PROCEEDINGS

OF THE

13th AUSTRALIAN RACECOURSE MANAGERS CONFERENCE

EAGLE FARM RACECOURSE
BRISBANE, QUEENSLAND

AUGUST 18-20, 2008

ORGANISED AND MANAGED BY

AUSTRALIAN RACECOURSE MANAGERS ASSOCIATION INC.

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The contents of this publication were compiled by the Australian Racecourse Managers Association Inc. from papers presented plus audio-taped comments and general discussion. Every effort has been made to ensure the information presented is a correct record of conference proceedings however the Australian Racecourse Managers Association Inc. assumes no responsibility for inaccuracies, errors or omissions.
Acknowledgements

These proceedings, as in past years, represent the efforts of many people who contributed to the planning, organisation and running of the conference, the support of a number of companies and organisations, and the keen interest and input from all delegates and participants.

Development and management of the conference was in the capable hands of the Australian Racecourse Managers Association Committee: Warren Williams (Chairman), Martin Synan (Deputy Chairman), Lindsay Murphy (Treasurer), Geoff Murphy, Murray Pyke, and John Tonani. Bill Shuck, Racecourse Manager at Eagle Farm, with his capable and obliging staff gave valuable assistance with programming and venue organisation.

Generous sponsorship of the main venue, facilities and catering was provided by the Queensland Turf Club. The Brisbane Turf Club complemented this hospitality by hosting delegates at the Welcoming Reception and at two race meetings. In addition, the Sunshine Coast Turf Club welcomed delegates to an inspection of their new synthetic track followed by a race meeting. Horticulture Australia Limited again gave valuable assistance with funding derived from the turf research levy and Queensland Racing added its financial support to the conference.

Once more our trade sponsors were integral to the success and viability of the conference by their presence and displays, their interaction with delegates, and their sponsorship contributions. The contributions from: Platinum Sponsors - Evergreen Turf, PGG Wrightson Turf, Programmed Maintenance Services, Nuturf Australia, Steriline Racing, Strathayr Turf Systems, Sustainable Turf Renovations and Toro Australia; Gold Sponsors - Coomes Consulting, QTurf Machinery, Rain Bird Australia and Turfcraft Machinery Australia; and Silver Sponsors - Anco Seed & Turf, Equestrian Surfaces, Globe Australia, Turfcraft International and the Venue Management Association, are gratefully acknowledged.

Inspections of the Eagle Farm racecourse, thanks to Bill Shuck and track staff, Doomben racecourse, thanks to Warren Williams and his track staff, and the visit to Redlands Turf Research Institute, thanks to Matt Roche and his colleagues, were valuable and popular outdoor components of the conference.

All those who presented papers or led discussion, as listed in the proceedings, are sincerely thanked for their time and input which ensured that participants had a most rewarding conference.

Finally, the staging of the conference would not have been possible without the positive support and co-operation of the Board of the Queensland Turf Club and the Club’s Chief Executive, Stephen Ferguson.

Arthur Stubbs
Conference Secretary

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Executive Summary

- A survey of grass racecourses in Australia in 1995, funded by the Rural Industries Research and Development Corporation (RIRDC), found a wide variation in the level of racecourse management expertise and technical knowledge. In addition, there was a sense of isolation by many racecourse managers and an expressed need for more information relevant to their jobs.
- This led to Racecourse Managers Conferences being held in subsequent years, at Rosehill, Moonee Valley, Doomben, Morphettville, Melbourne, Randwick, Ascot, Caloundra, Launceston, Ballarat, Newcastle, Flemington, and in 2008, the 13th Australian Racecourse Managers Conference, based at the Queensland Turf Club’s Eagle Farm Racecourse, Ascot, Queensland, from August 18-20.
- The racecourse conference objective was: “Improvement of racing industry communication, education and knowledge on issues of racetrack design, development, maintenance and performance for the advancement of economical and sustainable strategies for racecourse management”.
- 125 people attended the conference, including 79 racecourse managers, administrators and staff from 52 racecourses and racing organisations throughout Australia and New Zealand, plus suppliers and consultants to the racecourse industry, research workers and turf specialists.
- The objective was achieved through discussion of papers on racing industry developments, the equine influenza crisis; synthetic track options, racecourse management practices, track measurement and rating procedures; environmental management; turf nutrition and disease; turf research; and general liaison between racecourse managers and other turf managers and specialists.
- The conference was again rated highly by delegates and sponsors.
- The 4th Annual General Meeting of the Australian Racecourse Managers Association was held during the conference.
- Recognition of the importance of high standards of racecourse management to the racing industry was made by the presentation of the 10th Australian Racecourse Manager of the Year Award to Geoff Murphy, Western Australian Turf Club. In addition, Terry Watson, Victoria Racing Club, and Scott Olson, Wyong Race Club, were recognised for Significant Contributions at a Metropolitan and Provincial Racecourse respectively.
- Three foundation Honorary Members were inducted into the Association for their services to racecourse management. They were Lindsay Davies, Geoff Fanning and John Jeffs.
- The recipient of the first Steriline Racing/ARMA Racecourse Management Scholarship was Adam Ayre, Muswellbrook Race Club, who will study racing operations as guest of the Hong Kong Jockey Club.
- The conference enabled racecourse managers to gain and exchange information on the latest developments in research, racecourse development, track maintenance and resource management, and to learn from colleagues’ experiences and inspection of operations at major race and training tracks and racing enterprises. This will result in increased ability to practise their profession, leading to higher standards of racecourse management. Benefits accrue from improvements in track performance, appearance and life, and associated economic and environmental advantages for racing clubs and the community.
- The conference also strengthened the resolve of racecourse managers to apply accepted best practices, modified according to their particular situation, and armed them with the knowledge to justify their actions to the many stakeholders in the racing industry.
- Delegates welcomed the news that a similar forum would be organised in 2009 at Morphettville, South Australia, and were asked to provide suggestions regarding format and content.
Background

A survey of grass racecourses in Australia in 1995, funded by the Rural Industries Research and Development Corporation (RIRDC), found a wide variation in the level of racecourse management expertise and technical knowledge. In addition, there was a sense of isolation by many racecourse managers and an expressed need for more information relevant to their jobs.

This led to Racecourse Managers Conferences being held in subsequent years, at Rosehill, Moonee Valley, Doomben, Morphettville, Melbourne, Randwick, Ascot, Caloundra, Launceston, Ballarat, Newcastle, Flemington, and in 2008, the 13th Australian Racecourse Managers Conference, based at the Queensland Turf Club’s Eagle Farm Racecourse, Ascot, Queensland, from August 18-20.

Objective

The objective of the conference was: “Improvement of racing industry communication, education and knowledge on issues of racetrack design, development, maintenance and performance for the advancement of economical and sustainable strategies for racecourse management”.

Introduction

Delegates were welcomed to the conference by Warren Williams, Australian Racecourse Managers Association (ARMA) Chairman. He acknowledged the generous support from the Queensland Turf Club, complementary support by the Brisbane Turf Club and the Sunshine Coast Turf Club, valuable funding contributions by Horticulture Australia and Queensland Racing, and individually thanked the sponsors: Platinum Sponsors - Evergreen Turf, PGG Wrightson Turf, Programmed Maintenance Services, Nuturf Australia, Steriline Racing, Strathayr Turf Systems, Sustainable Turf Renovations and Toro Australia; Gold Sponsors - Coomes Consulting, QTurf Machinery, Rain Bird Australia and Turfcraft Machinery Australia; and Silver Sponsors - Anco Seed & Turf, Equestrian Surfaces, Globe Australia, Turfcraft International and the Venue Management Association, for their support.

Warren noted that the number of delegates and participants was 125 and included 79 racecourse managers, administrators and staff from 52 racecourses and racing organisations in Australia and New Zealand. Many delegates were again repeat attendees from previous years.

He acknowledged the valuable contribution to conference planning by ARMA Committee members, Geoff Murphy, Lindsay Murphy, Murray Pyke, Martin Synan, and John Tonani together with the ARMA Secretary, Arthur Stubbs. The final program was based on priority topics for discussion as determined by delegates at previous conferences. Warren concluded by wishing delegates a rewarding conference.
May, 2008

Circular Letter to:  
Racecourse Managers, Racing Administrators & Interested Persons

13th Australian Racecourse Managers Conference:  
August 18-20, 2008

The Queensland Turf Club welcomes you to the forthcoming 13th Australian Racecourse Managers Conference, based at our Eagle Farm Racecourse, Monday to Wednesday, August 18-20, 2008. This forum continues the established tradition of previous conferences, held at various venues in other States during the past two decades, by providing an annual meeting place and educational opportunity for racecourse managers and associates.

Features of the program include developments at the Queensland Turf Club and in Queensland Racing, pros and cons of Synthetic Track options, Turf Research, Nutrition, Disease Control and Irrigation, and a review of Eagle Farm Racecourse operations and plans. Visits will also be made to view initiatives at the Sunshine Coast and Doomben Racecourses and to the Redlands Turf Research Institute.

The Queensland Turf Club is pleased to be the major sponsor of the conference. Further sponsorship is being obtained from Horticulture Australia Ltd and industry suppliers to defray the total cost of the event. Conference organisation and management will be handled by the Australian Racecourse Managers Association Inc.

Please complete the attached registration form and return it to the address indicated at your earliest convenience. Any enquiries should be directed to the ARMA Secretary, Arthur Stubbs (see attachments for contact details). We look forward to your participation with your peers at this important industry meeting.

Yours sincerely,

[Signature]

STEPHEN FERGUSON  
CHIEF EXECUTIVE

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13th AUSTRALIAN RACECOURSE MANAGERS CONFERENCE

AUGUST 18-20, 2008

EAGLE FARM RACECOURSE, BRISBANE, QUEENSLAND

PROGRAM

Saturday, August 16
Race Meeting – Brisbane Turf Club, Doomben Racecourse

Sunday, August 17
Cushion Track inspection – Murray Weeding, Racecourse Manager, SCTC.
Race Meeting – Sunshine Coast Turf Club, Corbould Park Racecourse.
Welcoming Reception at Doomben Racecourse

Monday, August 18
Welcome & Introduction – Warren Williams, ARMA Chairman.
Queensland Turf Club – history and operations - Stephen Ferguson, CEO
Queensland Racing Scene - Malcolm Tuttle, Chief Operations Manager, Queensland Racing
Equine Influenza – review of events - Reid Sanders, Chief Steward, Queensland Racing
Synthetic Tracks - “What, Why, When, How” – Arthur Stubbs, ARMA Secretary; Viscoride – Geoff Murphy, WATC; Murray Nash, VRC; Pro-Ride – John Tonani, SAJC; David Patrick, Newcastle; ThoroughTrack – James Cataldo, Canberra; Charlie Stebbing, RVL; Cushion Track – Reid Sanders, Queensland Racing; Murray Weeding, SCTC
Eagle Farm Racecourse – Bill Shuck, Racecourse Manager, Queensland Turf Club - preview of features, problems and solutions, track and facilities inspection, review
Synthetic Tracks – group and forum discussion of options and future

Tuesday, August 19
ARMA Website - demonstration
Venue Managers Association - John Benett, CEO
Track Rating Procedures in Australia & NZ – methods, instruments, control
- description of current procedures in Australia and NZ
- group and forum discussion
- conclusions and recommendations
Turf Nutrition – efficient testing and fertilizing - Rachel Poulter, Dept. Primary Industry, Qld
Pests & Diseases of Racecourse Turf – Paul Jackson, Turfgrass Management, Bayer
Doomben Racecourse – Warren Williams, General Manager-Venues, Brisbane Turf Club
- preview of features, track and facilities inspection, review
ScanControl – demonstration and discussion - Robin Wood, ScanControl
E-par Racing – progress and future initiatives – Dean Scullion, Environmental Business Solutions
ARMA AGM
Conference Dinner
- Racecourse Manager awards – Alastair Dowie, Editor, Turfcraft International
- ARMA Honorary Member awards – Warren Williams, ARMA Chairman
- Steriline/ARMA Racecourse Management Scholarship presentation – John Fargher, Managing Director, Steriline Racing
- Guest Speaker – Craig Lovett, Founder & Executive Director, Cleanevent, “Luck & Opportunity”

Wednesday, August 20
Redlands Turf Research Institute – “Turf Research Update”, tour of facility and presentation, Matt Roche, CEO
Close of conference
Race Meeting - Brisbane Turf Club, Doomben Racecourse

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Racecourse Managers Awards – 2008

Awards were again presented in 2008 to recognise racecourse managers and to select an Australian Racecourse Manager of the Year for 2008 from amongst the awardees. Australian Stewards were asked to make the nominations for this year’s awards. The awards are for persons who have made a significant contribution to racecourse management and for developing fellowship among racecourse managers. To be eligible for an award a nominee must conduct TAB meetings and have made a significant industry achievement.

Geoff Murphy, Tracks and Maintenance Manager at the Western Australian Turf Club, was the winner of the tenth Turfcraft International Racecourse Manager of the Year Award in 2008. Other Award winners were: Terry Watson, General Manager Flemington, Victoria Racing Club, for a Significant Contribution at a Metropolitan Racecourse; and Scott Olson, Racecourse Manager, Wyong Race Club, for a Significant Contribution at a Regional Racecourse. The awards were announced at the Conference Dinner by Alastair Dowie, Editor of Turfcraft International, who congratulated all nominees and reported the following comments made by Stewards about the award winners.

Geoff Murphy has been Track Manager for the Western Australian Turf Club for in excess of twenty years. Geoff has been responsible for managing Ascot and Belmont Park race tracks for both training and racing. Geoff was a vital person in the re-construction of the Ascot race track some three years ago and it has resulted in an excellent racing surface – a sentiment supported by local and interstate trainers and jockeys. Geoff oversees and produces excellent training surfaces including trials. He liaises regularly with the stakeholders and combines with the Stewards to speedily resolve any serious track issues.

Terry Watson’s efforts to produce a reconstructed track in the manner it was presented for the conduct of the 2007 Spring Carnival at Flemington was an amazing feat. All participants commented on the condition of the track and how fairly it raced and full credit must be given to Terry and his dedicated team who spent many long hours in the lead up to the Spring Carnival ensuring that it would provide fair racing for all.

Scott Olson is a course manager of considerable talent and over the years has turned the Wyong course proper into what is widely acknowledged as a superb racing surface. This is despite the course being on the edge of swampy marshlands and the track being quite narrow which adds to the challenge given that he has extreme limitations with rail movement. Also, in the past twelve months, Scott has had to deal with floods which covered the entire course. There were concerns that this flood may have had repercussions with the racecourse however the surface has been restored to its former good condition.

Other nominees for the 2008 Awards were:
Steve Andrews – Gold Coast Turf Club
Lindsay Murphy - Sydney Turf Club
Warren Williams – Brisbane Turf Club

Alastair & Geoff
Queensland Turf Club
- by Stephen Ferguson, Chief Executive

Introduction
As a brief introduction and welcome to delegates, Stephen mentioned that he had been a Steward and in that position had found that track managers were the stewards’ best friend on a racecourse. The Queensland Turf Club acknowledges how hard the track manager’s job is, how difficult it can be, and how little thanks is given, but plenty of criticism by those who have no knowledge of turf science. He cited the work of Bill Shuck at Eagle Farm, managing 400 horses in work as well as major course and building improvements, as an example of a track manager’s achievements not readily recognized.

History
Eagle Farm Racecourse, home of Queensland’s most famous race, the Group 1 AMMI Stradbroke Handicap is owned and operated by the Queensland Turf Club Inc. The first meeting was held in 1865 and the Eagle Farm Racecourse is especially important for its strong social significance, including its association, over 130 years, with Queensland Turf Club members, officials, owners, trainers, jockeys and with generations of racegoers from all strata of Queensland, interstate and international society, who have attended the Eagle Farm races for social interaction, recreation and the enjoyment of this sport, so popular in Queensland. This association is reflected in the many changes that have occurred to the site, changes which demonstrate the continued relationship between the racecourse, the grandstands, including later extensions and additions, related structures, such as the totalisator building, the stabling areas and associated gardens and access ways and the entrance gates and ticketing offices, throughout the extensive grounds. These changes, including the inclusion of a special railway branch for racegoers and associated railway station, have contributed to making this racecourse a popular Queensland institution.

Racing
Eagle Farm plays host to one of the biggest racing events on the Australian racing calendar with the running of the Winter Racing Carnival. The feature being the Group 1 AMMI Stradbroke Handicap as well as the Group 1 Queensland Derby, Brisbane Cup, Queensland Oaks, Sires Produce and the T.J Smith. On average there are over 50 race meetings a year with the longest break between race meetings only 15 days.

Future
The Queensland Turf Club has recently merged with the Brisbane Turf Club. The Clubs have appointed developers Watpac to produce a master plan for both venues turning the combined Brisbane Racing Club into one racing precinct.
Coomes Consulting Group

Coomes Consulting is a multi-disciplined consultancy company offering services in agribusiness, engineering, surveying, planning, landscape architecture, urban design and sustainability and environment.

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- Rural Drainage Schemes
- Waterstar House Systems
- Agricultural Effluent System Design
- Feedlot Design

**Feature Projects**
- Moama’s New Zealand Synthetic Track
- Geelong Thorough Track
- Warrnambool Thorough Track
- Seymour Kimpoe, Cranbourne, Yarra Glen, Colac and Benallla Tracks
- Glen Goulburn Dairy Vic
- Goulburn Murray Water Rural Drainage Schemes Vic
- Eurobodalla Station and Bungendore Park WWTP Vic
- Brown Brothers Vic
- Domaine Chandon Vic
- Lindsay Park Stud Vic
- Racing Victoria Limited Vic
- ICM Agribusiness NSW
- Murray Irrigation

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Queensland Racing Scene
- by Malcolm Tuttle, Chief Operations Manager, Queensland Racing

Overview
This presentation discusses the planned or proposed developments at various venues in Queensland and highlights why the developments are considered necessary.

Palm Meadows
Exploring the prospect of relocating racing from Bundall to a site at Palm Meadows.

Reason for possible relocation:
- Current site is constrained in respect of future development;
- New larger site can facilitate on course stables;
- Provides an opportunity for Magic Millions to upgrade facilities;
- Facilitates a larger turf track;
- Facilitates a cushion track; and
- Provides for new amenities.

Issues to consider
- Sustainable financial model;
- Geotechnical considerations;
- Hydrology considerations;
- State Government support;
- Gold Coast City Council support;
- Local residents;
- Traffic considerations; and
- Environmental considerations.

Draft Master Plan
Metropolitan Racing
The memberships of both the Queensland Turf Club and the Brisbane Turf Club have voted to amalgamate to form the Brisbane Racing Club to become effective from July 1, 2009.
Reasons for Amalgamation and Master Planning:
- Generates efficiencies;
- Share resources;
- Single consistent approach;
- Membership benefits;
- Improved financial outcome; and
- Consideration of both courses when expending resources.

Corbould Park - Caloundra
Reasons for Development and Outcomes sought
- This facility was previously owned by the Caloundra City Council and leased back to the Sunshine Coast Turf Club.
- In 2006, the Sunshine Coast Turf Club and Queensland Racing Limited established a “Trust” to purchase this facility.
- The “Trust” now owns Corbould Park and leases the facilities back to the Sunshine Coast Turf Club.
- Currently, due to a lack of stabling in the area, this facility is under utilised as a training facility with approximately 350 horses in work.
- The installation of a synthetic track at Corbould Park has provided the opportunity for Queensland Racing Limited to review the placement of TAB meetings throughout Queensland. QRL is now positioned to allocate additional TAB meetings into the South East of the State to make best use of available horse populations.

Current and Future Developments
Cushion Track:
- Queensland Racing Limited and the Queensland Government recently funded the installation of a “Cushion Track” at Corbould Park.
- The “Cushion Track” is utilised for training and racing and to date seven (7) race meetings have been conducted on this surface.

On-Course Stabling:
- Sunshine Coast Racing has submitted a Development Application to the Sunshine Coast Regional Council for approval to build 400 on-course stables.
- At present only 350 utilise Corbould Park as a training facility due to the lack of stabling in the area.
- This initiative will enable approximately 750 horses access to Corbould Park for the purpose of training.

Continued Current and Future Developments
Installation of Lights:
- Sunshine Coast Racing has submitted a Material Change of Use Application to the Sunshine Coast Regional Council for approval to light both the “Cushion Track” and Course Proper.
- This initiative will enable the transfer of meetings from Toowoomba during the installation of their “Cushion Track”.
- Additionally, Queensland Racing Limited is working with Sky Channel to develop a night/twilight racing schedule that complements Interstate and Overseas meetings conducted during these timeslots.
Clifford Park – Toowoomba
Reasons for Development and Outcomes sought
- Toowoomba is in the grip of the drought and is currently operating under Level 5 water restrictions, with dams in Toowoomba at less than 20% capacity.
- Approximately 700 horses are trained at Clifford Park.
- Clifford Park conducts 58 TAB meetings annually.
- Queensland Racing Limited and the Toowoomba Turf Club are looking to drought proof Clifford Park.
- The Toowoomba Turf Club have developed a draft Master Plan for the facility and in the coming months Queensland Racing Limited and the Toowoomba Turf Club will discuss all available options, to ensure highest and best use is achieved at the facility.

Future and Current Developments
Cushion Track
- Queensland Racing Limited and the Queensland Government have committed to the installation of a “Cushion Track” at Clifford Park.
- After considering all factors associated with the maintenance of grass tracks, stakeholders were consulted and that decision has been taken to replace the existing turf course proper with a “Cushion Track”.
- Materials have arrived on site and the synthetic surface is currently being mixed.
- It is expected that earthworks will commence in November, with a view to work being finalised by February.
- During the construction period horses will continue to work at Clifford Park with race meetings to be transferred to Corbould Park.

Deagon Training Centre
Master Planning has commenced for the Deagon Training Centre
Current Position of Development
- The primary focus of the development is to facilitate increased stabling and training in South East Queensland;
- QRL intends to install a “Cushion Track” as the primary training surface;
- QRL Board has committed to the upgrade of the Deagon Training Centre, including infield stabling and improved training facilities (600 stables);
- Issues considered in development include town planning, track design, surveying for structures and boundaries, traffic, civil and hydraulic engineering, and specific QRL requirements including stabling construction; and
- Warren Williams to be retained by QRL to facilitate best practice in relation to track designs.

Callaghan Park – Rockhampton
Reasons for Development and Outcomes sought
- The course proper at Callaghan Park is used for 50 race meetings per annum.
- Additionally, due to the fact there is no grass training facilities, barrier trials are also conducted on the course proper.
- The course proper has a loop extension, on which all races of 1300 meters and beyond are conducted.
- Both tracks are less than 20 meters wide and the corners have a radii of 130. Currently the widest rail movement is 6 meters.
- Due to the abovementioned issues, the course proper is struggling to cope with its existing workload.
Course Proper Reconstruction and Reconfiguration
- Queensland Racing Limited has developed a draft master plan for the course proper that would see the eradication of the loop extension and construction of a 25 meter wide track in between the existing two turns;
- The master plan provides for a total increase in the track width to 25 meters, which will enable rail movements out to 11 meters;
- The radius and camber of both turns will also be increased as much as possible; and
- The sand track will be upgraded during this process, with a view to removing the necessity to conduct barrier trials on the course proper.
Equine Influenza (EI)
- by Reid Sanders, Chief Steward, Queensland Racing

Review of Events and Outcomes

- August 24, 2007: Queensland Racing Limited (QRL) was notified of possible EI cases in New South Wales – confirmed the following morning.
- August 25, 2007: QRL decided to cancel all weekend race meetings and stakeholders were asked to restrict movement of horses. (DPI&F were not aware of the impending situation at this stage)
- August 26 and 27, 2007: QRL worked on developing a policy to enable trackwork to resume with strict conditions. (Previous experience with Hendra virus outbreaks guided this work)
- QRL sought applications from clubs that wished to open their facility for training under strict biosecurity conditions – to avoid having to lock horses in boxes for extended periods.
- August 27, 2007: QRL required trainers, jockeys and trackwork riders to complete an application form to move or ride thoroughbred racehorses to training areas for training only.
- QRL processed approximately 800 applications from trainers.
- August 28, 2007: Trackwork resumed. QRL continued to cancel all upcoming meetings.
- QRL issued biosecurity instructions for trainers, employees, trackwork riders, farriers and any service providers.
- Track managers and staff were integral to implementation of all measures, eg, recording horse movements, use of footbaths, use of course propers.
- August 28-31, 2007: QRL developed a policy to enable racing in Queensland to resume under strict conditions. The essence of this was horses had to be stabled within a designated precinct.
- QRL made application for race meetings to resume on the appropriate application forms.
- August 31, 2007: QRL met with Department of Primary Industries and Fisheries (DPI&F) and Government officials. Restricted racing to resume from Wednesday, September 5, if current state of EI did not worsen.
  - Wednesday, September 5: Gold Coast Turf Club (GCTC); and
  - Thursday, September 6: Sunshine Coast Turf Club (SCTC).
- Only horses stabled at the clubs could race, and only essential race day personnel were allowed on course. No public or owner access admitted.
- September 2, 2007: DPI&F advised of 22 Infected Premises (IPs)
- September 3, 2007: Additional race meetings in Queensland:
  - Friday, September 7: Toowoomba Turf Club (ToowTC);
  - Saturday, September 8: Queensland Turf Club (QTC); and
- Races were open to the public on September 8 and 9. Brisbane race meetings will be a combination of Doomben and Eagle Farm stabled horses.
- September 13, 2008: The DPI&F implemented a two-zone structure in Queensland.
- September 14, 2007: Racing returned to Deagon after 66 years. First meeting since November 12, 1941. Track was perfect thanks to George Mawhinney. Bill Shuck and Warren Williams helped with equipment.
- EI Update: All EI cases still confined to New South Wales (NSW) and Queensland. As of September 13, 115 sites in Queensland are under quarantine and are considered IPs. EI has been contained to five localities in South East Queensland:
  - Warwick;
  - Brisbane Western suburbs;
  - Minden/Rosewood;
  - Goondiwindi; and
  - Tamborine.
- QRL is continuing to apply to DPI&F to conduct restricted race meetings.
- September 16, 2008: DPI&F advised of 146 IPs
- September 17, 2007: QRL Chairman called for the introduction of vaccine for EI.
• September 19, 2007: QRL commenced to process information regarding whereabouts of all Queensland thoroughbred racehorses to develop a vaccination strategy.

• September 21, 2007: QRL Chairman defends change to racing schedule due to impact of EI

• September 24, 2008: Horses at Hendra return positive for EI, confirmative tests are underway. As a precaution, the metropolitan racing precinct has been locked down. No further training or racing activity will take place until further notice. 700 horses were locked down.

7000 vials of vaccine would be made available to QRL by Friday, September 28, and precincts clear of any clinical signs of EI will be a priority.

Floating by way of permit to approved precincts in the Red Zone has been put on hold.

DPI&F advised of 282 IPs.

• September 25, 2008: Positive results back from Hendra. Entire contamination expected.

Six horses stabled at Deagon showing clinical signs of EI. An apprentice had ridden work at Deagon that morning, and then travelled to Ipswich races, therefore QRL had no option but to abandon the Ipswich meeting.

Due to the confirmed EI outbreak at Eagle Farm and Doomben, QRL suspended all racing in the Red Zone of South East Queensland. Racing in metropolitan Brisbane was expected not to resume until February 1, 2008.

QRL continued to plan a strategy to enable priority distribution of vaccine to the Gold and Sunshine Coasts, and Toowoomba within the Red Zone.

CHAPS applications now available – pay per horse, per day payment to provide for the welfare and ongoing limited exercise of horses. This is to ensure medication and attention is able to be provided to horses throughout the standstill period.

QRL initiatives as a result of EI – Free QTIS Registrations, transferred Rockhampton meeting (from 1/10/07 to 29/09/07 to fill void left by abandoned Doomben meeting), TAB racing in Atherton.

QRL worked towards a TAB racing schedule within the Green Zone. QRL conducted assessments of all available horse populations within Green Zone.

• September 27, 2007: Proposal for 19 TAB meeting in the Green Zone during October. This would see the approximate distribution of $1.3M to stakeholders over approximately 140 TAB races. (Prior to the outbreak of EI, the proposed program composed of 10 TAB meeting and 8 non-TAB and the distribution of approximately $900K to stakeholders)

QRL conducted an EI information session at Eagle Farm on September 28, 2008. The purpose was to ensure that those affected by the outbreak are fully informed as to assistance available to them; QRL were able to speak with stakeholders regarding the current situation and the future of racing in South East Queensland.

- CHAPS;
- EI Hardship Grant;
- EI Business Grant; and
- EI Wages supplement.

Queensland Industry Information Hotline – 1800 200 057.

The CHAPS payment for trainers were made on Tuesday, October 2.

• September 28, 2007: Information Hotline to provide assistance with CHAPS/Hardship funds, vaccinations, employment assistance, stewards and general information. QRL also conducted seminars at Sunshine Coast, Gold Coast, Ipswich and Toowoomba.

QRL took delivery of 7000 Pro-tecflu vaccinations from the DPI&F.

• September 29, and 30 2007: Approximately 5,500 thoroughbreds received their initial inoculation on the weekend at Gold Coast, Sunshine Coast, Ipswich and Toowoomba. QRL had 11 teams in the field from 6:00 AM working through the vaccine schedule. First round vaccinations continued for approximately October 14.

• October 8, 2007: Light trackwork resumed at:

Gold Coast; Toowoomba; Ipswich; Sunshine Coast; Gympie; Nanango; Dalby; Oakley; and Beaudesert.

There was great co-operation between stewards, trainers and racecourse staff during these difficult times.

Biosecurity measures were maintained. Deagon was still closed. Hendra trainers using Doomben or Eagle Farm were permitted to lead horses to the track, but normal trackwork was still suspended. It is anticipated that Deagon and Hendra were immunised during the week of Monday, October 8.
Subject to DPI&F approval, trainers that have been vaccinated and had their premises risk assessed within proximity to the tracks will not be permitted to float horses until Monday, October 15.

- October 10, 2007: Several horses at Ipswich test positive to EI.
- October 26, 2007: Round two of vaccinations continued.
- Doomben confirmed for metropolitan racing resumption on Saturday, December 1. Sunshine Coast and Toowoomba also raced on this day.
- October 29, 2007: Revised race date schedule published for the balance of Financial Year. QRL to publish programs and prizemoney by mid-week.
- October 30, 2007: Over $12M paid in CHAPS.
- October 31, 2007: QRL releases program and prizemoney schedule up to and including January 2008.
- November 5, 2007: QRL considered applications for the movement of thoroughbred racehorses.
- November 9, 2007: QRL has taken approximately 700 Serological (blood) tests from previously infected thoroughbred racehorses in Hendra and Deagon enable approved movements to commence.
- November 16, 2007: Vaccinations to occur in Green Zone. Priority given to horses intending to move to Red Zone, followed by all other horses in the Green Zone.
- November 17, 2007: Commencement of official barrier trials.
- November 22, 2007: 86 Barrier Trials were conducted last week with no fewer than 667 starters.
- November 27, 2007: Non-TAB racing back on track. Four meetings scheduled for Saturday, December 1; Emerald and Longreach in Green Zone and Gympie and Warwick and Red Zone.
- November 30, 2007: Shortage of trackwork riders. QRL’s Licensing Committee is reviewing the category of trackwork rider, with a view to splitting it into two categories – exercise and trackwork riders.
- December 1, 2007: Racing resumed in South East Queensland corner however, strict biosecurity conditions applied.
- December 7, 2007: Changes to Green and Red Zone took effect today. The Red Zone shrunk, with the introduction of an Amber “buffer” Zone, and a greater area of Queensland will be considered Green. Biosecurity measures still in place. QRL continued to PCR (nasal swab) test a range of horse that will be moved between the zones.
- December 18, 2007: Multi movement permits available. This allows the movement of horses between stables and from stables to properties.
- December 20, 2007: Number of IPs continues to decrease. IPs have dropped to 1671.
- January 3, 2008: Quarantine facility approved. Awaiting approval from DPI&F for Grandview Stud as a quarantine facility in South East Queensland. Horses requiring quarantine will be received each Monday afternoon after 2.00 PM to commence their isolation period. The following Monday, those horses will be despatched prior to 9.00 AM.
- February 12, 2008: Zone changes
- March 10, 2008: QRL devised a strategy for third round vaccinations.
- March 13, 2008: QRL placed a third round vaccination order form on website.
- March 14, 2008: CHAPS III closing date. Australia declared provisionally free of EI.
  - Approximately 8000 horse have been inoculated twice with 2000 of those receiving third round inoculations;
  - 3000 movement permits have been issued;
  - senior staff have attended in excess of 150 meetings with DPI&F;
  - 62 notices have been provided to stakeholders;
  - 50 application and information collection forms have been developed;
  - 100 applications lodged with DPI&F for conduct of race meetings and barrier trials;
  - assisted in excess of 150 people to find employment;
  - $55M in CHAPS have been processed (7788 horses, float companies, farriers, race clubs, breeders, jockeys, industry training equipments, risk assessment seminars);
  - 80 Media Releases issues;
  - 35 policies implemented; and
  - 81 EI Bulletins have been published to stakeholders.
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John Farquhar
Managing Director

Sterline Racing Presentation Platform being used to light the Beijing Olympic Torch Relay Cauldron

Chechenya in Russia where temperatures are extreme

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"The little bit of give in the StrathAyr track at the Valley has, as his record proves, really suited Fields Of Omagh.

"This has obviously been of great benefit to myself and the other part-owners of Fields Of Omagh but the yield in the Moonee Valley track is also advantageous to every other owner, or trainer, who races there... because that means you always take a perfectly sound horse home."

"People are talking about artificial tracks and all-weather tracks but in my opinion the StrathAyr surface at Moonee Valley can’t be beaten," says Cups King Bart Cummings.

"It doesn’t matter whether there is heavy rain or a drought the Moonee Valley track is always reliable.

"The fact that there is yield in the track encourages horses to let down and produce their absolute best... the horses love it and so do all true horsemen.

"It is the best racing surface I have seen anywhere in the world and I think there should be more of them," said Bart.

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City of Ryde Council
Sports Facilities Maintenance Coordinator
Ritchie Griffiths

"Drainage had always been a problem for us in the past, since “Recycling Dressing” last spring the rainfall had during the off season would typically have caused puddling and unplayable conditions. These issues were not a problem once I had Sustainable Turf Renovations complete my renovation works."

WIN Stadium Warm Up Arena
Curator
Mick Baraby

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Sydney University Sport & Fitness, Grounds Manager
Ray Hunt

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Mounties Sports Club, Grounds Supervisor
Paul Gill

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Synthetic Tracks
- by Arthur Stubbs, ARMA Secretary

What?
Synthetic, “artificial” or “unnatural” tracks have surface profiles comprised of mixes of sands and emulsions (mixes of viscous and aqueous liquids) to create polymers (aggregated molecules), and other inclusions such as plastic fibres, shredded carpet and rubber. Emulsions bind the sand particles together and provide water repellency. Advantages claimed for synthetic sand surfaces include:
- the cushioning effect is ‘kind’ to horses, helping to reduce injuries to the back and legs and providing secure footing that still allows the ‘give’ necessary for horses to perform to the best of their ability
- initial results indicate they do reduce injuries compared to sand and dirt tracks and can be comparable to turf
- uniformity in various weather conditions
- resistant to wind and water erosion
- dust free
- adaptable to various training regimens ranging from fast work to slow gallops and for racing
- capable of high usage, eg, daily
- less maintenance compared to a dirt track, and
- require little or no water

Disadvantages can include:
- high capital construction cost
- annual maintenance costs higher than turf but offset by increased usage
- some tracks are better in warm weather, some perform best in cool weather and others are superior in high rainfall
- dislodgement of horse shoes
- horses and riders being covered in sandy oily goo
- rock like in cold weather, sticky in hot weather
- a scarcity of independent information that looks at the relative merits of many available brands.

Why?
The development of synthetic surfaces was pioneered in the UK to provide an acceptable surface as compared to turf and natural surfaces during extreme winter conditions, eg, wet weather, snow, ice, etc. Current reasons for interest include their low need for water in Australia compared to turf and their lower injury rates in the USA compared to dirt.

When?
The first synthetic tracks appeared during the 1980s and variations on the theme, all with their own proprietary name, occurred in the following approximate order:
Equitrack (UK)
Polytrack (UK)
Velvettrack (Aust)
Stabiliser Gold (USA)
Viscoride (UK)
Fibre Sand (?)
Pro Ride (Aust)
ThoroughTrack (Aust)
StaLock All Weather (USA)
Cushion Track UK)
Tapeta (USA)
Loksand (?)
How?
Most are made from a selection of graded sands which are blended into a homogenous mixture and then coated with emulsions such as waxes and oils as a fluid binder. Shredded carpet, recycled rubber or various types of plastic fibres may also be included for a ‘cushioning’ effect.
The track surface layer usually varies from 100mm to 170mm depending on the main purpose of the track, eg, training or racing.
Tracks are laid like hot mix bitumen with similar machinery over a gravel layer or a firmer base, ideally with adequate sub surface drainage.
Some tracks drain through the profile, some across the profile, and some drain both through and across.
Maintenance includes:
- regular removal of manure and other organic matter, ideally daily
- light power harrowing after each use
- replenishment of ingredients, usually annually

Summary
- There is a history of failures and successes with synthetic tracks.
- The failures have cost the Australian Racing Industry millions of dollars.
- The synthetic track industry appears to be based on a trial and error approach by the manufacturers.
- There is a lack of independent testing and relative performance data compiled over time to support their use.
- Some tracks have been “works in progress” with gradual improvements by trial and error (eg, Pro-Ride went from using wax to a ‘polymetric binder’).
- No track has ever been installed at a venue on the basis of on site trial work comparing several different synthetic surfaces.
- Punters in Asia prefer to bet on races run on turf.

Cushion Track Inspectors – Corbould Park
Viscoride Tracks

Ascot
- by Geoff Murphy, Tracks & Maintenance Manager, Western Australian Turf Club

The Viscoride track was introduced into Western Australia at Ascot Race Course in the year 2001. It replaced the Wood Fibre track. The cost of this track was approximately $950,000. The track is 2000 metres x 9 metres.

This track is a very good surface to gallop horses on and is a very good surface in winter when other tracks can not be worked on due to excessive rain. It does not matter how much rain falls on the Viscoride track as it maintains its stability, the surface does not change. Trainers at Ascot believe the track gets better with rain.

Cost of maintaining Viscoride is approximately $125,000 per year. This includes weekly maintenance and top up of oils, binders and fibre approximately every 12 months.

I think the track has been a plus for trainers and horses in Western Australia. 100 plus horses use this track every morning. There are some trainers that will not use the track; they think that horses go too fast on it. They just don’t like the surface. They just like to complain about any thing different that is put in front of them.

This surface can get firm, the maintenance on this track is the key. We power harrow every fast work morning and deep harrow every three weeks.

In 2007 the club invested in a major top up of Viscoride. When we did this I discussed with Chris Engelbrecht from Viscoride Advance Track Surface Technologies to change the binder so that the track had less stability in the surface to give a softer feeling. Chris came up with a softer mix and in doing this the trainers seem more enthusiastic to use the track.

The biggest problem if any is that we have to remove contamination off our crossovers before winter rain, as these area turn to slush and become dangerous.

In finishing, if this track could be made so that it was non stick in the heat of the day I think it would be a good surface to conduct trial and racing on.
**Flemington**  
*by Murray Nash, Tracks Manager, Victoria Racing Club*

During the mid 1990s the VRC started looking at alternative artificial tracks to replace the woodchip track. The Woodchip track was good in its middle stages, but when it was new it was very loose and required large amounts of water and it deteriorated very quickly and was becoming too costly to replace.

In 1996 the American Dirt Track was opened at Flemington and following the success of the Viscoride Track at Lindsay Park in South Australia, which had been in for several years, it was decided to install a Viscoride at Flemington. The track was opened at Flemington in July, 1999.

Cost of the track including earth works, base construction, drainage, visco material and running rail was $1.6 million.

The track is 2100 metres in circumference x 7 metres wide. The crossfall on the track is 2% with the turn out of the straight 4%.

Yearly maintenance costs for the Visco are approximately $100,000 including annual track respray and labour costs.

Daily maintenance is generally minimal. The track is normally power harrowed every day taking 2 to 3 hours. If wet weather is expected the track is either wheel rolled with a tractor or rolled with a water sprayed flat roller. Trainers do not like the track left in this state as they say it is too hard. When a buildup of material occurs on the track edges a tractor mounted brush is used to sweep excess visco back onto track.

One advantage of the introduction of the visco has been the decline in the usage of grass tracks. While the horse population has nearly doubled in this period the annual grass track gallops has decreased:

<table>
<thead>
<tr>
<th>Year</th>
<th>Grass Gallops</th>
<th>Dirt Track Gallops</th>
<th>Viscoride Gallops</th>
</tr>
</thead>
<tbody>
<tr>
<td>1995</td>
<td>6,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1997</td>
<td>8,000</td>
<td>35,000</td>
<td>32,000</td>
</tr>
<tr>
<td>2000</td>
<td>4,000</td>
<td>17,000</td>
<td>45,000</td>
</tr>
<tr>
<td>2003</td>
<td>3,500</td>
<td>21,000</td>
<td>45,000</td>
</tr>
</tbody>
</table>

(Sand Track gallops not recorded)

The big positive of course with the Visco, especially in these drought times is it requires no water. When the track is at its prime it repels rain and still gives a very good galloping surface.

One problem we have is with contamination in the area where horses & tractors enter the track bringing on excess from other tracks and crossings (sand,dirt,woodchip). This area becomes sloppy during wet weather.

Trials have been conducted on the Visco however the width of seven metres is a bit restricting.

The track tends to be softer during the warmer months and harder during the cooler months.

Now in it’s tenth year at Flemington, the Viscoride has provided an excellent surface for training in that time.
**Wyong**  
*by Scott Olson, Racecourse Manager, Wyong Race Club*

**Reasons for Choice**  
Viscoride was cheaper

**Constructions Costs**  
Approximately $694,000

**Maintenance Costs**  
Overall yearly binder spray and re-fibre costs $34,000

**Performance – Training and Racing**  
I think what the track has been through, being the flood, etc, it has held up quite well. It does help horses with bad legs. It has taken me two years to get to know what this product is about.

**Pros and Cons**  
The colder the climate the harder the surface. The hotter the climate the softer the surface. You have to adjust your maintenance. Rolling in summer more and power harrowing more in winter. His one on one service is rated a 5 / 10 because he is always overseas.

**Comparison With Previous Tracks**  
The previous track was a Cinders Track. The maintenance on that track was high. It had a high water usage ratio and staff spent a lot of time preparing that track. Also getting hold of cinders was difficult. So that is why we went with the Synthetic Track mainly due to water issues and labour.

**Comparing Tracks - Viscoride versus Proride**  
I haven’t had much to do with the Thorough Track or Cushion Track. I have looked at them all. I do like the Proride just on its consistency.  
My opinion on Synthetic Tracks - low costs and low maintenance.


Pro-Ride Tracks

Morphettville
by John Tonani, Racecourse Manager, South Australian Jockey Club

Decision was made to convert a wood fibre training track to an artificial Pro-Ride training track

Reasons for Choice

- Chose artificial track due to cost savings for ongoing maintenance
- Insufficient supply of woodfibre
- Checked other timber supply options and tried red river gum (broke down too quickly)

Project Costs

- Current Pro-Ride - Supply and Installation  $994,000
- Maintenance – every 12 months
  - In 2003  $4 per square metre = $75,600
  - In 2006  $110,000 with new water resistant product
- Labour - $20,000 pa

Pro-Ride Maintenance

- Annual maintenance (12 to 18 months depending on condition)
- One person minor maintenance  (2 to 3 days per week for 2 hours per day if required)
- No watering required

Wood Fibre Replacement

- Wood fibre replacement undertaken every 2 to 3 years
- Cost to do this in June 2000 was $178,800
- Wood fibre labour costs $85,000 pa

Savings

- Reduced maintenance costs - woodfibre  track requires:
  - labour (wages including penalty rates)
  - water tanker (fuel and maintenance)
  - fuel, oil and maintenance for tractor
  - grading wood fibre track once a week (maintenance of grader, fuel, labour)
  - electricity (pumping water from bore shed)
  - freight charges from Western Australia
  - wood chipping to fibre from landscape supplies
  - removal of contaminated fibre and replacing with new

Training & Racing on Pro-Ride Track

- Training 6 days per week
- Less horses training on grass track
- Trainers get good times and performance from their horses
- Tried trials on this track with limited success due to tightness on the turns (new track 12 metres and cambered)

Pros

- Less maintenance cost than for a grass training track eg. Labour
- All weather track
**Cons**
- Automatic sprinklers for the grass track are adjacent and wind can cause wet patches on the Pro-Ride. This causes havoc for jockeys and horses.
- After running on the Pro-Ride track, horses have a build up of material under their hooves (up to 50mm thick). At this stage not sure of cause and inconsistent occurrences (climatic conditions).

**Conclusion**
- At this stage we are in process of building a new training track with the latest type of Pro-Ride surface (same as Santa Anita in USA)
- This track will have drainage along the rails, and underneath will be full balusters (50mm rocks) to help drain water through the track. Water currently runs off the top of the old Pro-Ride surface to an inside open drain.
- New track will be 12 metres wide with 4% camber on all turns, and 1% on the straights. This will assist in running official barrier trials on the Pro-Ride track. Will save wear and tear on the two grass track racing surfaces.
- Allan Scott Park Morphettville will be SAJC’s only metropolitan racing venue with two turf racing surfaces.
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REDUCED MAINTENANCE
MINIMUM KICKBACK
VERSATILE
SCIENTIFICALLY TESTED
ENVIRONMENTALLY FRIENDLY

This is the best track surface I've seen in the world.
- Bruce McLachlan, Queensland Racing Trainer

The track was consistent the entire way round and you could feel the cushion under the horses which relieves the jar from both horse and rider.
- Ken Pops, Sunshine Coast Jockey

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ThoroughTrack

Canberra
- by James Cataldo, Racecourse Manager, Canberra Racing Club

Track Selection
The Club did extensive research over time into what surface they would use. They had tested many tracks around Australia and liked the ThoroughTrack surface the most.

$2.4 million was spent installing the track in 2004 – this cost includes the installation of lights for training. The track was built with concrete mowing strips to hold material in a base of crushed rock and aggie pipes, spaced at 2 and 8 metre positions.

It has well and truly paid off as the track has been used for training for the past 4 years and racing for the past 2 years.

Costs

Yearly
- Wages for maintenance – 1 staff member per day (2-3 hours)
- Running of machinery to maintain it

Every 2-3 Years
- Adding wax to the track at a cost of approximately $60,000
- To date there has been no need to top up the synthetic material

Maintenance
- Once a month the track requires a full renovation
- This involves using the power harrows, the power rake and then the broom under the rail

Performance
- Approximately 140 horses train on this surface every day, 6 days a week
- This racing calendar, 6 race meetings are to be held on this surface
- These meetings are held during the winter month
- To date, never had to cancel a race meeting
- The cooler the weather, the better the performance of the track (best race meetings generally have a frost that morning)

Training Pros
- Easy to maintain
- Trainers enjoy the surface
- Not as taxing on horses as grass surface
- Jump outs every Wednesday – 6 horses per heat, up to four heats per week
- Knowing that you have a consistent and reliable surface, even after a night of steady rain

Training Cons
- From my experience, none

Racing Pros
- Trainers know that they are going to have a good surface to run on during the winter months
- No need to move rail
- No watering or fertilising

Racing Cons
- Can only have a field of 12 horses for every race (set by fixed width of 16m)
Geelong
- by Charlie Stebbing, Tracks & Facilities Manager, Racing Victoria

<table>
<thead>
<tr>
<th>Meeting Type</th>
<th>Ave Strs</th>
<th>Total Off course</th>
<th>Ave Off course</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geelong TT All</td>
<td>10.2</td>
<td>$32,934,804</td>
<td>$1,372,284</td>
</tr>
<tr>
<td>Geelong TT Programmed</td>
<td>10.6*</td>
<td>$25,763,974</td>
<td>$1,431,332</td>
</tr>
<tr>
<td>Geelong TT Additional/Transferred</td>
<td>9.1</td>
<td>$7,170,830</td>
<td>$1,195,138</td>
</tr>
<tr>
<td>Friday All</td>
<td>10.8</td>
<td>$80,048,805</td>
<td>$1,539,400</td>
</tr>
<tr>
<td>Friday Geelong TT</td>
<td>11.2</td>
<td>$14,512,468</td>
<td>$1,612,496</td>
</tr>
<tr>
<td>Friday Other</td>
<td>10.8</td>
<td>$65,536,337</td>
<td>$1,524,101</td>
</tr>
</tbody>
</table>

- Since the inception of the ThoroughTrack, there have been 26 meetings held:
  - 19 programmed
  - 4 transferred - 18/7/07 (Sandown), 22/7/08 (Kilmore), 29/7/08 (Kyneton), 12/8/08 (Kyneton)
  - 3 additional - 16/7/07, 23/7/07, 30/7/07 (to cater for those horses looking to race after recent abandonmen

**Issues with Synthetic Tracks**
- Traffic & Wear management
  - Cones
  - Track Width
- Drainage
- Correct Maintenance Machinery
- Plinths (Design & Maintenance)
- Horse/Jockey Welfare (Summer Racing /Heat)

**Victorian ThoroughTracks**

<table>
<thead>
<tr>
<th>Location</th>
<th>Length (inside rail)</th>
<th>Width</th>
<th>Configuration / Note</th>
<th>Installation date</th>
<th>Project value (AUD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seymour</td>
<td>1,540m</td>
<td>6m</td>
<td>Training only – prototype track – 60 to 80 horse circuits per day</td>
<td>March 2004</td>
<td>$600,000</td>
</tr>
<tr>
<td>Ballarat</td>
<td>1,755m</td>
<td>6m</td>
<td>Full training track</td>
<td>October 2004</td>
<td>$800,000</td>
</tr>
<tr>
<td>Canberra</td>
<td>1,600m</td>
<td>15m</td>
<td>Training and racing track</td>
<td>October 2004</td>
<td>$1,200,000</td>
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<tr>
<td>Mornington</td>
<td>1,580m</td>
<td>8m</td>
<td>Training track</td>
<td>July 2006</td>
<td>$1,600,000</td>
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<tr>
<td>Geelong</td>
<td>1,853m</td>
<td>16m</td>
<td>Racing and training track</td>
<td>July 2007</td>
<td>$3,900,000</td>
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<tr>
<td>Warrnambool</td>
<td>1,680m</td>
<td>7m</td>
<td>Training track</td>
<td>June 2007</td>
<td>$2,200,000</td>
</tr>
<tr>
<td>Bendigo</td>
<td>1,700m</td>
<td>7m</td>
<td>Training track</td>
<td>May 2007</td>
<td>$1,100,000</td>
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</table>

**Future Directions**
- Cranbourne Training Complex – new synthetic (racing?) track
- New Zealand Synthetic Track Development Program
- Victorian “BluePrint” strategic direction
  - Balance of required training tracks
  - North East Victoria & Gippsland
In late 2005, Queensland Racing Limited (QRL) commenced investigations into various synthetic surfaces throughout the world.

There are 4 primary drivers pushing the development of synthetic track surfaces:

- Drought proofing of training and racing facilities
- Industry’s pursuit of a low cost alternative to grass
- Reduce the cost of providing training facilities
- Potential to improve overall economics/viability of the industry by racing on a synthetic surface

QRL received a grant of $12 million from the Queensland State Government which will be supplemented by QRL to eventually install three synthetic tracks. The Sunshine Coast Turf Club racecourse was chosen as the guinea pig for installation of the state’s first synthetic training and racing surface because of the extremes of heat and wet often experienced at Caloundra.

The Cushion Track was selected as the best fit for Caloundra for a number of reasons including:

- Currently installed in temperatures ranging from -10C (UK and Detroit) to +48C (Florida)
- Ingredients are engineered to ensure they are suitable for each particular climate
- Testimonials are excellent from current installations (Hollywood Park, various training facilities in UK)
- Track life of 7–10 years with a warranty of 7 years. Training of staff and quarterly inspections by supplier
- Requires minimal irrigation and has minimal kickback
- Good testimonials about equine benefits/animal welfare

The Cushion Track replaced the Club’s existing sand track and comprises a formulated mixture of long and short synthetic fibres, rubber, silica, sand and wax. Construction began in August, 2007. The circumference of the new track is 1760 metres with a 400 metre straight and it is 17.2 metres wide. It has a 175 millimetre deep profile that comprises all new materials over a fabric liner which is laid over a gravel layer. 9,000 tonnes of Cushion Track material were laid. Particular attention has been paid to ensure adequate vertical drainage through the profile with underlying PVC pipes removing water under and across the track to the inside rail.

Daily maintenance includes removal of manure and organic matter to prevent contamination of the profile and track grooming to 25-50mm. Power harrows are used weekly to a depth of 50-125mm, according to weather and compaction, to maintain a level and consistent surface, assist drainage and prevent a hard layer forming. Every month, material from under the rail is swept back onto the track and a track depth check is taken to maintain the required 175mm profile. Regular measurements of track temperature, moisture and firmness are taken to monitor performance. All maintenance is recorded and lodged with Queensland Racing to comply with warranty conditions.

Staff numbers comprise 6 full time track staff, 2 full time maintenance staff, 2 gardeners and 2 track supervisors which includes the pool.

Horses in work on the Cushion Track have increased substantially compared to the previous sand track with about 300 each morning from Monday to Saturday. Most of these would previously have worked on the No 2 grass which now only has 25-30 horses each Tuesday.

The new track had its first barrier trials on March 13 and the inaugural race meeting was held on April 6. Racing is scheduled every third Friday, a total of 17 for the year which, combined with 54 meetings on the course proper, gives the Club 71 race meetings a year. Trainers and jockeys alike are very complimentary about the Cushion Track, its evenness and softness for horses.
Synthetic Track Forum

Group and forum discussion was held to consider synthetic track options and their future. The following points were made:

- Synthetic tracks are here to stay in Australia, definitely for training and probably for racing, due to the beneficial effects on horses, minimal water requirement compared to grass, and for racing, their ability to cope with wet weather or drought.
- It is impossible to know which of the current options are better than the others because none has stood the test of time, they tend to be located in different climatic zones, not side by side, and there is no comparative objective data between the alternatives. Testimonials from managers, jockeys and trainers are probably the best available guide currently.
- There are no standards or specifications for these tracks at the moment. The industry could collect data such as infiltration rates, firmness, etc, on tracks for comparison.
- Some tracks have given poor results, others have performed to expectations at least for certain times of the year.
- Inadequate drainage has been a cause of poor performance or failure and there appears to be a lack of application of the principles of profile physics in many designs and constructions. Good drainage is fundamental to their success.
Eagle Farm Racecourse
- by Bill Shuck, Racecourse Manager, Queensland Turf Club

2006/07 Season  49 Meetings  397 Races  4625 Starters  11.6 Runners per race
2007/08 Season  36 Meetings  293 Races  3532 Starters  12.5 Runners per race (EI interrupted season)

The Course Proper is a 2027 metre spacious track varying in width up to 30 metres and is widely acknowledged as one of the fairest and most consistent racing surfaces in Australia with rail movement and barrier placement having little effect on race results.

Track Information - Course Proper

<table>
<thead>
<tr>
<th>Circumference</th>
<th>Width</th>
</tr>
</thead>
<tbody>
<tr>
<td>2027m</td>
<td>28m</td>
</tr>
</tbody>
</table>

Grass Type: Kikuyu
Fertilizers Used: Lesco Slow Release, 24-2-9, 18-10-9, Nitrosert, Kelpac
Fungicides Used: Banol, Royal GT, Signiture, Baycor
Herbicides Used: Lesco Fertiliser/Pre-Emergent
Insecticides Used: Meridian, Nemacure
Irrigation: Rainbird Site Control System, Rainbird & Weathertec popups

Training Tracks

<table>
<thead>
<tr>
<th>Training Tracks</th>
<th>Circumference</th>
<th>Width</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. 1 Grass</td>
<td>1942m</td>
<td>12m</td>
</tr>
<tr>
<td>No. 2 Grass</td>
<td>1680m</td>
<td>14m</td>
</tr>
<tr>
<td>All Weather Dirt</td>
<td>1841m</td>
<td>16m</td>
</tr>
<tr>
<td>Sand</td>
<td>1774m</td>
<td>9m</td>
</tr>
</tbody>
</table>

Training Track Profiles
Training is conducted seven days a week 365 days a year.

No 1 Grass
- Open Between 4.00am and 8.00am on grass mornings.
- Grass Mornings are Tuesday, Thursday and Saturday.
- Jump outs held on this track once a month.
- Official trials held on this track once a month.

No 2 Grass
- Open between 4.00am and 8.00am on grass mornings
**All Weather (Dirt)**
- A sand and bark Composite for fast and slow work.
- Open six days a week
- Jump-outs held on this track every fortnight
- This track is intensively maintained during the day and night to ensure it is kept to the highest standard.
- The All Weather Dirt is regarded by most local trainers and many visiting trainers as one of the best training tracks in Australia with its unique mixture of firmness and cushion it provides an excellent galloping surface for horses.

**Sand**
- Open six days a week generally for slow work.

**Bullring**
- Two bullrings on course used seven days a week.

**Swimming Pool**
- Filtered swimming pool located in the center of course is open seven days a week.

**General Information**

<table>
<thead>
<tr>
<th>On-course Stables</th>
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</thead>
<tbody>
<tr>
<td>Number Of Horses In Work</td>
<td>430</td>
</tr>
<tr>
<td>Area Of Site (acres)</td>
<td>155</td>
</tr>
<tr>
<td>Number Of Staff</td>
<td>29</td>
</tr>
<tr>
<td>Number of Eagle Farm Trained Starters 2007-2008</td>
<td>2724</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Rainfall</th>
<th>2007</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rainfall</td>
<td>693 mm</td>
<td>744.5 mm</td>
</tr>
</tbody>
</table>

**Recent Developments**

Over the past five years the Club has used maintenance staff to conduct renovations to a number of areas on the racecourse both on tracks and buildings. It was felt that by using maintenance staff it would help reduce cost and insure better quality.

These include:
- St Leger area; Ascot Enclosure; Laboratory Bar; Rough Habit Bar
- Number Two Grass Training Track
- Computerized Irrigation System
- Vice Regal Room; Oaks Bar; Guineas Room; Champagne Bar; Members Betting Ring
- Enlargement of existing dam
- The construction of a new irrigation dam that when full will virtually “drought proof” the facility.
- New retaining wall on inside and outside of the All weather track plus new outside running rail (under construction).
- The implementation of new running rail for the course proper that is higher and therefore safer than the rail of old. The old rail will be used on the Number One Grass training track.

With the untimely arrival of Equine Influenza in August last year, it provided an opportunity to undertake capital works that had been earmarked for the future. These include:
- The removal of the old crossing at the 600m mark
- A new walk-way and saddling paddock
- Re-location of training to race day stalls
- The conversion of the old tie-up stalls near the 600m crossing into stables

40
Venue Management Association
- by John Benett, Executive Officer

History
The Venue Management Association (Asia and Pacific) Limited was incorporated in 1992 to provide management practitioners of public assembly facilities in Australia, New Zealand and the Asia Pacific region with their own organisation, dedicated to their professional development and to the growth and success of the venue management industry.

This followed humble beginnings in the early 1980s when a small group of Australia's capital city venue managers would meet occasionally to discuss issues of common interest. As the industry grew, the participation broadened to include colleagues from many different types of venues and in November 1989 the first full conference was held in Melbourne.

Since then the Association has gone from strength to strength. It now has over 600 members, representing over 300 organisations throughout Australia, New Zealand and South East Asia, as well as members in the USA, Canada, Asia, India & UK.

Objectives
- to promote co-operation and assistance between persons and organisations associated with public venue management;
- to provide education and training opportunities for the industry;
- to promote the use and development of public venues for the economic and cultural benefit of the community;
- to assist in developing the profession of public venue management at its highest level;
- to liaise with national and international associations of persons involved in public venue management.

Benefits
The many BENEFITS of VMA membership has now increased with the affiliation of VMA and the International Association of Assembly Managers, the largest venue management association in the world, giving free membership of IAAM for VMA members and providing a wider range of added programs and services.

What's in it for you? Repeatedly, our current members say networking is the most valuable benefit of joining VMA. When members have problems and need solutions, they turn to VMA membership or to the friends they make at VMA events. In this case, networking becomes a tool for you to use in problem solving and issues that you face daily.

There are many tangible benefits like:
- Educational and training opportunities
- All graduates of Public Venue Management School can apply to gain a TAFE Diploma in Venue Management
- Membership data upon request. This is KEY to your networking data base
- You can now gain a SIRIUS achievement industry recognition even if you are only 1 or 2 years into the Venue Management industry!
- Priority placement in the Public Venue Management School
- PVMS is now in its 14th year!
- Discount registration at Annual Congress & Trade Show (2009 on the Gold Coast, Queensland)
- Access to E-News publications and Email Forums
- Access to all IAAM publications
- FREE copy of Facility Manager magazine delivered to you every two months
- Distribution of industry information and links
- Free subscription to Australasian Leisure Management
- Sponsorship and advertising opportunities on web sites and in publications
- Invitations to regional membership meetings and seminars
- Opportunities to enrol in tertiary level courses and training
- Valuable personal networking opportunities
- International links

[ Contact John Benett for more information, 07 3870 4777, www.vma.org.au ]
ASCOT RACECOURSE CHOOSE TERRA SPIKE TO ASSIST WITH £185 MILLION REDEVELOPMENT

Ascot Racecourse, currently undergoing a £185 million redevelopment programme, has purchased a Wiedenmann Terra Spike XF to assist with maintenance of the new turf at the prestigious horse racing venue.

The Terra Spike XF is the very latest deep aerator from Wiedenmann and is up to three times faster than conventional deep aerators. That was one of the prime reasons behind head groundsman, Gilly Gilford’s decision to purchase this particular machine. “The speed that this machine operates is superb”, he said. “Time is an important factor and we have achieved 13 hectares in just two days with the XF. We are paying particular attention to the newly turfed areas, especially the Straight Mile Flat Course.”

The rebuilding of the Straight Mile has been a significant achievement and is major feat of engineering having been moved 42 metres north of its original position. It has a very high sand content, unlike the original soil, which was loam based. “The high sand content will greatly aid the drainage, especially as we have lateral drains every 6 metres along its entire length. However, it can compact quite considerably, especially after heavy rain”, he said. “Regular aeration with the XF across the full width of the track will help keep the ground open and provide the ‘give’ that we need for racing.”

The XF was purchased from local dealer, TH White Ltd in Reading, who have provided various turf maintenance to Ascot over the years. Commenting on the XF, Jeremy Tonks, Territory Sales Manager said, “Obviously Gilly is very impressed with the speed of the machine, but it also has other benefits which make it a viable alternative to other aerators. It is very low maintenance with a minimum of greasing points. It is very smooth in operation and its vibration dampening system is very efficient resulting high levels of operator comfort. Removing or replacing different tines can be achieved in minutes, due to its patented tine retention system.”

Gilly Gilford is a highly respected figure in the racing world and has been responsible for the Ascot turf for the past 10 years. Previously he worked with United Racecourses at Epsom and other courses within the group.

Wiedenmann is available in Australia from Qturf Machinery Pty Ltd. Contact Terry on 0428 290009. Email: terry@qturf.com.au Web: www.qturf.com.au.
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Track Rating Procedures

Group and forum discussion was also held on this issue to consider several components of track rating procedures in Australia and New Zealand. The following general consensus was reached:

Standard Method
- A standard method of track rating, covering all procedures, is considered desirable for all Australian States and New Zealand, despite the probability of variable measurements between tracks
- The ideal system for expressing ratings is the 1-10 scale with a gradual move to giving numbers without descriptions
- Ratings should be publicised using the 1-10 scale only, not with penetrometer readings

Instrument Preferences
- The Penetrometer is the most widely used instrument but is not considered ideal and should only be used as a guide to track ratings
- The Clegg Hammer is also used in some cases and moisture sensors were reported as valuable but no one device is clearly the best
- Some regional tracks do not have access to an instrument
- Proposed trial work on various alternative measurement devices may point to better equipment to help with track rating
- A track manager’s experience is vital in assessing tracks with the instruments being a useful guide

Timing of Measurements
- Important readings and ratings of tracks start with the morning of the day before the race meeting, to coincide with final acceptances, followed by race day morning assessments
- Race day morning penetrometer measurements and other assessments can be assisted by horse gallops

Release of Ratings
- The track manager should release the first rating of the track on the morning of race day based on measurements and assessment
- Control of track rating then passes to the stewards when they assume responsibility for the race meeting however stewards should, and often do, liaise with the track manager, and jockeys and trainers if necessary, if any official change in rating is to occur
- The track manager, having the most expertise regarding a particular track, accumulated over many days and years of management and maintenance, is best placed to give accurate track ratings
Turf Nutrition for Racetracks
- by Dr Rachel Poulter, Scientist, Queensland Department of Primary Industries & Fisheries

The soil profile is dynamic:
- While the turfgrass plant is a living organism we can also look at the soil as a ‘living’ system.
- Don’t expect it to be the same as it was 2 years ago.
- Not just an issue during drought years but water stress is enhanced when the soil is in a poor condition.

Why Test Soil?
- Assess land capability
- Identify & quantify soil constraints
  - e.g. salinity, nutrient limitations & imbalances
- Monitor soil fertility levels
- Develop fertiliser recommendations
- Diagnose problems
- Choose the right species/cultivar

Basics
- Take a representative sample of soil - minimum of 10-15 soil cores at random across a uniform area
- Take separate samples from areas that are obviously different
- 0-10 cm soil cores standard – sample to rooting depth (~30cm or more in this case) - vary if additional layers found in 0-10 cm depth - vary (or additional samples) to look at deeper soil
- Remove thatch (soil test not tissue test – don’t mix them up)
- Also pays to take notes- any turf problems, date, location etc.
- Same time each year – comparable results due to variations in nutrient content through year
- Analyse soil by procedures developed for that region
  - calibrated against fertiliser trials
- Interpret results using criteria developed through calibration trials
Soil analysis – which tests?
- Depends on the ultimate use of the data
- Start with pH
- More comprehensive tests
  - major nutrient elements
  - minor (trace) elements
  - exchangeable cations
  - soil organic matter
  - salinity (electrical conductivity), etc

Soil acidity (low pH)
- Soil acidity often limits plant growth due to aluminium and manganese toxicity, calcium, magnesium, molybdenum and phosphorus deficiency, and reduced microbial activity.
- You only need to add enough liming material to overcome the growth limitations – typically a pH of 5.0-5.5 will overcome aluminium toxicity.

Essential nutrients
- Macronutrients
  - structural roles in the plant
  - primary macronutrients: nitrogen (N), phosphorus (P), potassium (K)
  - secondary macronutrients: calcium (Ca), magnesium (Mg), sulphur (S)
- Micronutrients (trace elements)
  - regulatory roles in the plant: iron (Fe), manganese (Mn), zinc (Zn), copper (Cu), molybdenum (Mo), boron (B), chlorine (Cl), nickel (Ni)

Because turfgrasses are very efficient in extracting micronutrients from the soil, the use of agronomic or horticultural guidelines to evaluate soil test data for turfgrasses is likely to overestimate their micronutrient needs - in general, iron (Fe) and manganese (Mn) are the micronutrient deficiencies most likely to be encountered and only in some situations. Conversely, toxicities are also rare because turfgrasses are generally tolerant of high micronutrient levels.

Deficiency and toxicity
- Any of the essential elements may be present in lower than optimal (deficient) or excessive (toxic) amounts
  - N, P, K are the most common macronutrient deficiencies
  - Ca, Mg, S deficiencies are much less likely
  - Fe, Mn are the most frequent micronutrient deficiencies
- Toxicities may also result from other elements or groups of elements
  - sodium (Na), arsenic (As), etc
  - bicarbonate (HCO3), etc

Nitrogen deficiency – (mobile in the plant)
Stunted growth, older leaves lose colour, decreased tillering and density. General chlorosis across leaf, progressing to base, leaf tips and older leaves brown

Phosphorus deficiency (mobile)
Slowing of growth, dull green colour, purpling of leaf margin, low turf density, no growth, reddish tint of whole leaf

Potassium (mobile)
Soft leaves => droop, decreased tillering, interveinal yellowing of older leaves, loss of turgidity, reduced rooting & rhizome growth, . Leaf margins brown, leaf tips roll and wither. Plants more susceptible to wear, stress and disease.

Calcium – (immobile)
Younger upper leaves reddish brown on margins, older leaves reddish, Colour fades to pale red leaf tips wither and curl.

Magnesium (mobile)
Older, lower leaves, pale green to cherry red, shoot growth reduced, these leaves also go blotchy. Older leaves necrotic first.
Sulfur (mobile)
Older lower leaves pale green, leaves turn yellow green in interveinal areas, tips brown. Browning progresses to base.

Iron (immobile)
Intervernal yellowing of younger leaves, chlorosis of older. Patchy symptoms of spindly plants, with some leaves whitish in colour

Manganese (immobile)
Intervernal yellowing, leaf tips remain green. Leaves droop, with small necrotic spots, entire leaf then discolours, withers and rolls.

Soil analytical methods
- Extractants specific to different regions
  - availability of nutrients
  - calibrated against plant growth in regional fertiliser trials
  - correlations differ with soil type & climate
- Privatisation & globalisation of analytical services
  - samples submitted through local (fertiliser) companies
  - may be tested at distant or overseas laboratories
  - tested using uncalibrated methods
  - glossy printouts & fertiliser recommendations
  - information on methodology & extractants lacking

Water extraction tests
- Saturated paste or 1:5 soil:water extracts
- Excellent for measuring salinity
  - measures the salts that affect plant roots
  - expressed as Electrical Conductivity (EC)
- Misleading when used for fertility assessment
  - measures only what is in soil solution at sampling
  - very small % of plant-available nutrients in soil solution
  - varies greatly with rain or irrigation events

Plant roots exude acids that solubilise some of the water insoluble phosphates. Most available potassium for plant growth is found on the soil exchange sites.

While some methods ‘have frequently yielded valuable data in the particular problems for which they were first proposed, they have too often been adopted by other workers for entirely different soil types or used under entirely different conditions. It is not, therefore, surprising that under such conditions they often gave erroneous and conflicting values.’

Accredited laboratories
- Was soil testing carried out accurately and are the reported data reliable?
- Australian Soil and Plant Analysis Council (ASPAC) - conducts proficiency testing among member laboratories.
- ASPAC-accredited laboratories = assurance of quality analytical services
- Currently 31 laboratories are listed as having ASPAC accreditation in Australia. www.aspac-australasia.com

ASPAC aims and objectives
- Provide a national and international focus for promoting excellence in all aspects of soil and plant analysis.
- Encourage and promote the adoption of preferred methods and protocols used in soil and plant analysis within Australasia.
- Facilitate national and international communication
- Stimulate training, research and development in soil and plant analysis.
ASPAC’s Laboratory Proficiency Program

- Inter-Laboratory Proficiency Programme (ILPP). 3 rounds with 4 soil or plant samples in each round;
- Samples are analysed by participating laboratories throughout Australasia, SE Asia, and the South Pacific.
- Data is collated and a confidential report is e-mailed to each participating laboratory.
- Results and performance data are confidential to the participating laboratory.
- The ASPAC ILPPs are designed to enable valid comparisons between results from laboratories who use a range of methods.

Interpreting soil analytical reports

- Rate nutrient levels according to criteria developed in calibration experiments
  - very low, low, medium, high, very high
- Take into account
  - site history
  - grass species grown
  - quality of current turf growth
  - precision of the data

Very low suggests highly probable response to fertiliser application.
Very High suggest highly unlikely that there will be a response to fertiliser application.

The development of accurate interpretation criteria kind requires extensive field research, which has generally been restricted to field crops, forages, and horticultural crops.
By and large, turfgrass category ratings have been derived from closely related plants and adjusted over the years by experienced turfgrass scientists.
Calibration studies typically concentrate on the major macronutrients, phosphorus and potassium, so that correlations with extractable levels become increasingly tenuous with the micronutrients where deficiencies are less likely to occur.

As indicated earlier, it is of vital importance to know the method of analysis used, and for this to be specified in the soil analysis report.
Different extractants and different extraction times will remove different amounts of nutrient from the soil, so that different methods require different interpretation criteria.
A new extractant and/or time of extraction will require new interpretation criteria to be developed through new regional calibration trials.
Guesswork or anecdotal evidence, or even field data from other parts of Australia or the USA where the soils and climates are different are not appropriate.

Nitrogen requirements

- Main element required to promote grass growth, BUT the most mobile & easily leached nutrient
- Base recommendations on long-term regional fertiliser trials
- Modify according to: soil organic matter levels; turf use; turf variety; colour and quality required; geographical region & soil type

Tests in the US have shown that too much Nitrogen can lower root production significantly (max at 30 lb per acre/year but minimum at 60 lb per acre per year)

Two schools of thought …

- SLAN (sufficiency level of available nutrients)
  - Estimates the nutrient supplying power of the soil and ranks on ability to supply plants needs.

versus

- BCSR or BSR (base cation saturation ratio/Albrecht theory)
  - Compares relative levels of basic cations
**Exchangeable cations**

- Cations (positively charged) - held on surfaces of fine soil particles (clay, organic matter)
- Small proportion of cations also in the soil solution
- Cation exchange - movement of cations between reservoir & soil solution
- Cation Exchange Capacity (CEC) - capacity of a soil to hold the major cations Ca, Mg, Na, K (plus H, Al, Mn in very acid soils)

Clay minerals and organic matter negatively charged acts as a reservoir for nutrients & prevents leaching of nutrients. CEC is a measure of how much negative charge there is, the higher, the more cations held.

Sandy soils, CEC < 5 cmol/kg. Heavy clay soils 50-60 cmol/kg. Decomposed humus 140 -200

**The mechanism of plant cation uptake**

Potassium uptake – remember that plants need lots of K (3%)

Low affinity uptake
- driven by charge imbalance
- also drives Ca²⁺ and Mg²⁺ uptake
- cation competition

High affinity uptake
- highly specific
- high energy cost
- only used where K⁺ is limited

The effect of these uptake mechanisms is that the plant can control uptake – it can cope with a wide range of nutrient supply conditions.

However, cation competition can restrict uptake inducing deficiency. This only happens at extreme ratios.

In very saline situations, uptake of sodium into the plant is sufficient to interfere with the plants use of potassium in the leaves, but it does not prevent potassium uptake from the soil.

**What about soil structure?**

Soil structure is an important property. The chemical properties of the soil also affect the soil physical properties and biological properties.

The ideal ratio we have been discussing is probably more relevant in terms of soil structure, but only in soils with a high clay content.

Individual soil particles are attracted to each other and under certain conditions can ‘flocculate’ to form larger aggregates.

Ca²⁺ is a desirable cation (promoting aggregation) Na⁺ is undesirable (causes dispersion). Mg⁺ also undesirable (causes dispersion when concentrations are double that of Ca²⁺). Dispersal equals loss of structure.

Poor soil structure results in: crusting and hardsetting; decreased water infiltration; decreased oxygen movement; increased erosion; and POOR PLANT GROWTH

**Critical evaluation of base saturation ratio concept**

- Based on the assumption that:
  - Plants should grow well in soils with an ‘ideal’ cation saturation ratio
  - Plants grow better if soil cation ratios were adjusted to these ‘ideal’ values?
- Wide variations in % CEC saturation reported, but do not correlate well with plant growth response
- Relying solely on the BSR approach to make fertiliser recommendations is both scientifically and economically questionable (Haby et al., 1990)
- BSR is a soil-based concept
- The use of base saturation ratio commonly results in recommendations of Ca, Mg and or K that are unnecessary when interpreted using sufficiency levels.
- Does not take account of nutritional differences among plants
- Recommendations not based on calibration trials

But for sandy soils saturation by Na does not influence structure.
Also note that for turf there has been little research and correlation of nutrient requirements. Much of the interpretation is from agricultural commodities with the ultimate aim of maximising productivity. Turf is a different ‘crop’ in this respect as we are interested in maximising quality parameters rather than overall ‘yield’.

“The ratio of exchangeable cations will not influence plant growth or soil structure” (except at extreme ratios) Peter Kopitke & Neil Menzes (2006). At extreme ratios, a deficiency of one element was caused by excess of others.

**Plant tissue analysis**
- Monitor plant nutrient levels - direct check on soil fertility programs
- Extraction methods more straightforward than soil testing & universally applicable
- No calibrations yet for most Australian turf grasses
- Complements soil test to give a better picture of nutrient status

Typical concentrations in turfgrass clippings and sufficiency levels:

<table>
<thead>
<tr>
<th>Nutrient</th>
<th>Range</th>
<th>Sufficiency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nitrogen</td>
<td>2.2-6.0%</td>
<td>2.8-3.5%</td>
</tr>
<tr>
<td>Phosphorous</td>
<td>0.25-0.70%</td>
<td>0.3-0.55%</td>
</tr>
<tr>
<td>Potassium</td>
<td>1.2-3.5%</td>
<td>1.0-2.5%</td>
</tr>
<tr>
<td>Calcium</td>
<td>0.30-0.75%</td>
<td>0.5-1.2%</td>
</tr>
<tr>
<td>Magnesium</td>
<td>0.15-0.35%</td>
<td>0.2-0.4%</td>
</tr>
<tr>
<td>Sulphur</td>
<td>0.20-0.60%</td>
<td>0.2-0.5%</td>
</tr>
<tr>
<td>Iron</td>
<td>100-500ppm</td>
<td>35-100ppm</td>
</tr>
<tr>
<td>Manganese</td>
<td>30-100ppm</td>
<td>25-100ppm</td>
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<tr>
<td>Zinc</td>
<td>20-70ppm</td>
<td>20-50ppm</td>
</tr>
<tr>
<td>Copper</td>
<td>10-50ppm</td>
<td>10-20ppm</td>
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</tbody>
</table>

**Conclusions**
- Take a representative sample
- Use certified, independent laboratories
- Combine soil test data with plant tissue analysis for the complete picture
Deep aeration of turf playing surfaces is essential for the maximum absorption of water and nutrients, for exchange of gases and to promote deep roots and a healthy sward. **SISIS deep slitters give deep, clean penetration.**

**MEGASLIT**
The 2.5m wide MEGASLIT is the largest of the SISIS deep slitters and offers the deepest penetration, from 25cm to 30cm.

**MULTISLIT**
The MULTISLIT is the smallest of the mounted deep slitters and is 1.2m wide. Each plate is fitted with 5 tines, giving penetration from 15cm to 20cm.

**MAXISLIT**
The MAXISLIT is a deep slitting aerator designed for outfield turf, with 17.6cm or 22.8cm penetration. The 1.6m working width means quick coverage over football and rugby pitches, cricket outfields and hockey pitches.

**LITAMINA**
Compact PTO driven sweeper for efficient collection of all turf debris. Easily adjustable, spiral brushes drive debris into large capacity hopper. Standard 3-point linkage mounted with single acting, hydraulic tipping facility.

**LITAMISA**
Tractor mounted sweeper and collector for use on golf fairways, parkland and playing fields. Hard wearing spiral brushes are driven by the tractor pto. The high tip hopper can be emptied without the operator leaving the tractor seat, directly into trailer or skip, to a height of 150cm.

**SR 64**
Now you can deep line your greens without using a large tractor.

**SR 72**
Fastest of all deep line aerifiers. Wide enough to cover most turf line tasks.
Turf Racetrack Range
Instant Turf and Seed

RACETRACK TURF:
• Kikuyu
• Tall Fescue
• Kikuyu/Ryegrass
• Kentucky Blue/Ryegrass
• Contract Growing
• Laying Service

RACETRACK SEED:
• Winter active Ryegrass
• Kentucky Blue
• Tall Fescue
• Kikuyu
• Custom Blends

Line planting service
Contract growing available
All turf grown on sand and fumigated soil
Next day delivery

For advice and to order
contact us on 03 5223 1855

www.ancoturf.com.au
Pests & Diseases of Racecourse Turf
- by Paul Jackson, Business Manager Green, Bayer Environmental Science

Agronomic Decision Making
- Correct identification is the key to good economic control
- Selection of treatment
  - Cultural practices
  - Chemical treatment
  - Reconstruction or replacement etc
- Chemical treatment if needed
  - Chemical selection
  - Application techniques
  - Environmental awareness
  - OH&S considerations

Insects
1. Lawn Army worm
- Caterpillars appear in the late summer Autumn
- Eggs appear on solid surfaces
  - White egg case
  - Investigate brick walls
  - Rails etc

Control
- Current chemistry relies on knockdown products
  - Synthetic Pyrethroids - Beta-cufluthrin; Bifenthrin
  - Organophosphates – Chlorpyrifos; Diazinon
- These products need reapplying as they do not have any residual activity.
- They are not systemic
- Longevity of control is determined by speed of reinfestation
- Acelyprin (new chemistry - may be different)

2. Scarabs
Include Argentinian, Pruinose and African Black Beetle
- Larvae damage to turf begins during December
- Bird-feeding accentuates damage
- Larvae numbers can be as high as 350 per m2
- Scarabs affect all turf species

Management
- Detection - Identification – will ensure control success
  - Scarab type
  - Climate
  - Grass Species
- Chemicals
  - Larvae – Merit, Meridian & Acelyprin preventative, chlorpyrifos curative
  - Adults – Synthetic pyrethroids
- Biological Control - Entomopathogenic nematodes
3. Billbug
Kikuyu’s No 1 pest
• Weevils with characteristic hard snouts
• Adults overwinter in sheltered grasslands
• Eggs are laid in late spring and early summer
• Young larvae tunnel through stems and rhizomes
• Damage may occur very suddenly

Control
• Monitor & Map – ( generally low – more moist areas)
• Monitor Bird populations
• Pay special attention to ‘dry’ areas
• Preventative insect ides are required in this instance
  o Registered Products – Merit (standard rate); Meridian (high rate only); Acelypryn* ( high rate only)

Timing of Neonicitinoids Spraying

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<th>Pest</th>
<th>Sept</th>
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<th>Nov</th>
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<td>Pruinose Scarab</td>
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<td>Argentinian Scarab</td>
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<td>Billbug</td>
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Before applying Merit Turf always read the product label

4. Grass Webbing Mites
• Increased problem in dry times
• Dense, roughly circular web
• Mites can be observed in web
• Turf chlorotic and unthrifty
• Control – Supracide

5. Funnel Ants
• Two main species (A.pythia and A. longiceps)
• One or more Queen and King in each colony
• Queen lays eggs continuously
• Moisture governs distribution and behaviour
• Direct turf damage and removal of soil
6. Mole Crickets
- At least 17 species of native Mole crickets (Gryllotalpa) widespread through VIC, NSW, QLD, SA
- Changa Mole cricket (Scapteriscus didactylus) Hunter, Newcastle, Central Coast of NSW

7. Nematodes
Plant parasitic nematodes are transparent microscopic ‘worms’ up to 3mm long that have complex internal organs and body functions. They have well developed stylets, which are spear-like mouth parts used to penetrate plant cells (see diagram).

**Management**
- Nemacur only turf registered nematicide
- Important to maintain good root system
  - Nutrition
  - Stimulants, hormones etc
  - Control root diseases
- A lot of other products used but not proven (molasses etc.)

Nematodes inflict extensive types of damage ranging from malformations (formation of galls), lesions or stunting to complete cessation of root growth. Consequently uptake of nutrients and water is impeded and plant anchorage is weakened. Additionally nematodes are injurious by transmitting virus diseases, parasitic bacteria and fungi.

**Diseases**
1. Kikuyu Yellows
- Yellow perimeter
- Circular pattern
- Broadleaf weeds or other grasses will populate the effected area
- The disease is not a typical fungi
- Traditional Fungicides will NOT work
- Fungi cell walls are Chitin
- The Oomycetes cell walls are made of Cellulosic compounds
- Identification is essential
- The causal agent infects the root system and causes severe root rot and root and plant death.
- As an oomycete the pathogen thrives in the presence of high soil moisture.
- Disease symptoms are consistent and are expressed as a yellowing which becomes circular as the affected area expands.
- The centre of the circle dies and as kikuyu does not regrow in the centre, the patch is colonised by other grasses and broadleaf weed species.
- The disease usually appears in spring, progressing through summer and autumn.

2. Helminthosporium
- Helminthosporium Complex - *Drechslera* spp.; *Bipolaris* spp.; *Exserohilum* spp.
- Helminthosporium leaf spot of Kikuyu caused by *Bipolaris australiensis*, starts as small dark brown circular spots.
- Severe infestation will lead to turf and runner death.
- These pathogens are active at all times, with the ability to develop at temperatures between 3 and 30°C.
- Moisture on the leaf surface is necessary for infection to occur.
- Late afternoon or evening irrigation, reduced air movement and overcast days are ideal for leaf infections.
- Prefers High Nitrogen (Soft leaf)
3. Pythium spp
- There are many species of pythium known to cause damage to turf grass and symptoms are equally widespread.
- *Pythium* spp. are also known to cause crown and root symptoms which show most commonly as general decline in the vigour of the turf grass.
- Pythium is a water borne disease and more prevalent with high temperatures and excessive water.
- Affects cool and Warm Season grasses

**Occurrence**
- Beware when oversowing !!!!!!!!!!
- Warm nights (over 20°C) and hot days (over 30°C) coupled with rainy weather are conditions when Pythium appears most severe.
- Foliar symptoms are best observed under conditions of high humidity of >90% over extended periods and when night temperatures are above 20°C.
- Lush growth following *nitrogen* application is particularly susceptible to attack.

**Weed management**
- Pre emergent control – Dimension; Ronstar; Pendamethlin
- Pre - or post emergent ?
- Programming?? – Timing
- Weeds to be controlled – eg, Summer Grass out of Kikuyu???
- Post emergent – is there a control available????
Doomben Racecourse
- by Warren Williams, General Manager Venues, Brisbane Turf Club

History
The Doomben Track was opened in 1933 and, with its natural beauty, Doomben Racecourse is now known as the Garden Racecourse, located only 6 kilometres from the Brisbane CBD. It has a turf track with a circumference of 1715 metres, the straight is 350 metres and it is raced clockwise. The course was originally owned by 4 business men who also owned the Albion Park and Deagon courses.

Key Dates
- 1923 - Formation of the Brisbane Amateur Turf Club
- 1941 to 1945 - Doomben Racecourse closed for use by billeted US troops at the height of the Pacific War
- 1946 - "Bernborough" wins the TM Ahern Memorial (now Carlton Draught Doomben10,000) and Doomben Cup (now XXXX Doomben Cup) and is now recognised as one of the greatest sprinter-middle distance horses in Australasian racing.
- 1971 - Introduction of Queensland Horse of the Year Award
- 1973 - Farewell to "Gunsynd"
- 1980 - Women became eligible for BATC Membership
- 1981 - Last race at The Creek
- 1998 - "Might and Power" wins Treasury Casino Doomben Cup (now XXXX Doomben Cup) and is renowned as best horse in Australia
- 2001 - Brisbane Turf Club incorporated

Racing
- The club holds 47 race meetings a year including the Group 1 BTC Cup, Doomben 10,000 and Doomben Cup

Reconstruction
- The course was reconstructed in 1996 which was achieved within 13 weeks
- 18 Km of drainage, 34 tonnes of soil profile and 62,000 sq metres of Kikuyu turf were needed

Renovation & Maintenance
Conducted every year in October/November. Undertaken while racing by following rail movement, a 4 week process.

Renovation
- Reduce turf height to 60mm
- Dethatching
- Coring using 18mm cores
- Vacuuming of all dethatch and core matter
- Deep tine aeration
- Applying 10mm evenly graded sand
- Nutrition application
- Irrigation

Maintenance
- Course is deep tyned every 6 to 8 weeks
- Nutrition is based around slow release and immediate release fertilizer usage
- Focus on Ca/Mg ratio and Ph
- Soil testing up to 3 times a year
ScanControl
- by Robin Wood, General Manager, ScanControl Inc.

ScanControl Inc.
- Offices in Pleasanton, California.
- Major clients include Foster’s, Kendall Jackson, Diageo.
  - Global wine companies.
  - Other horticulture.
  - Experience with mosquito abatement programs.

Purpose
- Track rating data capture system for comprehensive description and preparation of going maps
- Reporting automation
- Rapid information distribution
  - 30 minutes from turf to coefficient of uniformity
- Single system – multi-purpose

Scope
- Surface Measurement
- Track Condition
- Facility Assessment
- Incident Report
- More than 50 facilities
- 8138 field measurements
  - Clegg Hammer/Penetrometer
  - Shear Strength
  - Soil Moisture
- Automated CU reporting
- CU variation GIS presentation
- Infrared Imagery
  - Greenseeker (one type of vehicle mounted system)
  - Convert pixel values to uniformity automatically
  - Disadvantage – affected by presence of water
E-par Racing Update
- by Dean Scullion, Queensland Area Manager, E-par

Introduction
- E-par Racing is ARMA’s world leading environmental initiative for future proofing racing
- This is a world first for racing and can realise all the benefits golf has

Purpose of Initiative
To develop and implement a framework to:
- Commit all racetracks to systems based environmental management
- Increase the environmental management skill base of racetrack managers
- Change corporate culture and management practices by incorporating environmental concerns into all business decisions.
- Works towards sustainability in a united non-fragmented manner
- Focus on continual improvement

As a member of the ARMA E-par environmental initiative you receive:
1. Initial setup, hosting and access to the award winning e-par environmental management system with your own unique password.
2. Your tabulated Environmental Management System Folder housing your E-par EMS.
3. Web based support of your E-par EMS.
4. Access to the “E-par golf bag”. This is a members only access to a library, where members can access and download all environmental documentation including induction booklets, incident reporting forms, and the innovative E-par environmental risk assessment worksheet. The E-par golf bag will also house procedures for activities such as spill response, rinsate disposal, in-field washing, contractor induction, chemical disposal, noise management, waste management, energy management, chemical and fuel delivery.
5. On-line electronic access to your E-par EMS.
6. Your own Environmental Management Poster for display. This poster is an excellent tool to demonstrate to staff, contractors and regulators your E-par EMS.
7. Access to the “E-par Maintenance Shed” which stores information on wash bay and chemical bay design features and options, how to manage staff, change management, energy calculations and many other items of environmental interest.
8. Access to the “E-par environmental chat room” to discuss environmental management with your peers.

Annual membership in the initiative entitles you to:-
1. Continuing hosting and access to the award winning E-par environmental management system for 12 months with your own unique password. Any updates of the system and its included environmental documentation will also be provided under the membership fee arrangement.
2. Access to environmental alerts and latest environmental news.
3. A monthly Environmental Management Newsletter.
4. Continued access to and updates produced and available in the “E-par golf bag”.
5. Access to discounted on-line environmental training programs.
6. Access to the “E-par newsroom” where environmental alerts and stories are posted. If your racetrack is undertaking an environmental initiative we post it in the newsroom.
7. Continuing access to the “E-par golf shop” and its wealth of information, updated and added to on a regular basis.
8. Use the “E-par search engine” to locate specific items of interest that will accumulate over time relevant information on an industry wide basis.
Further Benefits
E-par is based on ISO14001:2004. The ISO 14001 standard is an international standard for the control of environmental aspects and the improvement of environmental performance.

E-par is certified to Greenhouse Gas Protocol
- Certify carbon footprint
- Certify carbon capture
- Issue Certified Carbon Credits
- Working with golf to “pool” carbon credits.

E-par is working to have golf courses formally recognised as carbon car parks. This can occur for racetracks also.

Discussion
It was noted with concern that to date only 14 racetracks have committed to the E-par/ARMA Racing initiative. This is despite unanimous endorsement of the initiative at last year’s Flemington conference and nearly 300 letters of invitation having been sent to Chairmen of Race Clubs throughout Australia in February with copies to the respective Racecourse Managers.
A number of delegates reported their administrators ignoring the pros and cons of joining E-par Racing and only considering the cost. Ways of overcoming this short sighted approach were discussed and it was agreed that further publicity of the implications of neglect of environmental management was necessary.
Clubs that have committed to the program requested implementation of the system at their racecourses to achieve the benefits and to demonstrate to other racecourses the value of becoming involved.
Redlands Turf Research

A visit was made to the Redlands Turf Research Institute, the Queensland Department of Primary Industries & Fisheries station at Cleveland on the shores of Moreton Bay, 20 kilometres south-east of Brisbane. Delegates were taken on a short tour of the research sites by Matt Roche, Alan Duff, Rachel Poulter, Cynthia Carson, Jon Penberthy, Tony Troughton and Russell Durant.

Aims

- To provide independent scientific research, with a focus on warm-season turfgrasses, to meet the needs of the turf sector in Queensland, Australia and the wider Asia-Pacific region.
- To support development across the whole turf industry through innovation and by providing scientifically based information to turf producers, professional turf managers of parks, golf courses, bowling greens and sports fields, facility managers, and homeowners.

On-site research is complemented by test sites around Australia, maintained by research partners.

Resources

- Skilled scientists and technical staff
- Turf research laboratory
- Tunnel houses and glasshouse facilities
- Turfgrass field plots, multiplication areas, living turfgrass library and greens testing facility
- Co-located with GrowSearch Australia-providing a turfgrass information service

Research & Activities

- Buffalo grass shade, nutrition and water conservation studies
- Greens grass study of new varieties for golf and bowls
- Remediation of salt-affected roadsides and parks with salt-tolerant grasses
- Screening of turf for tolerance of saline and low pH soils
- Turfgrass wear tolerance studies
- Chemical testing for turf use (herbicides, fungicides and insecticides)
- Developing maintenance soil fertility programs for different turf species
- Disease identification and control across a range of warm-season turf species
- Sportsfield characterisation, performance, safety and auditing of local and elite fields
- Sprinkler testing and evaluation
- Development of a turf traction testing machine
- Genetic improvement-selection and breeding, DNA profiling
- Industry fee-for-service-importation of new varieties, Plant Breeders Rights registrations, multiplication and certification
- Independent contract research
- Information and extension activities

Other Features

Living turfgrass library

An in-ground collection of more than 130 warm-season turfgrass varieties has been assembled, the most comprehensive collection of its kind in the world. Already, these grasses include a number of species not previously represented internationally in any other turf program.

As well as its educational value, this material serves as the basic resource for the group's research program into water use and bioremediation, stress tolerance (salt, shade and temperature), diseases, nutrition and weed control, characterisation and improvement of sports surfaces, DNA fingerprinting, and breeding.
**Greens testing facility**
Redlands Research Station is home to a new purpose built experimental green to evaluate new turfgrass cultivars for bowling and putting greens. This facility is aligned to a commercial assessment program and will accelerate the introduction of new cultivars by bowling clubs and golf courses.

**Summary**
Delegates were impressed by the practical nature of the work being done and the relevance of most of the research to racetracks. They were invited to visit the centre in their own time and to make suggestions regarding any future trial work that would have specific application to the racing industry.
The Dinner

The MC

STC "Masters & Apprentices"
ARMA Archives

Racecourse Managers Awards
1999 - Lindsay Davies - “Racecourse Manager of the Year”
2000 - Geoff Fanning - “Racecourse Manager of the Year”
2001 - Ian Trevethan - “Racecourse Manager of the Year”
2002 - Warren Williams - “Racecourse Manager of the Year”
 & “Outstanding Achievement – Metropolitan Racecourse”
 - Murray Weeding – “Outstanding Achievement – Provincial Racecourse”
2003 - Norm James - “Racecourse Manager of the Year”
 & “Outstanding Achievement – Metropolitan Racecourse”
 - Charlie Stebbing - “Outstanding Achievement – Provincial Racecourse”
2004 - David Patrick - “Racecourse Manager of the Year”
- Geoff Murphy - “Outstanding Achievement – Metropolitan Racecourse”
- Scott Olson - “Outstanding Achievement – Provincial Racecourse”
2005 - Lindsay Murphy - “Racecourse Manager of the Year”
 & “Regional Award – New South Wales/ACT”
 - Graeme Green – “Regional Award – Queensland”
 - Bernard Hopkins - “Regional Award – Southern Australia”
 - Geoff Murphy - “Regional Award – Central/Western Australia”
2006 - Geoff Murphy - “Racecourse Manager of the Year”
 & “Regional Award – Central/Western Australia”
 - Graeme Green - “Regional Award – Queensland”
 - Scott Olson - “Regional Award – New South Wales/ACT”
 - Jason Kerr - “Regional Award – Southern Australia”
2007 - Michael Suey - “Racecourse Manager of the Year”
- Martin Synan - “Outstanding Achievement – Metropolitan Racecourse”
- Shannon Caddy - “Outstanding Achievement – Provincial Racecourse”
2008 - Geoff Murphy - “Racecourse Manager of the Year”
- Terry Watson - “Significant Contribution – Metropolitan Racecourse”
- Scott Olson - “Significant Contribution – Regional Racecourse”

ARMA Honorary Members
2008 - Lindsay Davies (1976 – 2003; Western Australian Turf Club, Sydney Turf Club)
ARMA Committee History

2000 (Advisory Conference Committee)
Warren Williams – Qld; Lindsay Davies – NSW; David Woods – SA; David Lowe – Tas; Martin Breen – Vic; Geoff Murphy - WA

2001 (Advisory Conference Committee)
Warren Williams – Qld; Lindsay Davies – NSW; John Tonani/Bart Cowan – SA; David Lowe – Tas; Martin Breen – Vic; Geoff Murphy - WA

2002 (Racecourse Managers Conference Committee)
Warren Williams – Qld; Lindsay Davies – NSW; Bart Cowan – SA; David Lowe – Tas; Ian Trevethan – Vic; Geoff Murphy - WA

2003 (Racecourse Managers Conference Committee)
Warren Williams (Deputy Chairman) – Qld; Norm James (Chairman) – NSW; Bart Cowan – SA; David Lowe – Tas; Ian Trevethan – Vic; Geoff Murphy - WA

2004 (Australian Racecourse Managers Association Inc.)
Warren Williams (Chairman) – Qld; Lindsay Murphy (Treasurer) – NSW; Bart Cowan (Deputy Chairman) – SA; David Lowe – Tas; Martin Synan – Vic; Geoff Murphy - WA

2005 (Australian Racecourse Managers Association Inc.)
Warren Williams (Chairman) – Qld; Lindsay Murphy (Treasurer) – NSW; John Tonani – SA; Murray Pyke – Tas; Martin Synan (Deputy Chairman) – Vic; Geoff Murphy - WA

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Mellow  | Danny | Darwin Turf Club |
| Mentha | Fred | Mt Barker Turf Club |
| Merrick | Matt | Nuturf Australia |
| Muir | Terry | Environmental Business Solutions |
| Murphy | Lindsay | ARMA/Sydney Turf Club |
| Murphy | Geoff | ARMA/Western Australian Turf Club |
| Nash | Murray | Victoria Racing Club |
| Neff | Kenneth | GSA Bloodstock |
| Nickson | David | Evergreen Turf |
| O'boughoff | Tony | Dalton Consulting Engineers |
| O'Connor | Gerry | Yarra Valley Racing Centre |
| O'Shannessy | Pat | Toro Australia |
| Patrick | David | Newcastle Jockey Club |
| Paton | Andrew | Townsville Turf Club |
| Paterson | Tim | Programmed Maintenance Services |
| Pollard | Jason | Maxwell & Kemp |
| Poultier | Rachel | Queensland DPI |
| Power | Brendan | Echuca Racing Club |
| Purcell | John | Turfcraft Machinery Australia |
| Pyke | Murray | ARMA/Tote Tasmania-Nth Region |
| Raine | Michael | Sale Turf Club |
| Roberts | Jim | Brisbane Turf Club |
| Roche | Matt | Redlands Turf Research Institute |
| Rossiter | Paul | Bunbury Turf Club |
| Ryan | Kevin | Brisbane Turf Club |
| Ryder | Wayne | Maxwell & Kemp |
| Sanders | Reid | Queensland Racing |
| Saunders | Ben | Toowoomba Turf Club |
| Schmidt | Steve | Kyneton & Dist. Racing Club |
| Schultz | Graeme | Ipswich Turf Club |
| Schumacher | Peter | Toro Australia |
| Shepherdson | David | Gawler & Barossa Jockey Club |
| Short | Brendan | Pakenham Racing Club |
| Shuck | Bill | Queensland Turf Club |
| Smith | Greg | Rain Bird Australia |
| Smith | Ian | Brisbane Turf Club |
| Smith | Ross | Brisbane Turf Club |
| Stebbing | Charlie | Racing Victoria Limited |
| Stone | Maxwell | GSA Bloodstock |
| Stubbs | Arthur | ARMA Secretary |
| Styles | Graeme | Mata Mata Racing Club - NZ |
| Suey | Michael | Monington Racing Club |
| Swindles | Murray | Complete Turf Management |
| Synan | Martin | ARMA/Moonee Valley Racing Club |
| Thompson | Brett | Seymour Racing Club |
| Tonani | John | ARMA/5th Australian Jockey Club |
| Toogood | Chris | Sydney Turf Club - Rosehill |
| Trevweek | Neil | Waikato Race Club - NZ |
| Tuttle | Malcolm | Queensland Racing |
| Wallace | Chris | Ipswich Turf Club |
| Wallace | Kim | Bunbury Turf Club |
| Wallace | Bill | PGG Wrightson Turf |
| Walsh | Vin | Kyneton & Dist. Racing Club |
| Warmann | Paul | Programmed Maintenance Services |
| Weeding | Murray | Sunshine Coast Turf Club |
| Williams | Warren | ARMA/Brisbane Turf Club |
| Williams | Mark | Brisbane Turf Club |
| Wood | Robin | ScanControl |