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A situation analysis of the Australian venison industry

Timothy B McRae[1], RJ Cox[2] and GK Watson[3]

[1] University of Sydney, Faculty of Rural Management, Orange NSW 2800 Australia
[2] Charles Sturt University, Faculty of Science and Agriculture, Orange NSW 2800 Australia
[3] Charles Sturt University, Faculty of Commerce, Orange NSW 2800 Australia

tmcrae@csu.edu.au

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Abstract. In this paper the results of a situation analysis of the Australian venison industry are presented from a study commissioned as part of the development process of an endorsed strategic plan for the Australian farmed venison industry. An extensive literature review, combined with in depth interviews with industry participants, revealed that the Australian venison industry is currently in an extended slump, characterised by a lack of viability within the industry. This lack of viability is due to many factors including, a decline in the number of large scale producers, reduced slaughter and production levels, historically low farm gate returns and very low demand for venison in the domestic market. A significant decline in export demand for venison has also affected the viability of the Australian industry.

Keywords: venison, situation analysis.

Introduction

Within the initial stages of developing the strategic plan for the Australian venison[1], an individual study was commissioned to research the current situation facing the Australian venison industry. This study was compiled through an extensive literature review along with in-depth interviews with industry participants.

In this paper firstly the theory behind undertaking a situation analysis for an industry is detailed, and then the method undertaken for analysis of this industry is outlined. The current situation is analysed in terms of the number and size of deer producers, the size of the Australian deer herd, deer slaughter rates, deer prices, venison production levels and domestic venison consumption. A brief analysis of the New Zealand venison industry concludes the paper.

What is a situation analysis?

Ricks and Woods (1996) state that a situation analysis in the context of Industry Strategic Planning and Coordination (ISPC) process is a useful approach that takes into account the industry's driving forces, key success factors, opportunities, major problems, and key [1]issues. Lyford *et al.* (2002) reinforces the role of a situation analysis in the ISPC process by defining that a situation analysis focuses on developing a comprehensive, up to date understanding of the evolving industry. Hall *et al.* (1999) stated that the most important outcome of situation analysis is the recognition of the industry's current position.

The term 'situation analysis', in the context of ISPC, as described by Ricks and Woods (1996), Hall *et al.* (1999), Lyford *et al.* (2002) and Makubate (1999), is commonly used to encompass all the analytical tools for developing an understanding of an industry. This encompasses such ISPC analytical tools as SWOT analysis, shift-share analysis, value chain analysis, competitor analysis, transaction cost analysis, analysis of major driving forces and the identification of key success factors (Hall and Pate, 1999).

In the context of the strategic process engaged for the development of the strategic plan for the Australian venison industry, the term 'situation analysis' was used in reference to the understanding of the current quantitative situation facing the industry.

[1] Venison is the trading name of deer meat.

Lyford *et al.* (2002) referred to this quantitative analysis of an industry's current situation as a shift-share analysis. Ricks, Hinman and Woods (1995) provide an example of how a shift-share analysis can work within an industry setting. Lyford *et al.* (2002) states that a shift-share is an analysis of change and trends in the industry's market share, size of the market, industry sales volume, and value of key industry segments over time. As such, this analytical tool provides a quantitative assessment of some of the key market trends as well as some overall baseline information on important aspects of an industry's performance (Lyford *et al.*, 2002).

The tools of shift-share analysis detailed by Lyford *et al.* (2002) and Rick, Hinman and Woods (1995) are closely aligned with the analytical concepts finally selected by the researchers for the current situation analysis of the Australian venison industry. However, the researchers have retained the term 'situation analysis', in preference to shift-share analysis (or any other term), as they felt it better represented the aim of this part of the strategic process and most importantly, was a term easily understood by industry participants.

Research method

The method used in this situation analysis of the Australian venison industry consisted of a literature review and an analysis of all quantitative information relating to the industry. Findings from the literature review were reinforced by selective interviews with key industry participants.

Quantitative information analysed as part of a current situation analysis for the Australian venison Industry included:

- The number of deer farms in Australia;
- Deer numbers;
- Deer slaughter levels;
- Deer prices;
- Venison production levels;
- Venison consumption levels; and
- A review of the New Zealand deer industry.

As deer farming is a very small activity in the Australian agricultural environment, there are very limited statistics collected by official collection organisations, such as the Australian Bureau of Statistics (ABS) and the Australian Bureau of Agricultural and Resource Economics (ABARE). The majority of the figures collected and quoted in this paper have been sourced from approved RIRDC research reports.

The availability of accurate information limited the scope of the quantitative analysis of the current situation facing the Australian venison industry. However, there was sufficient relevant information available for the researchers to gain a strong appreciation of the supply, demand, price and competitive factors interacting within the industry.

History of the venison industry

Established in 1971, commercial Australian deer farming expanded rapidly on the basis of viable returns until the late 1980's (Tuckwell 2003). The industry developed a strong export focus, with production concentrated in the south-eastern states, together with some breeding of temperate species (Red, Fallow and Elk) in other states and tropical species (Rusa and Chital deer) in Queensland (Tuckwell 2004a).

Declining net returns, primarily due to drought and associated high slaughter rates, saw the industry experience a downturn in the early 1990's (Tuckwell 2003). Since then, the industry has been characterised by sharp fluctuations in demand and prices, features not uncommon to other rural industries, especially those which are heavily dependent on export markets.

The Australian venison industry is primarily an export industry, with approximately 90% of production being exported (Tuckwell 2000). Australia's largest competitor in the international market is New Zealand (Tuckwell 1999), with a limited, but increasing, supply of New Zealand venison entering the Australian markets. Compared to other protein sources, such as beef, lamb, pork and chicken, very little venison is consumed in the Australian market, with almost all domestic venison consumed in the upper-end food-service.

The most recent estimate of the Australian deer herd in June 2002 was that there was approximately 200,000 head of deer in Australia (Tuckwell, 2003). Fallow deer make up about 34% of the total population and Red deer, Rusa, Chital and Elk deer are estimated to make up about 39%, 15%, 4% and 7%, respectively (Tuckwell 2003). Accurate figures for the Australian herd in 2004 are very difficult to obtain, with recent industry estimates ranging from 175,000 head, to 215,000 head. Similarly, accurate slaughter and production figures are also very difficult to obtain, with the most recent figures estimating that 1,000 tonnes of venison was produced and 35,055 deer were slaughtered in the 2002/03 financial year (Tuckwell

2004a). Feedback from wide consultation with all levels of the Australian industry during mid 2004, indicated that industry appears to be at one of its lowest points since its commencement in 1971. Many industry respondents stated that the industry had been in a rapid decline over the past year, with low prices, reduced processor activity and weaker demand; all of these factors contributing to the downturn.

Deer farming

In 2004 there were strong indications that the number of producers engaged in viable deer production has fallen significantly. While the actual fall in producer numbers has been very difficult to obtain, most long-term industry participants believe that the number of deer farmers in Australia has fallen by between 50% and 90% since the boom periods of the early 1990's.

This reported decline in the number of Australian producers involved in deer farming is reinforced by figures collected by the Australian Bureau of Statistics (ABS) (2004) and published by the Australian Bureau of Agricultural and Resource Economics (ABARE) (2004). However, it should first be noted that the ABS's release of farming enterprise numbers can be lagged by several years. Also, the ABS's criteria for what constitutes an agricultural enterprise has changed over several years and this can affect the comparability of figures over time periods.

In Chart 1 and Table 1 (Appendix) is shown the number of deer farming enterprises in Australia engaged in agricultural production. Chart 1 is a count of deer farming enterprises with an Estimated Value of Agricultural Operations (EVAO) of greater than A$22,500, while Table 1 is a count of deer farming enterprises with an EVAO greater than A$5,000. The figures contained in both tables are comparable, with the only difference being the "cut-off" used by the ABS for enterprises to be included in the count.

As shown in Chart 1 (Appendix) the official number of deer farmers with an EVAO over A$22,500 has declined by 89% over the nine-year period between 1993/94 and 2001/02. Whilst enterprise figures for 2003/04 are not available, phone interviews with industry participants estimated that there would be currently between 35-55 deer enterprises with an EVAO of over A$22,500.

In contrast to figures in Chart 1, Table 1 (Appendix) shows that the number of deer farmers with an EVAO of over A$5,000 has increased by 19% between 1997/98 and 2002/03. This increase in the number can be attributed to enterprises 'falling' out of the higher A$22,500 EVOA bracket and into the smaller A$5,000 EVAO bracket. Thus in effect, there has been an increased number of a very small enterprise, or hobby farmers in the industry, at the expense of medium and large scale enterprises.

As illustrated in Chart 1 (Appendix) the significant fall in the number of medium and large scale deer enterprises since the mid-1990's, while there has been a small increase in the number of very small, or hobby farms, operating within the industry (Table 1 - Appendix).

Deer numbers

Accurate figures on the Australia deer herd are not available. Throughout consultation with the industry many estimates have been attained, ranging from as high as 200,000 head to below 100,000 head.

Tuckwell (2003) estimated the Australian deer herd was approximately 200,000 head as at June 2002, with Fallow deer making up 34% of the total, Red deer 39%, Rusa 15%, Chital 4% and Elk 7%.

The Department of Agriculture, Fisheries and Forestry, in its publication*, Australian Agriculture and Food Sector Stocktake (2005)*, stated that "deer numbers are estimated to have dropped from a 2002 peak of 200,000 head, to around 120,000 head in 2004". Unfortunately the likely accuracy of these figures is questionable, as slaughter figures in 2002/03 of 46,652 head and 30,850 head in 2003/04 are not high enough to account for the 80,000 head liquidation reported during the two mentioned years. However, it should also be considered that during these two years, the majority of Australia was experiencing one of the worst droughts in history, so an increased rate of decline in herd numbers could be expected.

After consultation with the industry, the size of the Australian herd is not known accurately and a thorough industry-wide census should be required to ascertain these figures.

Deer slaughter

As can be seen in Table 2 (Appendix), deer slaughter levels dropped significantly during 2003/04. While it should be noted that figures in 2000/01, 2002/03, 2003/04 were inflated by drought induced selling, the slaughter figures in 2003/04 are well below previous years.

There has been a 34% decline in deer slaughter for the 2003/04 fiscal year. Full evaluation of this decline is problematic due to the lack of market information.

Industry respondents stated that there was a general lack of processing facilities for deer, and this may have contributed to the reduced slaughter levels during 2003/04. Tuckwell (2004) stated that many major processors slowed or ceased most of their activities during 2003/04.

However, through consultation with industry participants and knowledge of the Australian agricultural environment, the following factors could have contributed to the 34% decline in slaughter during 2003/04:

1. *Low deer herd numbers*

The decline in slaughter for the 2003/04 fiscal year could be fundamentally due to the reduced domestic deer herd, and as such, less deer being available for slaughter. This possibility is reinforced by the increased slaughter rates in the preceding four years, and the likely inclusion of a large number of breeding stock during these years.

While industry sources have indicated that the national deer herd has been reduced significantly in recent years, the lack of accurate herd numbers makes it very difficult to quantitatively assess this opinion.

2. *Producers withholding stock, waiting for higher prices*

The average value received for deer during 2003/04 was the lowest in six years, and this may have seen many producers withholding stock from slaughter while waiting for higher prices. Indeed, higher prices during 2000/01 and 2001/02 help to explain the increase in slaughter levels during those years, as producers looked to capitalise on the higher prices by selling an increased volume of stock.

It should be noted that while many producers may have simply withheld stock waiting for prices to rise, there is a general concern within the industry that if prices were to rise in the short term, many producers would take the opportunity to "cash-out" of the industry and sell all stock.

3. *Producers rebuilding herds following drought*

The decline in slaughter for the 2003/04 fiscal year could be attributed to deer producers rebuilding herd numbers after several years of drought and increased slaughter levels. Indeed, improved seasonal conditions across much of south-eastern Australia saw many other livestock industries enter a rebuilding phase during 2003/04, including both the sheep and cattle industries, thus reducing slaughter levels. The rebuilding of the herd should result in increased production volumes in coming years.

Deer prices

Average farm gate value figures published by Tuckwell (2004a) and displayed in Table 5 (Appendix), reveal that Australian venison producers during 2003/04 received their lowest farm gate values for the past six years.

Given the low level of slaughter during 2003/04, the low prices during the past year are more likely to be a result of demand issues, not a supply problem. Indeed, if the low slaughter levels in 2003/04 were a result of reduced supplies and constant demand, prices should have increased. Included in the demand issues for the lower prices during 2003/04 is the stronger Australian dollar, which reduces the competitiveness of Australian venison in export markets, reduced export demand and increased New Zealand exports into key European markets.

Shown in Table 6 and Chart 3 (Appendix) is a comparison of red and fallow deer prices to average annual cattle and lamb prices. This reveals that prices for cattle and lamb have increased in recent years, and red deer and fallow deer prices have fallen. The rise in cattle and lamb prices was attributed to the very strong domestic and export demand for beef and lamb, combined with relatively tight supplies of both lamb and cattle. It should concern people in the Australian venison industry that while other Australian livestock industries experienced historically high prices, due to tight supplies and strong demand, deer prices received by producers declined, even though total deer supplies were at reportedly low levels.

Through 1998/99 to 2001/02, deer producers were receiving higher prices than both cattle and lamb producers. However, 2002/03 saw a significant change, with cattle and lamb prices exceeding deer prices and this situation continued into 2003/04. While the fundamentals behind the price movements are different, it should be a concern to the Australian venison industry that deer prices have been declining in a period of increasing red meat demand, both in the domestic and export markets, resulting in historically high lamb and cattle prices.

Venison production

In Table 3 (Appendix) is shown venison production over the past six years. While slaughter levels during 2003/04 dropped by 34%, production levels only fell 28%, primarily due to a 2.7kg/head increase in the average carcase weight of fallow deer.

Similar to other Australian livestock industries, the average weight and condition of animals presented for slaughter can vary depending on such things as seasonal conditions, time of sale and age. In Table 4 (Appendix) is the average carcase weight of deer slaughtered across the past six years.

While slight fluctuations in carcase weights from year to year are expected given differing seasonal conditions, the yearly variation across the three different breeds is of concern. The majority of the variation in weights can largely be attributed to producers marketing deer when prices are suitable, not when deer are suitable. Tuckwell (2004b) indicates that the ideal carcase weight for red deer is between 55 and 65 kilograms, while for fallow deer it is between 25 and 35 kilograms.

Venison consumption

Accurate Australian venison consumption figures are extremely difficult to obtain, and in most cases, have not been recorded. However, an estimate of domestic consumption of Australian produced venison, or the domestic utilisation, can be calculated by using total production minus exports. While many of the figures contained in this section are estimates, it does give an insight into the level of Australian venison consumed in the domestic market compared to other red meats. These figures do not contain consumption figures of New Zealand produced venison in Australia.

Given that approximately 90% of venison produced in Australia was exported in 2003/04, the remaining 10% of production, or 108.7 tonnes, was utilised in the domestic market. In Table 8 (Appendix), the domestic consumption of domestically produced beef, lamb and venison is shown.

Whilst the domestic utilisation of Australian produced venison has always been well below that of beef, lamb and mutton, the above figures put in context how small this utilisation actually is. Indeed, these estimates show that for every 1 kilogram of Australian produced venison consumed domestically during 2003/04, 7,019 kilograms of domestically produced beef was utilised.

The majority of domestic venison sold and consumed within Australia is distributed by a small number of wholesalers who have established a network of clients. While the volume of venison sold by these wholesalers is not available, it is understood that the logistical demands of servicing these clients provide ongoing challenges.

The New Zealand deer scenario

A situation analysis of the Australian venison Industry would not be complete without examining the New Zealand venison industry. Being the largest farmed venison producer in the world, New Zealand retains significant market power on world markets, and as such, it is critical for the Australian Industry to understand and monitor situations within the New Zealand industry. New Zealand reports to have 1.7 million head of deer, as at 30 June 2004, with around 5,000 deer farms (Deer Industry New Zealand, 2005).

A small, but reportedly increasing volume of New Zealand venison enters the Australian domestic market, mainly into east coast markets. This venison is largely in demand throughout the foodservice industry for its quality, consistency and competitive price. Traditionally, the New Zealand venison industry has had very little focus upon the Australian market, primarily due to its small size in comparison to more lucrative European markets.

Similar to the Australia venison industry, the New Zealand industry is reportedly experiencing one of the most prolonged periods of low prices in its history. Indeed, a report released by Deer Industry, New Zealand (2004), stated that "*deer production is not sustainable at the current prices and certainly not competitive with other livestock options*" and that some producers are leaving the industry.

The low returns for New Zealand producers are predominately due to a combination of increased production levels since 2001/02, and a weakening in export demand. Figures released by Deer Industry New Zealand (2004) show that production levels for the past year have been at historically high levels and with around 90% of New Zealand venison exported, export volumes have increased significantly. Highlighted in Chart 4 (Appendix) is New Zealand's 51% increase in venison exports during 2004. This would have been a factor contributing to the decreased prices experienced through the Australian market.

Many of the current problems within the New Zealand deer industry stem from reduced export demand by Germany, the high New Zealand dollar, and historically high kill rates and production. Indeed, in the December 2004 edition (p. 2) of *Deer Industry News*, Clive Jermy, chairman of Deer Industry New Zealand states to New Zealand producers that "*the market does not want more product at this time, so instead of making supply decisions based on today's prices – which are heavily impacted by the high kill – holdback if you can*".

While the New Zealand deer industry is currently in a price slump, largely due to increased production, there are indications of "*exporters reporting relatively good demand for the coming season*" (Deer Industry News, 2004, p. 2). Whilst this could also be seen as good news for the Australian industry, it is even more encouraging that there have been little reports of stockpiles developing, even though export levels have been significantly increased. This should hopefully see export prices for venison increase in coming years, once the current high production levels are reduced.

Conclusions

The Australian venison industry is currently in an extended slump, characterised by low farm gate returns to producers and a declining number of large scale deer farmers. However, unlike the New Zealand industry which has experienced historically high production levels, Australian venison production has declined in the past year, a situation which would normally indicate a period of rising prices.

The fact that both prices and supplies have declined during 2003/04, indicates that demand issues are also present within the industry. Given the small size of the domestic industry, these demand issues are largely related to the export market and could easily be a case of demand for Australian venison being reduced due to the large volume of New Zealand venison currently available on the international market. The significant flow on effects that the depressed export market have had on the domestic market, further validates the need for the industry to significantly increase the size of the domestic market. This in turn should provide better stability to prices across all sectors of the Australian venison industry.

One of the greatest concerns facing the industry is the rapid reduction in the number of viable farmers within the industry (see Chart 1, Appendix). Indeed, the numerous interviews undertaken to industry participants have generated the perception that many producers within the industry are looking to exit the industry, and are simply waiting for the best time to sell stock and "cash-out". Thus, if returns for deer were to rise in the near future the action of producers would need to be closely monitored, as any further reduction in the domestic herd or number of producers could further harm the industry's future.

Finally it may be said that the current situation facing the Australian venison industry is bleak. Producers are discouraged by low returns while there is also only a limited number of processors remaining.

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References

Australian Bureau of Agricultural and Resource Economics (ABARE) 2004, *Australian Commodity Statistics 2004*, Canberra.

Australian Bureau of Statistics (ABS) 2004, *Agriculture, Australia,* cat. No. 7113.0, Australian Bureau of Statistics, 2004, Canberra.

Australian Bureau of Statistics (ABS) 2004, *Australian Farming in Brief - 2004*, cat. No. 7106.0. Australian Bureau of Statistics, 2004, Canberra

Deer Industry New Zealand 2004, Deer *Industry News – December 2004,* Deer Industry New Zealand, Wellington.

Deer Industry New Zealand 2004, *Venison Industry Strategic Intent 2005-2010*, Deer Industry New Zealand, Wellington.

Department of Agriculture, Fisheries and Forestry 2005, *Australian Agriculture and Food Sector Stocktake*, Australian Government Department of Agriculture, Fisheries and Forestry, Canberra.

Department of Agriculture, Fisheries and Forestry 2004, *Australian Food Statistics 2004 – Interim*, Australian Government Department of Agriculture, Fisheries and Forestry, Canberra.

Hall CR, Pate LD and Rutledge O 1999, *Industry Strategic Planning and Coordination: The Case of the Texas Vegetable Industry',* Faculty Paper Series 99-6, Department of Agricultural Economics, Texas A&M University.

Lyford CP, Ricks DJ, Peterson C and Sterns JA, 2002, *'A Framework for Effective Industry Strategic Planning'*, Journal of Agribusiness, 20(2): 131-146.

Makubate LR 1999, *'Strategic Planning for Agricultural Industries: A Case Study of Industry Situational Analysis of the Michigan U.S. Tart Cherry Industry'*, Master of Science research paper, Michigan State University, East Lansing, Michigan.

Meat and Livestock Australia 2005, *Australian Cattle and Sheep Industry Projections – 2005,* Meat and Livestock Australia, Sydney, NSW

Ricks D, Hinman D and Woods T, 1995, *'Changing competitive position and key market trends of the Michigan apple industry'* Staff Paper no. 95-61, Department of Agricultural Economics, Michigan State University, East Lansing, Michigan.

Ricks D and Woods T, 1996, *'Strategic Planning For Improved Competitiveness by Regional Commodity Industries'*, Journal of Food Distribution Research, 27(1): 59-71.

Tuckwell CD, 1999, *The Development of the Deer Industry as a Major Australian Livestock Industry.* RIRDC Publication No. 99/92, Canberra.

Tuckwell CD 2000, Niche European Venison Markets. RIRDC Publication No 00/172. Canberra.

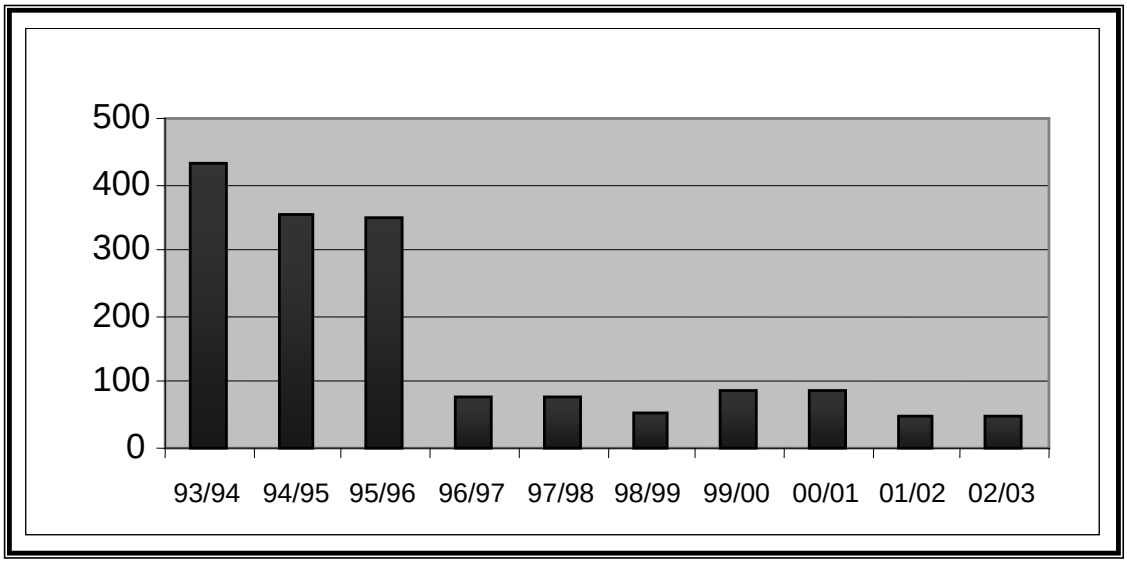
Tuckwell CD 2003, *Deer Farming In Australia: Production and markets for venison, velvet antler and co-products in 2001-02*. RIRDC Publication No. 02/128. Canberra.

Tuckwell CD 2004a, *Deer Production Handbook and Industry Statistics*. RIRDC Web-only Publication No W04/042. Canberra.

Tuckwell CD 2004b, *Dissemination of Results of Research Projects.* RIRDC Publications No. 04/ RIRDC Project No DIP-13A. Canberra.

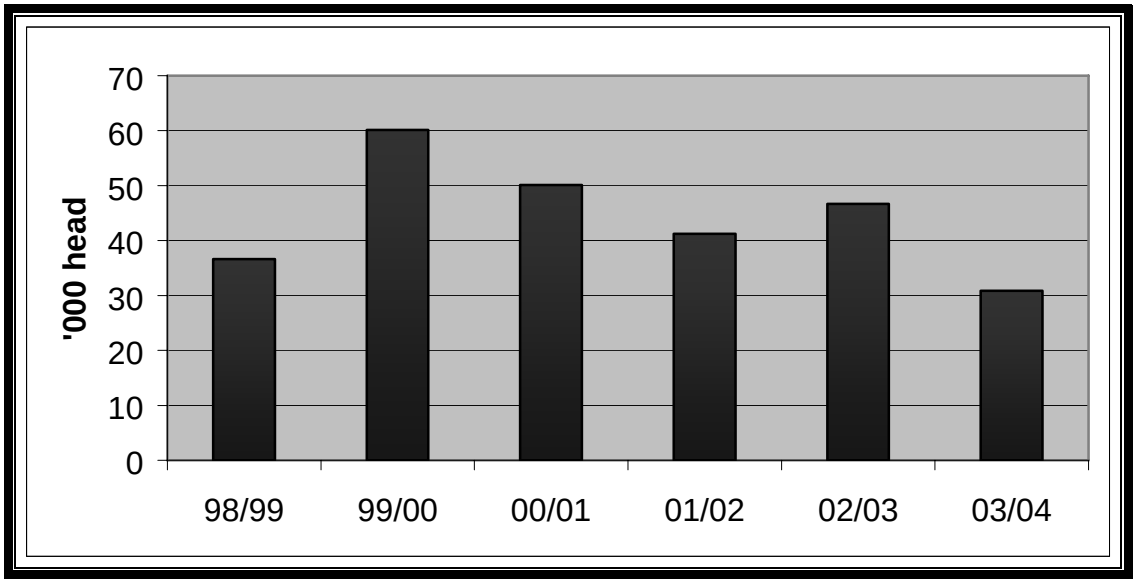
Appendix

Chart 1: Number of deer farming enterprises – EVAO greater than A$22,500.



Source: Australian Bureau of Statistics (2004), *Agriculture, Australia*, cat. No. 7113.0.

Chart 2: Total deer slaughter, ('000 head)



Source: Tuckwell (2004b)

Table 1: Number of deer farming enterprises – EVAO greater than A$5,000.

	1997/98	2002/03
Deer farming enterprises	225	268
Total farming enterprises	144,863	132,983

Source: Australian Bureau of Statistics (2004), *Australian Farming in Brief - 2004*, cat. No. 7106.0.

Table 2: Deer slaughter (number of head)

(no. head)	1998/99	1999/00	2000/01	2001/02	2002/03	2003/04
Red deer	12,642	18,042	18,975	15,018	16,334	12,953
Fallow deer	22,128	37,964	29,207	25,171	29,133	17,896
Rusa deer	1,883	4,160	1,949	1,033	1,185	na
Total	36,652	60,165	50,131	41,223	46,652	30,850

Sources: Tuckwell (2004b)

Table 3: Venison production (tonnes carcase weight (cwt))

(tonnes cwt)	1998/99	1999/00	2000/01	2001/02	2002/03	2003/04
Red deer	708	915	1,014	836	829	650
Fallow deer	542	859	686	619	632	437
Rusa deer	77	154	68	35	45	na
Total	1,323	1,928.1	1,767.8	1,489.4	1,505.5	1,086.8

Source: Tuckwell (2004b)

Table 4: Deer carcase weights (kg/head)

(kg/head)	1998/99	1999/00	2000/01	2001/02	2002/03	2003/04
Red deer	56	50.7	53.4	55.7	50.7	50.2
Fallow deer	24.5	22.6	23.5	24.6	21.7	24.4
Rusa deer	41.1	37.1	35.0	33.5	38.3	na
Total	35.8	32.0	35.3	36.1	32.3	35.2

Source: Tuckwell (2004b)

Table 5: Average farm gate value (A$/kg cwt)

(A$/kg cwt)	1998/99	1999/00	2000/01	2001/02	2002/03	2003/04
Red deer	2.44	2.71	3.79	4.70	2.03	1.67
Fallow deer	2.16	2.64	3.18	3.69	2.22	2.07
Rusa deer	1.91	2.84	3.30	3.19	1.83	na

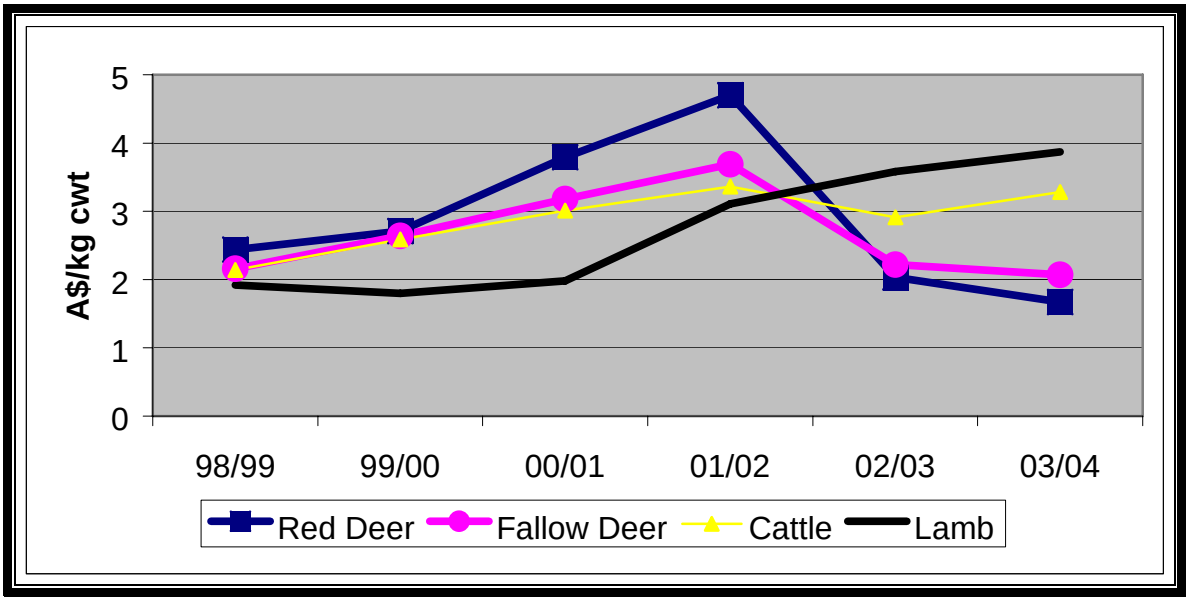
Source: Tuckwell (2004b)

Table 6: Average prices for red deer, fallow deer, cattle and lambs (A$/kg cwt)

	1998/99	1999/00	2000/01	2001/02	2002/03	2003/04
Red deer	2.44	2.71	3.79	4.70	2.03	1.67
Fallow deer	2.16	2.64	3.18	3.69	2.22	2.07
Cattle*	2.14	2.59	3.01	3.36	2.91	3.28
Lamb**	1.92	1.80	1.98	3.11	3.58	3.87

Sources: Tuckwell (2004b), Meat and Livestock Australia (2005).
* Trade steers, 170-230kg cwt.
** Trade lambs, 18-20kg cwt.

Chart 3: Average prices for red deer, fallow deer, cattle and lambs (A$/kg cwt)

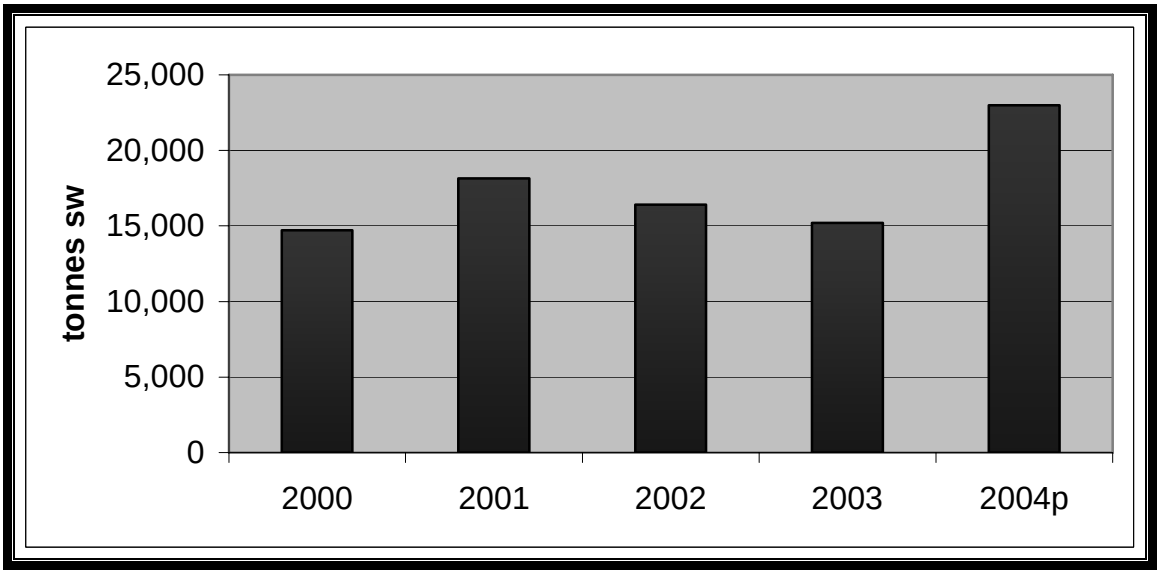


Sources: Tuckwell (2004b), Meat and Livestock Australia (2005).

Table 7: Domestic utilisation of Australian produced beef, lamb and venison

(tonnes cwt)	Beef	Lamb	Mutton	Venison
2003/04	763,000	208,000	62,500	108.7

Chart 4: New Zealand venison exports (Years ending October)



Source: Statistics New Zealand p = provisional