NORTHERN MELBOURNE INSTITUTE OF TAFE

### Booth No.16

Northern Melbourne Institute of TAFE is the largest provider of turf management training in Victoria and is based at the NMIT Fairfield campus. We will be providing information on the turf management courses offered by the institute which include Certificate II (Traineeship), Certificate III (Trade Certificate) for apprentices and adults and the Diploma in Turf Management, which can be offered by flexible delivery and is often undertaken by country, interstate and overseas students.

We will also be demonstrating the 3D modelling computer program that is used in turf construction and is included in the Diploma course. We will be pleased to talk to individuals or companies regarding their training needs and how we can assist, and any questions regarding starting dates, fees, duration etc.

## NUTURF

### Booth No.69

Nuturf Pty Ltd is a wholly owned subsidiary of the Australian owned company, Nufarm. We provide products and services of exceptional quality to the turfgrass industry nationally. Our products are geared towards turf and our people are passionate about imparting their knowledge. Nuturf works with turf managers in an ecologically sustainable context, considering the impact of products and their application on turf and its surrounds.

Nuturf will be having a fun and informative stand at the 20th Australian Turfgrass Conference trade exhibition. Our stand, No.69, will be conducted with Hunter, Syngenta and Triangle Filtration, giving a wide variety of products to check out and people to talk to.

Importantly, we want everyone to have a bit of fun! We will have a winter sporting theme with games revolving around NRL and AFL, which ties in with Nuturf's current sponsorship of the AGCSA footy tipping contest.

We'll have great prize giveaways and you'll be able to chat to our knowledgeable staff about your particular turf needs. Most importantly you'll be able to kick back, relax and catch up with mates over a cup of coffee.

Free call 1800 631 008. Free fax 1800 809 456 or go to [www.nuturf.com.au](http://www.nuturf.com.au)

## OASIS TURF

### Booth No.49

One of the new products Oasis Turf will introduce at this year's conference is the Nutriculture range of soluble fertilisers from Plant Marvel. Nutriculture is applied as a liquid allowing it to be absorbed immediately.

The company is the originator of spoon feeding fertilisers. The range of products includes four different NPK blends, all which are made from the highest possible tech grade material to ensure total solubility in spray tanks.

Lebanon Turf slow release fertiliser has been accepted extremely well into the Australian turf market, and will be represented. John Westerdahl, international sales manager for Lebanon, will be on hand to assist, advise and discuss any nutritional issues.

Growth Products liquid range of slow release fertilisers and biostimulants will also be of prominence. Growth Products, manufacturers of 'Companion' (microbial inoculate), will be represented by Keith Giertych (technical sales manager).

Oasis Turf is also a major distributor for all the major chemical manufacturers in Australia, including Bayer, Colin Campbell and Nufarm. Oasis Turf staff will represent all of these manufacturers at the show.

Seed plays a vital part in Oasis Turf's business, which is why PGG Seeds and Oasis Turf are working out of the same booth this year.

## OHIO STATE UNIVERSITY

### Booth No.17

The Ohio State University in Columbus, Ohio, USA, in conjunction with various TAFE colleges in Australia including Northern Melbourne Institute of TAFE in Melbourne, have been recruiting turfgrass trainees from Australia and New Zealand for over 20 years.

We will be in attendance at the 20th Australian Turfgrass Conference at booth No.17 to advise and recruit potential turfgrass trainees who are single, drug free, between the ages of 19 and 28 and who are willing to commit to a year in the US. Candidates must have a clean drivers licence and be willing to take a drug test upon arrival.

All expenses will be recouped due to the fact that all positions are paid well above minimum wage in US dollars. Housing, meals and uniforms are provided in most cases.

We have an excellent choice of warm-season and cool-season courses. University staff will give assistance with visas and health insurance. Opportunities to attend short courses/take classes at the university are

available to all who are qualified/interested during the internship.

Past students have gone on to gain excellent job opportunities both in Australia, Asia and Europe. Stop by and talk with Mike O'Keeffe and past student David Goldie at booth No.17.

## PATON FERTILISERS

### Booth No.18

In celebrating over 100 years of continuous business, Australian-owned Paton Fertilisers is proud to claim that it has the largest range of turf specific fertilisers in Australia, whether they be 'up front' or slow/controlled release.

Paton Fertilisers have a full range of solids, soluble and liquid products with varying analyses for all your needs. We are able to blend any ingredient to attain a specific analysis fertiliser to meet your exact requirements, rather than something supplied 'off the shelf'.

Being in business for a century, we realise that promoting any one type of technology is not the best way of getting the best results. Whether you require 'up front straights', slow release or controlled release nitrogen, phosphorus or potassium, or even combinations of these, we have the product to meet your requirements. This applies to liquids and solubles as well, thus offering even more flexibility.

Please feel free to come to the Paton stand at the trade exhibition and we will be only too happy to discuss the options available to you.

As a show promotion we are offering a 'buy one, get one free' tissue test service offering rapid turn around and low cost. See our stand for details.

## PGG SEEDS

### Booth No: 49 (with Oasis Turf)

PGG Seeds is the leading breeder and producer of cool-season turfgrasses in the Southern Hemisphere. On our stand will be turf breeders and agronomists who are able to answer any turf or seed related question.

We will be focusing on two new cultivars this year. The first is TransPro, a third generation hybrid transitional ryegrass suitable for overseeding warm-season species. The second is Colosseum which is the latest variety bred by own Ceres Research Centre.

## PRO FLOOR

### Booth No.4 and 45

#### Pro-Floor (Booth No.45)

Pro-Floor is a specifically designed grass protection cover system. It protects natural turfgrass in sensitive environments such as sport stadiums, golf courses, tennis courts and parklands. Pro-Floor works by allowing air, light and moisture to circulate freely but it still provides a cover preventing abrasion from traffic. Most major events in Australia are now covered by Pro-Floor.

#### Pro-Track (Booth No.4)

Pro-Track is a portable access road. Pro-Track is the quickest and easiest way to create a loading platform or road for construction vehicles and forklifts over your valuable turf. Forget the labour intensive plywood and timber sleeper systems of old. You can make a road 5m wide x 100m long in two hours with Pro-Track! When it is removed all you will have left is your pristine grass once again.



## RAIN BIRD

### Booth No.73A

Rain Bird has been designing and manufacturing a full line of irrigation equipment for over 65 years.

With a continuing commitment to product development for the golf course market, Rain Bird leads the way with EAGLE gear drive rotors including the Eagle 1100/1150 series, field controllers featuring an easy-to-use plastic pedestal, map-based central control irrigation systems with optional Smart Pump flow management software, decoders, pump stations, swing-joints, flow meters, valves and irrigation accessories.

Rain Bird central control components are also serviced and supported by a comprehensive Global Service Plan (GSP). These products are sold worldwide through an extensive network of distributors.

Visit the Rain Bird stand at the 20th Australian Turfgrass Conference to see the exciting release of Rain Bird pump stations. For further information regarding Rain Bird golf course irrigation systems expertise, contact Rain Bird Australia Pty Ltd on (03) 9338 1911 or visit at [www.rainbird.com](http://www.rainbird.com).

## REDEXIM CHARTERHOUSE

### Booth No.40 and 42

The name Redexim Charterhouse has become recognised worldwide as a leader in the design and manufacturing of turf renovation equipment, with ongoing research and development expanding the product range to meet turf management demands.

The VertiDrain range with two new models now offers 10 machines with width variations from .7 metres to 2.6m and penetration depths ranging to 400mm solid and 300mm hollow.

Redexim's range also includes the dedicated VertiCore machines with operating widths of 1.3m, 1.7m and 2.1m allowing coring of 19mm to a depth of 125mm, and productivity up to 6900m<sup>2</sup>/hr.

Gaining popularity are the Multi Spike/Level Spike systems designed for high speed slitting or spoon tining of sports fields and fairways with models of 1.2m, 1.7m and 2.2m working width.

The multi-functional Turf Tidy available in working widths of 1.3m and 1.7m can scarify, flail (two modes) and sweep and is complete with high lift dump facility to 1.68m.

Seeding machines include variations of VertiSeed, ProSeed and Charterhouse models to allow for overseeding on all surfaces, while Rink topdressers complete the range.

For your Redexim Charterhouse state distributor contact Peter Ellis on (03) 9435 0955 or 0419 310 546. Fax (03) 9435 0855 or email [lukrys@optusnet.com.au](mailto:lukrys@optusnet.com.au)

## SAFETY AND OCCUPATIONAL SERVICES

### Booth No.29

Safety and Occupational Services is a leading in helping organisations achieve compliance and due diligence for health, safety, environment and risk management. Safety and Occupational Services provide a full range of services in the areas of testing (air, soil, water, noise, electrical), management systems (WHS/OHS, environment, risk, integrated) and training programs.

At the conference we will have an integrated management system for WHS/OHS management, environmental management (EMS) and risk management designed specially for golf courses, bowling clubs, lawn tennis clubs and racecourses.

Safety and Occupational Services have developed a Compliance Assessment Checklist to start the process by showing clients where they currently are in regards to where they need to be. Our integrated management system based on the client assessment is then customised to the particular operation at the Safe Work Method Statement level to reflect the operation and equipment.

Safety and Occupational Services helps clients through the three phases of system development, implementation and maintenance. We also help with all the presentation and training programs to ensure the understanding and involvement of all employees and contractors. Call into Booth 29 and see the documented system on display and discuss any issues with our staff.

## JIMBOOMBA/SEALSLE AUSTRALIA

### Booth No.27 and 28

Sealsle 1 and Sealsle 2000 are the most environmentally friendly turfgrasses of the 21st Century. These seashore paspalum varieties can tolerate a wide range of water resources including potable water, variable recycled water (effluent, non-potable, waste and brackish) as well as seawater.

This turfgrass requires only minimal pesticides and judicious applications of fertilisers. It is very efficient in the uptake and use of critical fertiliser nutrients. Thus Sealsle can be easily managed to comply with local, state, federal and global regulations dealing with environmental stewardship.

Sealsle will have multiple uses in the turf industry. It has the fine leaf texture quality and traffic tolerance for use on golf course tees, fairways and roughs along with sportsfields, home lawns and landscape areas. It can also be used to clean up polluted or contaminated waters or soils (bioremediation).

Check out this fascinating turfgrass variety at this year's trade exhibition.

## SCOTTS AUSTRALIA

### Booth No.10 and 35

Scotts Australia, part of the global Scotts Company, has offices in Australia and New Zealand and a turnover exceeding US\$2 billion annually. Locally, Scotts Australia has been servicing the professional turf market for over a decade now and is a recognised leader in the industry, producing and supplying specialty fertilisers and pest control products.

The Scotts range of slow release and controlled release fertilisers, such as Sierrablen® and Sierraform® have become the benchmark for the industry. Recent releases in turf plant protection products include Maxguard 2G® and Maxguard 80 SC® insecticides, while in wetting agents, products such as Hydraflo G®, Hydraflo L® and Hydraflo NPK® service the market.

The latest introduction from Scotts is Sierraron®, a pre-emergent herbicide offering total, season-long weed control for up to six months. Sierraron is a non-selective granular herbicide, which is classified as non-hazardous.

Scotts will once again sponsor the 2004 AGCSA Distinguished Service Award. At Scotts we strive for excellence and quality from manufacture through to the end user. The Scotts range of turf products is results oriented so if it's a Scotts product, you know it will work. You can rely on the Scotts philosophy – A world of local knowledge™.

## SILVAN AUSTRALIA

### Booth No. 37

Silvan Australia is committed to providing the turf industry with spraying and chemical handling equipment to ensure safe and efficient operation and minimise operator exposure.

Equipment such as the Anabran Liquid Handling System, is a smarter, safer way of handling, measuring and dispensing liquid chemicals. Anabran works like a giant syringe. A manual hand pump creates a vacuum, which draws liquid from the chemical container through a unique coupling system into a calibrated, four-litre measuring chamber.

The amount of liquid in the measuring chamber can then be adjusted, leaving an accurately measured amount of liquid that is securely contained in a closed chamber and that can be safely and easily moved to the application point. The Anabran system has couplings and adaptors to fit virtually every type of container found in the industry.

Another specialist, high quality Silvan product well suited to spraying large turf areas is the Silvan Slimline Turf boom. The Slimline is a covered, trailed boom with bristle skirts that help to minimise spray drift. It is six metres wide, features electric fold, has outrigger wheels to maintain constant height and includes stainless steel spray lines with non-drip nozzle bodies and air induction spray tips.

## SIMPLOT PARTNERS

### Booth No.50

This year Simplot Partners will focus on Polyon technology. Polyon technology comes from the Pursell family, which is based in Alabama and is one of the world's premier developers and manufacturers of controlled release technology.

Simplot Partners will be showing a visual presentation on the PTI Tour at Pursell Farms, where golf course superintendents and nursery operators are invited to stay for education, recreation and relaxation, in the comfortable eight-suite Parker Lodge.

Pursell Farms is a 3000 acre world-class research and learning facility, which is home to Pursell Technologies' beautiful new corporate office building, environmental observation stations and testing sites. It is also the site of Farmlinks, their 18-hole research and demonstration golf course.

We will also be displaying the new Polygraph software from Pursell which will give you a guaranteed nitrogen release pattern for local Australian conditions.

Simplot Partners is also proud to display the latest in our Signature liquid fertiliser technology which incorporates a new injectable liquid range. In addition, we will have copies of our latest product catalogue on CD available at the show so hurry in and obtain a copy while stocks last.



## SPORTSTURF CONSULTANTS

### Booth No.8

SportsTurf Consultants is Australia's largest independent company specifically orientated towards the provision of technical advice related to construction, management and product development in both the recreational turf and horticultural industries.

Our consultants have over 100 years combined experience in the turf and horticulture industries. We are current with the latest technologies and research from around the world and incorporate this to ensure our advice is sound and up to date.

While we are Melbourne based, we service all of Australia and our skills cover all sporting codes. Our efficient consultancy services include;

- On-site inspections for problem solving;
- In-depth situation analysis;
- Construction planning, specification and supervision; and
- Laboratory facilities for diagnostic support and comprehensive soil testing of construction materials.

All consultancy and analytical work is followed by a written report with appropriate recommendations.

Come and have a chat to us and find out how we can help you. We look forward to meeting you at booth No.8.

## SUPATURF LINE MARKING SYSTEMS

### Booth No.26

Supaturf will launch the new Ride On Marker at the 20th Australian Turfgrass Conference. Saving you time and effort, the Ride On is simply driven off its own trailer ready for marking multiple fields in no time at all.

With storage for 6x30 litre drums of liquid and a wand attachment, any colour can be on board for any sort of marking. To change colour is as simple as washing the system through with the water container and then changing snap fittings to another container.

The 'Ride On' will be on display as will the professional electric, forward marking discs and a variety of our line marking liquids. Local Melbourne/Victoria rep Megan Corser will be on the stand along with Tracy Woodhouse from head office.

See you there.

## SYNGENTA

### Booth No.69

Syngenta, Nuturf and Hunter Irrigation are joining forces to create a stand that will be well worth a visit. Local and international Syngenta experts will be on hand to provide advice and recommendations on your turf issues and queries.

Check out Syngenta's new innovative online resource, Greencast, developed specifically to give turf managers the competitive edge in turf management. Try your skills out in the footy competition and strive to win for your code. There are prizes to be won, a wealth of information to be shared and giveaways galore.

Be a part of the action and join us at Booth No.69 for a cup of coffee and a chat about your turf.

## TELSTAT COMMUNICATIONS

### Booth No.13

During the 20th Australian Turfgrass Conference, Telstat Communications will display a brand new communications system developed for golf clubs called Safe Tee. With features not seen before, the system allows members to access management or other selected staff in case of an emergency.

At the conference trade exhibition, a full working unit will be demonstrated with base station and hand held units, plus our solar pole. This system is a must for all golf clubs.

## TGAA

### Booth No.20

The Turfgrass Association of Australia (TGAA) is a non profit industry body that represents turf practitioners, curators, ground managers, superintendents and groundsman. Our membership is also complemented by industry representatives from soil, seed, instant turf, industry consultancies and machinery supplies.

In addition, we have special working relationships with cricket associations, TAFE colleges and universities in each state.

The TGAA's main objective is to offer quality personal development and educational seminars that will assist our members to keep abreast of new developments, maintain awareness of industry standards and promote and deliver OH&S regulation and training.

We look forward to welcoming you at our stand. Committee members from all states will be around, so come and have a chat. Find out about research that we are helping fund and give us a few suggestions on what your TGAA can do for you.

## T2 GREEN SOLUTIONS

### Booth No.7

T2 Green Solutions is a wholly owned and operated Australian company specialising in finding solutions to the present and future challenges in the golf course industry, and is working with golf courses to help meet environmental responsibilities and achieve international best practice.

The T2 Green Solutions Remediation System is a bio-remediation and chemical treatment system for washdown wastewater. The system treats machinery washdown and chemical rinsate waters separately. Treated wastewater can be recycled and used to wash down equipment or discharged safely to an irrigation lake, wetland system or sewer.

We can also provide golf courses with our Blue Buggy Hire System - battery powered push buggies that have been developed as a means for clubs to obtain additional income from the expanding buggy hire market, with no capital outlay.

T2 Green will supply and maintain a fleet of Blue Buggies at an agreed rate per hire with clubs able to set their own hire fee. No bookkeeping is required as each hire is automatically recorded.

T2 Green can supply your club with all your spill kit needs. Chemical and fuel and oil spill kits in sizes to suit your requirements as well as drum bunds and dispensers.

## THE GROUNDSMAN

### Booth No.11

The Groundsman, Australia's only second-hand turf equipment magazine, is now well into its second year, and growing each issue.

The Groundsman has quickly become recognised as 'the green book' of the turf industry, by keeping people informed on prices and availability of second-hand machinery.

It has proven to be a great success, with many of the advertisers seeing better than average sales. Many of these sales have been interstate, and even overseas. They are sales that would have been less likely if it were not for The Groundsman.

We are proud to announce that not only are we distributing copies to relevant clubs, councils, schools and turf farms, but that The Groundsman is now available at newsagencies. We are at this stage distributing over 12,000 copies each issue.

You will notice that we have incorporated domestic ride-ons into The Groundsman. This is due to the fact that we have Gordon & Gotch distributing the magazine into newsagencies on a national basis, so we decided it was time to diversify and add more varied content into the magazine.

We welcome all who are attending the trade exhibition to come over and share with us your opinions and ideas about The Groundsman.

## TORO AUSTRALIA

### Booth No.71

Toro Australia Pty Ltd is the largest single supplier of irrigation products and commercial turf equipment to the golf, grounds and sports markets in Australia.

At the 20th Australian Turfgrass Conference trade exhibition, Toro will have a comprehensive range of products on display from the Commercial equipment, Toro Irrigation and Irritrol Systems ranges. A number of new turf care products will also be launched at the show. These include, from the Commercial division;

- The innovative Procore 648 Aerator;
- The electric e2050 Workman utility vehicle;
- The newly re-designed Heavy Duty Workman utility vehicle; and
- Protection Plus - Toro's new Extended Protection Plan for commercial equipment.

The irrigation division will be launching the following sprinklers;

- 835 S Part Circle Rotor;
- 855 S Part Circle Rotor; and
- 810 G Rotor

Toro is proud to be a major sponsor of the 20th Australian Turfgrass Conference and looks forward to seeing you at booth 71.

## TRIANGLE FILTRATION AND IRRIGATION

### Booth No.5

Triangle Filtration and Irrigation are the Australian distributors of Filomat, automatic filters, manually plastic and steel screen or disc filters, Comet<sup>®</sup>



hydraulic control valves, ITC fertigation equipment, water meters, plastic check, butterfly and air release valves.

Filtomat® filters are fully automatic, self-cleaning screen-type filters suitable for all types of irrigation systems including golf sprinkler systems drip, micro sprinkler, and are renowned for their reliability and performance. Cometal® hydraulic control valves are available up to 250mm in globe and angle pattern for pressure reducing, sustaining, relief, electric etc. configurations.

ITC manufactures a full range of hydraulic and electric fertiliser injection pumps in a wide range of sizes from 25-2000 litres per hour, and can be configured for proportional dosing to flow, and pH control. Water meters are available from 15-500 mm with pulse outputs.

Triangle Filtration and Irrigation is located at 17 Hinkler Rd, Mordialloc, Vic. 3195.

Phone (03) 9580 2122, fax (03) 9580 3131, or email triangle@filtomat.com.au. Branch offices are located in Brisbane, Sydney, Adelaide and Perth.

## TRU-TURF

### Booth No.41

Tru-Turf's history dates back to the early 1940s with the advent of turf rolling. We focus on manufacturing high quality golf and turf rolling equipment and export worldwide.

Since 2003, the US PGA Tour has been using our rollers for preparing the greens for their prestige tournament events. This year you can see the results of the Tru-Turf rollers in action at 40 US PGA Tour events.

Our product range consists of the benchmark greens roller model RS48-11 Roll 'n' Spike golf greens roller; GR7000 and GR11000 greens rollers; Triplex rolling heads to suit ride-on mowers; SR72 Sports and Golf Field roller and the MT2000 trailer for walk-behind mowers trailer.

What is unique about the Tru-Turf roller range is that it achieves smooth and true results through our patented designs and engineering expertise and not through the weight of the rollers.

Tru-Turf also has the distribution rights in Australasia for the Buffalo Turbine Debris Blower range - versatile, quiet, powerful and the best selling blower in the USA.

Why not check out [www.truturf.com](http://www.truturf.com) for dealers, testimonials and university rolling study findings.

Or phone (07) 5594 7199 and ask for our free 'Why Roll' booklet. See you in Melbourne.

## TURFCRAFT INTERNATIONAL

### Booth No.6

TurfCraft International is Australia's longest running information source for turf managers from all sectors of the industry. Every issue of the magazine contains timely, relevant and accurate information on pests, weeds and diseases, irrigation and water management, nutrition and soils, turfgrasses and weed protection.

The magazine caters for all sectors including golf, bowls, sportsfields, turf production and racecourses. TurfCraft has a stable of writers including Peter McMaugh, David Nickson, Jon Scott and Rod Riley.

We also have respected writers in each state who attend industry events and report back to the industry through the pages of TurfCraft.

We have been a sponsor of the Australian turfgrass conferences since their inception and will continue to support the industry through sponsorship and reporting on events.

TurfCraft sponsorships and industry alliances include with racecourse managers (including the TurfCraft Racecourse Manager of the Year Award) the TGAA in Victoria, SA, ACT and NSW, the Gold Coast Ground Staff Association and Turf Producers Australia.

Call in at booth six and talk to TurfCraft staff Alastair Dowie and Ed Kryskow about the issues you want addressed in the magazine.

## TURF AND IRRIGATION

### Booth No.76

Turf and Irrigation will display a full range of fertilisers (slow release and conventional), fungicides, herbicides and insecticides. Also on display will be top quality soil conditioners and a large range of latest released seed variety ranging from couch seed to rye and fescues. As Turf and Irrigation is a large supplier of irrigation there will be a major display of well known irrigation product brands along with advice.

## TURF LINK AUSTRALIA

### Booth No.72

Turf Link Australia is the Australian distributor for Ty-Crop topdressers and Lastec Articulator finishing mowers.

Ty-Crop was introduced into the Australian turf industry seven years ago and today is Australia's No.1 topdresser. Ty-Crop is an industry innovator when it comes to topdressers, actively involved in the fine turf industry producing the right products. All Ty-Crop machines utilise four wheel walking beam axle producing the lowest foot print in the industry, unsurpassed performance, and being multi-functional can be fitted with a drop brush or precise twin spinner.

Lastec was introduced into the Australian market seven years ago with its line of anti-scalping finishing mowers. Popular model 721XR, a 320cm wide cut mower can produce nine acres an hour, consistently. Model 325EF outfront deck is found on many outfront mowers on Australian golf courses.

The recently introduced model 3682 zero turn 38hp diesel 208cm cut Articulator rotary finishing mower produces 5.8 acres an hour.

This year Lastec released models 2872 and 3386 zero turn diesel mowers, which will be on exhibit at the tradeshow.

You are invited to visit Turf Link Australia and discuss how our products will benefit your turf areas.

## WIEDENMANN GMBH

### Booth No.33

#### Terra Spike XP

A heavy-duty deep aerator for golf greens, fairways, sports grounds and other turfs. Unique and easy set-up for working depth and heaving angle. Excellent shock absorption through VibraStop. Patented, integrated tine fixation and extraction system. Available in 1.60m, 2.10m and 2.60m working widths.

## Greens Terra Spike

Deep aerator dedicated to golf greens and other fine turfs. High performance and excellent working quality especially on very fine turfs. Set-up, shock absorption and tine fixation system as easy and unique as on Terra Spike XP. Available in 1.35m and 1.60m working widths.

## Terra Combi

A full turf maintenance system in one machine. One single base frame equipped with spike rollers, cast iron disks or a heaving rotor can be combined with different rear attachments from rear roller to sand brush up to an overseeder. Suitable for almost any kind of turf maintenance. All tools are ground driven - no pto needed. Optional bogey wheels to suit to small tractors or utility vehicles. Available in 1.35m, 1.60m and 2.10m working widths.

## VICTORIAN GREENKEEPERS ASSOCIATION

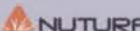
### Booth No.21

The Victorian Greenkeepers Association aims to harbour an environment in which turf managers (mainly bowling club turf managers and greenkeepers) can network on the wide stream of turf management practices and issues. Visit us at Booth No.21 to find out more about the association and how to join.

The association, in conjunction with Sport and Recreation Victoria, recently released its major survey on lawn bowls surfaces in Victoria. This wide ranging study has created a lot of industry interest and we will be more than happy to discuss the issues raised as a result. See you at the conference.

*All information presented was accurate at time of going to print.*

## Major Conference Sponsors





# Turf vehicles are a **critical** part of golf course operations



**S**pecialised turf utility vehicles are a critical part of the operation of golf courses across Australia and the launch of a new four-wheel-drive version will add to the diverse range of vehicles already available.

These turf vehicles are available from Club Car Australia and will be on display at the Australian Turfgrass and Conference Trade Exhibition which takes place on 23 and 24 June at the Melbourne Exhibition Centre in Victoria.

The vehicles are designed to provide safe, reliable and cost effective solutions to the challenging task of maintaining and developing golf courses, with each turf vehicle meeting the special needs of golf clubs. Importantly, the turf vehicles are designed to exert minimal impact on the turf surface of the golf course.

Bill Murphy works with the maintenance team at Sanctuary Cove in Queensland, which has twelve Turf 2 Club Car vehicles which have been purpose built for golf course superintendents.

"Our gardeners use the vehicles to carry a whole range of gardening and maintenance equipment and we also use the turf vehicles to transport sand around the course to re-sand tees and fill divots.

"They are also useful as a means of general transportation and during our general reconstruction of the course we used them to transport irrigation gear, such as hoses and pipes.

"We have found Club Car's turf vehicles to be very safe – we have never had a roll-over – and reasonably maintenance free. All we do is change the engine oil every 50 hours and engine filter every 100 hours," said Murphy.

Darren Turner, Manager of Turf Equipment for Club Car Australia, says the safety and protective features of the turf vehicles, which come in electric and petrol versions, are a big plus.

"Our entire turf range has been designed with a low centre of gravity with no 'top end' weight, which helps prevent the vehicle from rolling over. An optional rollover protection system – a specialised frame encasing the driver area – provides additional protection. This is a great OH & S advantage.

"A differential guard protecting the transmission casing is also standard on all our turf vehicles. It protects the transmission casing from becoming damaged when the utility car is manoeuvring around rocky or undulating areas on the golf course.

"It is also important that the vehicles don't damage the turf surface on golf courses, which is one of the reasons why we have an aluminium chassis to keep the vehicle light, and design the front and rear wheels so that they are not 'in line' with one another. The weight of the vehicle is spread across a larger area and the result is a greatly reduced impact on the turf," said Darren.

The Pacific Dunes at Port Stephens in NSW is currently under construction, and Andrew Ford, part of the construction management team at The Dunes, says the turf vehicles have played a vital role.

"We have found them to be very robust – we have put them through the hard yards day-in and day-out, traversing very rugged terrain without a moments rest, and they have coped very well.

"We have used them for transporting sand and soil for top dressing throughout construction and for general transport of personnel," said Ford.

A range of turf vehicles are available with different payload capacities – the Turf 2, has a payload of 540 kilograms, whilst the Turf 6 offers a greater payload of 680 kilograms with more storage space for larger maintenance operations.





**Left:** The Turf 2 Club Car utility vehicle, which is popular with many golf course superintendents and the Turf 2 tilting tray in action.

**Top right:** The '272' is excellent for more rugged terrain

**Middle:** The industries first four-wheel-drive utility vehicle, being launched this year.

**Bottom:** The Turf 6 will take on a big payload capacity of 680 kg.

The '472' is Club Car's first four-seat turf vehicle with a bigger payload capacity, a powerful 400 cc engine for more hauling and climbing power, hydraulic brakes and shift-on-the-fly rear differential lock, to assist with traction control in loose sand, mud and hilly conditions. The two-seat version or '272' has similar features.

All vehicles come with headlights, two-way radio holders and manual tilting trays with the option of upgrading the trays to electric or hydraulic versions.

A large range of additional options are available to tailor vehicles to the specific needs of the golf course.

In an exciting development, a new dimension is being added to the range of turf vehicles in Australia, with the revolutionary '294' four-wheel-drive utility being introduced to the market this year.

Darren Turner of Club Car says the 294, which will be available in 20 horse-power diesel and petrol engine versions, is the industries first fully automatic four wheel drive utility vehicle and it will be very useful for golf courses.

"This vehicle will be especially useful for golf courses undergoing development or re-development, as it is able to safely and comfortably deal with very rugged terrain whilst exerting minimal impact on sensitive turf.

## Win a trip for two to the Ryder Cup in the U.S.!

Anyone who purchases a new Club Car vehicle, including the vehicles which are part of the turf range on display at The Australian Turfgrass and Conference Trade Exhibition, will be automatically entered into the Ryder Cup Competition.

Compliments of Club Car, the lucky winner will receive a trip for two to the 55th Ryder Cup - one of the world's greatest Pro team events - at the exclusive Oakland Hills Country Club at Bloomfield Hills in the U.S.

The prize includes return airfares for two people, five nights twin share accommodation, 2 x three day Gold Passes, which will admit you to the Corporate Hospitality Suite with fine dining on offer every day.

The promotion running across Australia and the winner will be drawn at the Club Car stand at 4.30pm on 25 July 2004 at the conclusion of the PGA Golf Show in Melbourne. Terms and conditions apply!

"It is designed to automatically engage four-wheel-drive by transferring power to the wheels where it is most needed as driving conditions demand. Like the standard turf vehicles it has a low centre of gravity to prevent it from rolling over as well as rollover protection frames, which we believe makes it a much safer alternative compared to the standard quad-bike.

"A rental program for all Carryall Turf vehicles is available from just \$55 per week," said Turner.

Club Car Australia has also recently announced a major prize draw which means that anyone who purchases or rents a new Club Car utility vehicle will receive tickets in a draw to win a trip for two to the 55th Ryder Cup - one of the world's greatest Pro team events - at the exclusive Oakland Hills Country Club at Bloomfield Hills in the U.S.

*Club Car Australia has a dedicated division devoted to the supply of utility vehicles for the turf industry. Club Car can be contacted at its head office on 1800 680 008.*







Natural sites such as St. Andrews Beach require very little moulding...

In this AGCSATech Update, John Neylan reports on the establishment of new trial work and reviews the recent Turf Producers Australia Conference in Queensland.

#### New Golf Courses

Over the past few weeks I have inspected the sites of several new golf courses in Queensland, NSW and Victoria.

It indicates the healthy state of the golf course construction and maintenance industry and also continues to provide new opportunities and challenges for golf course superintendents and qualified greenkeepers looking for new employment opportunities.

Each site provides different challenges including;

- Design;
- Environmental restrictions;
- Soils;
- Climate.

Some sites such as St. Andrews Beach (Mornington Peninsula, Victoria) are natural sites that require very little moulding, whereas Kooindah Golf Course (near Wyong in NSW) is a flat and degraded site that presents architectural, construction and environmental challenges.

Many of these new sites are either using or plan to use reclaimed effluent water. Water quality and availability is one of the key factors in the successful establishment of these new developments and effluent water presents the ideal if not the only option.

The trend with most of these new golf courses is that they are part of a housing subdivision and this increases the restrictions on the use of the effluent, particularly if it is less than Class A.

With the increasing use of effluent in these situations there is a greater emphasis on the human health aspect. While human health is extremely important, the quality of the water must still be such that the site will not be degraded as a result of irrigating with the effluent. In all situations a detailed site assessment and an effluent management plan is essential.

In my recent experiences, the most misunderstood aspect of these new developments by engineers and developers is the importance of a good quality and constant water supply. In particular, having the water available before the first sod is turned. In respect to the water management plan, it is very important to involve people that understand turf management and golf course irrigation systems, not just the engineering of the site.

#### Visiting Scientist

In March, the University of Melbourne (Burnley Campus), through Dr David Aldous, sponsored





...whereas Koolindah Golf Course is a flat and degraded site that presents architectural, construction and environmental challenges

the visit of Dr Shoumo Mitra from the California State Polytechnic University. Dr Mitra has expertise in water management and wetting agents and while in Australia for his month long visit assisted in the establishment of two trials;

- Evaluation of new wetting agents; and
- Studying the effects of various herbicides on different forms of *Poa annua*.

The wetting agent trial is studying new formulations as well as industry standards and is a contract research trial. The *Poa annua* trial is an extension of some work started when Dr David Huff was in Australia.

During Dr Huff's visit in 2002, *Poa annua* strains were collected from many golf greens. This collection represented a range of types varying from the 'wild and weedy' true annual types to the high density perennial types.

The study that is currently being undertaken is examining the reaction of these types to the following herbicides - endothal, propizamide

and paclobutrazol. Each herbicide has been applied at label rates, however, in a separate trial endothal has been applied at label, 2xlabel and 3xlabel rates.

The results to date demonstrate a response that we often observe in the field in that different *Poa annua* types react differently to herbicides with the annual types being the most sensitive and the perennial types being the most resistant. These trials will be repeated and the different *Poa annua* types classified in terms of; density, seedheads, presence/absence of stolons and mature plant height.



Professor Peter Martin, Dr Louise Barton, Professor Peter Newman, Eddie Seaward and Peter McMaugh at the TPA Conference

#### Turf Producers Australia Conference

In April AGCSATech technical officer Andrew Peart attended the 2nd annual Turf Producers Australia Limited (TPA) conference in Queensland.

Theme for the conference was sustainability with Professor Peter Newman from Murdoch University, Western Australia presenting the keynote address about sustainability as it related to society. Sustainability, he commented, was a combination of economical, environmental and social factors. In general, economical and environmental factors are the two quantitative indices of sustainability but the social implication is often difficult to value. It refers to terms such as networking and trust, which are two vital components to the success of any business.

On matters directly related to the turf industry, Professor Newman indicated that broad acre areas of irrigated turf were no longer sustainable given the present climatic conditions. However, areas of managed recreational turf would become more important, not only for active recreation but also passive as inner city living



would become more prevalent and the need for community gardens increased.

The catalyst for more intensive urban growth could be due to the world's oil supply. Professor Newman claimed that world oil supply is expected to peak between 2003 and 2020 after which demand would exceed supply. Future oil prices are then expected to rise dramatically changing not only our lifestyles but maybe our work practices.

In relation to work practices, Peter McMaugh raised the question of utilising cooking oil to fuel diesel tractors in the future. Ironically the first diesel engine invented by Dr Rudolf Diesel in 1895 used peanut oil as fuel. In fact, the first diesel engines were designed to be powered by vegetable based fuels.

McMaugh also highlighted issues to do with irrigation efficiency, or lack of it, with the use of 'big gun' travelling irrigators, the use of netting in sod rolls and the effect maxi rolls were having on the soil being removed from sod farms.

Professor Peter Martin from University of Sydney talked primarily on the regulations set down in New South Wales for establishing a turf farm, indicating that by following legislative requirements to the letter was now the only way to have applications granted. To meet legislative requirements for the life of the operation required accurate record keeping as it related to fertiliser, pesticide and water use.

Dr Louise Barton from the University of Western Australia presented a research paper that highlighted differences between types of nitrogenous fertiliser and their relative leaching capabilities under two different irrigation regimes. This paper was presented in light of the occurrence of algal blooms and the perception that the cause is due to nitrogen leaching into waterways.

Dr Tim Murphy from the University of Georgia presented a paper on herbicide usage and the interaction of microbial degradation and soil pesticide mobility in relation to risk management.

David Nickson also presented a paper highlighting the importance of the use of warm-season grasses in Victoria given the current climatic conditions. He illustrated a saving of \$5000 per year per oval in watering costs by utilising warm-season turf. However, he highlighted some deficiencies in terms of variable winter colour, relative poor

performance in shade, the possibility of severe fungal infection and the limited window of opportunity for establishment.

Dr Don Loch hosted a visit to the Redlands Research Station for delegates to inspect the many different warm-season species and cultivars as well as other research projects the facility is undertaking, such as shade tolerance and salt tolerance of some warm-season species.

The highlight of the conference was a presentation by Eddie Seaward, head groundsman at the All England Lawn Tennis Club, Wimbledon. Seaward has been at the club since 1990 and has been involved in the turf industry for some 45 years.

In 1994, the Court One redevelopment commenced and of particular interest was that the court was constructed before the grandstands. This then gave the court sufficient time to consolidate before the first game was scheduled.



Don Loch at the Redlands Research Station

During the construction of the stands there was no access to the court so the ability to carry out maintenance work on the surface became somewhat complex. All personnel and equipment had to be craned over the top of the stand and then craned out afterwards.

The design of the grandstand and overhang is circular. This creates far less shade on the playing surface compared with the roof shape of Centre Court. There are also large industrial fans installed at the rear of Court One to promote air movement to compensate for the reduced amount of air flow within the enclosure.

The grass composition at Wimbledon has changed over recent years which has been done through research in conjunction with the Sports Turf Research Institute in Bingley.

The playing surface was initially composed of perennial ryegrass, fine fescue and brown top bentgrass. However, through the use of a point quadrant to measure the percentage of each species, the present day playing surface is composed of one single perennial ryegrass cultivar.

Seaward claims that the resultant, more slightly open sward of the perennial ryegrass has resulted in less fungal disease due to improved air movement through the sward.

The soil type for all courts at Wimbledon is consistent and importantly contains 21 per cent clay to create the hard surface required for acceptable ball bounce.

Seaward claims that the main objective at Wimbledon is not to grow grass but to produce a surface. This should be viewed as the objective for all turf managers.

The other important aspect of the courts at Wimbledon is uniformity. Two tests are conducted daily during The Championships to monitor uniformity. They are hardness, measured with a Clegg Impact Hammer, and ball bounce.

Hardness and ball bounce measurements not only compare one court to another but also can compare year to year, giving an accurate recording of the result of previous renovation work and practices on the eventual court performance. The regulation for acceptable ball bounce is that a tennis ball dropped from a height of 254cm (100 inches) must rebound to a height of 70-80 per cent as it would on concrete.

The success of the performance of the courts during The Championships has a lot to do with wear rotation during the lead-up practice week. Practice courts are assigned to each player based on sex and playing characteristics. For example, women tend to cause less wear on the court surface because they are generally lighter than the men.

Some players drag their toe when serving or slide when playing groundstrokes or tend to chip and charge which all cause differing wear patterns on the court. Therefore a major job that Seaward must undertake during practice week is to allocate courts to players so they will wear uniformly. 🌱



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# Under the Hammer

## The Clegg Impact Soil Tester

## TECH TALK



Developed by Dr Baden Clegg, the Clegg impact soil tester measures the 'stiffness' of natural or constructed soils

In this instalment of Tech Talk, AGCSATech technical officer Andrew Peart looks at the tried and trusted Clegg Impact Soil Tester and its many uses within the turf industry.

The Clegg Impact Soil Tester (Clegg impact hammer) is a portable piece of apparatus used to measure surface hardness. It was developed by Dr Baden Clegg from the Department of Civil Engineering at the University of Western Australia in the 1970s. It has applications for both civil constructions such as roads and pavements as well as sporting surfaces.

As the name suggests, the Clegg is an impact testing device used to measure the 'stiffness' of natural or constructed soils. A known mass, referred to as the Clegg hammer, is dropped from a set height and the peak deceleration of the hammer's impact with the surface is measured. The rate of deceleration is measured in gravities, and the digital readout is expressed in tens of gravities. The harder the surface the more rapidly the weight is brought to a halt and the higher the impact value.

There are four basic hammer masses available - 0.5kg, 2.25kg, 4.5kg and 20kg. The latter two are used primarily for construction of roads and earthworks, whereas the 0.5kg and 2.25kg hammers are used for sportsfield assessments. The set height of drop for the 0.5kg hammer is 30cm, whereas the 2.25kg hammer is 45cm.

Applications for using the Clegg on sporting surfaces are wherever soil hardness needs to be

monitored to evaluate either playability or safety. The evaluation of sporting surfaces has been inherently difficult due to the lack of techniques to objectively assess the surface.

- The Clegg impact hammer has three main uses;
- To objectively characterise players' subjective assessments of surface hardness;
  - To provide similar information gained from more laborious pieces of apparatus; and
  - To accurately record surface hardness to compare consistency between surfaces or of the same surface.

There have been many scientific papers produced that have used the Clegg to evaluate surface hardness. Below are some examples of its use in the past and present day applications.

### Cricket Pitches

Vertical ball rebound height has historically been the best way of evaluating pitch hardness. However, Lush (1985) demonstrated that the deceleration of a 0.5kg Clegg hammer could be correlated with vertical rebound height and that it was a quick alternative to the tedious vertical ball rebound test (Gibbs and Walmsley, 2002). Lush (1985) found a correlation of  $r=0.725$  for a new ball and  $r=0.846$  for the very old ball.

However, McAuliffe and Hannan (2001), found the heavier 2.25kg hammer had a better correlation than the lighter 0.5kg hammer and suggest that the poorer correlation found between the 0.5kg Clegg hammer readings and rebound height suggest this weight of hammer is of limited value as a tool for pitch evaluation.

In New Zealand, the routine assessment of cricket wickets has changed to the slightly heavier 2.25kg hammer. This is due to a far better correlation between the 2.25kg hammer and the vertical rebound height (Gibbs et al., 2002). McAuliffe and Hannan (2001), reported that there was a strong correlation ( $r=0.87$ ) between the 2.25kg Clegg hammer and ball rebound height.

This contrasts with a correlation coefficient of  $r=0.47$  for the 0.5kg Clegg hammer and rebound height results.

These differences, however, could be due to a difference in drop height and soil type of the pitches assessed.

Lush (1985) used a cricket ball drop height of 4.6m whereas McAuliffe and Hannan (2001) had a drop height of 3m. Also, Lush (1985) was testing Merri Creek soil used at the Melbourne Cricket Ground whereas McAuliffe and Hannan (2001) were assessing cricket wicket soils used in New Zealand.

### Tennis Courts

Eddie Seaward, head groundsman at the All England Lawn Tennis and Croquet Club, Wimbledon, uses the Clegg impact hammer extensively to evaluate the performance of the playing surface from one court to another to ensure consistency has been achieved for players during The Championships.

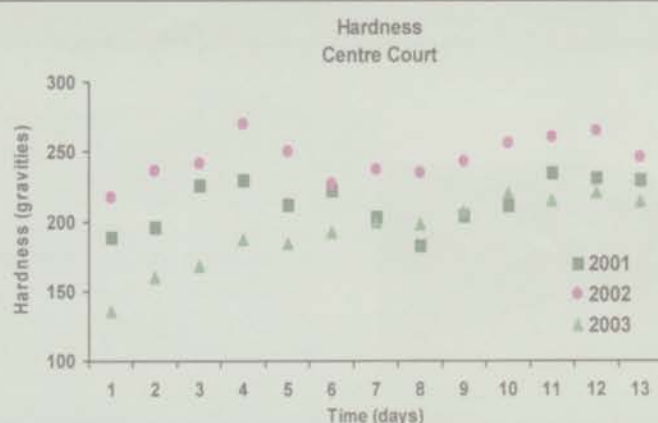
The most important aspect when preparing a large number of surfaces for the same event is consistency. He uses the Clegg to record the hardness for each court's surface.

The Clegg impact hammer can also be used to monitor the performance of a court from year to year, recording outcomes of changes in maintenance practices or the effect weather has had in influencing surface hardness. The results of three years of data from Centre Court can be seen in Figure 1.

Contradictory to other sports, Seaward claimed that the surface could not become too hard from an injury point of view and in fact a firmer surface meant the ball was rebounding more from the surface and as a result more of the wear to the playing surface was occurring outside the court itself.

He intimated that footwear had a large part to play in the absence of soft tissue injuries from the hard surface.





Hardness readings for three years on Centre Court measured throughout The Championships

### Football Grounds

The Clegg impact hammer is commonly used for ground assessments to evaluate their hardness. However, what is likely to be of more concern is the variation obtained across the playing surface. While it is obviously important to obtain the maximum hardness reading of the field, what could be more damaging to players is the variability in surface hardness.

Maximum hardness will no doubt have the major impact on the severity of an injury during a fall, (i.e. concussion), but more soft tissue injuries may well be sustained if running across a surface that is greatly variable in surface hardness. Therefore, when assessing surface hardness in relation to player safety, not only should the maximum hardness be recorded but also the standard variation between them.

Research work is currently being undertaken in Queensland with the Department of Primary Industries and Fisheries, collaborating with Horticulture Australia, AFL Queensland and the Brisbane Lions plus others to investigate best management practices for sustainable and safe playing surfaces of Queensland AFL sports fields.

The Clegg impact hammer is one of the objective pieces of apparatus to assess fields. It is hoped that a range of Clegg impact values can be substantiated to objectively say if a ground is unsatisfactorily hard or variable to provide players with a safe playing surface.

Their preliminary results have identified soft grounds as having a Gmax reading of <100 gravities whereas high hardness is identified as >150 gravities. These readings are recorded using a 2.25kg weight from the fourth drop. Once benchmark values have been established it is hoped that turf managers can then maintain surfaces within the range of acceptable hardness values.

Other research work is also being conducted on AFL grounds by Ian Chivers and Dr David Aldous to develop some understanding of what

are normal and abnormal readings on AFL grounds for factors such as surface hardness. This is being carried out in conjunction with a major player survey on preferred ground conditions as well as any correlation with major knee injuries.

### AGCSATech Bentgrass Trials

The Clegg impact hammer has been used to measure surface hardness of different types of bentgrass cultivars grown at Kingston Heath Golf Club. The hardness measurements were recorded with the 0.5kg weight dropped from 0.3 metres on the first drop. It has been used to observe if there is any correlation between surface hardness, ball roll or thatch depth. It would be envisaged that the firmer the surface the less thatch accumulation and greater the ball roll.

While there has been a significant difference observed in the hardness of the surface obtained under different bentgrass cultivars, there has been only limited correlation observed with any other test parameter.

The bentgrass cultivar Penncross produced a surface that was significantly firmer than the bentgrass cultivars of Penn A1, Penn G2 and SR7200 for the May 2002 assessment but for the corresponding assessment had significantly less thatch accumulation than all other bentgrass cultivars.

In January 2004, there was no significant difference in surface hardness recorded between any of the varieties although Penncross had significantly less thatch accumulation than all other cultivars for the corresponding period. These results can be seen in Tables 1 and 2.

While the entire site was constructed from the same soil it is likely that the moisture content retained in the thatch layer in the winter months played a pivotal role in the overall hardness of the surface. During summer it is likely that irrespective of thatch depth the moisture content would be similar. However, in

the winter, the varieties with the more thatch would hold significantly more moisture than those with a smaller amount and therefore provide a softer surface.

At no time during ball roll assessment was there a significant difference recorded between varieties. It is apparent that the plant itself plays an integral part to ball roll than simply the hardness and thatch accumulation of the surface. See Table 3.

It has been demonstrated that the Clegg impact hammer is a useful tool for assessing surface hardness. However, when comparing Clegg impact values it must be confirmed that the test method was the same. This refers to the hammer weight used and the drop number that the hardness measurement was recorded. The greater the number of times the hammer is dropped prior to the taking of the reading the less effect the turf will have on the impact of surface cushioning. ▀

Table 1: Surface Hardness (gravities)

VARIETY	8/5/02	27/2/03	21/1/04
Penncross	157	93	97
Egmont	160	100	102
PENN A1	117	78	75
PENN A4	135	85	88
PENN G2	128	83	82
PENN G6	147	98	87
Cato	147	98	88
Pennlinks	132	105	97
L93	143	88	88
Dominant	143	90	85
SR7200	120	85	85
LSD (P<0.05)	26	15	ns

Table 2: Thatch (mm)

VARIETY	8/5/02	27/2/03	21/1/04
Penncross	7.3	12.7	12.7
Egmont	9.0	11.0	17.3
PENN A1	12.3	18.0	18.7
PENN A4	10.0	16.0	18.7
PENN G2	10.3	16.7	18.0
PENN G6	9.0	17.3	17.0
Cato	10.3	17.3	19.3
Pennlinks	8.7	11.7	19.0
L93	8.7	15.3	17.7
Dominant	9.0	16.3	17.0
SR7200	8.7	18.7	18.0
LSD (P<0.05)	2.5	ns	3.4

Table 3: Green Speed (m)

VARIETY	8/5/02	27/2/03	21/01/04
Penncross	2.37	1.93	2.16
Egmont	2.07	1.74	2.09
PENN A1	2.28	2.05	2.06
PENN A4	2.17	1.95	2.09
PENN G2	2.20	1.92	2.06
PENN G6	2.24	1.96	2.1
Cato	2.14	1.86	2.04
Pennlinks	2.35	1.99	2.15
L93	2.29	1.96	2.03
Dominant	2.16	1.97	2.02
SR7200	2.20	1.97	2.11
LSD (P<0.05)	ns	ns	ns



# Recycled Wastewater Reuse Project

## Barwon Heads Golf Club



Horticulture Australia



For the past three years the Barwon Heads Golf Club has been the setting for the AGCSA's recycled wastewater trial.

**With the second irrigation season now complete, AGCSATech manager John Neylan provides an update of the ongoing Horticulture Australia-funded treated effluent trials at Barwon Heads Golf Club.**

### INTRODUCTION

The Australian Golf Course Superintendents Association (AGCSA), with funding from the Barwon Heads Golf Club and Horticulture Australia, has established a trial at the Barwon Heads Golf Club to monitor the effects of irrigating with recycled wastewater. In April this year, the second irrigation season and associated monitoring program was completed.

The supply source of the Class C treated wastewater is from the local water authority plant approximately 8km to the west which also services 13th Beach and The Sands, Torquay. The Barwon Heads Golf Club elected to irrigate greens, tennis courts and sensitive areas with a new potable water supply with reclaimed wastewater used on all other areas.

The project involves monitoring soil and water on the golf course as well as on a purpose built nursery green. The nursery green

has half the area irrigated with potable water and the other half with recycled wastewater and has been established with three bentgrass varieties and two *Poa annua* cultivars.

This project has provided a unique opportunity to monitor the effects of salts, sodium and nutrients on soils and turf quality and provides an excellent opportunity to monitor a site that has not previously used recycled wastewater.

The monitoring program that has been implemented includes weekly sampling of the effluent supply, sampling of the soils at 0-100mm, 100-200mm and 200-300mm depths and sampling watertable monitoring wells and ponds on the golf course.

### SOIL AND WATER ANALYSIS

#### Water analysis

In the irrigation season of 2003/2004, water samples were collected weekly for a range of

tests and the typical water quality (Table 1) can be described as follows;

- Salinity varied from 960-1600 mg/L with several readings at 1500mg/L and over the monitoring period averaged 1324mg/L (See Figure 1). The salinity is considered to be high and is higher than the 2002/2003 sampling period;
- Average pH is 7.5 with a range of 7.1-8.5;
- Sodium and chloride are high and relate to the high salinity. Both elements have increased since the 2002/2003 sampling period;
- Sodium Adsorption Ratio is marginal due to the high sodium;
- Total nitrogen is moderate;
- Total phosphorus is high;
- Potassium is very high;
- All other elements are low to very low.

The main concerns with the effluent continue to be the high salinity, high sodium and high chloride.

### Soil analysis

A large number of soil samples have been collected over the past three years and some of the representative results are detailed in Tables 2 and 3. As a control area, we have established a sampling point on a fairway that is irrigated with potable water and in the native soils where there is no irrigation or turf maintained.

The soils on the fairways are naturally alkaline with occasional outcrops of limestone. They are high in calcium, low in sodium and have moderate phosphorus levels. After the first season of irrigation there had been an increase in total salts and sodium and a slight decrease in calcium. At the August 2003 sampling, there was a reduction in soil salts and sodium due to the leaching of winter rains. Following the 2003/2004 irrigation period there was a moderate increase in soil salinity and a slight increase in sodicity.

There has also been an increase in total phosphorus with little change in plant available phosphorus. This same trend has also been observed on the fairway that is irrigated with potable water and not effluent. The soil results do not indicate any movement down the profile.

The unirrigated site provides a good indication of the effects of the natural conditions on the golf course where there continues to be considerable variation between sampling periods.

The turf quality on the fairways has been monitored and it consists of an excellent sward of couchgrass with no signs of the effluent affecting the turf.



Table 1: Effluent water analysis  
Barwon Heads Golf Club

CHEMICAL ANALYSIS WATER CHARACTERISTICS	IDEAL RANGE	2003/2004	2002/2003
pH, units	5 - 8	7.3	8.0
Electrical conductivity (microS/cm @25C)	<750	2500	1800
Salinity by calculation (mg/L)	<450	1500	1100
Total alkalinity, as CaCO <sub>3</sub> (calc.)	<150	170	170
Bicarbonate, as HCO <sub>3</sub> (mg/L)	-	210	210
Carbonate, as CO <sub>3</sub> (mg/L)	-	<1	<1
Chloride, as Cl (mg/L)	<100	480	370
Sulphur, as SO <sub>4</sub> (mg/L)	<100	120	90
Calcium, as Ca (mg/L)	<100	37	30
Magnesium, as Mg (mg/L)	<100	33	25
Hardness, calculated as CaCO <sub>3</sub>	<150	230	180
Sodium, as Na (mg/L)	<70	330	260
Residual Sodium Carbonate (calc.)	<1.25	-1.16	-0.14
Sodium Adsorption Ratio - SAR (calc.)	<10	9.5	8.5
<b>Nutrients</b>			
Nitrate + Nitrite, as N (mg/L)	*	4.3	2.3
Total Kjeldahl Nitrogen, as N (mg/L)	*	2.8	3.1
Total Nitrogen, as N (mg/L)	*	7.1	5.4
Phosphorus, total as P (mg/L)	*	7.3	8.8
Potassium, as K (mg/L)	*	57	>50
<b>Other</b>			
Iron, as Fe (mg/L)	<1	<0.05	0.09
Cadmium as Cd (mg/L)	0.01	<0.0002	<0.0002
Chromium as Cr (mg/L)	0.1	0.013	0.01
Copper, as Cu (mg/L)	<0.2	0.004	0.009
Nickel Ni (mg/L)	0.2	0.006	0.004
Lead Pb(mg/L)	0.2	<0.001	0.001
Zinc, as Zn (mg/L)	<2.0	0.14	0.078
Mercury as Hg (mg/L)	NG	<0.0001	<0.0001
Arsenic as As (mg/L)	0.1	0.002	0.002
Manganese, as Mn (mg/L)	<0.2	0.02	
Boron, as B (mg/L)	<2.0	0.25	

Table 2: Soil analysis  
Irrigated 9th fairway (0-100mm)

Element	Apr-02	Nov-02	Apr-03	Aug-03	Apr-04
pH	8.0	7.6	8.1	7.6	8.3
Total Salts (mg/kg)	446	891	1247	683	983
P (Olsen) (mg/kg)	14	16	8	15	7
Total P (mg/kg)	740	720	470	500	700
%Na	2	2	7	4	6
% Ca	90	88	83	83	80

Table 3: Soil analysis  
Unirrigated 2nd fairway (0-100mm)

Element	Apr-02	Nov-02	Apr-03	Apr-04
pH	7.5	6.1	5.9	5.7
Total Salts (mg/kg)	267	178	475	89
P (Olsen) (mg/kg)	3	1	<1	<1
Total P (mg/kg)	ND	55	35	ND
%Na	2	7	19	4
% Ca	82	69	52	72

Results at the end of the 1st irrigation season  
Results at the end of the 2nd irrigation season

Table 4: Soil analysis  
Fairway irrigated with potable water (0-100 mm)

Element	Aug-03	Apr-04
pH	5.7	6.5
Total Salts (mg/kg)	446	387
P (Olsen) (mg/kg)	18	4
Total P (mg/kg)	200	400
%Na	4	7
% Ca	72	67

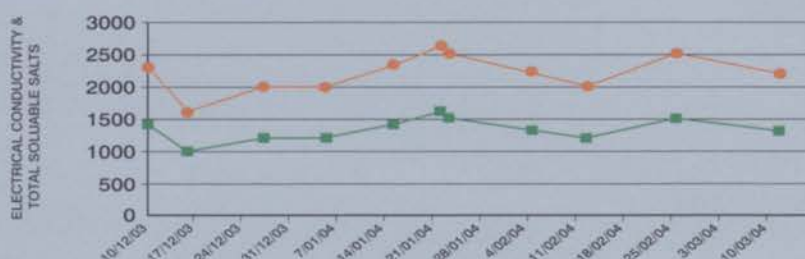


Figure 1:  
BARWON HEADS GOLF CLUB  
EFFLUENT MONITORING PROGRAM

SALINITY 2003/2004

Electrical Conductivity (microS/cm@25C)  
Salinity by Calculation (mg/L)

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## NURSERY GREEN

### Turfgrass trials

The nursery green has been established with the following turf species/varieties;

- Mariner (*Agrostis stolonifera*)
- Seaside II (*Agrostis stolonifera*)
- Penn G2 (*Agrostis stolonifera*)
- Grand Prix (*Agrostis stolonifera*)
- Penn State Poa (*Poa annua reptans*)
- BHGC Poa (*Poa annua reptans*)

The *Poa annua* species are a selection from the Penn State University (PSU) project being undertaken by Dr David Huff and the local type that occurs on the greens at Barwon Heads (BHGC Poa). The bentgrass cultivars were selected based on proven salt tolerance and availability of seed. In particular the research of Kenneth Marcum (*Salt tolerance varies in modern creeping bentgrass varieties. GCSAA Journal. October 2000*) was used as a guide.

The results for average turf quality after two seasons of effluent irrigation are detailed in Table 5 and Figure 2.

The results from the second irrigation season indicate that there have been no detrimental affects of using the effluent water compared to the use of potable water and there is no cultivar/water quality interaction. At this time the only significant differences are due to the species or cultivar.

The cultivars Penn G2 and PSU Poa had the best turf quality. In December 2003, there was a period of high temperatures that severely damaged the local ecotype of *Poa annua*, but had no effect on the PSU Poa. In February there was a blow out in the effluent supply and the plots were unable to be watered for 10 days. All species/cultivars were affected, however, they all recovered and the PSU Poa in particular survived the conditions extremely well.

### Soil analysis

Soil samples were taken at the end of the irrigation period and the results are detailed in Table 6. In 2002/2003, the section that was irrigated with effluent had an increase in sodium and a decrease in calcium compared to the potable water irrigated area. There was also an increase in total and available phosphorus. Salinity and pH were similar for both areas of the green. However, the 2004 sampling indicates very little difference between the two treatments and the minor effects of the effluent appear to be overridden by the effects of fertilisers.

### CONCLUSION

At the Barwon Heads Golf Club the second irrigation period has been completed using treated effluent that is high in salts, sodium and chloride. There was an increase in these particular elements in the 2003/2004 irrigation period.

On the fairways there has been an increase in sodium and a reduction in calcium, however, there has been no affect on turf quality with an excellent cover of couchgrass being maintained.

It is expected that if normal winter rains occur there will be a leaching of salts and sodium. The general calcareous nature of the soils appears to provide sufficient calcium once leaching occurs.

On the nursery green there is very little difference in soil chemistry and there is no significant difference in turf quality between the potable water and effluent treatments. ▲



Nursery green trials - PSU poa (right) compared to local *Poa annua* strain

Table 6: Soil analysis - Nursery green

	Potable Apr 03	Effluent Apr 03	Potable Aug 03	Effluent Aug 03	Potable Apr-04	Effluent Apr-04
pH water	7.8	8.1	6.3	6.4	6.3	7.1
EC (dS/m)	0.12	0.11	0.06	0.05	0.06	0.09
Total Soluble Salts (mg/kg)	356	327	178	149	178	268
Total P (mg/kg)	<20	22	200	200	300	300
P (Olsen) (mg/kg)	9	15	6	10	4	7
%Na	7	17	4	7	11	13
%Ca	68	47	31	39	50	58
%Mg	15	22	11	14	10	6
%K	13	15	53	40	29	23
Organic C (%)	nd	nd	0.17	0.35	0.30	0.22
Copper (Cu) - DTPA	<0.1	<0.1	nd	nd	<0.1	<0.1
Zinc (Zn) - DTPA	0.3	0.3	nd	nd	0.21	0.22
Manganese (Mn) - DTPA	<0.5	<0.5	nd	nd	<0.5	<0.5
Iron (Fe) - DTPA	54	66	nd	nd	35	29

Table 5: Turf quality for nursery green  
(0 = worst, 9 = best)

EW = Effluent water, PW = Potable water

Treatment	Apr 03	Aug 03	Sep 03	Nov 03	Apr 04	AVG
PSU poa-EW	6.3	7.8	7.0	7.7	7.2	7.2
BHGC-EW	ND	ND	6.0	6.3	5.7	6.0
Grand Prix-EW	5.7	6.3	6.3	6.2	6.7	6.2
Mariner-EW	4.8	5.7	6.0	5.5	6.2	5.6
Penn-G2-EW	6.5	7.2	6.3	6.8	6.2	6.6
Seaside II-EW	5.2	5.8	5.8	5.8	5.7	5.7
PSU poa-PW	6.5	7.7	7.0	8.0	7.7	7.4
BHGC-PW	ND	ND	6.3	6.0	4.0	5.4
Grand Prix-PW	5.7	6.3	6.3	6.3	6.8	6.3
Mariner-PW	5.3	5.7	6.0	5.5	5.8	5.7
Penn-G2-PW	6.5	7.3	6.7	7.7	7.5	7.1
Seaside II-PW	5.8	5.8	6.2	5.8	6.5	6.0
LSD <0.05	0.7	0.7	0.4	0.9	1.1	

Figure 2: Barwon Heads Golf Club  
Reclaimed water trials - Nursery green



Turf Quality and Turf Density: Rating 0 = worst 9 = best



*Riverdale*

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# Priming the Workshop over Winter



Winter allows mechanics to catch up on many jobs neglected during summer

**While winter affords the golf course superintendent the opportunity to catch up on matters neglected during a busy summer, winter can be just as productive a time for the golf course mechanic. Here, Mark Browne from the Eastern Golf Club in Melbourne takes a tour around the shed and compiles an essential winter checklist every mechanic should go through to ensure the workshop is in prime shape to tackle the new season.**

If I can borrow a paragraph from the Textron workshop and service manuals of all their machinery on preventive maintenance, it states, "Preventative maintenance is maintenance performed to prevent malfunction and parts breakdown by periodically and

systematically checking equipment and its systems. Preventative maintenance will cut back corrective maintenance."

This excerpt not only applies to the maintenance of machinery but also to many other tasks in the golf course mechanic's day-

to-day work. The following article examines areas where the golf course mechanic can stay one step ahead of managing golf course equipment and its maintenance.

Winter time on the golf course allows mechanics to catch up on many jobs that sometimes are overlooked or deferred because of other priorities during the peak growing season, when keeping ahead of things can be sometimes demanding. With the wetter, cooler months coming, mechanics can take stock of what they need to accomplish so that they can be back in full swing by the coming spring.

An important part in running a workshop, but one which is often overlooked, is the upkeep of handtools. Sometimes we can neglect the replacement of such. A damaged or worn open end spanner or ring spanner can be dangerous and skinned knuckles are not a welcome feeling on a cold winter's morning.

Cracked or worn sockets should be immediately discarded as these can be quite dangerous. What about that pair of side cutters that no longer cuts strips of wire efficiently and the combination pliers with the damaged jaws that no longer grips properly? These need to be replaced.

Power tools should all be checked for damaged leads and replaced if necessary. While on the topic, what about those extension leads? Check them over and make sure they are serviceable and safe.

While we're in the workshop, let's check over the mig welder. Blow out the dust from around the cooling fan. Check for worn parts making sure the wire feed is working properly and that there are replacement welding tips because it's going to get a good workout for those welding jobs and small projects that will need attending to over the winter months.

Another workshop initiative is to take account of which oil, air, fuel and hydraulic filters we need to stock up on for spring. Oils, lubricants and greases are other items that should be purchased in readiness for servicing, making sure there is enough hydraulic oil in stock when the transmission oil in larger machinery such as tractors needs changing.

Are there enough bedknives for the greens and tees and fairway mowers? Now is the time to redress those bedknives that are still serviceable but sitting under the bench.

Staying under the bench, how about throwing out those old bearings and nuts and bolts from those rollers overhauled in recent months and those old parts that seem to take up so much space. And while we're at it, order some new blades for the rotary mowers.

Have a look through the parts storage bins. Why do we keep parts for machines we no



longer have? Get rid of them! Or find someone who needs them; don't let them just take up unnecessary space.

Once the workshop is up to scratch and spick and span, let's go over to the air compressor. Is this one of the most neglected items in the workshop? Drain and refill the hydraulic oil, remove and clean the air filter, drain the tank, check the drive belt, re-tension the cylinder head, and check the hoses and fittings for serviceability - it will appreciate the extra attention.

Another overlooked item is the old faithful two-stroke engine used on brushcutters and walk behind mowers. If these are not to be used for sometime, drain the fuel tank and fuel bowl and blow out the filter.

I have seen two-stroke fuel turn to 'clag' after sitting for long periods blocking filters and the internals of carburettors. This becomes another unnecessary job to rectify come the first time these are to be used in the spring.

Hydraulic hoses and fittings are another important maintenance item. We can visually inspect a number of these on reel mowers and tractors and replace where necessary. The hoses

more exposed to the elements and around reel motors seem to cop a little more damage and with steel braiding exposed, it won't be long before they start leaking or blow completely. So a call to the local 'hose doctor' should be high on the list to have these replaced.

Winter is also a good time to catch up on servicing of machines that only get used seasonally. Topdressers, verti-drains, aerators and spray units should all be looked over for potential problems.

Changing gear box oils, lubricating cables and linkages and greasing of rollers and bushes will have them in top condition for the next time they are required. An application of CRC or WD40 on exposed and unprotected metals also helps stop surface rust from accumulating on these when they are sitting around for long periods.

If cylinders are to be re-ground, try and organise to get in early with your preferred grinder so your machine is not out of action for too long; sometimes they may have a back log of cylinders to grind through the winter. Make sure you have the right bedknives to give them if you're using genuine ones.

Batteries are another important but overlooked item, as on some machines they are out of sight and out of mind under floor covers and exposed to a mixture of grass clippings, water and fertilisers which create a corrosive effect on terminals. To counteract this, clean and hose thoroughly and spray terminals with terminal protector to help with the starting process on cold winter mornings.

The slight oil leak on a machine that's not getting any better and has been on the agenda to be repaired can also be covered over the winter months.

In summary, winter can be a very productive and busy time for the golf course mechanic as an abundance of challenging work can be undertaken and achieved.

Tools to the ready guys, there's no time to lose!

#### Acknowledgements

Mark Browne is head mechanic at the Eastern Golf Club in Doncaster, Melbourne and is vice president of the Victorian Turf Equipment Technicians Association.



18th Island green at Hidden Valley G&CC.

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The hydraulic table set in the workshop floor ...



...and raised to a comfortable working height.

## AN UPLIFTING INNOVATION

Outside of the environment, occupational health and safety has quickly developed into one of the most pressing industry issues for superintendents and turf managers to deal with. Machinery risk assessments through to testing staff for chemical spray exposure are all now important regular OH&S considerations.

As the saying goes, safety starts in the home and in terms of the golf course that means the shed or workshop. Literally taking this to heart is Avondale Golf Club superintendent David Warwick and his contingent of staff.

Already taking their environmental stewardship role seriously through membership of Audubon International's cooperative sanctuary program for golf courses, Warwick, a former AGCSA Board member, and his staff have developed a number of handy little innovations around the course, enough indeed to fill this section of ATM for a few editions to come.

However, it is this rather practical device which has helped overcome some of the more common OH&S issues which can arise in the workshop.

Set in the floor of the workshop is a hydraulic table which can be raised from floor

level to a comfortable working height. This enables, for example, a greens mower to be driven straight into the workshop and onto the table, the cutting units can then be removed and then the mower driven back out.

The hydraulic table can be raised to the appropriate working height without the need for the mechanic or other staff members risking their backs through strenuous lifting.

A rather uplifting idea don't you think?

Syngenta recognises our innovative superintendents and is proud to present David Warwick and staff at Avondale Golf Club with a \$150 AGCSA book voucher. 📖

If you have, through necessity, devised or created a tool/piece of machinery/gadget or made alterations to an existing piece of machinery or workplace tool to make the job easier, then we want to know about it! Call or email Brett Robinson at the AGCSA (03) 9548 8600 or [brett@agcsa.com.au](mailto:brett@agcsa.com.au)

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Dunheved superintendent Andrew Melville

**Full Name:** Andrew Melville

**Age:** 32

**Family:** Long term girlfriend, applying pressure

**Years as a superintendent:** 3

**Years as an AGCSA member:** 5

**Years at current club:** 3

**Number of staff:** 6 (plus 1 summer-time casual)

**Course specs:** 18-hole, bent/poa greens on 210 acres with predominantly couch fairways and mostly kikuyu tees. Irrigated using recycled effluent through a Toro CDS system.

**Favourite piece of machinery?**

John Deere 3235 fairway mower – it just mows and mows and has been so reliable. Closely followed by the Toro irrigation system

**Most embarrassing moment as a superintendent?**

Getting a machine bogged twice in the same spot and having to be towed out.

**Funniest moment you have seen on course?**

A John Deere 1145 rough mower in a dam.

**Plans for the course over the next 12-18 months?**

A master plan is in the pipeline which will hopefully lead to replacing a few tired old greens.

**Best advice you have ever received on the job?**

No such word as can't.

**If you could change one thing about your job what would it be?**

Committees!

**Best part about being a superintendent?**

Being able to look back at the end of the week, seeing how good the place looks and knowing you were responsible for bringing it all together.

**Worst excuse from a staff member?**

"My keys are in my mate's car and he is travelling up the coast for the weekend surfing, so I can't make it in today or work over the weekend".

**Favourite spot on your course?**

The back corner four holes (5, 6, 14 and 15) in the early morning or late afternoon. Very quiet.

**Career highlight?**

Being appointed superintendent at Dunheved.

**The overseas course you'd most like to visit?**

Augusta to see if it looks as good in real life as opposed to TV.

**Name 3 CDs you could not live without.**

Jeff Buckley – Grace; Pete Murray – Feeler;

Bruce Springsteen – Born to Run.

**What book are you reading now?**

Scarecrow – Mathew Reilly.

**Come the revolution, which celebrity would be first before the firing squad?**

Tony Greig.

**Your pick for the NRL title?**

Roosters.

**Favourite movie?**

Star Wars.

**Food you could not live without?**

Salt and chilli squid.

**Favourite sporting team?**

Parramatta Eels.

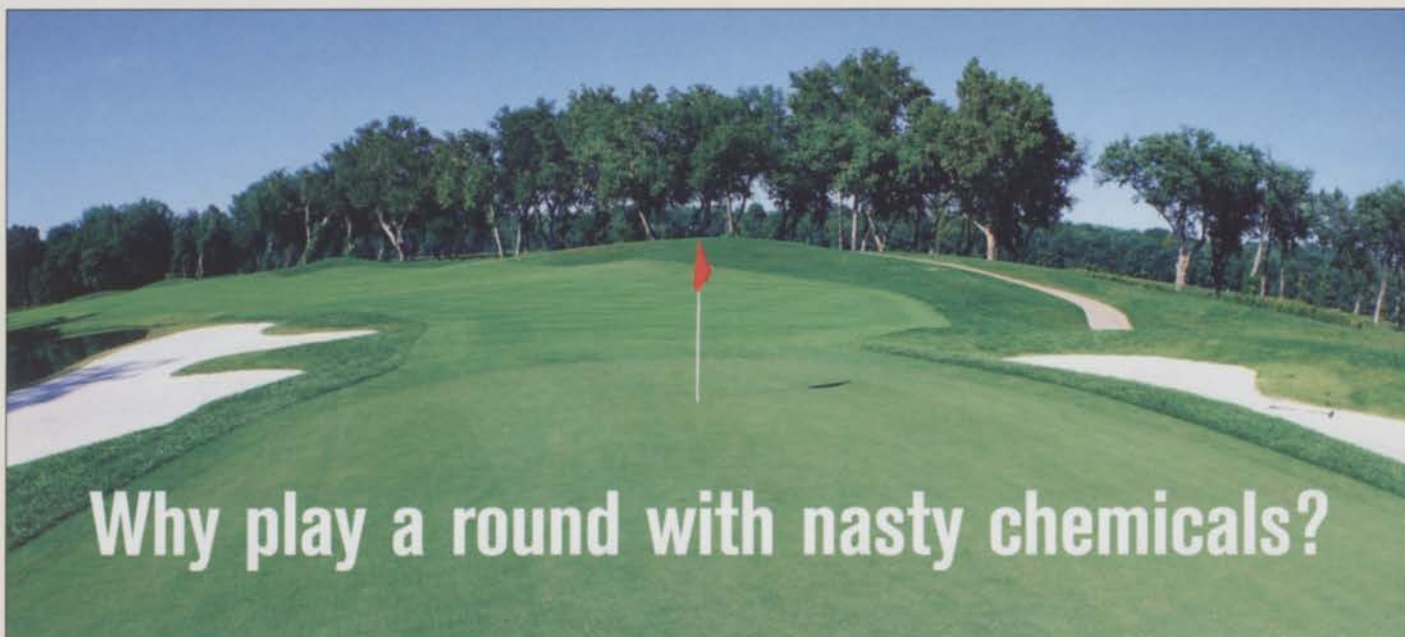
**Sporting team you despise?**

Canterbury Bulldogs.

**Dream Car?**

Anything that someone else pays for. 🚗

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\*Nutri-Gro Plus APVMA Approval No. 49074/0799



## NATIONAL TURF EDUCATION WORKING GROUP RELEASES DRAFT ASSESSMENT GUIDES

The final draft of 'The National Turf Industry Delivery and Assessment Guides - Certificate III Horticulture' has been released for feedback by the recently formed National Turf Education Working Group.

Copies of these draft guides are in the process of being sent to industry bodies, registered training organisations and all interested parties for final feedback and endorsement prior to being officially launched at the second National Education Forum to be held in Melbourne in June during the 20th Australian Turfgrass Conference.

It is requested that those interested parties read and discuss the guides with committee, staff and colleagues and forward any feedback, suggestions or endorsement to Steven Potts at the - AGCSA prior to 31 May, 2004.

The National Education Working Group is made up of state representatives from turf industry bodies and registered training organisations. The group was formed following the first national turf education forum held during the 19th Australian Turfgrass Conference in Adelaide in 2003.

The forum identified major issues affecting turf education pathways and as a result the National Turf Education Working Group was formed to address the issues raised.

The first project for the working group was to develop 'The National Turf Industry and Delivery Assessment Guides'.

These guides will be used as an additional support to the National Training Packages. The group's focus was to compile a clear and concise document to assist training providers in delivering and assessing courses to an industry minimum standard while creating a degree of national consistency. ■

## LETTER TO THE EDITOR

### AN IDEALISTS DREAM?

Can the respective sectors of the turf industry combine to develop a peak industry body? Surely it is time for another attempt.

In the 1990's the Victorian Government stepped into the management of thoroughbred racing and created a peak industry body called Racing Victoria. Previously, the racing industry in Victoria was overseen by a single racing club - the Victoria Racing Club. The move focussed the need for a separate body to be managing the global affairs of the racing industry separate from the affairs of a club that services its membership, the Flemington racecourse and its race fixtures.

Can we please adopt the same approach in turf management? Surely it is time for one peak body to speak on behalf of turf managers on the global and strategic issues of turf. In saying this, there is still a genuine need for the representative bodies for the differing turf sectors of golf course superintendents, bowling greenkeepers, grounds/sports turf managers and racecourse managers.

There are global turf issues that require a united voice to the following groups:

- Three tiers of government;
- Authorities such as WorkCover and the utilities companies;
- Educational institutions;
- Research bodies;
- Trade unions and employer groups;
- Legal groups and insurance companies;
- Sporting associations and leagues;
- General public;

The turf industry is subject to much criticism when sporting venues in the eyes of the public and media are believed to be poorly presented and maintained. Can you imagine the direction of the debate over the future of Medicare without a peak body such as the Australian Medical Association representing the interests of doctors?

The turf industry must not wait for others to develop a greater level of maturity towards it. We must take the lead in promoting causes such as:

- Stronger and consistent education standards that skill turf managers not only in their technical skills but their managerial skills.
- Promotion of the role of the turf manager and the best way of managing that role by his/her employers.
- A collaborative approach for sports turf research between the users and the providers.
- A voice in the design of stadia and sporting venues with natural turf surfaces.
- Smart turf management practices that can be adopted by the general public in order to promote issues such as water conservation, ecosystem conservation.

I know that the turf industry has tried and failed once before with the Sports Turf Council of Australia, however, I see as one of the keys to getting this concept off the ground is to have well defined roles for the industry bodies and not let these chapters overlap. It requires consensus and co-operation between the segments in the turf industry.

In the meantime, the turf sector lags behind in getting its voice heard on strategic matters.

Gerard Griffen,  
Property Manager, Xavier College,  
Kew, Victoria.



## Two for the Greenkeepers, One for the Members, All for the Club.

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Pants: Keep an eye on them.

## WHO'S WEARING YOUR PANTS?

With this being the conference edition of Australian Turfgrass Management, you will have noticed the extensive centre spread previewing what is set to be a bumper Melbourne gathering.

Here at ATM, however, we want to make sure you're whole conference experience is enjoyable and therefore feel it necessary to impart a cautionary tale for all those out-of-towners who will be shacking up with colleagues at hotels around the CBD.

Seasoned delegates are well aware of the shenanigans that go on during conference week and we are sure that at last year's conference in Adelaide a certain high-ranking Western Australian superintendent actually had the temerity to call hotel security on some of his colleagues such as the ruckus they created early one morning!

This tale, however, is more sedate but equally as hilarious, and begins in a hotel room on the Gold Coast where two AGCSA

employees – their names will remain anonymous – were kipping for the duration of the recent Turf Producers conference.

Being around the same height and build and with the same appalling taste in fashion, Employee No.1 rose early on day one of the conference, stumbled to the wardrobe, plucked out his best pair of chinos, ironed them and then went quietly about his daily business.

Despite a nagging notion that the trousers were a tad long in the leg and a bit tighter around the waist, he nevertheless went through the day oblivious to the fact that he was in fact wearing his colleague's trousers.

Roll on day two. As he did the day before Employee No.1 got up, put on the same pair of wrong trousers but this time headed out to Lakeslands Golf Club to do some bentgrass plot assessments. At 7.30am a rather bemused Employee No.2 called his colleague and nonchalantly asked him how his pants were feeling. Taken aback, Employee No.1 admitted they were a bit tight but put it down to the previous night's dinner.

By this time Employee No.2 was in hysterics and proceeded to inform his fashion-conscious colleague that he was in fact in possession of another man's pants!

Feeling very sheepish, Employee No.1 returned to the hotel. However, to add insult to stupidity, during his exploits at Lakelands, Employee No.1 had managed to soil his colleague's trousers (the bottom six inches were muddy and soaking wet) and before heading back to the room to change managed to spill half his breakfast down his lap!

Despite best intentions of getting the pants dry-cleaned, time would be against Employee No.1 who had to hand back the pants in pretty rank condition, a state they remained in all the way back to Melbourne.

So the moral of the story come conference delegates? Keep your pants on! Or Andrew Peart might just mistake them as his! ☹

## APPOINTMENTS

Having endured his fair share of drama down at the Stuart Appleby designed The Sands, Torquay, construction superintendent Brad Marsden has moved on. However, the lifestyle down on the Bellarine Peninsula must suit for the former NSW superintendent who has shifted 40km up the road to the former council-owned Clifton Springs Golf Club where he has been appointed golf course manager. Marsden replaces 23-year veteran Mark Gladman who has decided to move to St Arnaud in northern Victoria to run a motel. We wish Mark, a 10-year AGCSA member, all the best in his new venture.

\*\*\*

After a massive send off up in Queensland, Brad Burgess has parted Australian shores and is now ensconced in Indonesia. In a rare move, Burgess has literally swapped jobs, leaving his role as superintendent at The Glades to take over from Victorian Paul Lierse who has been superintendent at the Cengkareng Golf Club in Jakarta. Lierse started at The Glades in early May.

\*\*\*

South Australian superintendents have farewelled Balaklava Golf Club superintendent Steve Guy who has left the industry.

\*\*\*

Wayne Dale is returning across the border to Victoria after a couple of years as superintendent at the Fleurieu Golf Club in South Australia. Dale has been appointed superintendent at the brand new Growling Frog public golf course in Whittlesea on the northern outskirts of Melbourne. Former construction superintendent at the Growling Frog, Spiros Skaftouros, has moved on and has taken up a position with Densal.

\*\*\*

Moree Golf Club in NSW is looking for a new head greenkeeper following the departure of Colin Raeburn who has headed up the coast to Brisbane.

\*\*\*

Matthew McLeod has been appointed as superintendent at the Tocumwal Golf Club, McLeod, who has been in the industry for over 14 years and was the former superintendent at Millicent Golf Club, takes over from Charles Baldwin.

\*\*\*

Andrew Bowles has come across from the Neangar Park Golf Club to take over Alan Griffen's position as superintendent at Axedale Golf Club in Bendigo. ☹

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# Around the Trade

## KIWIS' POWER MOVE

Textron managing director Garry Kelson has announced that the company has agreed in principle to accept a proposal from the Power Farming Group to become the Australian distributor for Textron products.

Power Turf (NZ), a division of Power Farming, has been Textron's New Zealand distributor for the past eight years and has always expressed an interest in breaking into the Australian market.

As a result, a business unit is to be created within Agricultural Holdings (Aust), an established division of Power Farming that already distributes Daedong and Versatile Tractors and Garrison Agricultural accessories in Australia.

Greg Clark, formerly from John Deere and well known to members of the Australian turf industry, has been headhunted to set up the new unit which is expected to be up and running in June in time for the 20th Australian Turfgrass Conference in Melbourne.

The new division, which will be called Power Turf (Aust), will consolidate the existing dealership network and will be based out of Tullamarine in Melbourne. 📌

## TEXTRON GOLF AND TURF PRODUCTS

## CHANGE OF GUARD

Dean Plummer has been named as the new general manager of sales and marketing at Globe Australia following the retirement of Andrew Knox in April.

In a press release from Globe Australia chief executive John Peaty, Knox was said to have retired for "personal reasons". He will continue to work as a consultant and special projects adviser to Globe Australia and will be proprietor of newly acquired Better Methods.

Plummer (36) joins Globe Australia from BASF Australia where he was national marketing manager. Plummer, who has also held positions at Cyanamid in New Zealand and Dow Agro-Sciences in England, started his new position on 3 May.

Meanwhile at Syngenta, marketing manager Kate Dorahy will be leaving the company's turf division. The popular Sydneysider has been promoted to a position within the company's agricultural division. Peter Sullivan has been named as Dorahy's interim replacement. 📌



The new Sumo ride on slasher mower now available at Kennards Groundcare

## A MOWING HEAVYWEIGHT

Kennards Groundcare has introduced a new ride on slasher mower designed specifically for long grass and rough terrain.

Called the Sumo, it is powered by a 21hp engine with a direct shaft drive to the cutting deck which enables it to tackle and knock down long grass, previously the domain of the tractor and slasher attachment.

The Sumo is four-wheel drive giving it unique hill climbing ability combined with four-wheel steering which enables greater manoeuvrability around trees and tight blocks. The mower deck is rear discharge with electric height adjustment. The deck can also slide out to the side an extra 150mm for close cutting along the edge of fences. 📌

## A CLEAN SWEEP

Billy Goat litter vacuums and debris loaders are now available in Australia through Allpower Industries Australia.

Billy Goat's multi-purpose litter vacuums are powered by Honda or Briggs and Stratton engines of between 5 and 5.5hp according to

model and intended application. The vacuum's steel impeller lifts litter ranging from mown grass and leaves through to cans, plastic bottles and light industrial waste.

There are both push models, self-propelled and self-propelled chipping models. All feature high capacity catching systems for maximum run times between emptying and easy steering for low operator effort and best manoeuvrability.

Billy Goat's debris loaders perform similar functions only with heavy volumes of leaves, litter or organic debris.

Where the litter vacuums suck litter up through 27-33 inch intake manifolds, debris loaders accept higher volumes through 8-12 inch diameter flexible suction hoses.

These machines are appropriately powered according to model, by Briggs and Stratton, Honda or Kohler petrol engines up to 23hp.

The extended range of Billy Goat equipment embraces EZair aerators, power rakes, lawn vacuums, as well as heavy duty contour mowers and outback slashers and wheeled blowers. 📌

## GOING WIRELESS

Users of AQUAFLEX soil moisture sensors now have another wireless option to choose from. To complement the existing GSM telemetry solution, AQUAFLEX now offers a radio solution that is ideal for applications such as golf courses where all the sensor sites are within a few kilometres of a central point.

With the radio solution, the PC at the base station automatically collects soil moisture and temperature data from the sensors and provides this data in an easy to understand graphical format. 📌

For further information contact AQUAFLEX Australia on (08) 8244 4798. In New Zealand, contact Scott Technical Instruments on (03) 374 2101.



The Billy Goat litter vacuum





## INTERNATIONAL KUDOS FOR IES

Australian company International Environmental Systems (IES) has been successful in assisting ClubLink, Canada's largest owner, operator and developer of golf courses and golf resorts, in achieving environmental compliance in golf course development and operations.

ClubLink has turned to Oxegen Inc. and its patented OxegenEMS for its environmental management system (EMS).

The OxegenEMS system provides a web-based solution to environmental management for golf courses and provides management with reports on the progress and status of each course's EMS.

OxegenEMS can be utilised equally by a single golf course, multi-site golf course operations or groups of golf courses in a region with like environmental issues. It is also possible to integrate into OxegenEMS other risk management compliance modules such as occupational health and safety and security. ▀

For more information on OxegenEMS contact John Reinehr on 0414 859 372 or visit the Oxegen website [www.oxegen.com](http://www.oxegen.com)

## HYDRO-PLAN OPENS OFFICE IN CHINA

Independent irrigation design consultancy Hydro-Plan is to open an office in Beijing, China. The office is being managed by David Bedingfeld, an engineer with a long background in irrigation design in England, Europe, Africa, Asia and Australia.

In a highly competitive industry, Hydro-Plan has developed a name for being one of a handful of independent design companies in Australia.

Bedingfeld's background includes designing and supervising overhead, pivot and drainage systems in many countries of Europe and Africa, designing systems for sugar, citrus, turf, golf and dust suppression.

In the last few years, he has provided technical and management support to local distributors and consultants on golf, turf landscape and agricultural irrigation systems, particularly on major projects and turnkey projects, as well as working in Asia. ▀

## BIOTECH BUYS IN

American based biotechnology company Becker Underwood has made a move into Australia's turf management, crop production and pest control markets by acquiring a major stake in

Australian biotech Bio-Care Technology Pty Ltd. Becker Underwood is a developer and formulator of a range of speciality bio-agronomic and colorant products for turf management, agriculture, seed treatment and structural pest control. Bio-Care specialises in the development and production of legume seed inoculants and bio-pesticides for agriculture and horticulture. ▀

## NO MOW, NO WATER

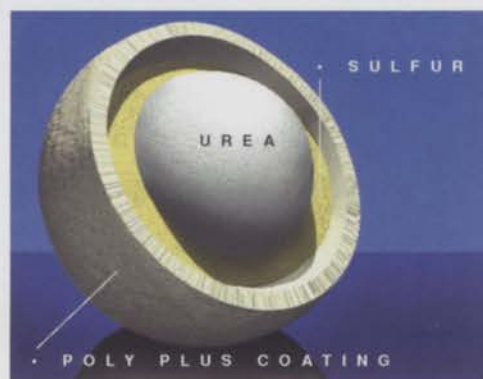
Pro-tech is now offering the latest concept in synthetic lawns. These lawns are a new concept based on unique European 'fibrillated' technology, and are now available in Australia from Pro-tech Lawns, the company that also installs professional synthetic golf greens used by a number of professional players.

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# AGCSA Member Benefits...



## MEMBERSHIP BENEFITS

The AGCSA is committed to providing greater resources to enhance its leadership, unification and professional development of the Australian turfgrass industry and its members.

Membership of the AGCSA enables golf course superintendents as a collective unit to have their say on matters such as education, turf research, legislation and industry development.

So far during 2004, the AGCSA has undertaken a major redesign of its website for the use of all members of the turf industry.

The AGCSA believes that this medium is becoming a vital communication tool for the industry and something which members need to become familiar with.

The new-look website features a special 'Members Only' section, where special offers available only to AGCSA members will appear. Members will also be able to update their contact details in this area.

Now up and running, it is envisaged more services will be added in the coming months.

## MEMBER BENEFIT FOCUS

### Online Auction



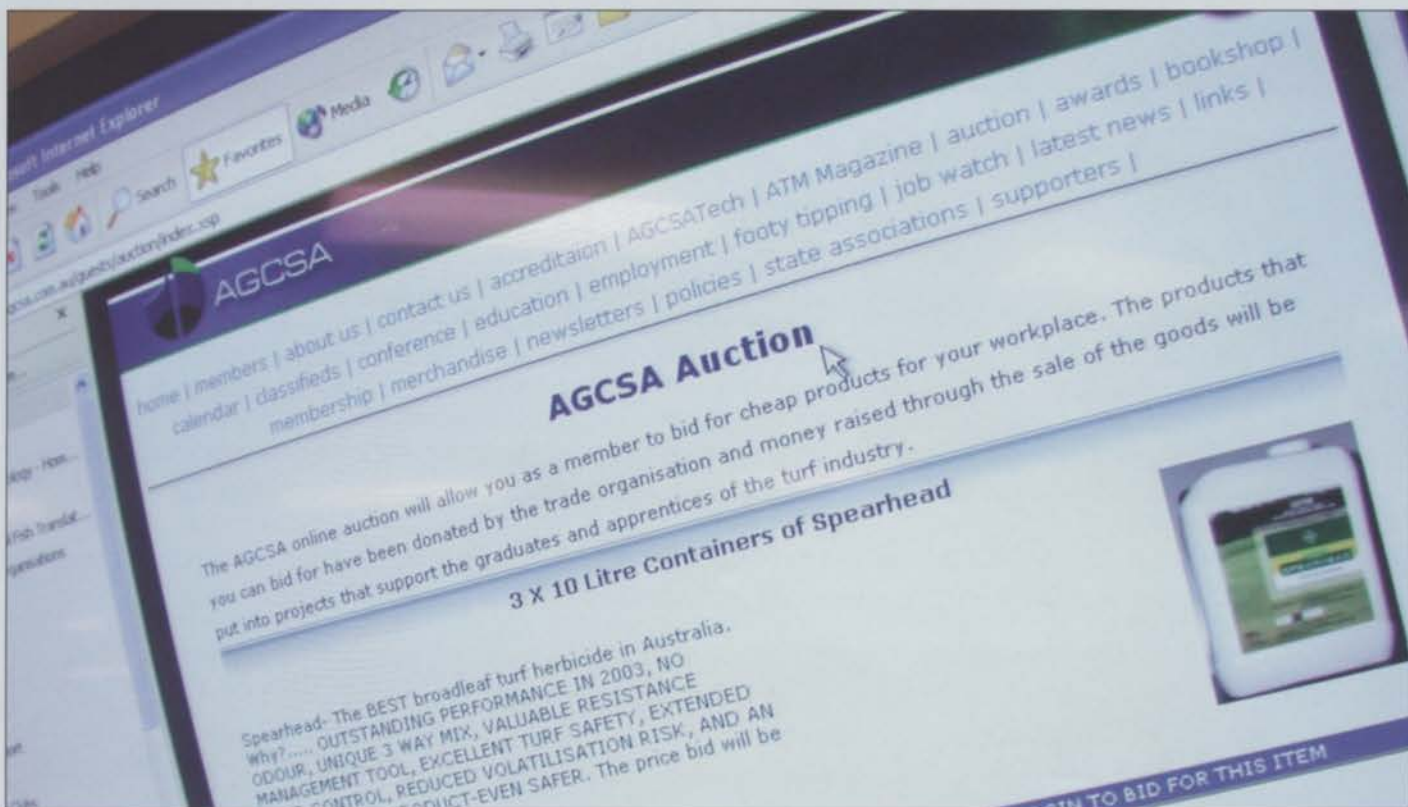
One of the main functions of the new-look AGCSA website is to improve the way in which the association not only communicates with its members but also in the way it services its membership base. To achieve this there is a new members-only section on the website which will enable members to settle accounts online, while one of the other new and exciting features is the ongoing Online Auction which is available to AGCSA members.

On the home page of the new website, down in the left hand corner, you will notice the Online Auction section (alternatively you can access this section through the menu button on the top of the page). Here, members can bid for items for cheap products used daily by superintendents and turf managers around

Australia. The products you can bid for have been donated by trade organisations and the money raised through the sale of the goods will be put into projects that support turf industry graduates and apprentices.

The first item up for grabs was 3x10 litre containers of Spearhead (proudly donated by Bayer Environmental Science). Normally retailing for \$900, bidding started at \$400 and within just a couple of days moved to \$500 which was the end price. Guy Thomas, superintendent at the Newcastle Golf Club, was the lucky man to snap up a real bargain.

There will be regular changes to items up for auction so make sure you log on regularly to [www.agcsa.com.au](http://www.agcsa.com.au) and grab yourself a bargain. 🍷






As well as the AGCSA website, there are many other benefits being an AGCSA member.

These include;

- Six editions of the bi-monthly AGCSA journal Australian Turfgrass Management magazine, the No.1 turf industry publication;
- AGCSA yearly wallplanner;
- AGCSA members hat;
- Access to the AGCSA 'Members Only' area on the AGCSA website;
- Regular AGCSA ACTION Newsletter;
- Turf News email newsletter;
- Reduced registration fees to the AGCSA roving workshops and conferences;
- Receive member discounts on soil and water testing, disease diagnosis and other analytical services through AGCSATech;
- Discounted books from the AGCSA Bookshop;
- Discounted merchandise from the AGCSA website;
- Free legal service provided by Madgwicks Solicitors providing up to half an hour free legal advice on any subject;
- Regular mail-outs of positions vacant within the industry;
- Access to AGCSA Contracts of Employment;
- Regular opportunities to meet with your peers and the allied turf trades;
- Access to AGCSA Skills Recognition Program, Accreditation Program and AGCSA endorsed qualifications; and
- Opportunity to be involved in the Australian Open Course Quality Officials program.
- Clearmake Industries offers AGCSA members a 10 per cent discount on all products and services company-wide. Products available include oil water separators, water recycling plants, gross pollutant traps, rope mop oil skimmers and diversion and spill control valves.

If you have any questions or queries about becoming a member of the AGCSA, or about any of the listed membership benefits, please do not hesitate to contact Jane Phelan, membership services and administration co-ordinator, on (03) 9548 8600 or email [info@agcsa.com.au](mailto:info@agcsa.com.au).

You too can discover how the AGCSA can assist and make a difference in your future endeavours within the turf industry. 



Australian Golf Course  
Superintendents Association



AGCSATech



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Golf Course Maintenance Company.....	\$310
Consultant.....	\$310

### Associate Membership

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### Student Membership

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Discount Sliding Scale for joining of two or more staff	5% discount = 2-3 staff 10% discount = 4-6 staff 15% discount = 7+ staff
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## Membership Application Form

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City/Suburb: \_\_\_\_\_ Postcode: \_\_\_\_\_

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Club/Organisation: \_\_\_\_\_

Club Postal Address: \_\_\_\_\_

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Member Class: \_\_\_\_\_

### Membership Payment

Membership payments for any of the above classes are to be sent to the AGCSA.

☐ Please charge this purchase to my credit card account

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Send completed application form and payment to:

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Phone: 03 9548 8600 Fax: 03 9548 8622 Email: [info@agcsa.com.au](mailto:info@agcsa.com.au)



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## Seashore Paspalum - The Environmental Turfgrass

By R.R. Duncan and R.N. Carrow (Wiley)

"A new grass for a new era". That is how Robert Carrow and Ron Duncan describe seashore paspalum. And in this book, which deals solely with seashore paspalum, the two authors provide an extensive look into this impressive and increasingly attractive turfgrass species.

The 21st Century has already brought about significant changes within the turf industry, particularly from an environmental standpoint where closer scrutiny of pesticide, fertiliser and irrigation practices has become prevalent.

Water quality and quantity issues have and will result in major shifts in turf to the utilisation of treated effluent of varying quality. Seashore paspalum provides an alternative grass of comparable texture and quality to the hybrid couchgrasses that can tolerate effluent, brackish and seawater blends.

Use of variable quality water resources subsequently changes management strategies. Choice of salt-tolerant grass cultivars becomes an increasingly important consideration, since selecting salt-sensitive species can double management costs.

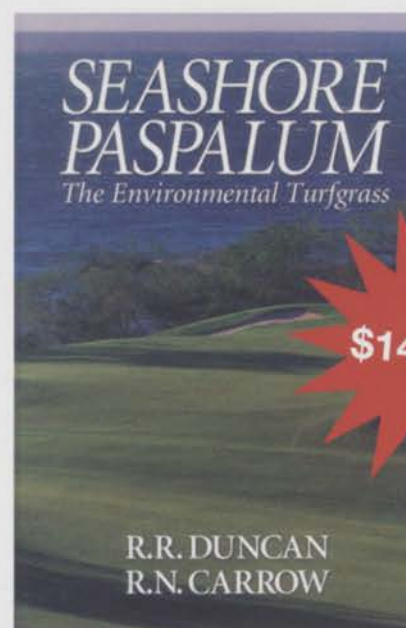
In this book, Carrow and Duncan outline the basic science, history, and management protocols for seashore paspalum, presenting information from three basic perspectives;

- Specific scheduling of regular maintenance practices (fertilisation, irrigation, pest control, mowing);
- Specific industry use (golf courses, athletic fields, lawns and landscapes, sod production); and
- Specific environmental stress situations (use of effluent water, sites using seawater or those affected by salt water intrusion, acid soil, complex soils, environmentally sensitive wetland sites).

The authors hope the book will establish a precedent within the turf industry regarding information packaging and providing an operational manual for turf managers when new cultivars are released for industry use.

Both Carrow and Duncan will be presenting keynote addresses at the upcoming 20th Australian Turfgrass Conference in Melbourne

with Duncan giving a dedicated workshop on the topic of seashore paspalum. ■



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Fax: (03) 9548 8622  
Email: info@agcsa.com.au





## GCSAQ

2004 is certainly starting to fly past. It's halfway through and I am still coming to grips with writing '2004'.

The weather up in our neck of the woods has been wet. Not consistently pouring down, just on and off with a few sunny days in between to suck you in to starting that big drainage project then hammering down for a few hours to add that extra degree of difficulty. Nothing like trudging around in the mud to get those enthusiasm levels up among the staff.

Meanwhile, the rest of the southeast corner of Queensland has had fine conditions with typically idyllic weather, warm sunny days, balmy tropical nights and the thought of the upcoming 20th Australian Turfgrass Conference in Melbourne.

Around the traps there has been a bit of movement lately with Paul Lierse returning from Asia to swap places with Brad Burgess at The Glades Golf Club. David Golf rep Dean Scullion has thrown himself back into the greenkeeping profession by taking on a position as assistant superintendent down in NSW, while T&I man Glen Beauclerk has become the assistant at Robina Woods Golf Club under Lance Coventry. This has meant Steve Moncreiff is back on the road for T&I and keen to show those youngsters just how it should be done.

At Sanctuary Cove, Daryl Edwards is planning to rebuild the Palms Course, while Stuart Laing is in the middle of demolishing 18 holes on the west side of Royal Pines to rebuild nine holes with a greater housing component. Gainsborough Greens is about to be sold by its Japanese owners of 14 years to an American company who intend to change the name to Silkwood Lakes and rebuild half the course and add nine holes.

The John Deere Golf Championships have been played at the lovely Wynnum Golf Club, presented in excellent condition by superintendent Jason Adams who was lucky enough to represent Australia in the 2002 John Deere final. Jason has a few tall tales to tell of his trip and is likely to present a slide show of his adventures when he gets the photos back.

Scott McKay of Northlakes has been busy representing our association as education officer and has been setting up a database of e-mail addresses to speed up the delivery of news and information to our members. For members wanting to be added to the list contact Scott at northlakes@thegolfcompany.com.

Upcoming events include the Turf Tour and AGM. Anyone interested in becoming part of the GCSAQ committee should consider nominating for a position as it is a great way to keep abreast of the latest happenings in the industry and a sure way to meet some decent people.

Rod Cook has been overseeing the involvement of superintendents in the Futures

Of Golf in Queensland Conference to be held at the Hyatt Coolom Resort in August. This promises to be a forum where the views of a wide variety of stakeholders in the golf industry will get an airing. Don't be surprised if a few controversial statements are made and a few noses get put out of joint as some robust discussion is anticipated.

The goodwill so far engendered by this initiative has given reason for hope that there is a future for the long term improvement of communication between all the different and diverse sections of the golf fraternity.

On a lighter note, I have broken a rib after performing a swan dive off a postie bike which soared over a sleeper retaining wall. I thought that might brighten your day. Never fear I will recover. Enjoy the Melbourne conference.

**Jon Penberthy**  
President, GCSAQ



## GCSAWA

The drought has broken, at least for this winter season anyway. Most areas are recording good falls for the start of May. Year-to-date rainfall in WA has been poor with the metropolitan area only recording rainfall over the last three weeks since spring 2003. Over the last three months much of the metropolitan area has been listed as seriously deficient in rainfall and the onset of good falls has been a blessing. Now we need more.

The recent AGCSA Spray Techniques Workshop has come and gone, probably without notice to some members. Again another educational day put on for the benefit of members failed to attract no more than nine attendees from four golf clubs and TAFEs which is extremely disappointing and frustrating from my point of view as an association committeeman.

Thank you to those attendees for supporting this event, which has been widely acclaimed throughout Australia. For the first time, the AGCSA presented a topic which targeted not only the superintendent but anyone within the industry responsible for the spray application of chemicals. If you're too busy, how about someone else from your staff attending these training days!

What is the answer to attracting members to association sanctioned events? I put the challenge out to all members. Tell me if we are not catering for your interests and let us make changes! Too busy, Tuesdays not good for us, not interested, too many days on. WHAT CAN WE DO? Email me at superintendent@inet.net.au.

Registrations across the country are looking excellent for this year's 20th Australian Turfgrass Conference in Melbourne and the AGCSA has already booked out the tradeshow floor, so a good show is expected by all.

The GCSAWA has nominated Craig Webley (Lakelands Country Club) for the AGCSA Graduate of the Year Award. Craig was the successful applicant for the 2003 GCSAWA Best Indentured Apprentice Award. Craig demonstrated

his ability as a fine turf manager and will be a fine ambassador for the GCSAWA in Melbourne and in the future.

Congratulations also to Callum Hitching (Bussellton Golf Club) and Brodie Clynk (Royal Perth Golf Club) on their successful TAFE studies and their individual achievements in their workplaces. Thank you all for applying for this prestigious award. I hope the association can play an important part in your careers in the future. Members will get a chance to meet Craig Webley and 2002 winner Nick Kinley down in Margaret River in August.

Closer to home, on 19 April Bunbury Golf Club defended the title of the 2004 Management Challenge on home turf. A sensational day was had by all and thanks go particularly to Melville, Chequers and Cottesloe for travelling down to join in. Seven teams in total joined me on the rain free day to enjoy the magnificent golf course Des Russell and his hard working staff and volunteers prepared for us. Much gratitude and thanks go to all the staff and Jenny Gomme for their hospitality. Secret Harbour Golf Club finished on top with Sanctuary Golf Club in second.

At last we have received the Environmental Waste Audit for Golf Clubs, at least the final draft stage. The executive committee is currently proofing it and fine tuning it prior to printing it and submitting it to the Department of Environment and our members.

It appears through reading the draft that the DEP has been involved with this project acting in a reference capacity and overseeing the outcomes of the project inline with grant payments, so it may be fair to say this has been a possible motivation for them to visit several random golf courses in the last few weeks. Early indications are we will all get a visit sooner rather than later so be prepared.

In light of recent Worksafe Australia requirements for superintendents to complete risk assessments for hazardous substance use on golf courses, the GCSAWA has commissioned John Forrest to conduct these assessments on behalf of all members in a generic format which can be modified to accommodate every site individually.

This may come too late for some superintendents who have had to do this project already, but we can't avoid such situations. Future projects which are being considered are generic environmental management plans and operator training procedures/competency certificates. Please don't be backwards in coming forwards with ideas for the GCSAWA to be working on.

Upcoming events to be looking forward to include round four of the Golf Masters Cup at Mount Lawley Golf Club on 14 June, while round five will be hosted by Collier Park Golf Club on 19 July. And of course, don't forget the 20th Australian Turfgrass Conference in Melbourne from 21-25 June. See you in Melbourne.

**Brad Sofield,**  
President, GCSAWA





## NSWGCSA

You would be hard pressed to find a superintendent in NSW that wouldn't be delighted to see autumn and winter roll around this year. The 'Around the traps' section in the NSWGCSA newsletter summed up the plethora of varying obstacles superintendents and their staff had to overcome to survive an extremely dry and arduous spring and summer.

As I write this report, dam levels around the state are nearing an accumulative all time low. Even the climatically protected coastal regions of NSW are still experiencing the scorch of the endless summer drought. This includes Sydney itself, which appears to be only privy to coastal showers and the odd inner metropolitan thunderstorm. Unfortunately, this has all come on the back of record high March/April average temperatures.

Meanwhile, the NSW Minister of Environment and Heritage candidly pledged in a radio broadcast that all golf clubs in NSW would be totally void of potable water dependency in 10 years time.

This rather brazen and open statement has certainly taken the NSWGCSA Board by complete surprise. The Board submitted an

extensive submission and provided what we considered to be a long-term achievable and amicably agreeable goal for restricted potable water use on golf courses.

I regret to say, that if the clouds don't burst and the dams don't fill up, we'll be back at the negotiation table before too long. Hopefully, with the rain gods on our side, this winter may provide long soaking wet periods nationwide to alleviate what could be a potentially disastrous summer ahead.

On a brighter note, the NSWGCSA held its annual Rube Walkerdon Championship at the magnificent St. Michael's Golf Club. The day was extremely well attended with the best round on the blustery day belonging to NSWGCSA Board member Scott Lane of Oatlands Golf Club with a magnificent knock of 77.

Congratulations to host superintendent and NSWGCSA Board member Darren Jones for preparing magnificent surfaces. Merv Hayward and Scott Riley who both did a fantastic job are to be congratulated for their preparatory skills for this event.

Leura and Mudgee golf clubs recently hosted the annual Country Tour. Brave troops toughed out cold and blustery conditions on the Sunday morning and played in serene conditions on a

perfect Mudgee Monday. Both courses were presented in pristine condition and it's a reassuring testament to the craftsmanship of these superintendents to prepare their respective courses on extremely tight budgets in inhospitable territory.

The educational forum was second to none with Kristina Barrett (OH&S) providing an extremely informative perspective on methods to unravel OH&S terminology and how to categorise and identify potential risks and hazards in the workplace.

Frouke de Rouver (DEC) presented an extremely informative update on the environmental audit of NSW golf courses. Frouke also expressed her desire to encapsulate more clubs on the lower end of the financial scale into the project. The industry appreciates Frouke's passionate involvement in this program.

Major Grant Gleeson who provided a stunning talk relating to the use of non-lethal weapons to subdue potential combatants completed the educational component with many in attendance saying they were willing to forgo the golf just to listen to this bloke talk for another four hours.

The next field day will be held on Monday, 19 July at Cypress Lakes for our annual

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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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ambrose event. Then it's off to Muirfield Golf Club on Monday, 6 September for the NSWGCSA AGM.

With the 20th Australian Turfgrass Conference just around the corner I'm sure there will be plenty of NSW superintendents clamoring to post their delegates registration forms to ensure they will be a part of this enormous gathering. Judging by the content of the speakers and simply the venue alone, this event will be truly memorable.

Enjoy the rest of winter and I hope to catch up with everyone in Melbourne.

**Craig Easton**  
President, NSWGCSA



### SAGCSA

All good things must come to an end they say and the magnificent late Indian summer enjoyed in South Australia came abruptly to a halt at the end of April with a cold southerly blast. With below average rainfall for the first four months of 2004 all we can say is bring on the winter rain.

Movement on the local front sees dedicated superintendent Wayne Dale leaving Fleurieu Golf Club after a second term in charge to take over the reins at the recently completed Growling Frog golf course. If the course is half as good as its name, it will be a fantastic golfing experience. If there is a better-named golf course in Australia I haven't heard of it yet.

I digress. Wayne will be greatly missed from the South Australian scene as a long serving SAGCSA committee member, secretary and former president. Wayne, together with his wife Pam, have been long time supporters of our state and national bodies and we wish them all the success in their venture back to the Yarra Valley.

Two upcoming meetings for the diary include the joint meeting with the Turf Technicians Association of South Australia and the SAGCSA AGM on 3 June at the Riverside Golf Club. Host superintendent for the day will be Stu Gillespie.

Proceedings will start with nine holes of golf in the morning, followed by a course inspection/turf technicians meeting. At the conclusion of these activities we will all gather in the clubhouse to listen to a guest speaker which has yet to be confirmed. The AGM will follow lunch. A day with something for everyone I'm sure, so please support your association in attending.

Looking a little further ahead, the SAGCSA spring meeting is scheduled for 16 September at AAMI Stadium. Guest speaker will be Kevin Handrick.

With the onset of winter, two things come to mind - footy tipping competitions and AGCSA conference week. Sponsors Nuturf together with the AGCSA are to be congratulated for running the AFL and NRL national tipping competitions. What an innovative way to collect some

sledging material for use on fellow supers, especially one fanatical Richmond supporter who happened to pick the card in round one! I suppose lightning won't strike twice until the Tigers next win, hey Pross!

The 20th Australian Turfgrass Conference in Melbourne looks like a very interesting program once again. If the level of interest from SA is anything to go by this should be a very well attended week. I look forward to seeing everyone there.

**Peter Harfield,**  
President, SAGCSA



### TGAA (ACT & Surrounding Region)

Along with the cooler weather, winter has brought with it continued water restrictions throughout the ACT and surrounding districts. The current restrictions should not affect recreational turf areas as consumption of irrigation water has significantly reduced due to a reduction in plant requirements and evaporation rates.

In local news, the Canberra Institute of Technology has progressed well through semester one with good enrolment numbers. Elsewhere, many grounds have been re-designed, rebuilt, and have regenerated after the devastating firestorm that had such a widespread affect over much of the ACT.

Excitement is growing among local and interstate turfies because the TGAA (ACT) is in the final stages of preparing for its annual seminar. Like all previous seminars this year is set to be bigger and better than the last.

This year's topics will encompass differing aspects of irrigation and water management including management, design, scheduling and use of recycled water. Speakers on the day include Gary Reynolds (water supply and sewage consultant), Dr John Illingworth, Craig Easton (Carnarvon Golf Club), Hugh Lester (irrigation design consultant) and Peter Kirby (Nuturf).

Members and anyone who attended last year's seminar should have received a registration form and program. If you wish to attend and you do not have a registration form, contact the TGAA by mailing to TGAA ACT Region, PO Box 3223, Weston Creek, ACT 2611. Don't miss out!

Come along and enjoy a friendly social environment and learn of new ideas and the latest innovations in the turf industry. The seminar will be held on 28 July at the Burns Club, Kambar, ACT. Cost is \$80. Contact Bruce Davies (02) 62074623 or Keith McIntyre (02) 62314721.

Till next time, agrostologists!

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



### TGAA (VIC)

Here's a nice short report for our TGAA members. Over the past couple of months TGAA (Vic) has been busily preparing for the upcoming 20th Australian Turfgrass Conference to be held in Melbourne from 21-25 June. As you are probably aware, our three-day Sportsfield Management Stream will incorporate the popular Cricket Wicket Seminar.

Various topics of importance are covered during this conference and I would urge all members to attend. Not only will this be an excellent point of information for all members of the turf industry, it will also give us a chance to meet and say thank you to many of our generous sponsors who continually support our industry.

Aside from the upcoming conference, another date for members to enter in their diary is the TGAA (Vic) AGM to be held on Tuesday, 17 August. Again we would like to see as many members as possible attending this day. More information will follow as venues and speakers are confirmed.

I look forward to catching up with as many colleagues as possible during the June conference. See you in Melbourne.

**Jim Marchbank,**  
Vice President, TGAA (Vic)



### TGAA NSW

Welcome to the first regular column by the TGAA NSW in Australian Turfgrass Management magazine! It is great to be a part of this fantastic publication and we look forward to keeping you updated on what is happening at TGAA NSW.

Once again our year started on a great note with the TGAA NSW Golf Day held in March at Leonay Golf Club. Despite scorching temperatures there was some very impressive golf with the team from Sterling Group Services scraping in to take out the trophy. It was a chance for many mates in the industry to catch up and enjoy a round of golf and then a hearty lunch.

Congratulations go to course superintendent Andrew Kennedy and his staff for the excellent condition of the greens and their assistance in preparing the day. Plans are well underway for 2005 and at this stage pen in 8 March at the New Brighton Golf Club.

The TGAA NSW Turfgrass Seminar and Tradeshow is set for Wednesday, 11 August 2004 at the Sydney Showgrounds, Homebush Bay. This is promising to be a very informative day but also entertaining with a special guest speaker. The topics to be covered on the day will include:

- Pesticides and their modes of action;
- Machinery for renovations;
- Sportsfield oversowing;
- Sports law and liability; and
- Golf course reconstruction.

Plans are also underway for our 3rd TGAA NSW Sportsman's Charity Luncheon scheduled for Friday, 19 November 2004 at Canterbury



Leagues. We are currently negotiating with some of Australia's biggest sporting legends as guest speakers and we will keep you informed.

Our commitment to providing training workshops for our members continues with more workshops being held in July, including Chemical Application AQF3. For further information on the workshops or seminars contact TGAA NSW on 0408 441 119 or email [tgaansw@bigpond.com](mailto:tgaansw@bigpond.com)

Hope to see you at a TGAA event in the near future.

**Graeme Logan,**  
President, TGAA NSW,  
Arenas Manager, Telstra Stadium



#### VGCSA

With the year rolling on and the rains finally arriving in Victoria, we down south are finally turning off our irrigation systems and moving into course improvement mode. Fortunately, Victorians were diligent with their water consumption this season allowing golf turf managers some latitude with night watering in order to maintain greens and tees.

The VGCSA is now getting through its annual awards program with the apprenticeship award

being won by Mathew Beddison from Horsham Golf Club. Congratulations also to his course superintendent Max Ward for the training he provided that allowed Matthew to shine through.

We are also about to announce the winner of the VGCSA Conference Scholarship, once again being held to assist a worthy superintendent to attend the 20th Australian Turfgrass Conference. Our thanks to the AGCSA for their support regarding this award which has seen an encouraging number of keen superintendents nominate in order to participate at the Melbourne conference in June.

On the local front Kingston Heath hosted our 77th AGM in mid-May. The agenda had a reasonably full program with the usual golf in the morning deciding the various championship winners. Guest speaker was motivational speaker Grant Gleeson, well known to the NSW fraternity who came highly recommended.

A new committee was appointed and Paterson River Country Club superintendent Michael Riordan, who steps down from the AGCSA after 10 sterling years' service, was given special praise for his efforts over the years. *(Due to deadline constraints the full VGCSA committee will be published on Vol 6.4 of ATM - Ed)*

On the education scene, it must be stated that after many years of disharmony, none more obvious than in Victoria, it is an absolute pleasure to see the work that has come from the National Turf Education Working Group. Special praise goes to Steven Potts and the members of the committee for this major achievement.

Finally, as I have listed in the last couple of reports, a number of position changes have occurred. Well known New South Welshman Brad Marsden has again relocated, moving from The Sands, Torquay to Clifton Springs. Together with this change, and again on the west coast, long standing superintendent Ross Corbett has decided to give the game away for a private business. This move created an opening at Warrnambool Golf Club where David Mason, former assistant at Metropolitan Golf Club, has taken the opportunity.

The VGCSA would like to pass on its support to the above individuals and in particular a word of praise to Ross Corbett for his contribution to the association over the years.

See you in Melbourne for what should be an enjoyable conference.

**Michael Picken**  
President, VGCSA

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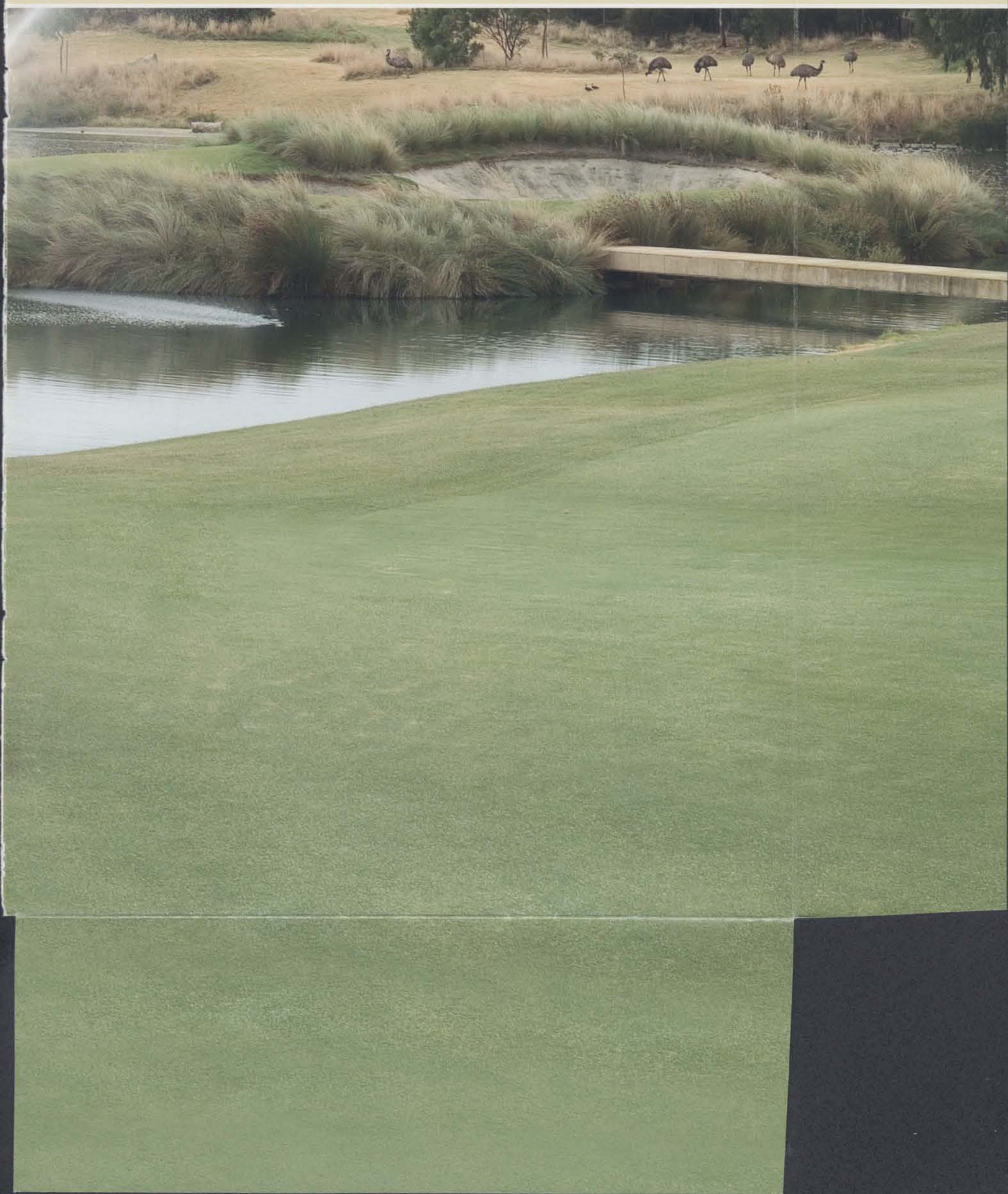


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