Productivity Commission Inquiry

Rural Research & Development Corporations

Submission by Australian Racing Board

JUNE 2010

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(i) Introduction and Approach

The following submission has been prepared by the Australian Racing Board Limited (**ARB**), a public company limited by guarantee, which is the national body formed by and representing the thoroughbred racing Controlling Bodies in each State and Territory of the Commonwealth (**Controlling Bodies**). The Controlling Bodies are all either established or recognised by State or Territory legislation, and each is responsible for doing all that is reasonably within its power to develop, encourage and manage the thoroughbred racing industry in its jurisdiction. This submission has also been prepared on behalf of Harness Racing Australia (**HRA**), which is the national peak industry body for harness racing in Australia. Harness Racing is similarly structured to the thoroughbred racing industry comprising State and Territory based Controlling Bodies – a number of which are government statutory agencies.

This response to the Issues Paper published by the Commission considers each of the following topics from within the Terms of Reference established by the Assistant Treasurer:

- The rationale for Australian Government investment in rural R&D.
- The appropriateness of current funding levels and arrangements – particularly levy arrangements, and the basis for Australian Government contributions
- The effectiveness of the RDC model in enhancing the competitiveness and productivity of Australia's rural industries
- The extent to which RDC-funded projects deliver an appropriate balance between industry-specific and wider community benefits
- How the current RDC model compares and interacts with other arrangements for funding and delivering rural R&D
- The scope for improvements to the current model and any alternative models that could deliver better outcomes

The ARB and HRA welcome the opportunity to contribute to the Commission's Inquiry into the rural research and development corporation arrangements. Our approach responds to the topics raised by the Terms of Reference, but goes into most detail on the role of the research and development corporation arrangements in the horse industry. We first describe the scope and significance of the horse industry generally, and the Australian Thoroughbred Racing sector (ATRS) in particular, using a broad industry definition. We describe the existing R&D arrangements for the horse industry, the sector's future needs, and the industry and community benefits that will accrue from good R&D arrangements. Finally we propose a change to the existing levy arrangements for rural research and development.

1. Background on racing industry and broader horse industry

General

The horse industry is fairly characterised as unique among Australia's livestock industries. This is a product of many factors not the least of which is its scale and diversity.

Number of Horses in Australia

Type	Estimated Number
Thoroughbred (racing)	32,039
Thoroughbred (breeding)	68,199
Standardbred (racing)	13,954
Standardbred (breeding)	33,080
Arabian horses	42,101
Arabian derivatives	60,333
Australian Stock Horse	145,000
Australian Quarter Horse	87,000
Warmblood	10,000
Appaloosa	34,000
Paint Horse	6,000
Australian Pony	79,800
Miniature Horse & Pony	5,000
Heavy Horse	Average 5000 per colour (4) 20,000
Coloured Horse	Average 5000 per colour (4) 20,000
Other breeds	Average 1000 per colour (8) 8,000
TOTAL	**Approx. 664,506**

Source the Horse Industry: Contributing to the Australian Economy CIE 2001

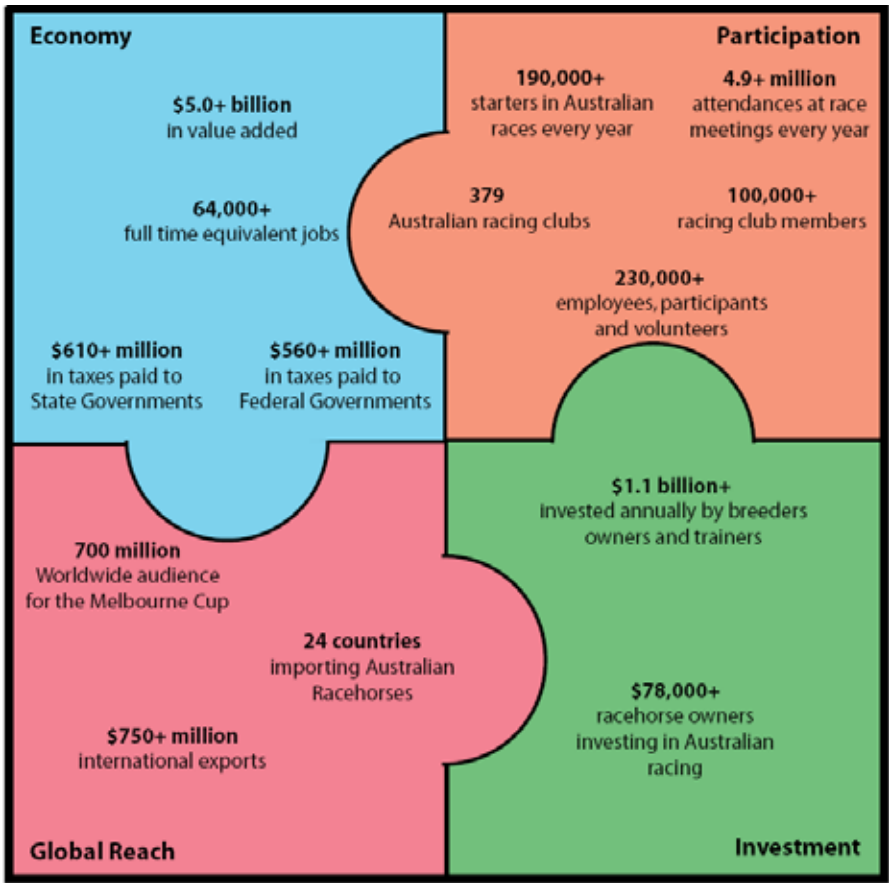
Other estimates have put the total herd at about 1.2 million horses across Australia including some 400,000 brumbies and 316,000 horses on agricultural properties.

Thoroughbred

An examination of the thoroughbred racing sector, one of the major components of the horse industry, provides a useful indication of this scale and diversity.

The impact of the ATRS extends far beyond 'declaration of correct weight'. The ATRS fills an integral place in the sporting life, cultural traditions and everyday economy of Australia. From the first official race meeting staged by Governor Macquarie at Hyde Park Sydney in 1810, Australian Racing has grown to a scale that would have been difficult to imagine two centuries ago, and has few equals anywhere in the world. Today, Australian Racing spans both the calendar and continent: over 17,000 thoroughbred races are held each year, staged in almost every part of Australia. On any given day there are between 40 and 300 races run, which as George Johnston observed *"is a pretty deafening thunder of hooves by any*

standard"[1]. Here we provide a snapshot of the size and scope of the ATRS, illustrating the remarkable extent of its influence on Australia's economic and social life.



Source: Australian Racing Fact Book; ABS attendance at sport

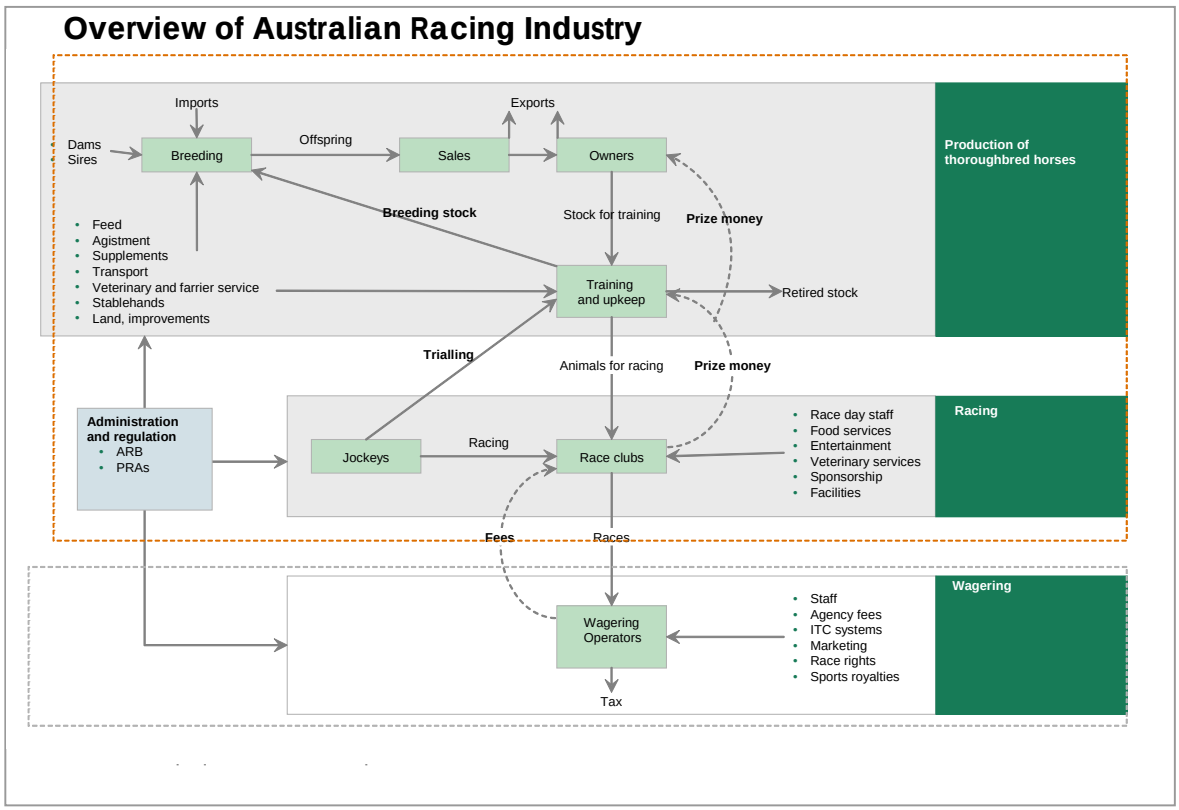
For the purposes of this submission, we have defined the ATRS as comprising three integrated parts:

1. The production of thoroughbred horses - this includes horse breeding, bloodstock sales, horse ownership, and the training and upkeep of horses
2. Racing - which entails the holding of race meetings and includes racing administration, race clubs and jockeys
3. Wagering - This involves operators such as bookmakers, TABs, corporate bookmakers and betting exchanges who accept wagers on races.

The industry also includes functions for administration and regulation. These are an integrated set of activities that have evolved together with the strongest links being between

[1] George Johnston, The Australians

horse breeding, training and racing. Exhibit 3 illustrates this definition of the ATRS and the interrelationships between the key elements.



Note: Adapted from Australian Racing Board. 2003. Submission to the Review of Issues Related to Commonwealth Interactive Gambling Regulation.

The most recent and complete assessment of the ATRS was undertaken by IER for the ARB[2] and covers the 2005-06 year. Including the direct and indirect impacts of thoroughbred racing together with their multiplier effects, the ATRS provided approximately $5.04 billion in value added to the national economy. This represented 0.58% of Gross Domestic Product.

IER's assessment found that the set of activities associated with Australian thoroughbred racing, breeding, training, racing and wagering, directly accounted for an estimated 48,680 full-time equivalent (FTE) jobs in 2005-06. An estimated 9,900 breeders employed 17,990 staff, 80 percent of who were based in non-metropolitan areas. An estimated 1,280 trainers (from a total of 4,700 trainers Australia-wide) and their 3,100 staff were also concentrated in non-metropolitan Australia. 1,500 full-time staff, 12,000 part-time staff and 1,000 jockeys were employed in delivering the race day product. Bookmakers totalled 700 and they employed an additional 1,400 people. TAB wagering staff totalled an estimated 4,700. IER's study found that racing and breeding also help to sustain employment in other areas of

[2] IER. 2007. Economic Impact of Australian Racing. Melbourne, VIC

the economy, such as feed merchants, veterinarians, farriers, transport companies, caterers, hoteliers, and the fashion industry.

People participate in the ATRS in three main ways: producing and delivering the 'racing product'; attending race meetings; and wagering on horse racing.

The total number of people involved in producing the race product is much larger than the 48,680 FTE employees recorded above because of the considerable extent of part-time, casual and unpaid work. In fact, closer to 230,000 people are involved in the ATRS, two-thirds of whom are tied to provincial and country racing.

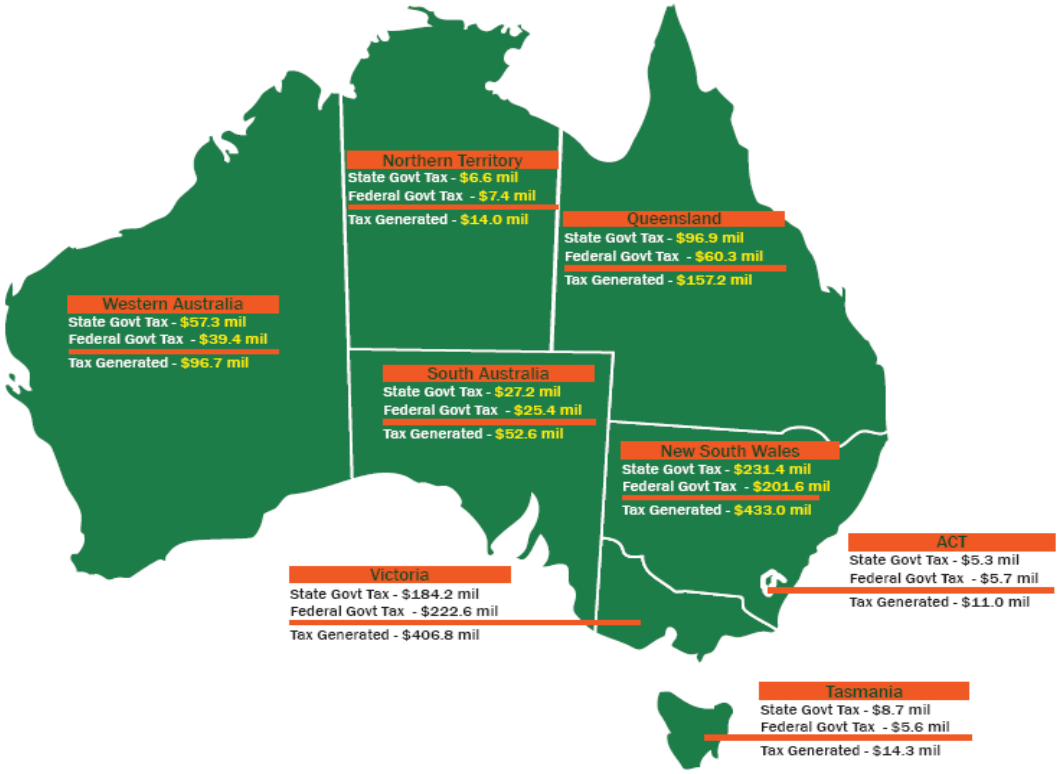
Horse racing is one of Australia's oldest and most popular sports. The first organized thoroughbred race meeting in this country was held in Hyde Park, Sydney, in 1810, with Governor Macquarie in attendance. Today, about 2 million Australians attend a thoroughbred race meeting at least once per year, ranking it second only to AFL in terms of attendance[3]. While racing's best known event, the Melbourne Cup, is now an international spectacle viewed by 700 million people, at the same time racing continues largely unchanged in picnic meetings run throughout country Australia where almost every place big enough to be called a town – as well as in some that are not – has its own racetrack. For many rural communities, their Cup race day remains one of the social highlights of the year.

Racing also has a cultural significance that poker machines and casinos cannot begin to imitate, with our champions, such as Phar Lap and Bart Cummings, part of the national identity, and writers from Banjo Paterson, C J Denis and Breaker Morant through to Frank Hardy, George Johnston, Gerald Murnane, Peter Temple, Les Carlyon and David Williamson mining its rich lode of characters and stories or documenting its place in the national psyche.

Indeed, it can be said that Australia has three truly national days: ANZAC Day; Australia Day; and Melbourne Cup. Appendix E is a brief history of the ATRS in recognition of the forthcoming bicentenary of racing in October 2010.

IER's assessment found that the ATRS generated nearly $1.2 billion in taxes each year. Taxes on wagering comprised almost half of this amount, with GST the next largest component.

[3] ABS Attendance of Sport.



There are 379 thoroughbred race clubs in Australia, which is more than any other country in the world.

On a per capita basis Australia has arguably the strongest racing industry in the world. Even in aggregate terms the ATRS ranks in the top 3 racing industries in the world on all industry indicators notwithstanding its much smaller population and economy *vis a vis* competitors such as the US, Japan, Great Britain and France.

Australian thoroughbred racing on a world stage

Rank	Starts	Black type races	Prize money	Foals born
1	USA	USA	USA	USA
2	Japan	Australia	Japan	Australia
3	Australia	Great Britain	Australia	Ireland
4	Great Britain	France	France	Japan
5	France	Argentina	Great Britain	Argentina
6	Chile	Japan	Korea	Great Britain
7	Argentina	South Africa	Turkey	France
8	Italy	Brazil	Hong Kong	New Zealand
9	South Africa	New Zealand	Ireland	Brazil
10	New Zealand	Ireland	Italy	Canada

Source: ARB Australian Racing Fact Book

Harness Sector

Harness racing and breeding are also substantial in size and scope, large by international standards, and a significant facet of Australian life and the Australian economy:

- 116 race clubs and 91 racetracks.
- 2000 race meetings representing 16,000 individual races run around Australia throughout the calendar.
- Almost 150,000 starters in races each year.
- Almost 5000 trainers and 4000 drivers.

Broader Horse Industry

To gain a sense of the myriad facets of the horse sector, regard should also be had to the equestrian competitions conducted under the aegis of the Equestrian Federation of Australia.

The sport includes the Olympic disciplines of Dressage, Eventing and Jumping and is recognised and supported by the Australian Sports Commission.

The Australian Equestrian Team has multi-medalled at three Olympic Games and has won single medals at four others. Because of this and based on other evidence, the ACS ranks equestrian competition among the top 15 sports it supports.

This sport has approximately 19,000 direct members and another 30,000 – 35,000 members through clubs and affiliated organisations.

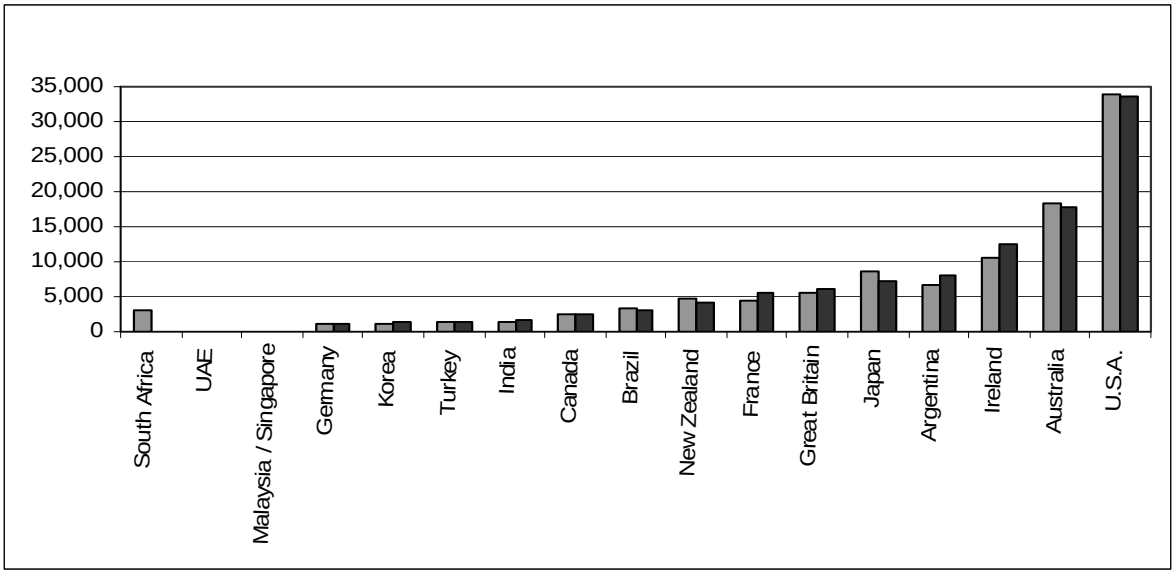
2. Horse Industry Markets

(a) International trade

The thoroughbred sector is the foremost element of Australia's trade in horses.

Australia's breeding sector is one of the largest and most successful breeding industries in the world. Australia currently makes the second largest contribution to the world's thoroughbred foal crop.

International Thoroughbred Foal Crops 2003 v. 2008

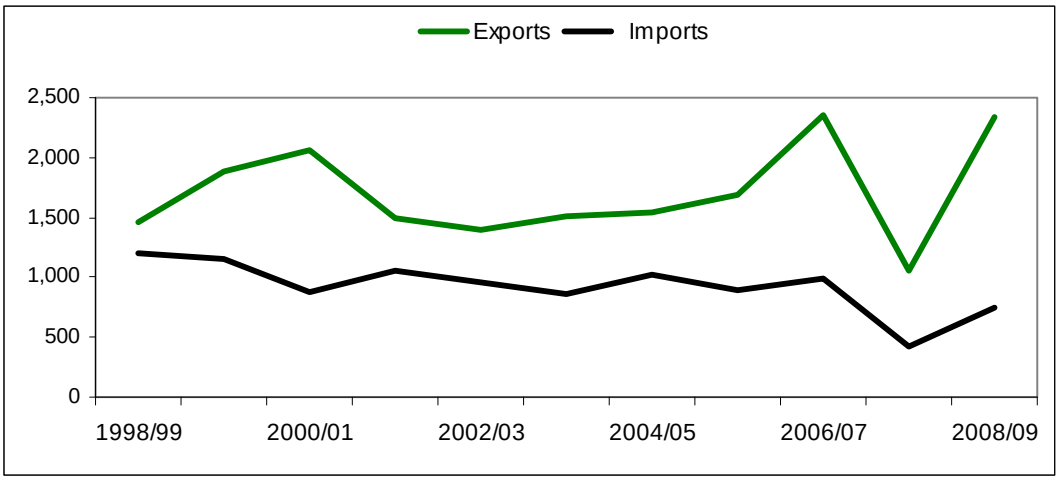


Source: Australian Racing Fact Book

Exports are an important and vibrant component of the Australian industry with Australian bloodstock highly regarded internationally.

There is also significant potential for future growth with Australia's world best practice improvements in reproduction technology and pasture management, and the recent international successes of Australian-bred horses all combining to substantially enhance the marketability of Australian bloodstock.

Number of Thoroughbred Horses Exported/Imported 1998/99-2008/09



Source: Australian Racing Fact Book

The spread of export markets for Australian horses is wide and growing.

Australian Thoroughbred Exports by Country 1999/00 - 2008/09

COUNTRY EXPORTED TO	1999/00	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	Total
NEW ZEALAND	438	497	512	507	475	557	575	1002	185	883	**5,631**
SINGAPORE	336	363	183	176	145	145	195	212	190	346	**2,291**
KOREA	151	127	39	5	54	115	184	198	94	107	**1,074**
MALAYSIA	296	298	214	257	194	148	152	178	7	243	**1,987**
HONG KONG	141	197	144	135	140	121	118	130	119	160	**1,405**
MACAU	113	150	171	117	141	155	102	86	56	68	**1,159**
CHINA	195	244	101	0	78	18	0	3	1	80	**720**
THAILAND	0	8	6	46	29	26	24	21	18	43	**221**
SOUTH AFRICA	87	19	5	34	59	60	104	190	85	107	**750**
PHILIPPINES	0	15	63	46	72	101	105	179	143	128	**852**
USA	17	30	23	35	42	33	37	33	37	37	**324**
INDONESIA	0	0	0	0	0	0	0	11	0	11	**22**
JAPAN	6	23	13	17	34	33	16	46	22	19	**229**
IRELAND	2	21	7	9	26	0	20	29	24	32	**170**
UNITED ARAB	1	25	10	3	7	6	16	23	1	13	**105**
GREAT BRITAIN	2	9	4	4	17	19	27	23	25	15	**145**
INDIA	0	2	0	0	0	0	0	2	1	0	**5**
SAUDI ARABIA	0	0	0	0	4	0	0	0	0	0	**4**
OTHER *	97	29	0	10	0	11	20	17	53	42	**279**
TOTAL	**1,882**	**2,057**	**1,495**	**1,401**	**1,517**	**1,548**	**1,695**	**2,362**	**1,061**	**2,334**	**17,352**

Source: Australian Racing Fact Book

Moreover, the global equine market has been estimated to be greater than US$250 billion. Examples of opportunities, recent and future, to generate export revenues from R&D outcomes include:

- Development of race tracks in Vietnam, China, UAE and Mongolia
- Worldwide demand for enhanced safety gear for riders

(b) Markets related to the horse industry

There are a number of markets that are either wholly derivative from or significantly affected by the horse sector. These include:-

(i) Wagering

Horse racing was the first medium for organized gambling in Australia. In 2009 the Australian market for wagering on racing (3 codes) stood at approximately $19.3 billion.

(ii) Events

The horse sector is a major source of public entertainment. Racing by itself is the second most popular sport in Australia measured by attendance (ABS 2007). In addition horse shows, equestrian events, polocross, pony club are significant in the market for public events.

(iii)Trading in horses

Australia has a substantial market in the trading of horses.

Australian Auction Sales Results 2008/09

CATEGORY	NO. SOLD	GROSS SALES	AVERAGE	MEDIAN
Weanlings	981	$14,643,750	$14,927	$6,000
Yearlings	4,730	$244,733,852	$51,741	$19,000
2 Year Olds	530	$12,508,800	$23,602	$12,000
Broodmares	2,068	$51,549,659	$24,927	$4,500

Source: Australian Racing Fact Book

(iv)Service providers

So far as the market for services are concerned what should also be understood is the significance of ancillary activities which specialize in providing goods and services to the horse sector, including, most immediately, feed merchants, veterinary services,

farriers and transport companies, but extending to an array of activities such as pharmaceutical companies, accountancy, air transport and others.

(v) Markets in other industries

The markets in fashion, food and beverage, tourism and accommodation are also significantly linked with the horse sector. For example, the Victorian Spring Racing Carnival by itself annually generates a gross an economic impact in excess of $500M (IER: Spring Racing Carnival Economic Benefit 2005-2009).

3. RIRDC Horse Program

RIRDC is a statutory authority established by the Australian Government to work with industry to invest in research and development. RIRDC manages R&D Programs for a range of industries, some of which have statutory levy based programs and others that do not.

Industry funds for programs without a statutory levy are derived from voluntary contributions. These funds are then matched by the RIRDC Board using money from the RIRDC core operating budget. Decisions concerning matching including the ratio of matching are made by the RIRDC Board on an annual basis and are influenced by strategic issues facing the Board including discretionary use of limited funds to develop new programs.

History of the Horse Program

The RIRDC Horse R&D Program was established in 1995 and is based on voluntary funds from industry that are matched by RIRDC.

The major component of the voluntary funding is a $20 fee incorporated into the cost of registration of a thoroughbred racehorse to race in Australia. The Australian Racing Board implemented this levy in 1995. However, though payment of the levy by racehorse owners is compulsory it is not considered as a statutory levy under the Australian Government levies program: from the perspective of the levies matching program this fee is considered as a voluntary industry contribution. This money is collected and channelled to RIRDC by RISA (Racing Information Services Australia: www.risa.com.au).

Relatively smaller amounts of voluntary contributions are received each year from a range of other industry stakeholders including companies and individuals. Some of these contributors have chosen to stop payments in the last few years because of general financial tightening.

For many years now annual voluntary contributions have ranged from $250 to $300k, leading to a total annual R&D budget for the Horse Program of about $500 to $600k.

For a 3-year period (2006-2007 to 2008-2009), the controlling body for thoroughbred racing in Victoria (RVL), Racing Victoria Limited provided an additional $200k per annum into the RIRDC Horse Program and this was matched by RIRDC, resulting in an increase in the annual R&D budget to $1 to $1.1 million. The arrangement was initiated as a 3-year commitment with an option to renew. A decision was made not to continue the contributions and payments ceased at the end of the 2008-2009 year due to RVL's contention that a fair and equitable national horse industry funding scheme needed to be introduced.

Table 1: Estimation of voluntary industry contributions to the RIRDC Horse R&D Program expressed as a % of horse industry GVP.

Industry $ for Horse R&D	Est'd industry GVP ($billion)	IVC as % of GVP
$300,000	3.6	0.0083%
	2	0.015%
	1	0.03%
	0.5	0.06%

Whole of horse industry GVP est'd as $3.6 billion during equine influenza (EI) response

If the racing industry's levy was treated in the same way as a statutory levy then levy funds would be matched dollar-for-dollar up to a value of 0.5% of GVP.

The estimate of GVP for the broader equine industry used by the Australian Government in the recent EI outbreak was $3.6 billion. The current RIRDC Horse Program attracts about $550,000 (0.015% of GVP) in voluntary industry contributions and from 1 July 2009 this will reduce to approximately $350,000 (0.01% of GVP).

It is important to note that the funds raised by the racing industry levy contribute to research that in most cases generates benefits for the entire horse industry.

Current Research Program

The RIRDC Horse R&D Program is in the fourth year of a five-year plan (2006-2007 to 2010-2011).

Table 2: Horse Program investment arranged by activity and summarised for the entire lifespan of the program (1995 to date) or the current five year plan (2006 to date)

Type	Value_all	2006-current	% All	% 2006-
Project	$9,169,306	$3,440,582	85	88
Scholarship	$393,000	$315,000	4	8
Newsletter	$972,094	$112,800	9	3
Conference	$272,507	$38,519	3	1
Travel	$13,261	$13,261	0.1	0.3
Grand Total	$10,820,168	$3,920,162	100	100

Almost 90% of the annual R&D budget is spent on project activities and the remaining funds are directed to post-graduate scholarships, sponsorship of conferences and travel grants and production of the equine newsletter.

Table 3: Annual R&D budget in the RIRDC Horse Program

Year	Annual R&D $
<2006	$500,000 to $600,000
2006-2007	$1,100,000
2007-2008	$1,100,000
2008-2009	$1,000,000
2009-2010	$600,000
2010-2011	$600,000

In years where the annual R&D budget is around $0.5 to $0.6 million, the Program generally funds about 4 to 13 new projects each year, with new expenditure in any one year accounting for between $0.1 to $0.25 million, and the balance of the annual budget being spent on on-going projects (multi-year projects started in previous years).

In the years when the budget was expanded and particularly 2006-2007 and 2007-2008, the Program started 22 and 24 new projects, respectively, indicating the impact of a large increase in available funding on the ability to start projects.

The median value of projects started since 2003-2004 is $41,000 meaning that 50% of all projects funded by RIRDC since 2003 have received total funds of up to ~$40k from RIRDC.

The 25th and 75th percentile for total RIRDC funds per project over the same period was $15k and $90k, respectively.

The single largest project funded by RIRDC to date is a project currently on-going on determining reliable excretion rates for therapeutic drugs in horses, receiving a total of $676,640 over four years. This project has attracted considerable project-specific voluntary contributions from industry stakeholders that are separate to the industry voluntary contributions to the overall program. These amounts are included in the total figure so the investment from the normal budget of the RIRDC program is a little over half the total project budget.

Data from the RIRDC database (Clarity) were used to estimate total leverage on industry voluntary contributions (IVCs). Budget details from a total of 24 projects from the last 2-3 years were extracted and used to summarise contributions to the project budget according to 3 criteria:

- RIRDC payments to the project:
  - 50% IVC
  - 50% matched dollars from RIRDC Core Budget
- Direct contributions of cash to project costs from sources other than RIRDC (including university grants, Australian Research Council grants, other government grants and industry contributions)
- Indirect financial support from other sources including in-kind contributions from research providers and other stakeholders

Table 4: Estimates of total leverage on industry voluntary contributions to horse research

RIRDC Horse projects	Industry $	RIRDC $ 1:1	Other contributions to these projects		Leverage	
(n)	IVC	matching	Direct $	Indirect	Direct$:IVC	Total:IVC
24	1.17	1.17	2.1	4.9		
	1.17		1.17 + 2.1 = 3.27		2.8	
	1.17		1.17 + 2.1 + 4.9 = 8.17			7

The 24 projects for which detailed budget estimates were available, involved a total of $2.34 million in funds being paid from RIRDC to research providers (50% or $1.17 million from IVC and 50% from matched RIRDC Core Budget).

The projects also involved an additional $2.1 million in direct cash contributions from other sources to offset project costs and an additional $4.0 million in indirect contributions to institution in-kind for example.

The leverage achieved from the IVC inputs can therefore be estimated as:

- 1to1 with respect to matching from RIRDC Core Budget
- 2.8 to 1 with respect to total cash contributions to project costs.
    - This means that every $1 provided through industry voluntary contributions to the RIRDC Horse Program, attracts an additional $2.8 from other sources.
- When all inputs are considered (direct and indirect contributions) the leverage increases to 7 to 1.
    - This means that for every $1 invested through industry voluntary contributions, the value of R&D performed is equivalent to $8.

Table 5: Summary of projects by topic grouping for projects begun within the current five year plan (2006 and onwards) , excluding projects that are currently in final consideration for approval at present.

Topic Group	Value	Count
Racing injuries	$480,408	7
Breeding	$314,131	6
Laminitis	$191,500	5
Foals	$569,940	4
Welfare/Safety/Behaviour	$390,000	4
Respiratory - infectious	$197,000	3
Respiratory non-infectious	$73,320	3
Therapeutics	$676,460	1
Racetrack	$16,000	1
Cardiac	$65,299	2
Non-racing MS conditions	$27,945	2
Parasites	$238,954	2
Anaesthesia	$27,575	1
Emergency care	$15,000	1
Gastrointestinal	$24,875	1
Infections - bacteria	$12,500	1
Infections - virus	$60,000	1
Levy project	$59,675	1
Travel	$13,261	7
Scholarship	$315,000	5
Conference	$38,519	4
Newsletter	$112,800	1
Grand Total	**$3,920,162**	**46**

Between 2006-2010, (fourth year of the current five year plan) the Program has started 46 research projects covering a wide range of topic areas.

Benefits from R&D

Impact assessment of R&D programs is often reported within a triple bottom line framework – assigning benefits to economic, environmental and social outcomes. Methods typically involve a combination of benefit-cost analyses for those impacts that can be estimated in dollar terms and alternative methods for presenting potential benefits that may not be amenable to economic valuation.

The approach is clouded by the fact that there is a considerable time lag between research output (publication of a paper) and a resultant measurable change within the broader industry

that may represent an outcome impact of the R&D. Examples of measurable changes may include increased productivity, reduced disease, and changes in policy.

Estimates from Australia and overseas indicate that lameness and musculoskeletal injuries affect between 10-18% of horses each year. Costs attributable to musculoskeletal injuries can be split between direct costs of health care (veterinary fees, drugs and other treatments), mortalities and costs associated with lost use of the animal. The largest contributor to costs is the loss of use of the animal, accounting for 50-60% of total costs. It is estimated that musculoskeletal injuries cost the Australian horse industry as much as $100 million per year.

Major R&D outputs relating to injuries and non-infectious conditions of athletic horses include:

- Information on racetrack design and assessment of racetrack surface characteristics to better manage racetracks, provide a more uniform and consistent racing surface and reduce the risk of injuries that might be caused by racetrack configuration, surface angle or physical characteristics.
- Information on major injuries sustained by racehorses during training and racing and factors that may be either causing these conditions or helping to reduce the risk. A number of projects have been completed over several years. In recent years the program has funded research aimed at developing computer modelling of joint and limb function and dysfunction as a means of exploring pathogenesis of injuries and identifying preventive strategies to reduce injury risk.
- Better understanding of factors associated with bleeding (EIPH) in racehorses and its effect on performance.
- Better understanding of the range of changes observed in radiographs of yearlings at sales and the relationships between changes observed in yearlings and subsequent performance as a racehorse.
- Development of a system for recording fitness data while a horse is actively training to allow accurate monitoring of fitness and improved training and performance.

In the current 5-year plan (since 1 July 2006), the Horse Program has invested a total of ~$700,000 on research focused on musculoskeletal injuries which in turn has resulted in R&D with a total value of ~$4 million. RIRDC funded R&D has resulted in significant improvements in our understanding of factors causing these conditions, as well as detection, treatment and prevention.

Assuming that this R&D has resulted in a 10% reduction in total costs of musculoskeletal conditions, this represents a saving of ~$10 million per annum, derived from an initial industry contribution of ~$350,000 distributed over several years.

Other major conditions affecting horses include gastrointestinal disease (including colic, diarrhoea, dental disease and other conditions) that are estimated to affect 2 to 4% of horses, respiratory conditions (2 to 6%) and skin conditions (4%). Major contributors to ongoing preventive health costs include parasite control (most horses are wormed four times per year), foot care, teeth care and vaccination against infectious diseases (tetanus, strangles and

equine herpes virus). Costs associated with these conditions are estimated to total $50-75 million plus per year.

The RIRDC Horse Program has invested in a range of different types of research areas. With respect to diseases of horses major R&D outputs from the RIRDC Program include:

- Improved understanding of factors causing respiratory disease (infectious conditions and inflammatory airway disease) in horses, and better management of conditions to ensure full and rapid recovery
- Understanding of the epidemiology and pathogenesis of specific diseases including strangles and *Rhodococcus equi* infection (rattles) in foals, leading to improved methods of diagnosis and treatment for these important conditions.
- Identification of parasite resistance and improved strategies for managing parasite control
- Improve understanding of the occurrence of gastric ulceration and factors causing ulceration

The outcomes of these projects may be categorised as:

- Improving our understanding of factors that predispose horses to infection leading to development of preventive strategies by controlling those factors;
- Earlier identification of disease risk to allow early implementation of effective treatment leading to higher likelihoods of successful treatment, lower treatment costs and earlier return to full health;
- Identification of improved treatments

Benefits are wide-ranging, including improved animal welfare, better OH&S, as well as productivity gains.

As an example of approximate benefit-cost, the RIRDC Horse Program has spent ~$2 million on R&D related to non-musculoskeletal conditions during the current 5-year plan (since 1 July 2006). Assuming the increase in knowledge and improvement in products is associated with a 10% reduction in the total impact of all conditions per annum the net benefit of this order of impact over 10 to 20 years is far in excess of the actual cost of the R&D, leading to a very strong benefit: cost ratio even in the short term.

An example of a project with unanticipated benefits associated with the horse industry can be seen in a project funded by the Australian Biosecurity Co-operative Research Centre (AB-CRC) that resulted in the development of a rapid (<5 hours), real-time PCR test, specific for influenza type A and that was developed primarily to detect avian influenza virus. The resulting test was used from the outset of the 2007 EI virus outbreak to confirm presence of EI virus in horses showing clinical signs and was a major contributor to the ability to rapidly determine disease status and implement effective control. Project costs totaled some $262,000 and the estimated ratio of benefits to costs was 456 to 1 (estimated over a 30 year period), indicating that the R&D investment in diagnostic capability (for a disease in birds) had an unanticipated and massive benefit resulting from its application during the EI outbreak. While the R&D leading to the development and implementation of

this test was not funded by RIRDC, it is an excellent example (documented by a published BCA) of a very high value outcome resulting from modest R&D expenditure.

Protecting lives and reducing injuries is a very powerful R&D outcome. The value of the investment into the development and production of plastic running rail was graphically illustrated in a major race incident at Flemington in early May 2010 when three jockeys fell colliding with the rail but avoided the serious injuries often associated with the traditional steel structure. In terms of drug detection it would be useful to note the collaborative links with R&D in the field of sports doping. Agronomy work also benefits other sporting industries.

The Australian Racing Board and Harness Racing Australia strongly believe that the RIRDC model has been demonstrated as being a highly efficient and effective model for delivering high value R&D in the horse sector. The benefits of the RIRDC horse program have been both to the industry and the community.

4. Other racing industry investment in R&D

Apart from the contributions that the racing industry makes to RIRDC there are a number of other R&D programs that the thoroughbred and horses sectors invest in. The table below gives an overview of the level of this investment over the period of 2001 – 2009.

Year	Equine Vet R&D	Lab R&D	Other R&D*	Total
2000/01	350,000	150,000	30,000	530,000
2001/02	350,000	150,000	30,000	530,000
2002/03	350,000	150,000	30,000	530,000
2003/04	350,000	150,000	30,000	530,000
2004/05	350,000	150,000	30,000	530,000
2005/06	350,000	150,000	175,000	675,000
2006/07	150,000	150,000	75,000	375,000
2007/08	150,000	150,000	165,000	465,000
2008/09	150,000	150,000	135,000	435,000
2009/10	130,000	150,000	90,000	370,000
Total	**2,680,000**	**1,500,000**	**790,000**	**4,970,000**

*includes rail development and jockey safety & welfare

5. Future R&D needs

Looking to the future the horse industry's R&D needs include:

- jockey safety including protective gear improvements
- jockey health especially weight control management
- jockey welfare including career transition factors and support
- synthetic track safety analysis
- equine injury and wastage reduction
- equine disease prevention and control
- equine reproductive efficiencies
- drug detection particularly new synthetic drug technology and gene doping

Research in these areas will have both industry and community benefits:

- increased industry efficiency with consequent employment and tax generation benefits
- improved OH&S
- improved animal welfare
- enhanced integrity

6. Moving to a statutory levy for horse industry R&D

The current situation involves industry stakeholders making voluntary contributions to fund Horse R&D. Individuals and organizations may change their decision at any time and choose to cease payments, including potentially the decision by the thoroughbred sector to collect fees on racehorse registrations. In recent years a small number of contributors have reviewed their contributions and on occasion have decided to stop payments due to the absence of a fair and equitable scheme across the horse industry. The ongoing dependence of the Horse R&D Program on voluntary contributions is a source of vulnerability.

The Horse R&D Program is also vulnerable to the annual decision making process by the RIRDC Board to determine the level of matching that will be applied to voluntary contributions to the horse program. The RIRDC Board has been a consistent supporter of horse R&D but has in recent years clearly signaled that the horse industry should as a mature industry, move towards implementing a statutory levy to support horse R&D.

Under the current arrangements, the RIRDC Board has to choose where to invest core budget funds across a wide range of strategic activities including new and emerging industries and cross-cutting industries. The horse industry cannot assume that the RIRDC Board will continue to invest scarce core budget dollars in supporting horse R&D as opposed to other strategic investments being considered by the Board. If the horse industry were to implement a statutory levy this would free the core budget for the RIRDC Board to invest in another new or emerging issue or industry.

An attempt has been made previously to establish a Horse R&D levy (the horseshoe levy proposal) and while this levy proposal achieve broad support across the horse industry the level of support was not sufficient for the levy proposal to proceed.

In the aftermath of EI, there has been considerable focus on an Emergency Animal Disease Response Agreement (EADRA) levy proposal and this proposal was rejected in Parliament. There appears to be a high level of distrust amongst horse industry stakeholders (individuals and peak bodies) over any proposal to implement a levy and some confusion over the distinction between an EADRA levy and an R&D levy. A further attempt is being made to achieve a horse industry levy or levies for EADRA purposes, but at this point it is far from clear whether a whole-of-industry agreement on an R&D levy could even be achieved.

Therefore, the situation is this:

- If the horse industry does not move to a statutory levy, matching funds applied to horse industry R&D is at risk of diminishing.
- If consensus cannot be achieved on a levy across the whole of the horse industry, then the only viable option remaining would be to convert the racing industry's current registration levy to a statutory levy on registrations of racehorses.
- A statutory levy on registrations of racehorses would achieve **no** increase to the amount currently raised by the existing industry-administered arrangements.

- The only material difference between the existing industry-administered arrangements and a statutory levy on registrations of racehorses would be the involvement of the Levies Revenue Service within the Department of Agriculture, Fisheries & Forestry.

In these circumstances our submission to the Commission is that the current distinction between statutory levies and voluntary contributions should be removed. That is to say all RIRDC R&D should qualify for matched funding up to the level of 0.5% industry GVP irrespective of whether the industry contribution is raised by statutory levy or voluntary contributions.

End.

Appendix A. – R&D Victorian Racing Industry

HIGHLIGHTS OF EQUINE RESEARCH PROJECTS & INITIATIVES

Year	RVL Funding	Project	Partner(s)
Contributions to Melbourne University Research Capability			
2002-07	750,000	Chair of Equine Studies	Melbourne University
2002-07	250,000	Contributions to equipment purchasing including Gamma Camera	
2005-10	320,000	Residents Program	Melbourne University
Outcome: Strategic support of equine research capability directed into numerous research projects			
Equine Disease Research			
2000-04	500,000	Virology studies	Melbourne University
2003/04	70,000	EIPH in Racehorses	Melbourne & Ohio State University with RIRDC support
2005?	50,000	Analysis of reactive proteins re EIPH	Melbourne University
Outcome: Virology studies resulted in development of a commercial diagnostic test for equine herpes & EIPH work has led to progress in identification of a treatment agent			
Equine Safety			
2001 -10	250,000	Post-mortem study of all fatalities on metropolitan racetracks	
2004	20,000	Racetrack fatality study	
2006-08	25,000	Epidemiological Study of Jumping Racing	Flinders University
2008/09	15,000	Analysis of jumps racing statistics	Parkin-Boden
Outcome: Post mortems and epidemiological studies have provided significant ongoing data to support improved training methods and inform track design and technology			

Further and more detailed information available from University of Melbourne and RIRDC

SUMMARY OF OTHER R&D PROJECTS

Running rail testing, development & prototype production			
2005/06	25,000	Testing	DV Experts
2006/07	75,000	Testing	DV Experts
2007/08	165,000	Engineering & tooling	Enterprise Tooling & others
2008/09	135,000	Engineering & tooling	Enterprise Tooling & others
2009/10	90,000	Patents & licences	
	490,000		
Outcome: Creation of award winning plastic rail product currently being rolled out across Victorian race tracks			
Jockey health and welfare			
2005/06	10,000	Nutrition study	Victorian University of Technology
2005/06	15,000	Psychological effects of wasting study	Victorian University of Technology - Aust Research Council $75k
2005/06	30,000	Helmet & vest research	National Jockey Safety Review Committee - total budget $90k
2005/06	7,000	Jockey bone density	National Jockey Safety Review Committee - total budget $20k
TBC	TBC	Jockey hydration study	TBC
	62,000		
Outcome: Research learnings applied to jockey welfare and education programs particularly in relation to weight mgt practices			
Horse tracking and movement GPS technology			
2005/06	86,000	Exploration of technology	Power Button
Outcome: Investigation informed RVL about technological opportunities for managing horse movements at training venues			

Appendix B. – R&D Queensland Racing Industry

1. Cushion Tracks (synthetic racing and training tracks) – evaluating the performance of track daily through processes of surface hardness, temperature and moisture content, and recording the number of horses using the track daily.

2. Turf Tracks – chemical trial on a turf disease called kikuyu yellows (a soil born fungal disease) that attacks the roots of the plant therefore killing the plant and leaving large patches of dead turf, which is a safety issue for racing and training. Trials currently being undertaken at Deagon Training Centre.

3. Plastic running rails and fencing – QRL will be undertaking trials at Deagon Training Centre with a number of different plastic rails and fences to evaluate their ability to withstand Queensland weather conditions (conducted in horse movement areas).

4. Turf species trials – *cyndon species* couchgrass – throughout Queensland to evaluate their ability to cope with thoroughbred racing.

5. Trialing a number of sand/soil ratios including drainage systems for future turf track reconstructions.

6. Stewards digital video recording system which is currently being rolled out to all TAB racecourses - $270,000

7. Website is currently under development for a live date of 1 July - $50,000

8. 'Raceday Live' Stewards blog for live race meeting commentary (December 2009) - $6,000

9. 'Race Information System' to collect and process wagering data from wagering operators as a result of race fields legislation (August 2009) - $15,000

10. 'Jockey Availability system' that facilitates online jockey engagements between Jockeys and Trainers (June 2008) - $7,000

Appendix C. R&D Western Australian Industry

Current and Proposed

1. Racing Participation (Ownership)
2. Thoroughbred Customer Value Proposition
3. Thoroughbred Racing Brand
4. Thoroughbred Racing Sport Administration
5. Thoroughbred Training Venue Requirements
6. Thoroughbred Racing Venue Requirements
7. Thoroughbreds Horse Racing Environmental Sustainability
8. Hendra Virus – Vaccine Research

Recent

9. Customer Research program – January 2009
10. WA Racing Industry Workforce Planning Study – December 2008
11. Sustainable Business Model review – December 2007
12. Animal ownership study – April 2008
13. *Staying on Track* and review – April 2006
14. Industry Economic Review, *A Plan to Get Back on Track* – October 2004
15. Size and Scope of the Western Australian Racing industry – July 2004
16. Industry Training Division Report – December 2009

Appendix D. R&D Harness Racing Industry

Recent:

- Australian Perspective of TC02 in Harness Racing by Dr Diane Ryan
    - Incorporating standardbred diet survey
- National Research Project (health of the industry) by Colmar Brunton
- Equine Therapeutics Research Australia (partner)
- Sulky Wheel Standards by Human Impact Engineering
- Helmet Standards by Human Impact Engineering

Current:

- Prohibited Substance Review by Independent Industry Panel
- National Injury & Incident database by HRA
- Vest testing by Human Impact Engineering
- Sulky Standards by Human Impact Engineering

Proposed:

- Horse 'wastage' by Independent Industry Panel
- Identification of emerging substances and development of testing via a coordinated, national approach
- Performance benefits attributed to use of Altrenogest in fillies and mares

Appendix E. – October 2010 – Bicentenary of Australian Racing

INTRODUCTION

Two hundred years ago and a century before it became a nation, this country first heard the roar of a crowd cheering the favourite home.

Governor Macquarie, officers of the 73rd regiment and emancipated convicts – pimps, prostitutes, forgerers and other felons - rubbed shoulders together at a three day race meeting in Hyde park Sydney. Perhaps this was the seed from which Australian democracy was born – the sense that on the turf, and under it, all men are equal.

There can be no doubting that this was the beginning of something profoundly important to the Australia we know today.

RACING AND THE COLONIES

European settlement of Australia began in 1788. Australia's first Europeans established a penal colony consisting of 700 convicts, their marine guards and enough supplies to keep them all until they became self-sufficient. It is interesting to reflect that for thousands of years beforehand…40,000 or more…. no one in this land had seen a horse, nor any animal with a rider atop. And yet from those earliest colonial days horses were the key to unlocking the vast interior of the island continent. Horses pioneered transport routes. Horses provided the means of ploughing, mustering and droving. Horses delivered the mail, and carried people to church on Sunday. Bushrangers on stolen horses robbed banks and stage coaches and it was mounted policemen who gave them chase. Literally, Australia rode on the horse's back. It is little wonder then that racing quickly emerged as the first Australian sport. *"The universal love of horseracing in Australia is shown by the large number of meetings every year. There is scarcely a township in any one of the colonies which has not its annual event. The principal reason for this is the abundance of good horseflesh and the number of good riders as there are few persons residing in the country who cannot mount the saddle. Under such circumstances a love of the turf is natural."* – Australian Sportsman 1881

As the colonies grew towards maturity and nationhood so too did the sport. Organised racing commenced in Tasmania in 1814, Western Australia in 1833, Victoria and South Australia in 1838, Queensland in 1843 and the Northern Territory in 1874. As the Presbyterian clergyman John Dunmore Lang recorded in 1834 – *"the three never failing accompaniments of advancing civilisation in the new colony are a racecourse, a public house and a goal."* And he named them in that order. Anything worth celebrating was accompanied by a race meeting, from the Queen's birthday, Christmas or St Patrick's Day to the end of shearing or the arrival of the railway. When the centenary of the colony of New South Wales came round in 1888 there were 66 anniversary race meetings advertised in the Sydney newspapers for the holiday. The bush poet John O'Brien immortalised this colonial racing world in his tale of the Bishop lecturing a country schoolboy:

"Come tell me boy" his lordship said in crushing tones severe, come tell me why is Christmas day the greatest of the year? "The ready answer bared a fact no Bishop ever knew – it's the day before the races out at Tangmalangaloo"

Or as Banjo Patterson put it

"Before the North Pole was discovered, some cynic said that it would be discovered easily enough by advertising a race meeting there, when a couple of dozen Australians would infallibly turn up with their horses" – AB Patterson 1935

Flying across the Australian inland today you can still see passing over an outback town a circle of post and rail fencing and perhaps a judge's box still standing...a reminder of this special period of Australian racing. Once a year in the desert outback of Birdsville, in Queensland, racegoers come from all distant places to attend the running of the Birdsville Cup and to relive this bush tradition in Australian racing. Birdsville is a very long way from Hyde Park. But another tradition had entered Australian racing by the mid century: it came with the gamblers. In a sense Australian history itself has been a gamble. The convict system... immigration... land settlement... were all life's gambles and now in the 1850s came the biggest gamble of all... the gold discoveries. Into Australia and soon onto the gold diggings in the bush came boatloads of gold-seeking immigrants. Once again the horse came into its own for transport and for this gold-seeking population horse races were the place to go to give their new won wealth a fling of fortune. Now enter the bookmaker... the bookie... the bagman... the satchel swinger... into the Australian racing story. The bookie on his stand under a tree, or on a box with his penciller is one of the enduring images of our earlier racing story and the life and style of the bookie with his gold watch chain and panama hat writing the bet on his betting ticket and taking on the punters is one of the images set into our picture of Australian bush racing.

When the bookmakers formed their own Tattersall's clubs where their betting markets were framed and published they became a powerful influence, especially on the Australian preference for handicap racing. The handicap race made for a better betting market and the bookies charts added extra interest to the racing cup and festival meetings. It gave to the racing scene its own special character.

The great interest in the bookies charts did not escape the interest of the racing patrons in the taxation department and the purveyors of the odds provided a bonanza for the nation's budget when feature racing carnivals came round each year. The punter and the bookie are among Australia's folklore characters and in one of our popular sporting cartoons it was the weekly battle of Perce the Punter, with Shaw Todds the bookie that won such appeal with Australian racegoers and boosted Sunday newspaper sales. There were no bookies at Hyde Park. But any number of gamblers.....many with their life.
Another influence on Australian racing carrying it further away from its English origins was the Irish influence. Irish immigrants had been here in the Australian colonies from the beginning as convicts, and then as immigrants from the potato famine, and now the gold rush arrivals brought their luck of the Irish outlook onto the goldfields and into the Australian racing story. From a mostly rural background and without inheritance they entered the racing

world..... into the stables as grooms, stable hands, and trainers, into the saddle as jockeys and trackmen, and where they found a special calling was into the ranks of the bookmakers. Today, in any list of licensed persons on the racecourse there they all are. Irish names appear like peppercorns, and in generations they follow: O'Shea, O'Sullivan, O'Reilly, O'Gorman, O'Connor, O'Neill, O'Leary, O'Grady and the Mulligans, Murphys, and McCartneys, and the Quinns and the Quintons. Now we have Kathy O'Hara leading the field home in the saddle...and the Irish Cummings family into its third generation as trainers with a record of Melbourne Cups. The St Patrick's Day meetings became a regular fixture in the racing calendar and when the St Patrick's race clubs hold their annual meeting each year at Geelong, Broken Hill, Rockhampton and Springsure with the shamrock on the racebook Australian racing would seem to have come a long way from Governor Macquarie's Hyde Park meeting. Among racegoers at the St Patrick's Day meetings a beer may well have been downed for the Irish convicts who, at Hyde Park, in 1810 were not allowed to have a bet or a drink. By the end of the century racing was the national sport and when all the colonies entered the new Commonwealth in1900 it was celebrated throughout the new nation with federation race meetings. It might not be too far from the mark to suggest that more Australians in the new nation knew the name of Carbine, the winner of the Sydney and Melbourne cups, than that of Edmund Barton the first Prime Minister.

As Australian life entered the new century the motor car was still years away, horses were part of everyday life and racecourses set into the landscape of the town and the city. In Sydney and suburbs there were eight race courses and Australian bred thoroughbreds were making their mark on the racecourse and gaining status at the bloodstock sales. The new states had created their own carnivals and horses were travelling by boat and train to the capital and country cups. It was a horseracing world. That was until 1914. When the British Empire declared war on Germany all things changed. Australia was part of the empire so Australia too was at war. In the next four years thousands of men and their horses found themselves in far off lands.....in Egypt, Turkey, Palestine, and in the trenches during the freezing winters of France and Belgium. Far from home with his horse, taking dispatches from the trenches during the battle of the Somme Jack Hutton, a jockey from Bayly Paytens stable in Sydney writes in his small Gem diary ... *Murder bloody murder... Shells all night...* And then... *I wonder what won the Epsom*. It was spring at home and his thoughts were carried back to when he was *rounding the turn and riding into the wind at Randwick.* Happily he did return home and was to find out who won the Epsom in 1917. In Belgium when the war was over and Australian soldiers were waiting for a ship home they organized a race meeting with their artillery horses and some local mules. The names each animal carried were straight out of an Australian race book. It was their best recollection of the world they had left and their prospect of coming back to the world they missed...a day at the races.

RACING AND AUSTRALIA'S CULTURAL IDENTITY

Every nation has its own distinctive cultural identity, and the literature, films and art of that country both draw from and shape that identity. In Australia's case the highs and lows of racing, the courage and beauty of the thoroughbred, and the eclectic cast of personalities who consort at the racetrack are a constant refrain in our national story. The first Australian

film ever made was Marius Sestier's *Melbourne Cup 1896* which was screened not only in Australia but also in London, St Petersburg and Paris. That iconic Australian journal The Bulletin declared at the time how *"beautifully appropriate it is that the first picture presented by the new machine should be a horse race."*
This was echoed some 70 years later with a broadcast of the Caulfield Cup introducing colour television to Australia. Australian newspapers have also reflected this cultural significance. As a Cyril Pearl wrote in "So you want to be an Australian", in 1959:
"The marriage of a jockey is always front-page news. So is the death of a trainer. The death of a poet does not rate newsprint unless the poet's wife is able to afford an announcement in the small ads columns. This is very unlikely." – Cyril Pearl 1959

Australian literature has long had a love affair with racing. Today it is writers such as Peter Temple and Les Carlyon who mine its rich lode of characters and stories but the literary tradition stretches right back through Frank Hardy and Cyril Pearl to Breaker Morant and CJ Denis. Of course this list must also make mention of the bard of the bush, Australia's best loved poet, Banjo Patterson.

They bred him out back on the `Never',
His mother was Mameluke breed.
To the front -- and then stay there -- was ever
The root of the Mameluke creed.
He seemed to inherit their wiry
Strong frames -- and their pluck to receive --
As hard as a flint and as fiery
Was Pardon, the son of Reprieve.
They're off and away with a rattle,
Like dogs from the leashes let slip,
They gained ten good lengths on him quickly
He dropped right away from the pack;
I tell you it made me feel sickly
To see the blue jacket fall back.
And if they have racing hereafter,
(And who is to say they will not?)
When the cheers and the shouting and laughter
Proclaim that the battle grows hot;
As they come down the racecourse a-steering,
He'll rush to the front, I believe;
And you'll hear the great multitude cheering
For Pardon, the son of Reprieve.

THE CUP

No statement on the Bicentenary of Australian racing could be complete without some mention of the Cup. It can be fairly said that Australia has three truly national days: Anzac day, Australia day and the Melbourne Cup. As Les Carlyon writes, the Cup is a reference point for many of the most important events in Australian history. Grand Flaneur, ridden by

the crack Tommy Hales, won in 1880, days before they hanged another useful horseman, Ned Kelly, after a $30 trial. In the second great conflict the Queensland-bred bolter Old Rowley's 1941 win was broadcast by BBC radio to members of the AIF stationed in Britain, and the fact that the 1944 Cup was won by Sirius and Darby Munro seemed almost incidental to the military operation of getting film of the race to the troops on Port Moresby, Lae and the most remote Australian battle stations. Russia, a chestnut stallion, won in 1946, as the allies realised they had licked Hitler only to inherit Stalin. Equally poetic, Think Big won in 1975, days before Gough Whitlam was sacked as PM by Sir John Kerr. In the country towns of Les Carlyon's youth, the Cup was the reference point. A squinteyed farmer would say: 'We haven't had a crop as good as this since…buggered if I can remember…. when The Trump won the Cup.' And the race itself surely defies easy or neat definition. One of the most prestigious of races anywhere in the world, unlike any other of its peers it is a handicap race. Myth has it that winner of the first and second Melbourne Cups, Archer walked the 500 miles from Nowra to Flemington, though it is more likely that steamboat was the means used. By 1993 the Irish Vintage Crop had travelled 40,000 miles to become the first non-Australian trained winner of the Cup. In 2006 Japan quinellaed the race with Delta Blues and Pop Rock. And unforgettably the English-bred Makybe Diva re-wrote the history books by winning three Cups from 2003 to 2005.

THE HEROES

Mark Twain said that "it is not best that we should all think alike; it is a difference of opinion that makes horse races." Differences of opinion would surely visit any attempt to short list the champions of the Australian turf, but we must name a few of them. Carbine was the shot that echoed around the world, and the Carbine Club continues to celebrate his grace and courage around Australia and internationally. While the Great Depression broke lives, Phar Lap broke records. He lifted Australia's spirits at one of its grimmest hours, and the nation wept at the news of his death in America. Bernborough, Tulloch, Kingston Town. These also take their place in the pantheon. And over time the concept of what is an Australian-bred horse has evolved. From the speed-dominated genes of our colonial sires to the best classic blood of the international shuttle stallions – and a unique hybrid (further evolved through the importation of superior North American and European mares over the space of three decades) that has produced our current generation of champions. This has moulded the likes of international success stories Takeover Target, Miss Andretti, Silent Witness, Choisir, Elvstroem, Starcraft – modern day heroes who have ably emulated the deeds of their forefathers such as Strawberry Road, and Balmerino. Our jockeys have thrilled us at home and glittered overseas. George Moore, whose name is given to the annual medal for Sydney's outstanding jockey, Roy Higgins, Darby Munro, these were the brilliant lights of past generations just as Darren Beadman and Damien Oliver are today.
And the trainers, TJ Smith started life in Golgowi on the edge of the outback. His first job was trapping rabbits but he raised himself to the point of utterly dominating Sydney racing for over 3 decades. Bart Cumming's first brush with the Melbourne Cup was in 1950 when he strapped the home-bred Comic Court for his father. 60 years later he has the unmatchable record of 12 Melbourne Cups and 5 quinellas. C.S Hayes, Etienne de Mestre, Jack Denham and their ilk have given Australian racing a reputation for producing some of the best horsemen in the world. Others have also added greatly to the story of Australian racing.

The ‘accurate one’ Bill Collins called 34 Melbourne Cups and races around the world. And bet London to a brick that Ken Howard is still exercising his magic eye somewhere in the hereafter. At the beginning of the 20th century, working in a shed at the back of his house in Sydney, the inventor George Julius applied himself to converting a mechanical vote-counting machine he had invented into the world’s first automatic totalisator. He was soon exporting them around the world. A little earlier the jockey Reuben Gray received a £5 fine from the AJC stewards for allowing his mount to step over the white chalk line that marked the start. By 1894 he and his father Alexander had given the world the first starting barriers.

CONCLUSION

And so we come to 2010. Somewhere along the way the sport of racing has become the Australian racing industry. The second-largest foal crop in the world is exported to 24 countries as well as putting 200,000 starters on Australian race tracks every year. To give you some sense of the scale: 50,000 employees, $5 billion in gross domestic product, and 2 million Australians attending at least one race meeting a year.

Today Australian racing spans both the calendar and the continent: some 400 race clubs conduct 17,000 races barring only Good Friday and Christmas day. 120,000 flock to Flemington on the first Tuesday in November. And in September the population of Birdsville in remote outback Queensland swells from 100 to 6,000 for a two day race meeting. Two hundred years old. A good age, but hopefully we are still yet to pass the first turn. For this sport we love is evergreen: there is no last race and the hope always stays alive that one day we will lead our horse into the winner’s circle.