

12 November 2010

Ms Jeanette Radcliffe
Committee Secretary
Senate Standing Committee on Rural and Regional Affairs and Transport
PO Box 6100
Parliament House
Canberra ACT 2600

Dear Ms Radcliffe

Inquiry into the Australian horse industry and the Emergency Animal Disease Response Agreement

On behalf of Animal Health Australia (AHA), I would like to make a submission to the above Senate Inquiry.

AHA is a not-for-profit company established by the Commonwealth and state/territory governments and the major livestock industries in 1996; Appendix 1 provides further details. The company has gained an enviable reputation for strengthening Australia's national animal health status by fostering collaborative partnerships between AHA members and other stakeholders – i.e. all relevant government agencies, organisations, commercial companies and individuals that are involved in livestock production and the use of horses for work and recreational purposes.

Importantly, AHA does not represent any particular government or industry viewpoint, but seeks to promote and coordinate national programs and initiatives for the collective benefit of all members. While the company is able to take a relatively independent stance on the matter of this Inquiry, as custodian of the *Government and Livestock Industry Cost Sharing Deed in Respect of Emergency Animal Disease Responses* or Emergency Animal Disease Response Agreement (EADRA), we certainly encourage and assist national industry bodies to become signatories to the EADRA.

Background

Under the terms of the EADRA, the Australian Government guarantees to underwrite the industry share of costs of a response to an incursion of any of the diseases listed in the Agreement, enabling control and eradication action to proceed immediately. Once the response is completed, the Australian Government recoups part of its expenses from the relevant industry Parties to the EADRA.

In general, the EADRA has proved to be a very useful mechanism whereby cost sharing arrangements are agreed before the occurrence of an EAD incursion. It is noteworthy that several overseas countries are using the EADRA as a model on which to base their own emergency disease contingency plans.

All the major livestock industries have signed the EADRA which is administered by AHA. However to date, no horse owners' organisation has signed the Agreement. It should be noted that one-third of the 65 diseases presently listed in the EADRA can affect horses; these are listed in Appendix 2.

In the 2007 equine influenza outbreak, the Commonwealth carried the industry's share of the response costs because of the particular circumstances of that incursion. In April 2010, PIMC agreed to the need to establish by 1 December 2010 horse industry commitment to a national levy and to inclusion of the industry under the EADRA. In the absence of any funding agreement, Ministers stipulated that there would be no nationally cost shared response to any exotic horse disease incursion and steps would be put in place to enable voluntary vaccination of horses against equine influenza as a risk mitigation strategy. (PIMC did not suggest a mechanism to protect against diseases other than equine influenza.)

Immediately following the PIMC decision, AHA convened a meeting of its horse industry members (Australian Racing Board, Harness Racing Australia, Equestrian Australia, Australian Horse Industry Council) together with representatives from three major recreational organisations – Pony Club Australia, National Campdraft Council of Australia and the Australian Stock Horse Society. A range of levy options was canvassed and a broad action plan agreed.

While AHA agreed to coordinate and facilitate the consultation process, the six organisations (and others) subsequently agreed to contribute to the costs of this exercise. A total of \$23,630 was offered, of which \$14,300 was from the Australian Racing Board and Harness Racing Australia. Thus far, total direct expenditure by AHA has been almost \$35,000, with the shortfall being met from AHA resources. This does not include considerable costs of travel, advertising, communications etc incurred by many different horse industry organisations.

The Australian Government (DAFF) and state/territory primary industries agencies have also been very supportive, with Industry and Investment NSW providing the 'in kind' services of two senior veterinary officers to assist in coordinating communications and compilation of the final industry submission.

Communication and consultation – levy options

Since the PIMC decision in April, the horse industry has continued to work towards the 1 December deadline. There has been widespread and unprecedented consultation across most sectors of the horse-owning community, and almost unanimous support for signing the EADRA. There has also been strong support for the two proposed cost recovery options – zero-based levies based on manufactured feed and treatments against internal parasites (worms).

In April, a Horse Levy Working Group was nominated to consider the various levy options and recommend a preferred solution. This group has met several times by teleconference, considered each of the various cost recovery mechanisms, and then endorsed the two preferred levy options.

AHA set up a dedicated website to provide horse owner organisations and individual owners with a central reference point for authoritative information about the EADRA, possible levy collection options, and progress towards the 1 December deadline. It also has been a useful place to raise questions and exchange relevant information about forthcoming meetings, etc.

The website address is http://www.animalhealthaustralia.com.au/aahc/horse-owners-and-the-eadra/horse-owners-and-the-eadra_home.cfm

NSW Industry and Investment set up a dedicated email account to handle direct enquiries regarding the EADRA, cost recovery arrangements and related issues. Since April, a series of electronic newsletters has been prepared by the NSW I&I officers, published on the website and also circulated to a contact list of 400 organisations and individuals throughout Australia.

These communication efforts have been complemented by numerous articles and comment in relevant newsletters, magazines, websites, social networking internet sites, etc produced by government agencies and industry organisations. Numerous media releases have been produced, and interviews provided to the electronic and print media. Some organisations such as Horse SA instituted their own communications plans, to good effect.

Levy options

Over the past 10-12 years, various levy proposals have been considered by the horse-owning community; to date, none have gained sufficient support across all sectors to enable implementation. The latest attempt in 2008 proceeded to the stage of enabling legislation (*Horse Disease Response Levy Bills 2008*) for a levy based on registration of horses; this legislation was defeated in the Senate.

During the past six months, a range of levy options has been suggested by the horse-owning community in various communications to the Australian Horse Industry Council and AHA. Approximately 400 associations and individuals provided suggestions and/or comment on this topic. Each of the suggested options was evaluated by the Horse Levy Working Group against the following criteria:

- The legality of the option as a levy; compliance with the Australian Government's *Levy Principles and Guidelines*.
- The definition for the levy option. The horse-owning community, the 'supplier/provider' of the option and the Government all must have a good understanding about the definition and scope of the levy option.
- Equitable application of a levy across the whole horse-owning community – keeping in mind the reality, that it is not possible to achieve 100% coverage. Any levy or combination of levies should be fair and reasonable for a large proportion of the horse industry.
- Number of units on which a levy could be imposed. The greater the number of units, the smaller will be the actual additional cost per unit, if the levy is required.
- Number of potential 'levy collection points'. A levy collection point is the point in the marketing chain where the levy is collected to be remitted to the Australian Government. The cost of collection is as important as the number

of units. The aim is to have a levy option which minimises ‘red tape’ and is relatively inexpensive to collect; too many collection points would increase the cost of collection. The cost of collection will also be met by the industry sector.

- Uncertain or indeterminate aspects of a levy option, due to lack of background information and data.
- Attitude of the horse-owning community to a levy option. Some levy options had strong support by some sectors and very negative responses from others. While this wasn’t treated as a critical or absolute criterion, it was a significant consideration in working towards a consensus position.

The main options considered were as follows:

1. Manufactured or compounded (‘hard’) feed – see table below.
2. Treatments against worms – products that include pastes, pellets, liquid formulations and other products defined and registered by the Australian Pesticides and Veterinary Medicines Authority to treat internal parasites in horses – see table below.
3. Vaccines
 - inadequate coverage of industry
 - relatively small number of units sold.
4. Horseshoes
 - approximate figures on usage available
 - levy collection points are identifiable, small number
 - poor coverage, with uneven use by most sectors
 - usage by some sectors is declining.
5. Registration of horses or owners
 - strong support from some sectors
 - definition not agreed; interpreted differently by different sectors (registration of foal births, adult horses, members of organisations?)
 - many horses and/or riders are registered with more than one organisation
 - reliable figures on horse numbers not available from all sectors or organisations
 - number of levy collection points unknown.
6. Levy placed on event fees
 - no reliable data on number of units or levy collection points
 - additional administrative workload on volunteers (for some sectors).
7. ‘Transit import’ levy (applied to all imported horses)
 - contravenes international (trade) treaty obligations.
8. Foal registration
 - inequitable, with uneven coverage of all sectors
 - variable recording arrangements, necessitating complex audit arrangements.
9. Slaughter levy (horses consigned for human consumption to domestic or export markets)
 - very few units compared to other options

- an existing levy (\$5 per horse) imposed for chemical residue testing.
10. Levy on purchase of equipment (saddles, harness, floats, etc)
 - no clear definition as to type of product
 - no data on number of units or levy collection points.
 11. Microchips (electronic devices implanted subcutaneously, used to identify the ownership of a horse with the information stored in a database)
 - very few units currently available to be levied
 - strong opposition from several recreational sectors.
 12. Wagering revenue
 - rejected on legal advice
 - gaming revenue is not the property of the racing industry.

After a wide-ranging consultation and communication process involving most national and state horse organisations, two preferred options were eventually agreed – manufactured feed and treatments against worms. The pertinent aspects were seen to be:

	advantages	disadvantages
Manufactured feed	<ul style="list-style-type: none"> • Reliable production figures, but only have estimates on usage by the horse sectors. • Relatively wide coverage; increasing usage of manufactured feed by some horse sectors. • Moderate collection costs (<180 collection points, with majority of collection points identifiable) • Cost per unit is relatively low • Ease and low cost of auditing 	<ul style="list-style-type: none"> • Need for a satisfactory definition of 'hard feed' • Some levy 'leakage'
Treatments against worms	<ul style="list-style-type: none"> • Relatively wide coverage • Minimal collection costs (~25 collection points, all readily identified) • Cost per unit is relatively low • Reliable figures available on the number of units sold • Ease of auditing, very low cost; products have to be registered 	<ul style="list-style-type: none"> • Some horses are not treated for worms; there will be some levy 'leakage'

Imposition of the levies

Both proposed levies would be 'zero-based', and no money would be collected until an emergency disease response actually occurred. In the event of a disease emergency affecting horses, both levies would be triggered simultaneously. The process for calculating and imposing the levies is set out in the EADRA.

1. There is an outbreak of an emergency animal disease (EAD), as listed in the EADRA.
2. An Emergency Animal Disease Response Plan (EADRP) is prepared by the 'combat' jurisdiction(s) and presented to the Consultative Committee on

EADs (CCEAD), a technical committee that includes appropriate industry representation. The EADRP includes a budget, with 'eligible costs' identified for sharing among the affected government and industry parties.

3. The CCEAD provides technical advice and a recommendation on the EADRP to the high-level National Management Group (NMG) which also has appropriate industry representation.
4. Based upon advice by CCEAD, NMG approves the EADRP and in doing so invokes cost-sharing of the response under the EADRA.
5. The anticipated shared response cost (and therefore contributions by affected parties), is initially 'capped' at 1% of the affected industries' GVP (2% in the case of foot and mouth disease). If necessary, this limit can be subsequently increased, by agreement of all Parties.
6. The EADRP is implemented; as costs are incurred, AHA receives invoices for all expenditure (eligible for cost sharing); this expenditure is audited by AHA.
7. Based on the cost sharing formulae stipulated in the EADRA, AHA calculates the amounts owing by and to the various parties. While jurisdictions are obliged to pay any monies owing immediately, the Commonwealth meets the industry share.
8. On completion of the emergency response, the total industry share of the response cost is known. This amount then has to be repaid to the Commonwealth, generally over a period of up to 10 years.
9. Under the *Primary Industries Levies and Charges Collection Act 1991* and related legislation, the agreed cost recovery mechanisms agreed by industry, will be activated. The actual quantum of the two levies will then be calculated, aiming for repayment over 10 years – see **Calculation of levies**, below. The repayment period may be less than 10 years, according to the wishes of industry.
10. The levies would be collected at the point of manufacture and/or wholesale, for both manufactured horse feed and worm treatments via an increase in the price of these commodities (and passed along the marketing chain). At required intervals, usually quarterly although other arrangements are possible, the manufacturers will remit monies to the Commonwealth. (Note that manufacturers are able to retain any interest earned on those funds, to offset any additional administration costs incurred.)
11. When the total industry share (plus interest) is repaid, collection of the levies will cease.

Calculation of levies

The direct response cost of the 2007 equine influenza outbreak was \$107 million. When the disease was first detected, considerable time was spent confirming the diagnosis, obtaining information about the location and numbers of horses, and modifying response plans. As a consequence, the cost of the response was far higher than would be the case if a similar incursion were to occur today.

It is the professional view of AHA management that the estimated cost of a future response to an EAD affecting horses is likely to be less than \$50 million (based on the ‘worst case scenario’ of responding to equine influenza following the recent review of the response policy). This is regarded as a generous estimate. Accordingly, the calculations for four different scenarios (see Appendix 3) are based on total shared cost for an EAD response of \$50 million.

In the EADRA, the 65 diseases are placed in four categories that determine the respective shares to be borne by government and industry; at Appendix 3, an example is given for each category. It is emphasised that these are indicative figures only, to give an approximation of the quantum of the levies that might be imposed. Also, it is important to note that for diseases that affect species other than horses, the response costs would be shared across those other industries – further reducing the horse industry’s share.

As shown in Appendix 3, the predicted size of the proposed levies would be relatively modest, and would be unlikely to significantly affect the buying behavior of horse owners. It is likely that for the sake of convenience and to ensure the optimal performance of their animals, horse owners would continue to buy prepared feeds and to treat for worms. This is the preferred option for the majority of owners, as reflected in the positions adopted by national horse industry organisations.

Horse numbers in Australia

In 2001, the number of horses in Australia was estimated to be as high as 1.5 million or as low as 0.9 million of which around 300,000 were feral horses¹. The base estimate used in the RIRDC study was 1.2 million. This was substantially lower than a 1993 Bureau of Rural Sciences figure of 1.5 million horses, reflecting an overall decline in horses over the previous decade. Assuming that that rate of decline has continued, with the effects of drought etc, the base figure accepted for the purpose of these calculations is approximately 932,000 horses in total, excluding feral animals.

The present numbers for the broad sectors can be summarised thus [numbers in parenthesis include some estimates]:

Sector	Horse numbers	Source
Thoroughbreds (racing, breeding)	103,000	Michael Ford, Keeper of the Stud Book (Oct. 2010)
Standardbreds	30,700	Andrew Kelly, CEO, Harness Racing Australia (Nov. 2010)
Recreational Estimated total recreational	798,300	
Equestrian Australia	[45,000]	Grant Baldock, CEO, Equestrian Australia (Nov. 2010)
Arabians	[65,000]	Arabian Horse Society

¹ *The Horse Industry – Contributing to the Australian economy*. Rural Industries Research and Development Corporation Publication No. 01/83, June 2001

Sector	Horse numbers	Source
Arabian derivatives	[180,000]	Arabian Horse Society
Quarter-horses	[74,400]	Aust. Horse Industry Council (2008)
Aust. Stock Horse Society	[35,700]	Aust. Horse Industry Council (2008)
Welsh Pony & Cob Society	[31,588]	WP&C Society (2010)
Pony Club Australia	[35,000]	Pony Club Australia (2010)
Pony Club Stud Book (seven breeds)	[55,000]	website (2010)
Miniature horse and pony	[5,000]	CIE estimate (2001)
Heavy horse breeds	[20,000]	CIE estimate (2001)
Coloured Horse Registries	[26,000]	CIE estimate (2001)
Warmblood breeds	[10,000]	CIE estimate (2001)
Unregistered, non-stud book, station horses, riding schools, pets, etc.	[numbers unknown]	
TOTAL (excluding feral horses)	932,000	ABARE, <i>Report to Secretary DAFF, January 2010</i>

It should be noted that the total thoroughbred numbers, including foals, represents only 11% of the total non-feral horse population. It is reasonable to assume that, in addition to thoroughbreds, a high proportion of standardbreds and performance horses (equestrian, endurance, campdrafting and cutting horses) are fed compounded feeds and would also be regularly treated for worms.

Impact of levies on different sectors

It is generally recognised that no levy or combination of levies will provide 100% coverage of horses or horse owners across Australia. The Horse Levy Working Group concluded that the simultaneous application of a levy on horse wormers and on manufactured horse feed would provide the closest fit to the Government's levy guidelines. Although there have been a few comments received that horse owners will find a way to avoid paying the levy, e.g. using non-proprietary worming products or mixing their own feeds when they have not done this previously, over the repayment period of up to ten years it is highly unlikely that there would be a significant 'leakage' of levy payment by these means.

There have also been claims that the choice of manufactured feed and wormers would result in some segments of the horse-owning community making a disproportionate contribution to the debt repayment. Inquiries of a number of horse feed manufacturers, wholesalers and retailers indicate that the thoroughbred industry

(racing and breeding) accounts for approximately 40% – 55% of purchases of manufactured horse feeds, varying according to region. Refer to Appendix 4.

It has been argued that the thoroughbred and other high performance sectors of the horse industry pose a higher level of risk of introducing or spreading an emergency horse disease. While this claim is debatable, the use of ‘shuttle stallions’ and international movements of thoroughbreds do create a certain level of risk.

The choice of compounded feed and worm treatments as the basis for the preferred levy options has given rise to some concerns and questioning by the manufacturers of those products. In an effort to address some of those concerns, AHA commissioned a limited economic study of the likely impact of a levy on the market for manufactured horse feed.

The report (Appendix 5) does explain that the economic burden of the levy would be shared between manufacturers and feed buyers. As long as manufactured horse feed demand is somewhat responsive to price changes, manufacturers will not be able to fully pass on the levy without some losses in sales and profits. However the burden of the levy would fall mostly upon the group that responds least to price – the horse owners (feed buyers) at the end of the marketing chain.

The report concludes that for feed manufacturers the commitment to collect (and bear in part the cost of the EADRA levy) is likely to be a worthwhile investment. The profit forgone from absorbing part of the levy is likely to be small compared to the profit gain from a much faster disease response under the provisions of the EADRA. As manufacturers experienced during the 2007 EI outbreak, the standstill and cancellation of events had a dramatic effect on horse feed sales – a reported fall in sales of at least 40%.

Further, feed manufacturers would benefit from a response mounted under the EADRA before they had to bear some of the levy cost. A faster disease response, reducing the loss of feed sales would be almost immediate; the levy would not be introduced until the disease event is controlled, and then repayment of the industry share spread over 10 years.

Submission to Federal Minister

A comprehensive dossier is now being prepared by Industry and Investment NSW with assistance from AHA, for submission to the Federal Minister for Agriculture, Fisheries and Forestry. This dossier will demonstrate the broad level of industry support for signing the EADRA and the preferred cost recovery mechanisms, together with evaluation of the cost recovery mechanisms against the Commonwealth *Levy Principles and Guidelines*.

Yours sincerely

Dr Michael Bond
CHIEF EXECUTIVE OFFICER

APPENDIX 1 – ABOUT ANIMAL HEALTH AUSTRALIA

Animal Health Australia (AHA) is a not-for-profit company established by the Commonwealth and all state/territory governments and the major livestock industries. AHA is a dynamic partnership of governments and livestock industries that strengthens Australia's animal health status and reinforces confidence in the safety and quality of our livestock products in domestic and overseas markets.

There are 31 members in five categories:

Australian Government

State and territory governments

Livestock industry organisations

- Australian Alpaca Association Inc.
- Australian Chicken Meat Federation Inc.
- Australian Dairy Farmers Ltd.
- Australian Duck Meat Association Inc.
- Australian Egg Corporation Ltd.
- Australian Honey Bee Industry Council
- Australian Horse Industry Council
- Australian Lot Feeders' Association Inc.
- Australian Pork Ltd.
- Australian Racing Board
- Cattle Council of Australia Inc.
- Equestrian Australia
- Goat Industry Council of Australia
- Harness Racing Australia
- Sheepmeat Council of Australia Inc.
- WoolProducers Australia

Non-program participants/service providers

- CSIRO – Australian Animal Health Laboratory, Geelong
- Australian Veterinary Association
- Council of Veterinary Deans of Australia and New Zealand

Associate Members

- Australian Livestock Export Corporation (LiveCorp)
- National Aquaculture Council
- Dairy Australia

Since AHA was established in 1996, the company has established a credible record in managing a wide range of significant national animal health projects. It has also gained a commendable reputation for enhancing and strengthening Australia's national animal health status by facilitating a variety of collaborative partnerships between AHA members and other stakeholders in the interests of the national animal health system.

The national animal health system includes all organisations, government agencies, commercial companies and individuals that are involved in livestock production and

their use. It is focused mainly on the production of food and fibre from livestock species and the use of horses for competition, work and recreational purposes.

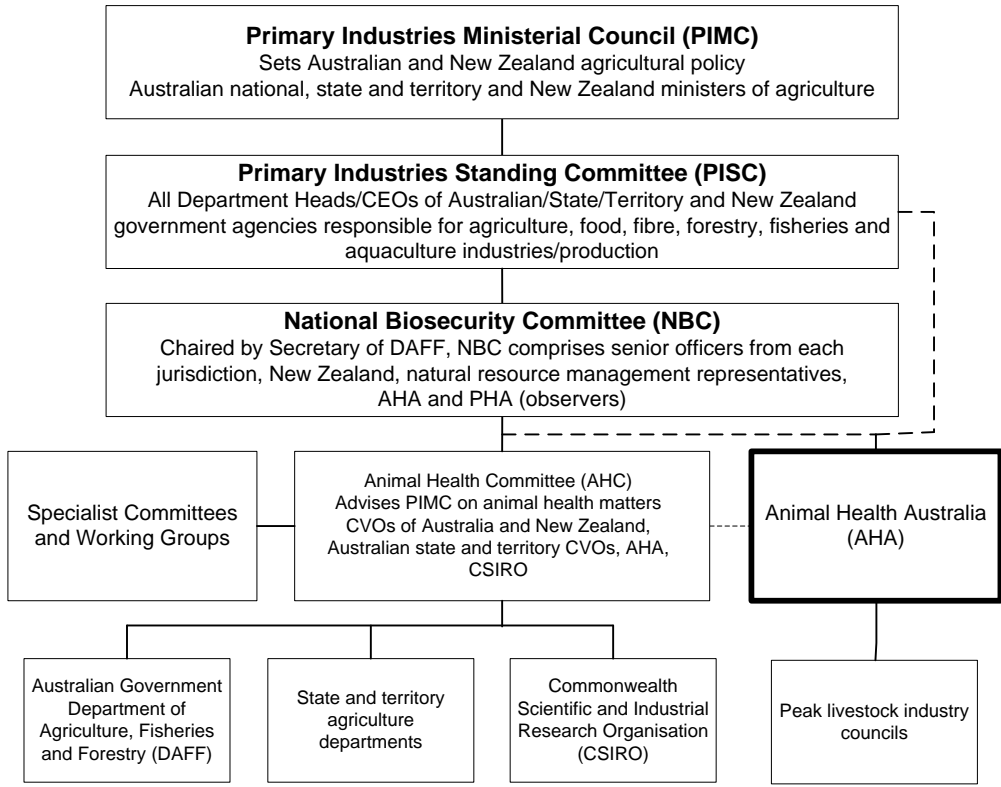
The system works to improve animal and human health, market access, food safety and quality, animal welfare, livestock productivity, biosecurity and the level of protection against emergency diseases.

In the development of national animal health policy AHA, in conjunction with its members, has influence at different levels through its membership of the Primary Industries Standing Committee and the National Biosecurity Committee, where the company is represented. The company has been a core participant of the Australian Biosecurity Cooperative Research Centre but has only a limited role in the coordination and prioritisation of research through the R&D corporations.

AHA plays a pivotal role in initiating, managing and brokering the funding for more than 50 national projects, in collaboration with our members and other stakeholders in the national animal health system. It is important to note that these projects are jointly funded and jointly managed, and cover the broad areas of:

- emergency animal disease preparedness, including EAD training
- disease risk mitigation
- endemic diseases
- animal disease surveillance, including the National Animal Health Surveillance Strategy
- national animal health laboratory network
- biosecurity planning
- National Animal Health Performance Standards
- transmissible spongiform encephalopathy (TSE) freedom assurance
- emergency animal disease vaccines
- national Johne's disease control
- livestock welfare
- *Farm Biosecurity Campaign*
- EAD communications.

AHA maintains a close working relationship with its counterpart organisation, Plant Health Australia (PHA), particularly in the development of biosecurity communications programs and emergency response planning. AHA and PHA are the custodians of two national Agreements involving all governments and major livestock and plant industry organisations – the Emergency Animal Disease Response Agreement (EADRA) and the Emergency Plant Pest Response Deed respectively. The two Agreements are essentially similar in the obligations placed on all signatories, including requirements for biosecurity planning and maintenance of an adequate response capability.



Some major relationships across the national animal health system

APPENDIX 2 – HORSE DISEASES LISTED IN THE EADRA

	Other species affected	Epidemiology	Expected effect on horse health	Major aspects ² of current response policy for horses	AUSVETPLAN manual or Response Policy Brief (RPB)
EADRA Category 1 [Government 100% Industry 0%]					
1. rabies	all warm-blooded animals, humans	direct contact (bites); horses are dead-end hosts	nervous signs; fatal	destruction, movement controls, possibly vaccination	Manual
2. Australian lyssaviruses (including bat lyssavirus) ³	humans (horses not shown to be hosts)	insects?	skin signs; mild	destruction, movement controls, possibly vaccination	Manual
3. Japanese encephalitis	pigs, humans	mosquito-borne; horses and humans are incidental hosts	nervous signs; seldom fatal	possibly vaccination	Manual
4. Western, Eastern and Venezuelan equine encephalomyelitis	poultry, humans	arthropod-borne; horses and humans are dead-end hosts	nervous signs; up to 90% mortality	movement controls, possibly destruction	RPB

² Although vaccination is mentioned in some cases, vaccines for exotic diseases are generally not available in Australia.

³ not exotic to Australia

	Other species affected	Epidemiology	Expected effect on horse health	Major aspects ² of current response policy for horses	AUSVETPLAN manual or Response Policy Brief (RPB)
EADRA Category 2 [Government 80% Industry 20%]					
5. brucellosis (due to <i>Brucella abortus</i>)	cattle, humans	contact	lameness, 'poll evil'	destruction, movement controls, possibly vaccination	Manual (Cattle focus)
6. Hendra virus ² (formerly called equine morbillivirus)	humans	contact with bats; not contagious between horses	respiratory and nervous signs; fatal	destruction, movement controls	RPB
7. glanders	humans	highly contagious; direct contact and ingestion	respiratory , skin; often fatal	destruction, movement controls	RPB
8. screw worm fly	all warm-blooded animals, humans	through wounds	extensive, deep muscle wounds	movement controls, treatment	Manual
9. vesicular stomatitis	cattle, pigs, humans	not fully known		destruction, movement controls	Manual
EADRA Category 3 [Government 50% Industry 50%]					
10. African horse sickness	(dogs)	insect-borne	respiratory and cardiac; fatal	movement controls, possibly destruction, possibly vaccination	Manual

	Other species affected	Epidemiology	Expected effect on horse health	Major aspects ² of current response policy for horses	AUSVETPLAN manual or Response Policy Brief (RPB)
11. Anthrax ² (major outbreaks)	many animals and humans	rare in horses, uptake of spores from soil	sudden death	movement controls, vaccination	Manual
12. Trichinellosis	mammals and humans	ingestion of larvae with rodent-contaminated feed	rarely clinical	possibly movement controls	RPB
EADRA Category 4 [Government 20% Industry 80%]					
13. Borna disease	sheep	direct contact, mostly young horses	up to 90% mortality	possibly destruction	RPB
14. contagious equine metritis	-	sexually transmitted	genital (female only), abortion; not fatal	movement controls, treatment	RPB
15. dourine	-	sexually transmitted	genital (both sexes); 50% mortality	movement controls, possibly neutering or destruction	RPB
16. epizootic lymphangitis	-	highly contagious; direct contact	chronic skin infection	movement controls, destruction	RPB
17. equine babesiosis	-	tick-borne	fever	movement controls, treatment	RPB
18. equine encephalosis	-	insect vector?	nervous signs and	movement controls	RPB

	Other species affected	Epidemiology	Expected effect on horse health	Major aspects² of current response policy for horses	AUSVETPLAN manual or Response Policy Brief (RPB)
			respiratory, low mortality		
19. equine influenza	(dogs?)	Highly contagious; direct contact	Respiratory; rarely fatal	Movement controls, vaccination	Manual
20. Getah virus	-	Arthropod-borne	Skin; not fatal	Movement controls	RPB
21. Potomac fever	-	Not contagious; arthropod-borne (tick)?	Colic, lameness, can be fatal	Destruction and movement controls	RPB
22. surra	dogs, cats, cattle	Transmitted by biting flies	Fever and cardiac; usually fatal	Movement controls, possibly destruction, treatment	Manual

APPENDIX 3

CALCULATION OF PROPOSED LEVIES

In the EADRA, the 65 animal diseases are placed in four categories that determine the respective shares to be borne by government and industry; an example is given for each category:

1. Equine encephalomyelitis [EADRA Category 1]

Government – 100%
Industry – nil

No contribution is required from industry; therefore the levies are not activated.

2. Glanders [EADRA Category 2]

Government – 80%
Industry – 20%

Total cost of response = \$50 million

Industry share (20%) = \$10 million, to be repaid over 10 years
= \$1 million per year

Manufactured feed

Total feed manufactured – 5.2 million tonnes per year

Proportion sold as horse feed (3%) – 156,000 tonnes

Estimated 70% compounded feed – 109,000 tonnes

A levy of 0.6 cents per kg feed (on 109,000 tonnes) would generate \$654,000 pa

Wormer treatments

Total sales of anthelmintic preparations – 1.25 million doses per year

A levy of 35 cents per dose (on 1.25 million doses) would generate \$437,500 pa

Thus: \$0.654m + \$0.437m = \$1.091 million (including administration costs)

3. African Horse Sickness [EADRA Category 3]

Government – 50%
Industry – 50%

Total cost of response = \$50 million

Industry share (50%) = \$25 million, to be repaid over 10 years
= \$2.5 million per year

Manufactured feed

A levy of 1.8 cents per kg feed (on 109,000 tonnes) would generate \$1,962,000 pa

Wormer treatments

A levy of 60 cents per dose would generate \$750,000 pa

Thus: \$1.962m + \$0.75m = \$2.7 million (including administration costs)

4. Equine influenza [EADRA Category 4]

Government – 20%

Industry – 80%

Total cost of response = \$50 million

Industry share (80%) = \$40 million, to be repaid over 10 years

= \$4 million per year

Manufactured feed

A levy of 3 cents per kg feed (on 109,000 tonnes) would generate \$3,270,000 pa

Wormer treatments

A levy of 80 cents per dose (on 1.25 million doses) would generate \$1,000,000 pa

Thus: \$3.27m + \$1m = \$4.27 million (including administration costs)

It is emphasised that these are indicative figures only, to give some idea of the amounts that would be added to the cost of these products. Also, it is important to note that for diseases that affect species other than horses, the response costs would be shared across those other industries – further reducing the horse industry's share.

Summary (indicative figures only, based on total response cost of \$50m)

EADRA disease category	Total industry share of response costs (pa)	Levy on manufactured feed	Levy on worm treatments	Amount generated per year (for 10 years)
1	\$0	nil	nil	nil
2	\$1m	0.6 cents/kg	35 cents/dose	\$1.091m
3	\$2.5m	1.8 cents/kg	60 cents/dose	\$2.7m
4	\$4m	3 cents/kg	80 cents/dose	\$4.27m

APPENDIX 4

Compounded horse feed – Survey of manufacturers, wholesalers and retailers

All companies that are registered with the Stock Feed Manufacturers' Council of Australia and that could be identified (from their website) as selling horse feed were contacted. If a company did not list a website, it may have been missed; these companies would be expected to be smaller companies only. Several extra companies not on the SFMCA list were included, when identified as being relevant to the survey.

Senior staff (for medium-large firms, usually the national sales manager or equivalent for equine sales), were asked to estimate the percentage of their manufactured product going to the thoroughbred industry, as compared to other sectors of the horse industry. In very few cases, the person contacted was not prepared to provide an estimate; these companies have not been included. The responses were provided on a 'commercial in confidence' basis, and the information is therefore listed anonymously; details are held on file, for reference.

The following estimates were obtained:

Manufacturer, wholesaler or retailer	Company Size (with respect to the horse feed market)	Estimated % supply to thoroughbred sector	State	Comments
A	Small	1-2	NSW	
B	Large	45 (includes standardbreds)	various	Approximate % segmentation: Amateur breeding – 25% Amateur sport & leisure – 30% Racing and trotting – 20% Commercial breeding – 25%
C	Large	60	various	
D	Large	30	various	All product sold through retailers

Manufacturer, wholesaler or retailer	Company Size (with respect to the horse feed market)	Estimated % supply to thoroughbred sector	State	Comments
E	Small	10	QLD	No specific products for racing market
F	Small	0	QLD	
G	Medium	20	VIC	Company targets performance and pleasure horse market. Recreational horse people tend to feed 10-20% processed feed. Thoroughbreds – 75% processed feed/concentrates. Equestrian – 50% concentrates, 50% roughage.
H	Large	70 (including standardbreds)	VIC	
I	Medium	5	QLD/NSW	Company aims for recreational sector – polocrosse, campdrafting, workhorse etc.
J	Small	75	SA	Most of business is racing.
K	Large	50	NSW	
L	Large	45 (including standardbreds)	WA	55% recreation sector

Manufacturer, wholesaler or retailer	Company Size (with respect to the horse feed market)	Estimated % supply to thoroughbred sector	State	Comments
M	Small	95	WA	
N	Large	55-60	NSW	
O	Small	40 (including standardbreds)	WA	Pellets and cubed products mainly aimed at pony club, pleasure horses.
P	Medium	70	QLD	
Q	Medium	60	QLD	Retailer
R	Small	5	QLD	
S	Small	40	QLD	Retailer
T	Medium	5	QLD	Retailer
U	Small	10	QLD	

A few managers made the point that the thoroughbred industry would feed considerably more manufactured feed per horse than the non thoroughbred industry, but these figures are representative of overall sales. One nutritionist stated that non-thoroughbreds rarely had more than 50% concentrate in the diet, whilst it was normal for racehorses to be fed 80% concentrates.

While these figures should be treated with some reservation, it would appear that overall, the estimate of manufactured feed purchased by the thoroughbred industry (racing and breeding) would be in the order of 40-55%. This estimate does not include standardbred consumption.

APPENDIX 5

Prepared for:

Animal Health Australia

Deakin, ACT

EADRA levy options for horses: Purchased manufactured feed: Some economic issues

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SUMMARY

Amongst the options being considered as an EADRA levy for horses, should it be required, is a statutory levy on 'purchased manufactured horse feed'. Concerns have been raised by stockfeed manufacturers about who would bear the cost of the levy and the impact on feed sales.

Australian manufactured horse feed production is estimated at around 109,000 tonnes per annum (chaff excluded). It is estimated that it makes up under 10% of the total feed ration of horses and owners of about half of the total number of horses would pay the levy, if it were introduced.

AHA estimates that under an EADRA event horse owners might be required to contribute up to \$30 million towards the recovery cost. In the situation where horse owners had to meet 80% of this response cost, and 60% of this was agreed to be collected through a feed levy, that levy cost would be about \$1.7m per year for 10 years (allowing for interest and administration). The levy rate would be around \$15/tonne, or about \$0.30 per 20kg bag, ex manufacturer — a 1.6% price increase.

The demand for manufactured horse feed is influenced by factors such as its convenience, actual and perceived performance from using it in the ration and, to some extent, its relative price compared to other feed stuffs. It is likely that a higher manufactured feed price resulting from the levy would result in some substitution with other feedstuffs and supplements. The absence of data on feedstuff price movements and demand changes limits analysis the extent of this substitution. However, it seems reasonable to conclude that the levy would result in some decline in sales. It is suggested that a 1% price increase would result in a 1% decline in purchases.

Although manufacturers would collect the levy, the economic burden of the levy would be shared between manufacturers and feed buyers. As long as manufactured horse feed demand is somewhat responsive to price changes, manufacturers will not be able to fully pass on the levy without losses in sales and profits. The burden of the levy would fall mostly upon the group that responds least to price — feed buyers. It is estimated that about 60% of the levy would be passed on to feed retailers and finally horse owners; the other 40% borne by manufacturers. With 60% passed onto to horse owners, horse feed sales would fall by an estimated 1,000 tonnes or 0.9%. Horse owners would pay an additional \$1m for feed and manufacturers' returns would fall by \$0.7m: \$1.7m levy in total.

For horse feed manufacturers the commitment to collect (and bear in part the cost of the EADRA levy) is likely to be a worthwhile investment. The profit forgone from absorbing part of the levy is likely to be small compared to the profit gain from a much faster disease response with the EADRA. As manufacturers know all too well from the EI outbreak, the standstill and cancellation of events had a dramatic effect on manufactured feed sales — said to be 40% at least.

Further, feed manufacturers would benefit from the EADRA before they had to bear some of the levy cost. A faster disease response, reducing the loss of feed sales would be almost immediate; the levy would not be introduced until the disease event is controlled and then spread over 10 years.

BACKGROUND

Amongst the options being considered as an EADRA levy for horses, should it be required, is a statutory levy on 'purchased manufactured horse feed', together with a levy on other consumables, such as wormers.

The manufactured feed option has been discussed by the EADRA Horse Levy Working Group and the Group has held discussions with the Stock Feed Manufacturers' Council of Australia (SFMCA) following its submission to the Working Group.

The SFCMA has outlined a range of concerns with the option with the main issues being who in the feed supply chain would ultimately pay the levy; the economic impact of a levy on stock feed manufacturers and the transparency of the levy to horse owners.

This note has been prepared at the request of Animal Health Australia. In undertaking the analysis discussions were held with the SFMCA, individual manufacturers, stockfeed retailers and industry advisors.

The note presents a brief explanation of the potential levy impact in the context of industry characteristics, government policies and market forces more generally. Specifically:

- Any 'anti-competitive' effects that might result from a levy being applied to manufactured (pelleted) feed, specifically a change in horse owners' buying patterns, eg. buyers switching to alternative feeds and/or mixing their own feed.
- The extent to which the levy is passed on and thus the resulting 'incidence' and 'burden' of the levy.
- The feasibility and/or desirability of identifying the levy component on any invoice or receipt along the marketing chain – primarily with the aim of demonstrating that the ultimate user (horse owners or trainers) are actually paying the levy.

STOCK FEED SUPPLY CHAIN

Manufactured horse feed

Manufactured horse feed is one feeding option for horse owners and in the broad context makes a relatively small contribution to the 'total ration' of Australia's horse population. Horses are grazed on pasture, fed hay, grain and chaff as well as various supplements either as individual feedstuffs or as an 'own mix' and manufactured horse feed. The relative importance of each of these feedstuffs varies considerably between owners/trainers depending upon the activities (breeding, growing, racing equestrian), access to certain feedstuffs as well as the preference of owners/trainers.

The Working Group has developed a definition based on their experience with horse feed products.

A product that is modified, an adulterated feed or a specialist supplement that is produced and marketed for equines or identified as an equine specific consumable product. This definition does not currently include chaff products or specialist feed additives.

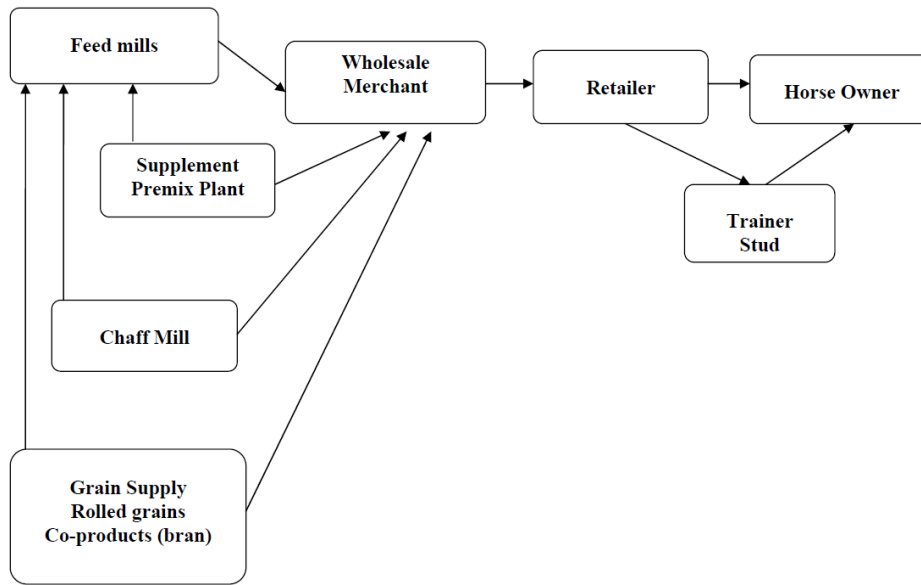
The SFMCA has estimated that around 3% of all manufactured stockfeed is 'manufactured horse feed, including chaff' suggesting annual production/usage of 156,000 tonnes, given annual stock feed production of 5,200,000 tonnes.⁴ When chaff is excluded (about 30% of production), manufactured horse feed production is estimated to total around 109,000 tonnes. This level of production has been used in the analysis that follows.

Using estimates of horse numbers and broad averages of feed consumption, it is estimated that manufactured feed contributes something under 10% of the ration of the 932,000 horses (excluding feral) in Australia.

The supply chain

The manufactured horse feed supply chain is illustrated in the table below.

⁴ SFMCA, Facts and Figures, http://www.sfmca.com.au/info_centre/facts_and_figures/, accessed 31 August 2010.



Source: SFCMA submission to EADRA Horse Levy Working Group

Figure 1: Manufactured horse feed supply chain

Table 1: Estimated consumption of horse feed: Australia

	Breeding	Foals and young horses	Training, racing, spelled and recreation	Total	
Horse numbers (2007)	'000	'000	'000	'000	
Racing (Thoroughbred and Standardbred)	40	47	162	248	
Recreational	29	29	626	684	
Total	68	76	788	932	
Feral				400	
Total including feral				1,332	
Total ration (kgs/day) maintenance 1% of bodyweight av bodyweight of grown horse of 400kg, plus 50% additional for in work (estimated)					
	kg/day	kg/day	kg/day		
	4	3	6		
Proportion of ration (estimated)					
Pasture	85%	70%	5%		
Own mix (hay/grain/chaff/supplements)	12%	27%	70%		
Manufactured feed	3%	3%	6%		
Total	100%	100%	81%		
Consumption/day (number of horses by category x proportion of ration x ration)					
	'000 tonnes	'000 tonnes	'000 tonnes	'000 tonnes	% of total ration
Pasture	85	58	86	229	15%
Own mix (hay/grain/chaff/supplements)	12	22	1,208	1,242	79%
Manufactured feed	3	2	104	109	7%

	Breeding	Foals and young horses	Training, racing, spelled and recreation	Total	
Total	100	83	1,397	1,580	100%
Proportion of horses fed some manufactured feed (estimated)					
	30%	30%	60%		
Number of horses fed some manufactured feed					
	'000	'000	'000	'000	% all horses
	21	23	473	516	55%
Implied manufactured feed per head kg /day					
	0.4	0.3	0.6		

Source: Horse numbers (derived from) CIE, *Estimating Australian horse industry GVP* and horse numbers, report to AHA, September 2007; ration, ration composition and proportion of horses consuming manufactured product, industry estimates. Daily consumption and source of feed estimates reconciled to the estimated 109,000 tonnes of manufactured feed supplied by the stock feed industry.

LEVY ASSESSMENT FRAMEWORK

A levy on manufactured horse feed can be considered in the same way as other rural industry levies. In particular, the incidence (who initially 'pays the levy') and the burden (who ultimately pays the levy). This distinction is particularly important in the current context since the levy would be paid initially by feed manufacturers (to the Government) but the intended burden is manufactured feed buyers — horse owners.

Incidence of the levy

The proposed levy would apply to sales of manufactured horse feed, ex feed manufacturer —the incidence of the levy would be thus manufacturers of horse feed. The manufacturer would be responsible for collecting the levy on feed sales and paying the assessed levy to the Australian Government (through the Levies Management Service of the Department of Agriculture, Fisheries and Forestry). Manufacturers would incur some administrative costs; equally manufacturers would be required to only submit levy collections annually, thus benefitting from any interest received on levies collected earlier in the year.

SFMCA members operate 116 feed milling sites located in all States of Australia.⁵ The number of mills and volume of feed manufactured represents over 90% of all commercial feed sold within Australia. The number of mills supplying manufactured horse feed probably totals less than 30 and the number of businesses less than 20, when chaff is excluded. This suggests that collecting the levy ex manufacturer could be relatively cost effective.

As an alternative a manufactured feed levy could instead be applied at the wholesale or retail level but collection costs would be much higher as there are many more wholesalers/retailers when all the rural and metropolitan sellers of manufactured horse feed are tallied up.

Levy burden or how the levy is distributed between feed manufacturers and horse owners

Levy distribution: principles

Determining the burden of a levy is not straightforward. The key issue is the extent to which a levy can be passed forward as a higher price (of feed) and the response by those further along the chain to an increase in the price (of feed). In technical economic terms the burden of the levy — or how the levy is distributed shared between feed manufacturers, wholesalers, retailers and and horse owners —will reflect the relative demand and supply elasticities all along the supply chain.

- If the demand by horse owners for manufactured horse feed is price inelastic (not responsive to small changes in price), feed manufacturers could more easily pass on the levy. That is, if horse trainers/owners are committed to using manufactured horse fed in the ration even at a higher price, say for reasons of convenience, ensuring nutritional balance and perceptions of demonstrated horse performance

⁵ SFMCA, <http://www.sfmca.com.au/>, accessed 31 August 2010.

and, are not too much influenced by its price. These aspects would be reinforced if there were a strong brand loyalty to particular products or a manufacturer.

- But if this demand is price elastic, manufacturers will end up absorbing most of the levy if they are to maintain sales. That is, if horse owners' decisions to buy manufactured feed is mainly price driven, recognising that manufactured feed directly competes with pasture, hay, chaff, grains and various supplements individually or in own mixes. A rise in the price of manufactured feed relative to these other substitute feedstuffs would see some shift away from manufactured feed.
- The supply of manufactured horse feed is likely to be relatively price elastic — a small decrease in the returns from horse feed manufacture would see supply decrease significantly. Feed manufacturers can readily shift between manufacturing horse feed and manufacturing other stock feeds, especially given that horse feed is a small part of overall production, even for individual mills, and uses the same production facilities. Further, there a number of feed manufacturers and they compete strongly for market share — individual manufactures cannot sustain higher prices for long as other suppliers will quickly enter the market. Competitive transport further limits the extent to which mills have the ability to maintain higher prices, including locally to mills.

In the absence of virtually any data on relative price changes for manufactured feed changes in demand, a qualitative assessment to guide the elasticity estimates has been undertaken.

Price sensitivity of manufactured feed

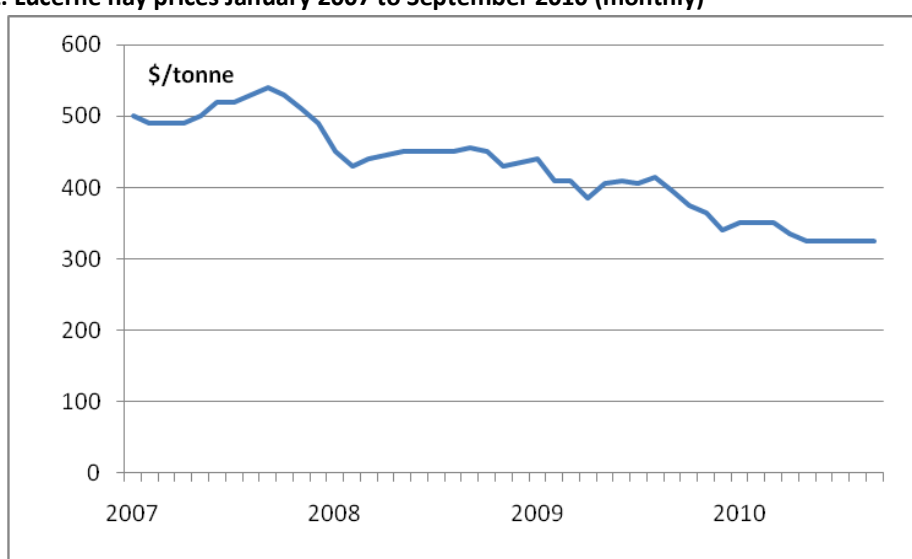
As noted above there are reasons to suggest that demand might be relatively unaffected by the price of manufactured feed but there are other reasons which suggest that it is a close substitute for own mixes of one type or another. On balance it is likely that *overall* the demand for manufactured horse feed is price responsive: a rise in the price, even small one, would see some contraction in demand. It is most unlikely that demand is perfectly price inelastic. But a generalisation is difficult and the situation will differ between horse owners.

- The variation in horse rations is considerable and rations change. Rations differ between trainers' stables and within stables including ration changes week to week, further illustrating the capacity to substitute one or group of feedstuffs for another. While, some if not most of these changes reflect non-price factors such as assessed reasons for better/worse performance or handling some changes will reflect price changes. Further, once a stable has set up the storage and handling systems to use pre mixed or manufactured feed, there will be limited substitution to other feeds unless there are major technical or expected continuing price changes.
- The cost of feeding/agistment is a major proportion of total ownership costs, suggesting that small changes in the cost of feed would be examined by these owners, and changes in ration mix considered. Then again, manufactured feed is estimated to make up a small proportion of the total ration, even for the racing and equestrian industries, suggesting that even small savings from substituting to other

feeds would have a limited impact on total feed costs and the quantity purchased may not change very much.

- Relative feed prices change. In recent years manufactured feed prices have continued to increase/stabilised, although there is no industry wide price series available. However, some other feed prices have fallen, reflecting both increased supply (seasonal conditions) and reduced demand (EI outbreak and reduced horse movements/events and better pasture growth for horses, sheep and cattle). Lucerne hay prices, for example, have been trending down since late 2007, although fluctuating and likely now levelling out. Since their peak in September 2007 Lucerne hay prices have fallen by 40%. However, in the absence of sales data for Lucerne hay, manufactured feed and grain prices and sales for horses, quantifying the degree of possible substitution between these feed sources has not been possible.

Figure 2: Lucerne hay prices January 2007 to September 2010 (monthly)



Source: Australian Fodder Industry Association

- The convenience of manufactured is a major issue for many owners, particularly pleasure horse owners, suggesting that small changes in price would have little, if any, impact on the quantity bought. Equally, pleasure horse owners are cognisant of feeding costs and can be expected to substitute for manufactured feed to some extent.
- While there may be limited brand loyalty to individual feed brands there is a significant degree of 'loyalty' to manufactured feed. The latter reflects what some retailers describe as the fickle or fashion driven nature of manufactured horse feed demand: owners change feeds for all manner of reasons, real or perceived, but usually between manufactured feeds.
- In recent years the use of manufactured horse feed has increased but this has been temporary to some extent. Increased use has likely reflected the higher prices and variable quality of hay and grain needed for own mix feedstuffs; in turn a reflection of continuing drought in Southern Australia and resulting limited supplies of lucerne hay and oats in particular. Manufactured horse feed offered the opportunity to

consistently meet owners and trainers requirements without searching and evaluating hay and grain from various sources.

- Own mixing is now further supported by availability and access to expert nutritional advice, feed analysis reports as well as industry experience thus better enabling trainers and owners to achieve a balanced ration. But this is likely more applicable to the racing industry.

In summary:

- A small change in price will not affect every owner in the same way. Some owner/trainers will not change the quantity they buy; others will. Overall, for horse owners in total, the quantity of manufactured feed demanded will fall to some extent as a result of a price rise.
- Conservatively, the fall in sales with a price rise is probably at least in direct proportion — a 1% rise in price leading to a 1% fall in the quantity sold. It is hard to conclude that it is either more or less than proportional given that there is no supporting data.
- Against this background, while ever manufactured horse feed demand is somewhat responsive to price changes, manufacturers will not be able, in an economic sense, to pass on the levy in full without some loss in sales and thus a loss in profits. Thus, in practice feed manufacturers will bear part of the levy cost and see some reduction in sales and profits.

Accepting that the demand for manufactured horse feed is price responsive enables some quantification of the expected loss in feed sales. A price elasticity of demand of -1 has been used in the analysis. That is, a 1 % per cent increase in price would see sales decline by around 1%.

Levy rate

In broad terms, it has been estimated that response costs for a horse disease event could total up to around \$30m per event (AHA). The industry contribution would differ depending upon the disease.

- Category 1 (eg equine encephalomyelitis) – governments pay 100%; industry nil
- Category 2 (eg. glanders) – industry pays 20%
- Category 3 (eg. African Horse Sickness) – industry pays 50%
- Category 4 (eg. equine influenza) – industry pays 80%

For the purposes of the analysis a worst case has been used:

- Total response cost of \$30m with industry contributing 80% — industry cost of \$24m per defined disease event.

- Industry contribution collected from a manufactured feed levy and other sources. It is assumed that 60% of the collection required would come from a levy on manufactured horse feed. Feed levy requirement \$14.4m.
- Under the EADRA a 10 year payback period applies, with the interest rate equal to the rate of inflation. This implies an annual revenue requirement of around \$1.6m per annum for 10 years. An additional 10% would be needed for administration by the Levies Management Service. All up the levy would need to raise about \$1.7m per year over 10 years.
- Given historical manufactured horse feed production levels of 109,000 tonnes this implies a levy rate of approximately \$15 per tonne, ex manufacturer which equates to a \$0.30 or 1.6% increase on a \$19 (20kg) bag of feed, ex manufacturer.
- Wholesale and retail margins for manufactured horse feed are typically percentage based. Retailers purchasing direct from mills typically seek a 30% margin, which covers transport, and their handling and inventory costs suggesting a \$0.4 or 1.6% increase on a \$25 (20kg) bag of feed. (Typically, where a wholesale margin is involved the retail margin is lower; the total margin then being no different).
- Although it might be argued that the levy should not provide a basis for enabling higher wholesale and retail margins as a result of the levy, the reality is that it would be hard to regulate or enforce against it, particularly if there were other price changes happening at about the time, for whatever reason.

On this basis a levy (fully passed on) which led to prices increasing by the full 1.6% at retail level would see annual sales decline by an estimated 1.6% or 1,700 tonnes (from 109,000 tonnes).

However, as has been argued above the full levy is not likely to be passed on to horse owners, rather it will be shared between manufacturers and buyers. Horse owners (buyers) would react by buying a little less and manufacturers supplying less.

Using again the demand elasticity of -1, and with a supply elasticity of 1.5 (a relatively elastic supply), the shares of the levy (of \$15/tonne or \$0.30/20kg bag, ex manufacturer) would be 60/40 (horse owners/manufacturers).

- That is, the price (to initially wholesalers then retailers lastly buyers) would rise by \$9/tonne, each of these groups bearing some part of the additional \$9/tonne but most of the increase likely passed on to horse owners.
- The return (profits) to feed manufacturers would fall by \$6 per tonne.
- With a \$9/tonne or 0.9% rise in prices to buyers, annual sales of manufactured horse feed would fall by some 1,000 tonnes to around 108,000 tonnes.
- In total horse owners would pay \$9/tonne on purchases of 108,000 tonnes (\$1.0m) and manufacturers would pay \$6/tonne on these sales (\$0.7m).

In summary, a levy on manufactured horse feed can be expected to amount to around \$15/tonne. The nature of the demand for manufactured horse feed (that is, that higher prices lead to reduction in sales) combined with the capacity of manufacturers to switch in and out horse feed manufacture (from general stock feed manufacturing) suggests that the levy would not be fully passed onto buyers. Horse owners and manufacturers would share the levy 60/40. Manufactured horse feed sales are estimated to fall by around 1,000 tonnes from their current level of 109,000 tonnes or about 0.9%. Horse owners would pay around \$1.0m extra for manufactured feed and manufacturers' net returns would fall by around \$0.7m, per annum, for the 10 years of levy collections.

Table 2: Sales, levy rate and levy distribution between buyers and manufacturers

Industry data and levy rates					
Feed production	109,000				
Levy collection	\$1,688,119				
Levy rate (tonne)	\$15				
Bag retail price	\$25				
Bag weight (kgs)	20				
Retail margin	30%				
Ex man bag price	\$19.2				
Tonne price	\$1,250				
Levy per bag ex man.	\$0.3				
Price increase ex manufacturer	1.6%				
Levy fully passed onto horse owners			Levy shared between manufacturers and horse owners		
Ex man. Price including levy	\$19.5	bag	Elasticity of demand	-1	
Ex man price increase	1.6%		Elasticity of supply	1.5	
Retail price with levy	\$25.4	bag	Buyer share of levy price increase	0.9%	
Levy at retail	\$0.4	bag	Man. share of levy price increase	0.6%	
Retail price increase (full pass on)	1.6%		Buyer share of levy	60%	\$9
Sales change	-1,700	t	Man. share of levy	40%	\$6
			Change in sales (%)	-0.9%	
			Change in sales with levy (t)	-1,020	t
			New sales	108,000	t
			Horse owner levy payment	\$1,000,000	
			Manufacturer levy payment	\$700,000	
			Total	\$1,700,000	

Sensitivity: Price elasticity of demand for manufactured horse feed

A key issue is the sensitivity of horse owners' purchases to changes in manufactured feed prices. The above analysis uses an elasticity of -1. If demand is not very responsive at all, for example, because of non-price factors such as convenience and perceptions of manufactured feed as crucial to achieving performance, then horse owners will bear more of the levy and manufacturers less.

Table 3: Levy burden with alternative estimates of the prices elasticity of demand

Total response cost	\$30	m			
Industry share	80%				
Manufactured feed levy share	60%				
Levy collection required	\$1.7	m			
Levy rate	\$15	/tonne			
Elasticity of supply	1.5				
Price elasticity of demand	-2	-1.5	-1	-0.75	-0.5
			Base case		
Horse owner/manufacture split	43/57	50/50	60/40	67/33	75/25
Horse owner share \$m	\$0.7	\$0.85	\$1.0	\$1.1	\$1.3
Manufacturer share \$m	\$1.0	\$0.85	\$0.7	\$0.6	\$0.4
Totals may not add due to rounding					

Sensitivity: EADRA cost sharing arrangements

The cost to horse owners and manufacturers will differ depending upon the disease and hence the cost sharing agreed with governments.

Table 4: Levy burden with alternative EADRA industry/governments cost shares

Total response cost	\$30,000,000				
Industry share	80% (base case)	50%	20%	0%	
Manufactured feed levy proportion	60%	60%	60%	60%	60%
Industry cost \$m	\$1.7	\$1.1	\$0.4	\$0	\$0
Levy rate \$/t	\$15	\$10	\$4	\$0	\$0
Horse owner share \$m	\$1.0	\$0.7	\$0.3	\$0	\$0
Manufacturer share \$m	\$0.7	\$0.5	\$0.2	\$0	\$0
Totals may not add due to rounding					

It is worth noting that this outcome of the distribution of a manufactured feed levy contrasts with the situation in most rural industries which have levies for R&D/marketing/residue testing/EADRA purposes. For most industries the incidence and the burden of these levies is much closer and the burden is mostly borne by producers.

- The levies are typically deducted at the point of sale by agents/processors from the producers sales account (\$ per head of cattle sold; c/litre of milk sold). The levy incidence is at the producer level.
- Since these levies reduce producers' net returns they consequently reduce the incentive for production (leaving to one side the point that these levies are typically for investment in R&D and so forth which ultimately increases producers' returns).
- In export industries where product prices are determined in the world market, this lower level of production will not result in any compensating rise in prices. None of the levy increase is able to be passed onto consumers: producers bear the full burden of the levy.
- Where products are sold primarily on the domestic market, prices might rise meaning that consumers bear some of the levy cost as well as producers.

Levy somewhere else in the chain

Stock feed manufacturers understandably would argue that applying the levy closer to the horse owner would be preferable, for example at the wholesale or retail level. To do so would increase collection costs considerably and would not change the impact on stock feed manufacturers. A levy applied to just manufactured horse feeds will always come back on manufacturers to some extent because of the capacity of owners to substitute for manufactured feed with other feedstuffs.

Levy cost and levy benefits

The fact that manufactured feed suppliers would see some reduction in profits with a levy is only part of the story. The EADRA levy would be there for a purpose, namely because the horse community has signed up to the EADRA. Signing up to the EADRA will enable a much quicker response to a disease outbreak than otherwise. Without the EADRA there will be response delays as governments and industry negotiate about who will bear the cost. In the context of a highly contagious disease such a delay could result in a much wider spread of the disease, extended constraints on the movement of horses and possibly more significant stock losses.

A quicker disease response is likely to benefit the horse community substantially, possibly by hundreds of millions of dollars. In turn horse feed manufacturers would also benefit since horse feed sales are maintained at higher levels than otherwise. A longer standstill means that there are no, or many fewer, equestrian and racing events and riding pleasure horses in public area is similarly restricted. As a result there is much less demand for performance feeding, including manufactured stock feeds. Manufacturers report that during the EI outbreak, manufactured sales fell by in excess of 40%.

For horse feed manufacturers the commitment to collect (and bear in part the cost of the EADRA levy) is likely to be a worthwhile investment. The profit forgone from absorbing part of the levy is likely to be small compared to the profit gain from a faster disease response with EADRA, leading in turn to a quicker restoration of feed sales.

A final point. The issue for stock feed manufacturers is a commitment to collect the levy should there be a call under EADRA. The levy would only begin to be collected at the time of the benefits of EADRA to the horse owning community and indeed stockfeed manufacturers. There would be no levy collections prior to an EADRA response.

In summary, horse feed manufactures would bear some of the costs of the levy but they would also benefit from the EADRA (quicker return of feed sales and associated profit gains). These benefits to feed manufacturers would almost certainly far outweigh the levy costs on them. Further, the levy costs only begin when there is an EADRA response, that is, when, or more likely after, the benefits accrue.⁶

Distribution of the levy cost amongst horse owners

Another distributional issue is how the levy might be shared across horse owners.

Anecdotal comment suggests that the predominant use for manufactured horse feed is bolstering the ration for horses in work, either racing or equestrian (recreational sector) and amongst pleasure horse owners. If true, it means that the levy would

- fall on only part of the horse community, namely owners of racing, equestrian and pleasure horses and not so much on horse breeders or those owners and others growing out young horses.
- levy payers would be the owners of around 55% of horses
- levy payments would vary considerable between owners, depending upon how much manufactured feed they purchased.

In summary, a manufactured horse feed levy is likely to fall on owners of racing, equestrian and pleasure horses. It seems that the levy would be paid by owners of about half the horses in Australia and the levy would vary between owners depending solely upon how much manufactured feed they purchased.

Informing horse owners of levy contributions

As noted most rural industry levies are deducted by marketing agents or processors from the producers sales account when produce is sold. Producers see the levy payment that they have made.

With a levy on manufactured horse feed owners would not generally be aware that they have made a levy payment. Recalling the supply chain above, manufacturers could indicate (or could be legally required to show) on their invoices to wholesalers/retailers that a levy of \$40/tonne is part of the price. However, wholesaler and retailers only use the price into store as the basis for their costings and have no incentive to note in subsequent invoices that a levy has been paid.

⁶ Technically, the distribution of the benefits of the EADRA may not be the same as the distribution of the costs. Horse owners' benefit in the first instance and this will benefit all feed supplies not only manufactured suppliers. In contrast the levy cost would fall on manufactured feed suppliers, not all feed suppliers.

It has been noted that the plant nursery industry uses a levy on new pots to fund nursery industry R&D and this model could apply to the manufactured feed levy. Certainly pot suppliers do note on their invoices to nurseries that a levy has been added for the purpose of funding industry R&D. However, plant purchasers at wholesale or retail have no knowledge of the prior levy payment.

In summary, horse owners are at least one transaction removed from manufacturers who 'pay the levy' and, where wholesalers are involved, two transactions removed and if a third party buys the feed (for example a trainer), three transactions removed. Nothing on the invoice to them would indicate that a levy has been paid and it is difficult to see how the levy payment information could be readily directly conveyed. Legislation may overcome the issue, but the associated regulations would have to apply to retail level and third party buyers and be capable of enforcement. Otherwise, although horse owners might be aware through general media coverage that levy collection system was operating, they would not see the levy contribution in their invoice details.