



final report

Project Code: A.TSE.0008
Prepared by: Michael Hartmann
Date published: October 2006

PUBLISHED BY
Meat and Livestock Australia Limited
Locked Bag 991
NORTH SYDNEY NSW 2059

Contextualisation of TSE0008 Aggregation Point Data

Meat & Livestock Australia acknowledges the matching funds provided by the Australian Government and contributions from the Australian Meat Processor Corporation to support the research and development detailed in this publication.

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Contextualisation of TSE008 Aggregation Point Data

Prepared for

Animal Health Australia

October 2006

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FINAL REPORT

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Executive Summary

The TSE008 Aggregation Point Study commenced collecting data in October 2003. The study aimed to investigate the potential of utilising existing points throughout the country where animals are routinely congregated as venues for disease surveillance activity.

This report interrogates the data compiled over the course of the 3 year study, and attempts to contextualise the data with relation to the seasonal and market impacts that were influencing the buying and selling mechanisms within the industry at the time.

October 2003 to September 2006 (inclusive) was a period of drought throughout most of Australia. However for cattle and sheep, it was a period of buoyant prices and market opportunities. The live export sector however experienced a substantial downturn.

The report concludes that the seasonal and market influences did have an impact on the data collected, however also concludes that the years in question were too similar and too few for any definite trends to be identified.

The report concludes that the Aggregation Point Study was successful in identifying that capturing surveillance information at aggregation points is possible.

The report also concludes that knackeries are the most suitable points to use if the surveillance is to involve animals that are dead, dying, diseased or disabled.

The report finally concludes that the small percentage of dead, dying, diseased or disabled animals being presented to other aggregation points is suggestive of the success of industry Codes of Practice and good on-farm management systems in ensuring that unfit animals are not presented for human consumption.

1. GENESIS

1.1 Overview of TSE008 Aggregation Point Study

The TSE008 Aggregation Point Study commenced in October 2003. The purpose of the project was to ensure that Australia has the capability to quickly deploy surveillance methods requiring post-mortem sampling, sometimes in public places such as saleyards. This addresses an important challenge for Australia where, because of the extensive nature of production systems, there is a need to develop innovative, cost effective sample collection methods based on a number of different livestock aggregation points.

Lessons learned will be used to position Australia to rapidly respond to any changes in surveillance requirements for diseases like BSE that might occur in the future, whether that results from detecting disease, a change to international standards or domestic policy, or in response to trading partner requirements.

This Aggregation Point Study aimed to evaluate Australia's unique needs and ability to scale up surveillance in specific risk animal sub-populations through post-mortem sampling at different aggregation points. Activities included developing and testing methods to identify and sample risk animals at a number of aggregation points such as meatworks, saleyards, knackeries and live export facilities.

Within the contract between Meat and Livestock Australia and Animal Health Australia that governs this project, there was only one objective to be met by the aggregation point study, viz:

To develop, evaluate and describe cost-effective methods for the identification of eligible risk animals (both cattle and sheep) presented at different types of aggregation points such as meatworks, saleyards, knackeries and live export facilities.

State/Territory TSE coordinators were tasked with identifying the individual aggregation points within their jurisdiction. Each aggregation point was then assessed individually for the following information:

- Approximate numbers of risk animals being presented at each aggregation point,
- The manner in which risk animals are usually disposed of at each point,
- The ease with which samples can be collected at each type of aggregation point,
- Carcase disposal issues.

Summary data was then collected for each suitable aggregation point, namely:

- Approximate annual throughput of animals by species
- Approximate number of animals presented to each aggregation point that would meet the surveillance sampling criteria (ie: "Downer" animals – dead, dying, diseased, disabled).
- The ease with which the samples could be collected if necessary.

The summary data was forwarded to Animal Health Australia and maintained in a spreadsheet for later analysis. Data was collected over three years, from October 2003 to September 2006 (inclusive).

1.2 Overview of Contextualisation Study

The Terms of Reference for this study are attached (Appendix A). In summary, the author has been tasked with providing an analysis of the Aggregation Point Study summary data with consideration to the impacts that seasonal variation and market forces prevailing at the time may have had on the levels of data collected. This analysis then provides a context to the data that can be taken into account during any future reference.

2. SETTING THE SCENE

Two forces that can have a major impact on the numbers of animals being presented to aggregation points are the seasonal conditions and the prevailing market conditions (domestic and international). These two forces are intrinsically linked. During a period of drought for example, livestock producers may elect to reduce pressure on their farm resources by selling stock. This will increase the throughput at certain aggregation points (eg: saleyards). These animals may be in less than ideal condition, and not suitable for slaughter for say, the export market, leading to a downturn in numbers being presented to export abattoirs. They may however be suitable for the live export market, causing an increase in throughput at live export depots. Alternatively, they may be in such poor condition that the only market opportunity is through knackeries.

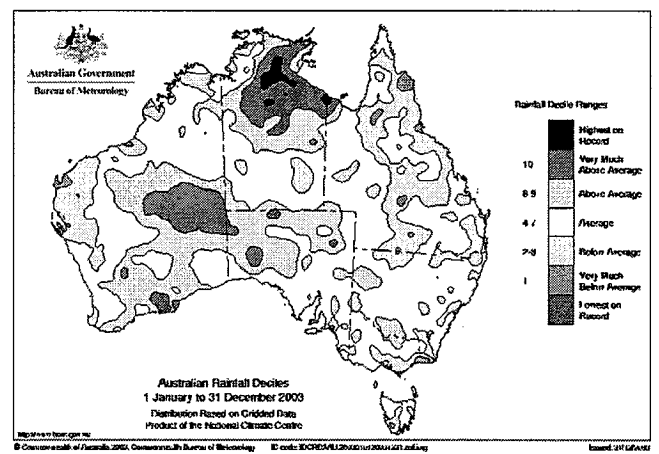
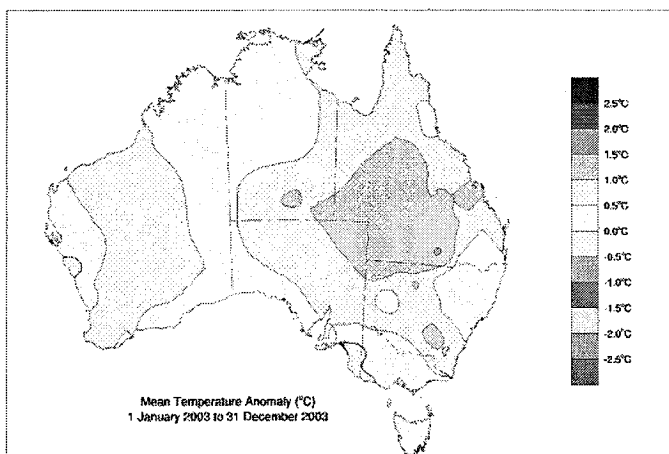
Following is an overview of 1. the seasonal conditions that were evident over the period of the data collection, and 2. the market forces that prevailed over that same period. This overview will set the scene for the analysis and contextualisation of the aggregation point data.

2.1 Seasonal Conditions during the Data Collection

2.1.1 The 2003 Calendar Year

Data collection for the Aggregation Point Study commenced in October 2003. This was during a calendar year best described as warm with near normal rainfall. The all-Australian annual mean temperature for the year was 0.62°C above the 1961-90 average, making it Australia's sixth warmest year on record since 1910 (when reliable Australia-wide climate records became available.)

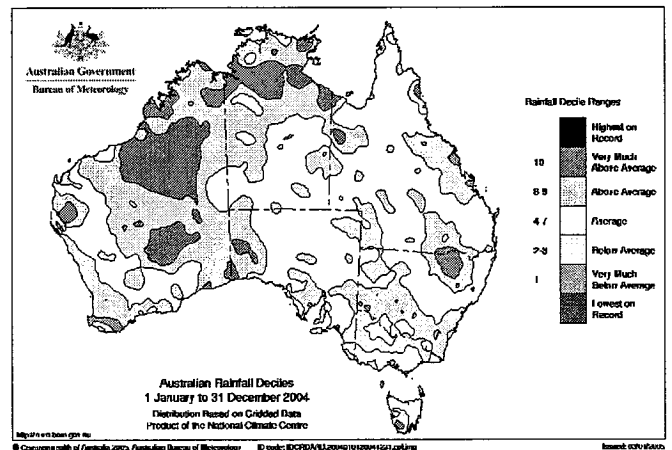
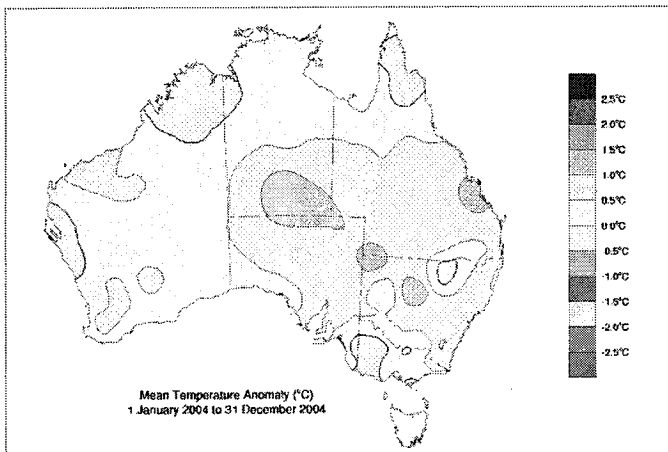
Australian rainfall for 2003 was largely influenced by the breakdown of El Niño conditions. The average rainfall throughout Australia for 2003 was 476mm, very close to the long-term average of 472mm. However, recovery from the rainfall deficiencies that accumulated during the severe 2002/03 El Niño-related drought was slow and patchy.



2.1.2 The 2004 Calendar Year

2004 was another warmer than normal year; dry in the south while very wet in the northwest. Average temperatures were again warmer than normal across most of the country. The all-Australian annual mean temperature for 2004 was 0.45°C above the 1961-90 long-term average, making it the tenth warmest year since 1910. The annual values were boosted by several extensive warm spells, including an exceptional two-week heat-wave during February (which affected a large proportion of the country and resulted in many new temperature records) and warm periods in eastern Australia during September and October.

The average rainfall throughout Australia for 2004 was 507mm, which was higher than the long-term average of 472mm. Rainfall patterns were far from uniform, however, with much of the western half of the country (apart from southwest WA) receiving above average rainfall for the year. The northern wet season was particularly active during January to March, with heavy rains occasionally associated with flooding, particularly in inland Queensland and northern New South Wales around mid-January, and in the Northern Territory in February and March. However despite good rainfall throughout southeast Australia in November and December, the annual totals across this region were mostly below normal.

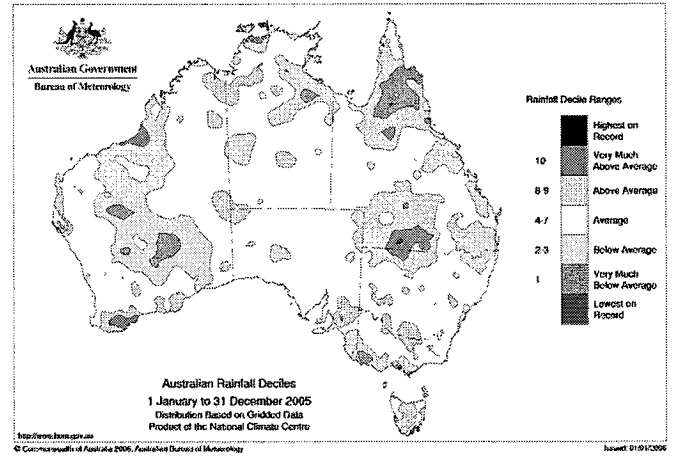
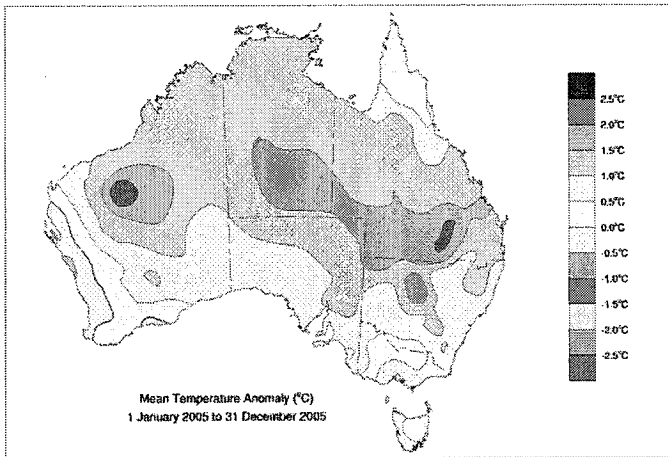


2.1.3 The 2005 Calendar Year

2005 was Australia's hottest calendar year on record. The nation's annual mean temperature for 2005 was 1.09°C above the standard 1961-90 average. Despite some regional variations, the warm conditions were very widespread. All States and Territories, apart from Victoria and Tasmania, recorded 2005 mean temperatures amongst their top two warmest years on record. The absence of any El Niño events made this occurrence even more unusual.

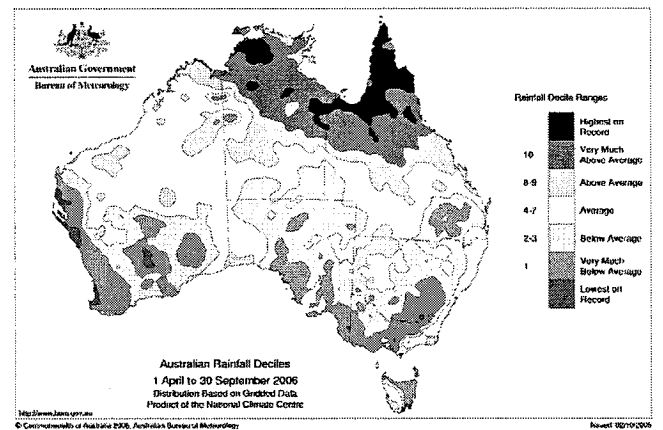
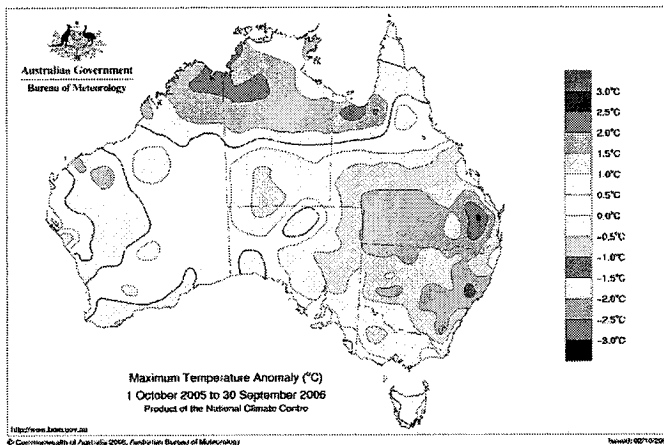
In addition to being warm, the early months of 2005 were also very dry over much of Australia. The January-May period was the second driest on record. From June onwards rainfall reverted to near- to above-normal levels over much of Australia, but the lack of sustained above-normal rainfall led to the continuation of multi-year droughts in parts of Australia, particularly in the southeast. The average total rainfall throughout Australia for 2005 was about 399 mm, compared with a long-term average of 472mm.

CONTEXTUALISATION OF TSE008 AGGREGATION POINT DATA



2.1.4 The 2006 year to date

The 2006 year commenced with high rainfall in the north of the country, associated with cyclonic activity. However the remainder of the country continued to experience prolonged drought, with long-term above average rainfall periods required to alleviate the deficiencies. September 2006 saw continuing below average rainfall across southern and central parts of the mainland, with deficiencies generally expanding or intensifying over South Australia, New South Wales and Victoria. Furthermore, the dryness was exacerbated by temperatures that were well above normal. The continuing drought has been described as the hottest, driest, most prolonged and widespread in the recorded history of Australia.



2.2 Market Conditions during the Data Collection

2.2.1 The 2003 Calendar Year

2.2.1.1 Beef

2003 was a turbulent time for the beef industry. The historically high prices enjoyed at the beginning of the decade had been shattered by the September 2001 discovery of BSE in Japan. Meanwhile, Australia was in the midst of a severe and continuing drought and experiencing an appreciating currency value. Nonetheless, demand for Australian beef, both domestically and internationally (US and Japan in particular), continued to increase, with a resultant rise in cattle prices, almost back to pre-Japan-BSE levels.

Despite record retail beef prices, domestic demand for beef increased by 2.5%. Meanwhile, the live export trade suffered as it was unable to withstand the sharp increase in cattle prices.

While there was some relief from the drought in 2003, it was patchy and insufficient to permit full recovery from the dry. Cattle numbers consequently continued to fall as producers sold stock.

2.2.1.2 Sheepmeat

The markets for sheepmeat continued to be buoyant in 2003. A tight global demand/supply situation resulted in a further 17-20% increase in average lamb and sheep prices over the records of 2002. Since 2000, the prices for lamb increased 135% while sheep prices increased almost 200%. The attractive prices caused many sheep producers move into sheepmeat production and away from the depressed fine wool market.

Meanwhile, the live sheep trade suffered a number of serious setbacks, principally due to a dramatic fall in the availability of Australian sheep, the sharp rise in the exchange rate, and the suspension of the trade to Saudi Arabia following the "MV Cormo Express" incident.

2.2.2 The 2004 Calendar Year

2.2.2.1 Beef

On 25 December 2003, a case of BSE in the United States was confirmed. Japan immediately suspended beef imports from that country. Up until this time, the United States had been the major competitor to Australian beef on the high-valued Japanese market. Suddenly, Australia was required to fulfil the Japanese beef import requirements. Beef prices again increased (though not yet to pre-Japan-BSE levels) with this sudden increase in the already high demand. Meanwhile, domestic consumers continued their demand for beef, despite the increasing retail prices.

The drought continued to devastate rural Australia, yet the high beef prices encouraged producers to retain their cattle numbers.

The live export trade continued to suffer from the cost of cattle, the rising dollar, and public concerns regarding animal welfare.

2.2.2.2 Sheepmeat

The markets for sheepmeat continued to perform well in 2004, driven by steadily expanding local and export demand and tight global supply. Supply remained limited due to the continuing drought, while demand continued to escalate, resulting in extraordinary price levels.

The live sheep trade however continued to suffer from the loss of the Saudi market, increased prices for sheep, competition from other countries, and the same concerns regarding animal welfare.

2.2.3 The 2005 Calender Year

2.2.3.1 Beef

Despite the continuing drought and rising prices, beef demand remained high in 2005. The drought eased slightly in the first half of the year, leading to a sharp rise in prices mid-year. The continued absence of the US from the Japanese and Korean markets contributed to further price increases, as well as strong demand for Australian beef domestically and in the US. Cattle prices returned to their pre-Japan-BSE levels.

Live cattle exports continued to fall in the face of rising costs for cattle, fuel, and pressures from competing suppliers and animal welfare activists.

2.2.3.2 Sheepmeat

Lamb prices continued to perform well, with returns to specialist lamb producers remaining at historically high levels. A small fall in prices occurred as an improved breeding season allowed producers to supply additional lambs through the year, preventing the occurrence of the winter peaks that had occurred in the previous two years.

The live export industry received a major boost with the re-opening of the Saudi market, however there continued to be falls in exports to other Middle East countries due to the cost of Australian sheep (accentuated by the rising exchange rate) and intense competition from other suppliers.

2.2.4 The 2006 Year to date

2.2.4.1 Beef

Demand for Australian beef, both domestically and globally, has remained strong in 2006, and expectations are that this will continue, despite the re-entry of US beef into the Japan, and eventually Korean, markets. The ever-continuing drought however has finally had its impact on cattle prices as producers have been forced to sell cattle and inundate processors with young stock – particularly in the southern states.

Australian live cattle exports in the 2005-06 fiscal year ended on a positive note, with exports during June jumping 15% on the previous year.

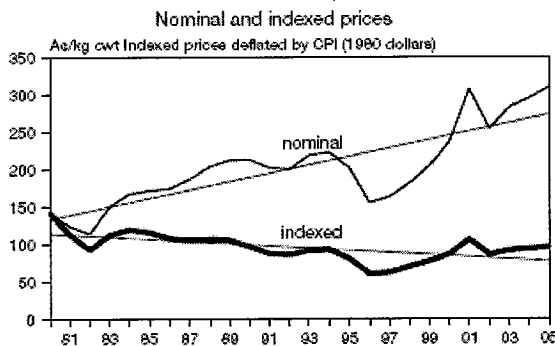
2.2.4.2 Sheepmeat

Lamb prospects remain bright despite the impact of drought. The drought is however having an impact as increasing numbers of light lambs are being released onto the market.

Australian live sheep exports have strengthened with exports almost doubling over the past 12 months.

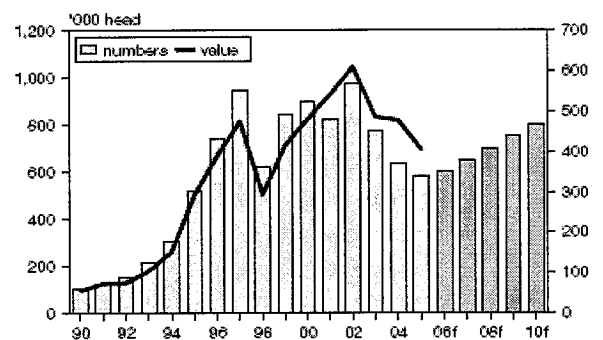
Overall Trends

Australian cattle prices



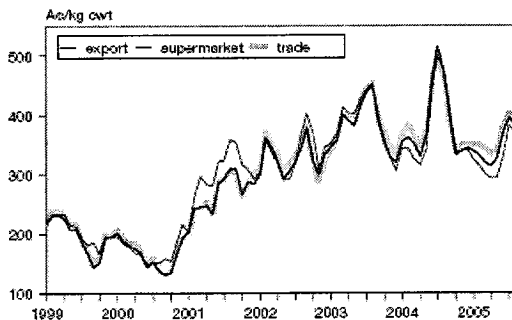
Source: ABARE, MLA

Australian live cattle exports



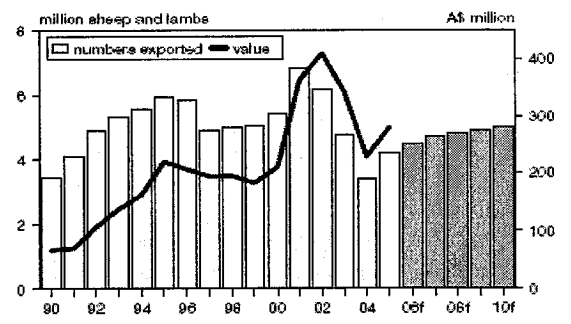
Source: ABS, MLA forecasts

Australian lamb prices



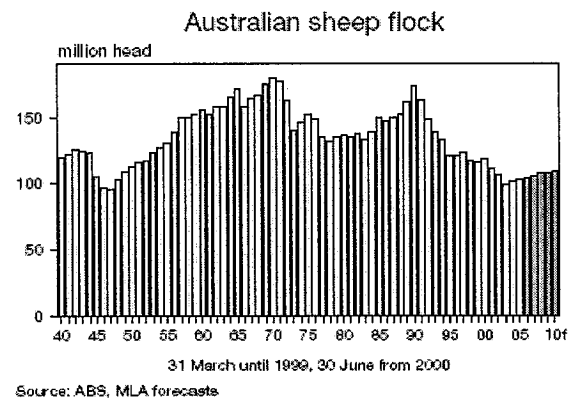
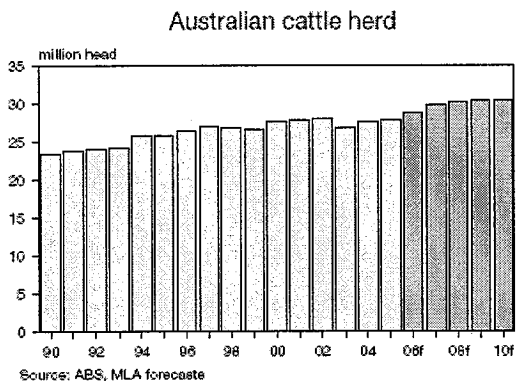
Source: NLRS, MLA

Australian live sheep exports



Source: ABS, MLA forecasts

CONTEXTUALISATION OF TSE008 AGGREGATION POINT DATA



3. INVESTIGATING THE DATA

State TSE Coordinators collected data according to a series of principles established by the project. Owing to confidentiality issues, only summary data was provided to Animal Health Australia for collation and later analysis. Data was collected primarily for cattle and sheep, however as the project progressed data was also captured for buffalo and goats.

Five common types of Aggregation Points were selected for the project, namely:

- **Domestic Abattoirs** – Abattoirs slaughtering animals for human consumption within Australia.
- **Export Abattoirs** – Abattoirs licensed to slaughter animals for human consumption outside Australia.
- **Knackeries** – Sites slaughtering animals for purposes other than human consumption, eg: dog food, fertiliser. These animals will normally be sick, aged, and/or in poor condition.
- **Live Export Depots** – Sites where animals are congregated prior to loading onto a ship.
- **Saleyards** – Sites where animals are bought and sold, normally by auction.

Records were also collected at sites labelled "Other", including dips, feedlots and scales.

3.1 Considerations

In analysing the Aggregation Point data, a number of factors must be taken into consideration, viz:

- The number of Aggregation Points are not identical across each year (see Table 3.1a below). The 2003/04 year is particularly different to the other years. Further investigation shows that a number of states (South Australia and Tasmania in particular) provided throughput data for each aggregation point in that year, but did not identify how many points the data came from.

Year	Point	NSW	NT	QLD	SA	TAS	VIC	WA
2003/04	Domestic A.battoirs	24	2				78	27
	Export A.battoirs	26	0				28	20
	Knackeries	12					28	14
	Live Export Depots	0	16			2	8	22
	Saleyards	104	6	14			78	40
Total		166	24	14		2	220	123
2004/05	Domestic A.battoirs	100	24	280	16	80	104	36
	Export A.battoirs	64	0	72	32	12	60	44
	Knackeries	16	0	12	8	12	56	20
	Live Export Depots	0	24	52	8	4	16	60
	Saleyards	208	8	208	32	52	180	68
Total		388	56	624	96	160	416	228
2005/06	Domestic A.battoirs	100	24	280	44	80	100	36
	Export A.battoirs	64	0	64	24	12	76	36
	Knackeries	12	0	8	8	16	56	20
	Live Export Depots	0	24	8	8	4	16	60
	Saleyards	260	8	208	32	52	180	68
Total		436	56	568	116	164	428	220

Table 3.1a: Sites per year per state

CONTEXTUALISATION OF TSE008 AGGREGATION POINT DATA

- The samples are notional only, ie: no samples were actually collected in the project and only totals are provided rather than numbers of samples per individual site.
- Sampling at the sites categorised as "Other" was extremely limited, and in some cases the data was erroneous. As a consequence this set of data has not been analysed in any detail in this report.

There are also a number of possible data errors to be considered, viz:

- Cattle data was collected in 2003/04 for export abattoirs in Queensland, however no number of aggregation points was recorded. There are also some doubts regarding the accuracy of the throughput recorded. 2003/04 throughput in Queensland export abattoirs is registered at 3,231,200. This figure is 2.5 million head (78%) higher than the subsequent two years.
- Similarly, cattle data collected in the same year for export abattoirs in NSW registered throughput at 1,413,800 : around 1.1 million (79%) higher than the following two years.
- No saleyard cattle throughput records were recorded for NSW in 2003/04.
- There is potential for "double counting", eg: animal counted at a saleyard and then later at a domestic abattoir.

Note that the author has been advised to accept the data provided and highlight any potential errors rather than seek clarification from those who recorded the data initially.

4. INTERROGATING THE DATA

4.1 Annual Throughput - CATTLE

The impact of the data anomaly regarding export abattoir throughput in 2003/04 is shown in the charts below, while 2004/05 and 2005/06 are remarkably alike.

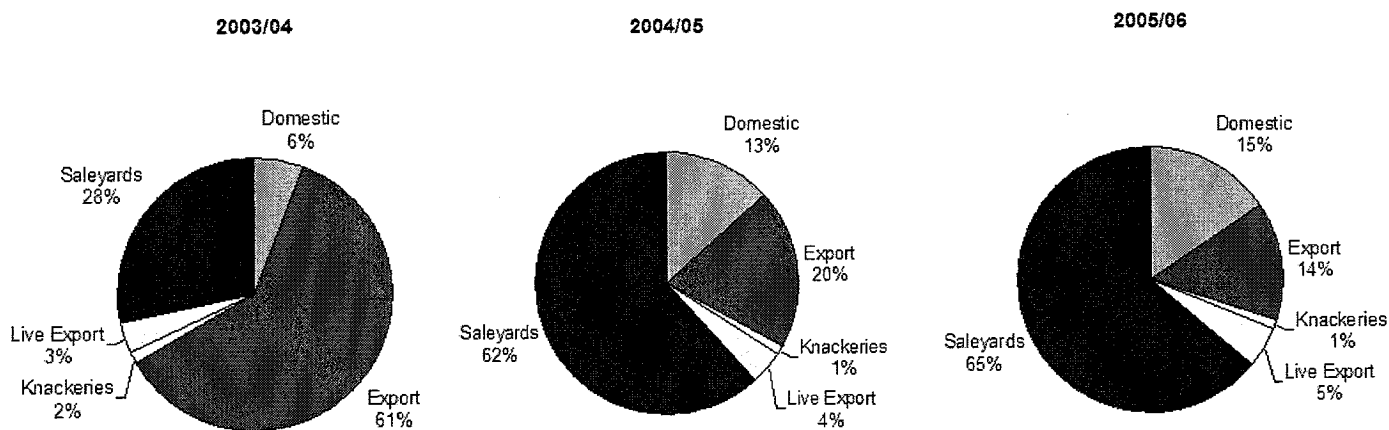


Chart 4.1a: Australia – Percentage Cattle throughput per Point per year

Comparison of throughput in the Northern states (Queensland and NT) to that in the Southern states indicates that:

CONTEXTUALISATION OF TSE008 AGGREGATION POINT DATA

- the greatest amount of live cattle are being exported from northern Australia,
- most knackery activity is in the southern states,
- most domestic slaughter occurs in the southern states,
- the greater proportion of the annual kill in northern Australia is export destined.

Again, the impact of the data anomalies regarding export abattoir throughput in 2003/04 is clearly evident.

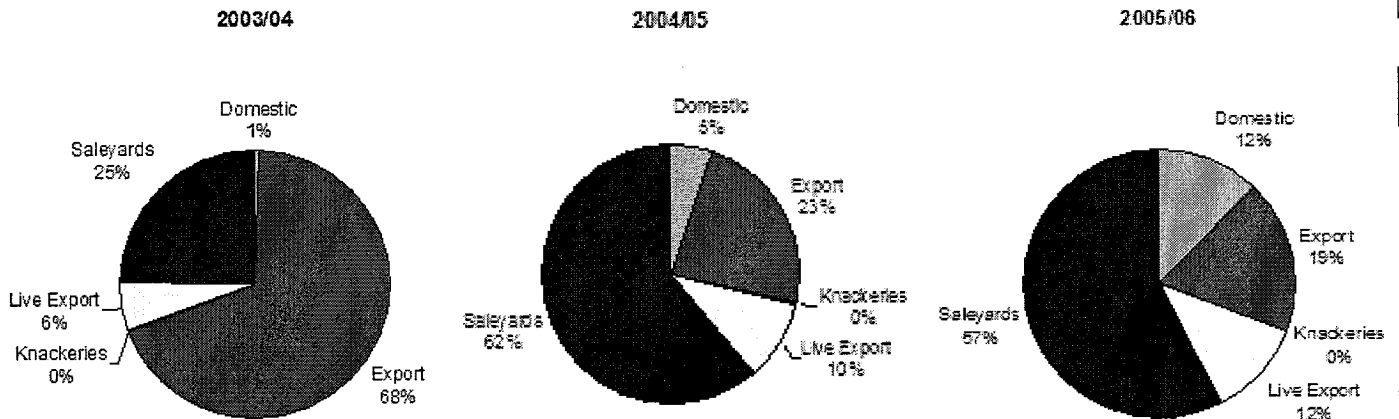


Chart 4.1b: Northern States - Percentage Cattle throughput per Point per year

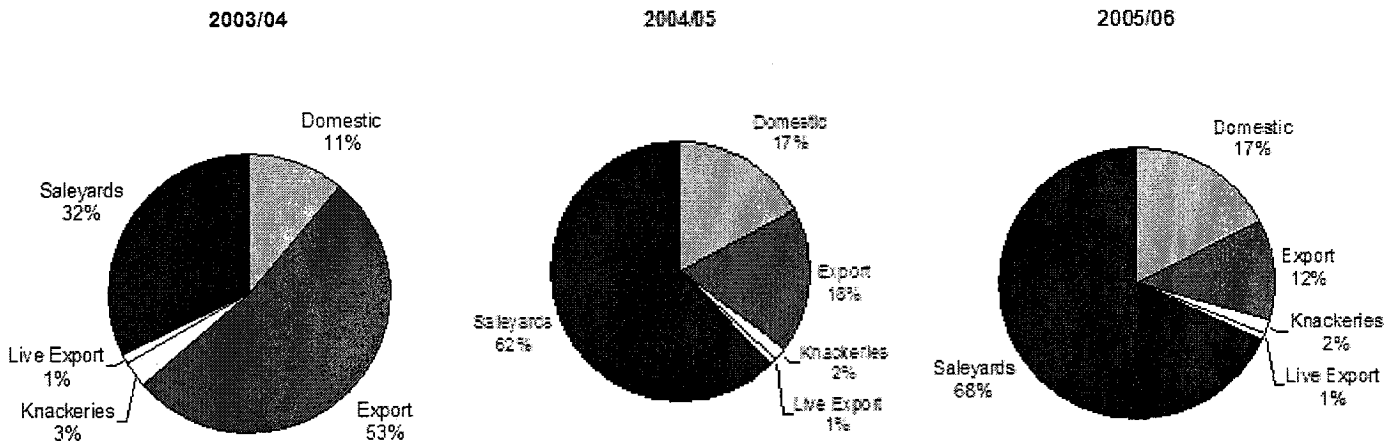


Chart 4.1c: Southern States - Percentage Cattle throughput per Point per year

Throughput per state shows that NSW and Victoria are the source of the majority of the domestic abattoir slaughter, while most of the slaughter for export occurs in Queensland (even if the 2003/04 data is disregarded).

CONTEXTUALISATION OF TSE008 AGGREGATION POINT DATA

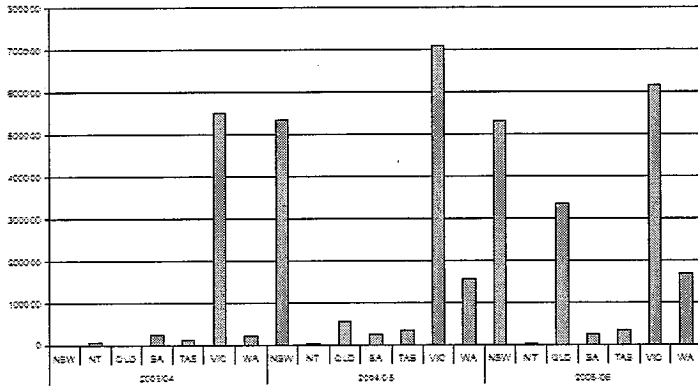


Chart 4.1d: Cattle throughput per state, domestic abattoirs

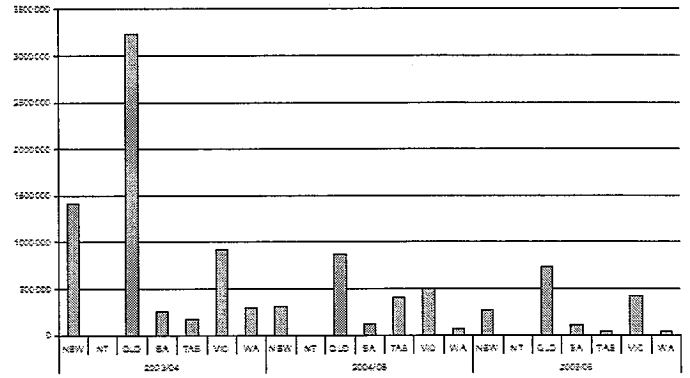


Chart 4.1e: Cattle throughput per state, export abattoirs

By far the most knackery data is sourced from Victoria, while NT and WA are the prime source of live export depot throughput.

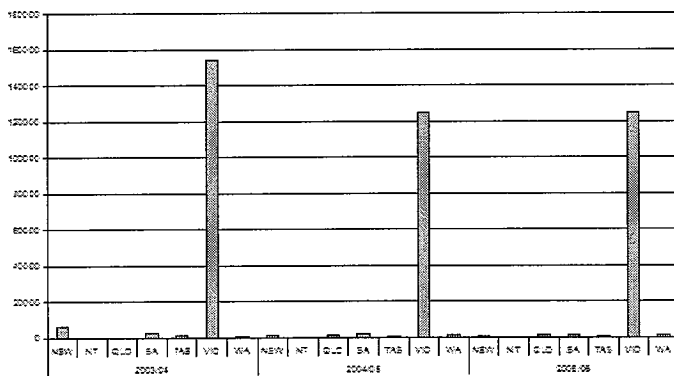


Chart 4.1f: Cattle throughput per state, knackereries

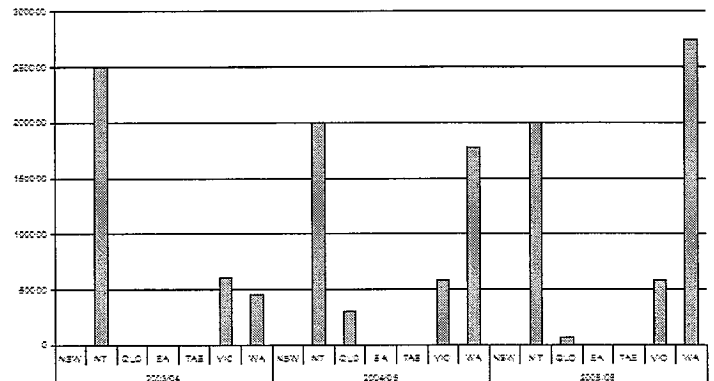


Chart 4.1g: Cattle throughput per state, live export depots

NSW and Queensland, followed by Victoria, are the major sources of saleyard throughput. Note that no saleyard throughput records were recorded for NSW in 2003/04.

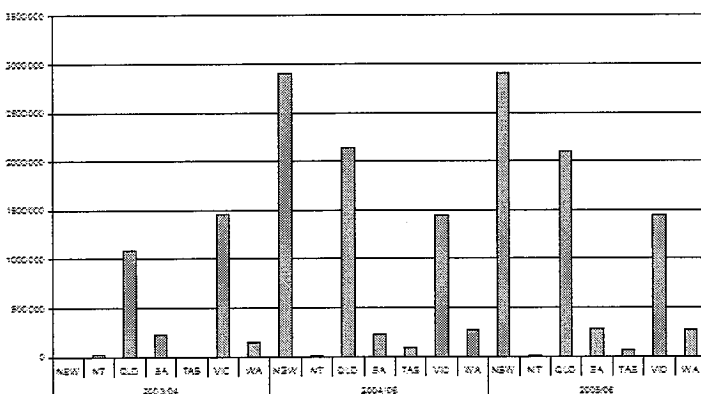


Chart 4.1f: Cattle throughput per state, saleyards

4.2 Sample Collection as a Percentage of Annual Throughput - CATTLE

The Code of Practice for Animal Welfare and good husbandry procedures ensure that cattle which are dead, dying, diseased or disabled are not normally presented for sale or slaughter, with the notable exception of knackereries where the slaughter of these type of animals is the core business. Relative to the throughput, the number of samples possible is expected then (with the exception of knackereries) to be very small, and this expectation is reflected in the data.

The three years covered by the data collection occurred during a period of extended and widespread drought. Some "spikes" in the data are evident which may indicate an out of the ordinary presentation of cattle in poor condition due to the rigours of drought. Unfortunately it is difficult to be more precise as only summary data has been provided for the analysis.

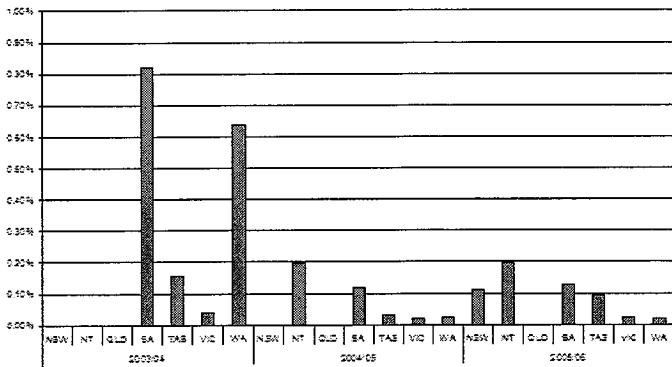


Chart 4.2a : Samples as % of throughput per state Domestic abattoirs

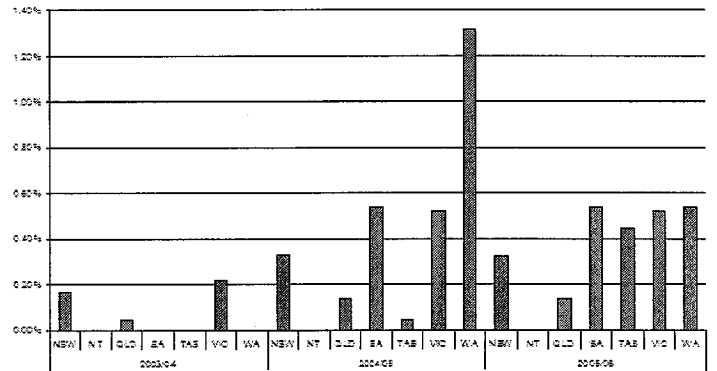


Chart 4.2b : Samples as % of throughput per state Export abattoirs

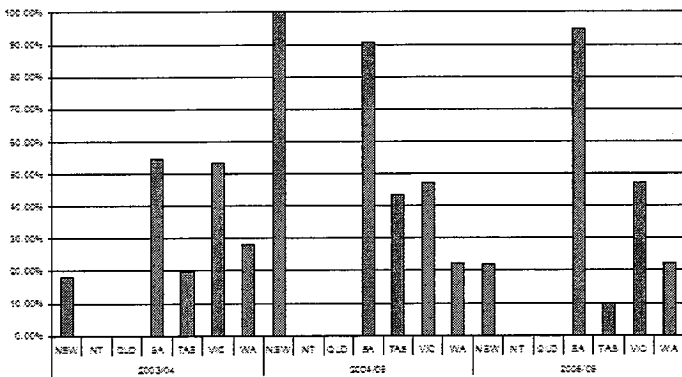


Chart 4.2c : Samples as % of throughput per state Knackereries

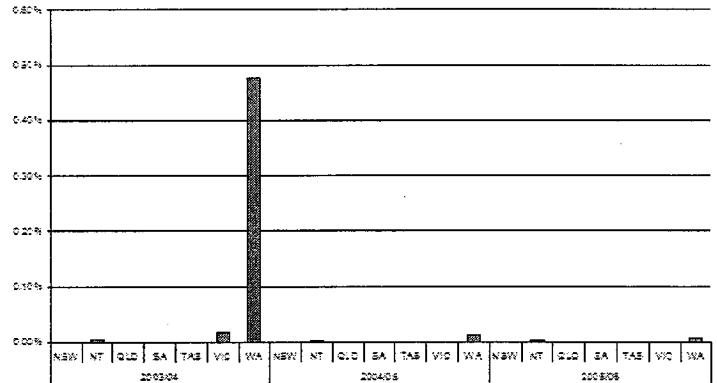


Chart 4.2d : Samples as % of throughput per state Live export depots

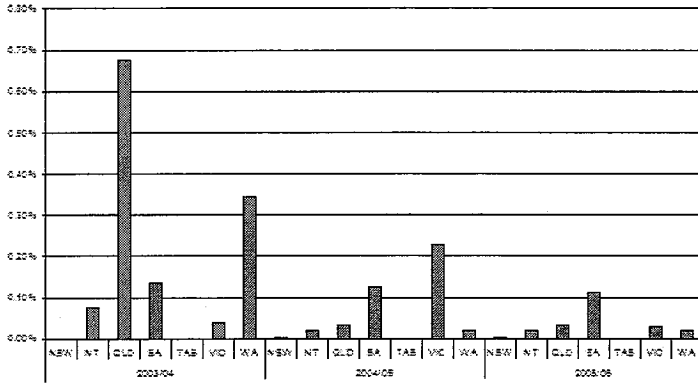


Chart 4.2e : Samples as % of throughput per state Saleyards

4.3 Annual Throughput – SHEEP

The most significant difference between throughput figures over the three data years is in relation to live export depots. Number fell significantly after the 2003/04 period. The fall reflects the market change that occurred with the closure of the Saudi Arabia market. In 2004/05 and 2005/06 the throughput in Domestic abattoirs increases, presumably as those animals normally destined for live export were slaughtered for the domestic market with its advantageous prices.

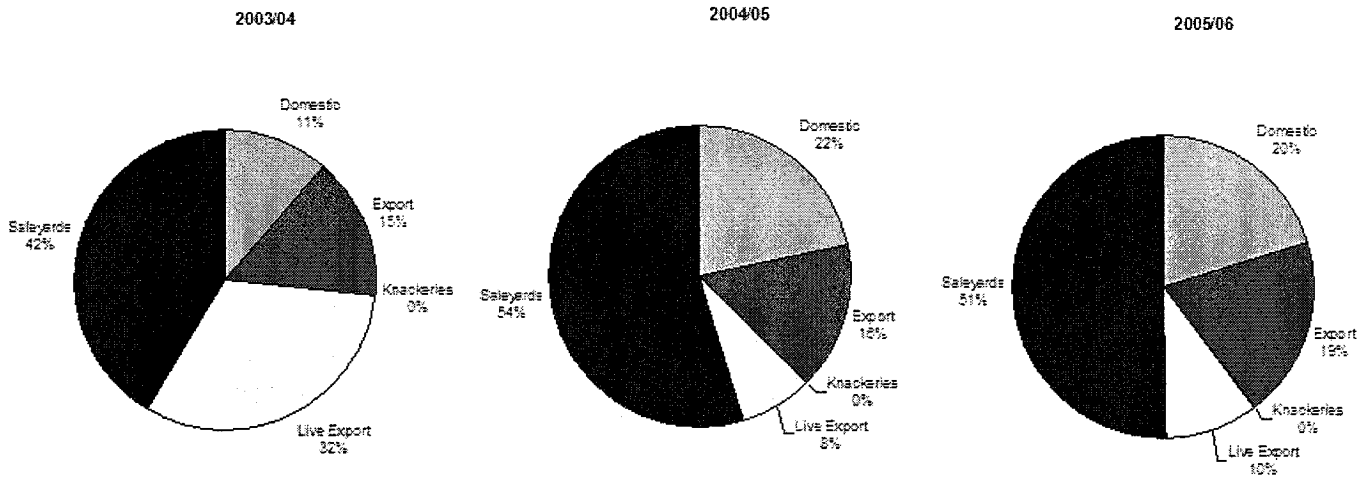


Chart 4.3a : Australia - Percentage Sheep throughput per Point per year

Comparison of throughput in the Northern states (Queensland and NT) to that in the Southern states indicates that:

- Sheep are not exported live from the northern states,
- Most sheep in the northern states are sold direct to the export abattoirs, bypassing the saleyard system,
- There was a move in 2005/06 to sell small proportion to domestic abattoirs in the northern states,

CONTEXTUALISATION OF TSE008 AGGREGATION POINT DATA

- The reduction in live export numbers caused an increase in the domestic kill.

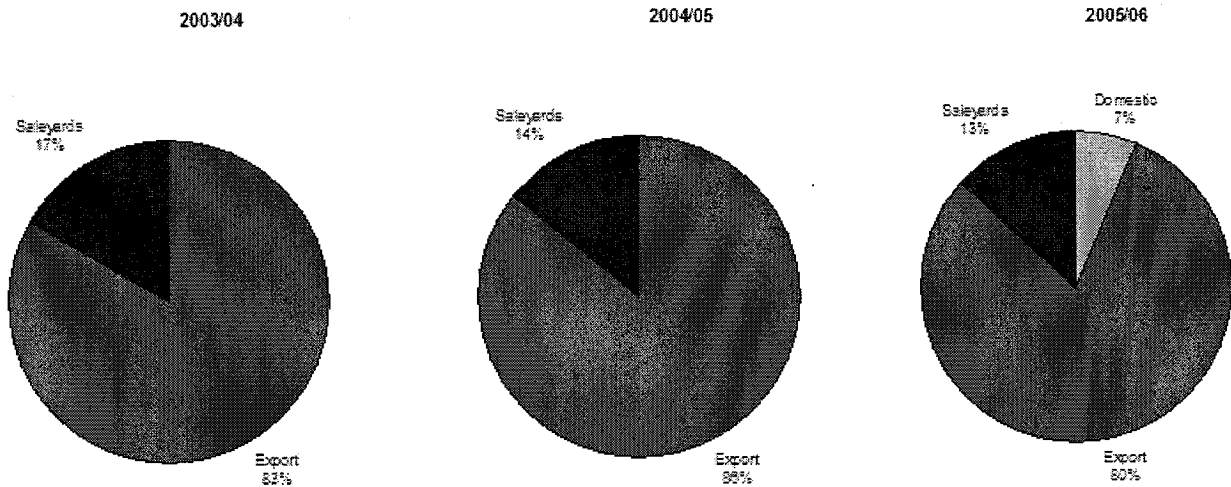


Chart 4.3b : Northern States - Percentage Sheep throughout per Point per year

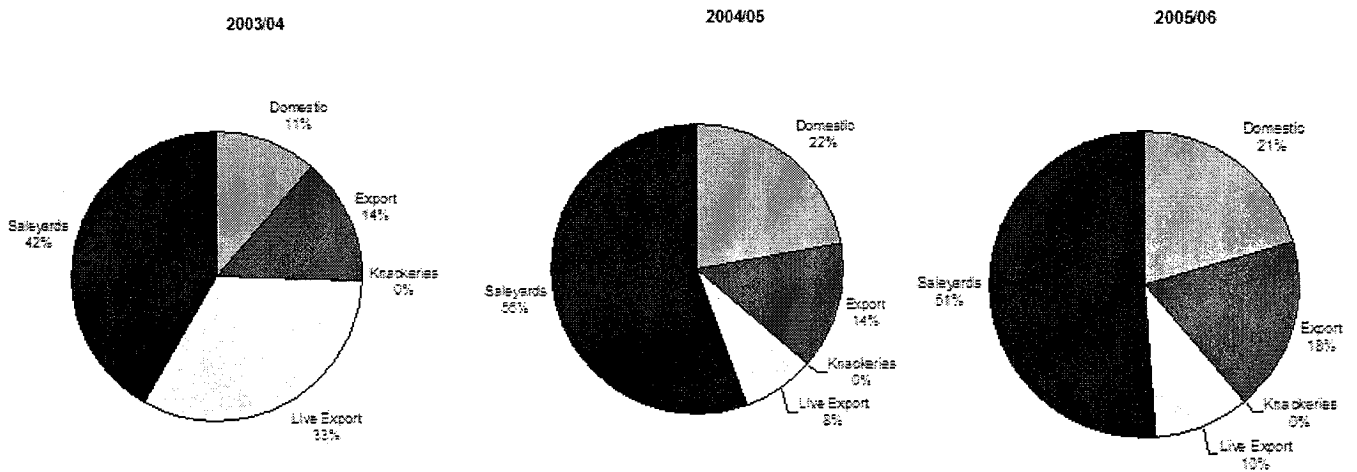


Chart 4.3c : Southern States - Percentage Sheep throughout per Point per year

Throughput per state shows that:

- there is wide coverage countrywide for both domestic and export kill.
- Western Australia has the highest knackery throughput by far, with Victoria coming a distant second,
- Most live export data come from Western Australia. Both saleyard and live export depot throughput were high in 2003/04, suggesting the depot animals were sourced from saleyards. Numbers fell for both points in 2004/05, coinciding with the loss of the Saudi market.

CONTEXTUALISATION OF TSE08 AGGREGATION POINT DATA

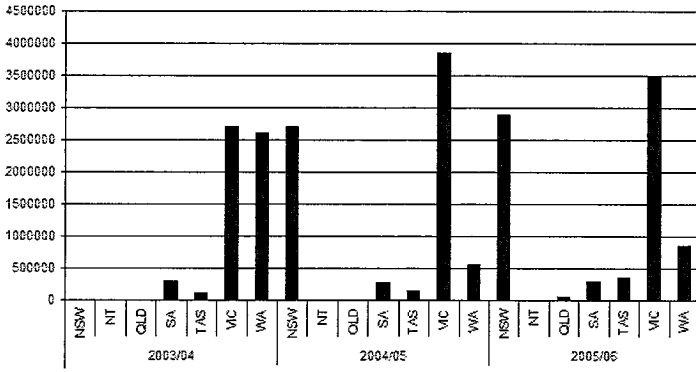


Chart 4.3d : Sheep throughput per state, domestic abattoirs

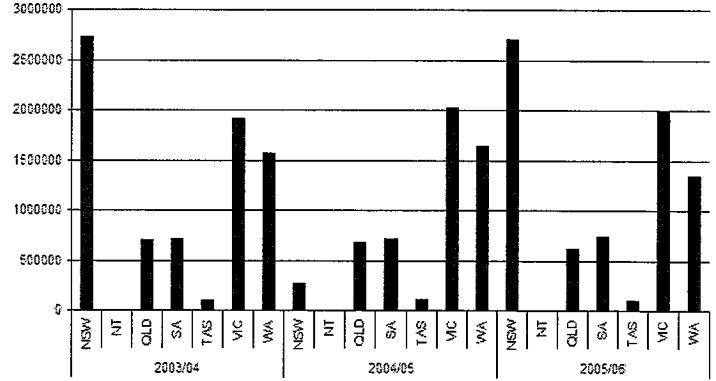


Chart 4.3e : Sheep throughput per state, export abattoirs

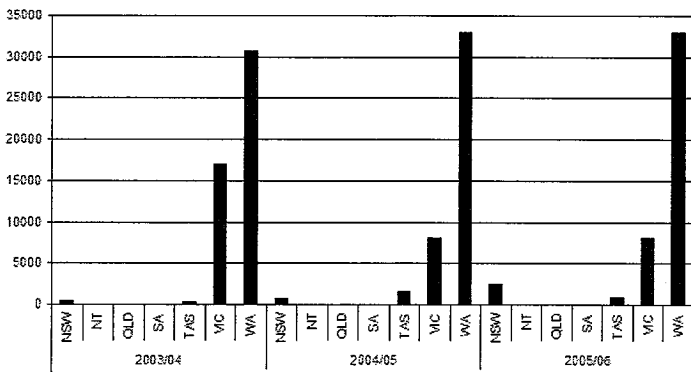


Chart 4.3f : Sheep throughput per state, knackeries

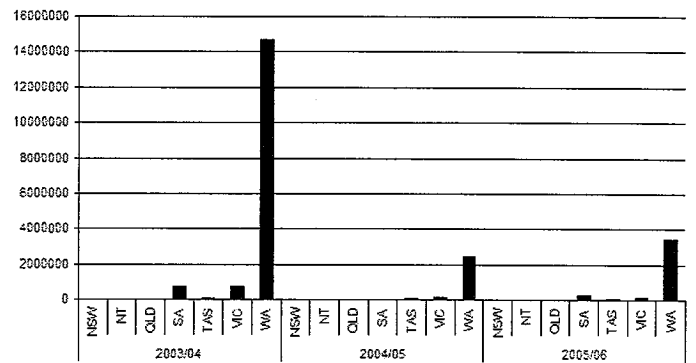


Chart 4.3g : Sheep throughput per state, live export depots

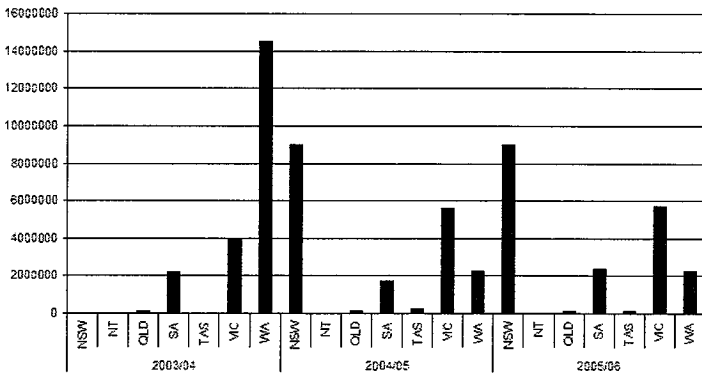


Chart 4.3f : Sheep throughput per state, saleyards

4.4 Sample Collection as a Percentage of Annual Throughput - SHEEP

The highest proportions of sample numbers came from states with the lowest numbers in throughput (South Australia for example). This may indicate relatively high numbers of animals passing through the points in poor condition due to drought. Knackeries again proved the best source of the type of stock required for the study.

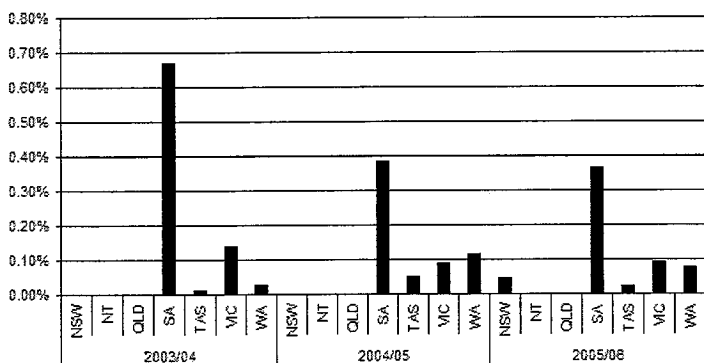


Chart 4.4a : Samples as % of throughput per state Domestic abattoirs

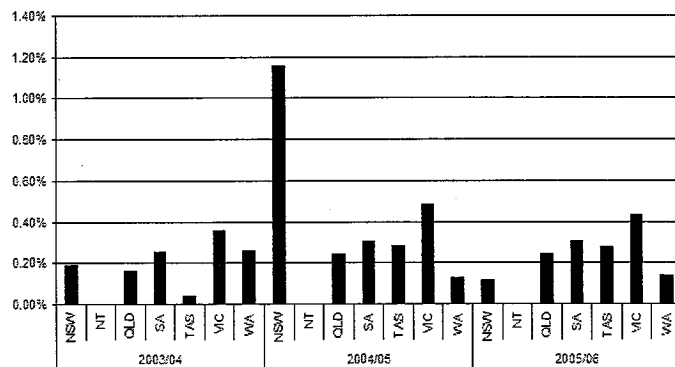


Chart 4.4b : Samples as % of throughput per state Export abattoirs

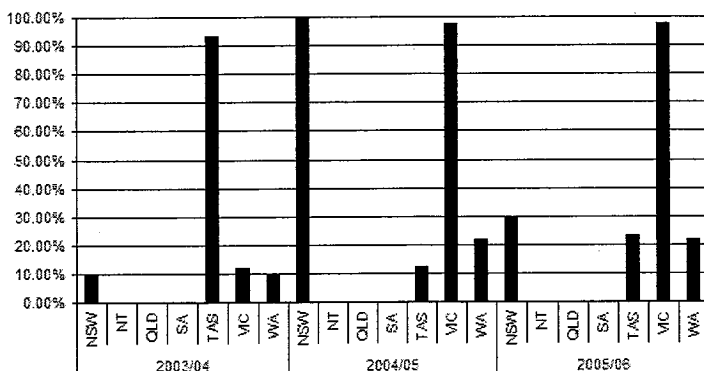


Chart 4.4c : Samples as % of throughput per state Knackeries

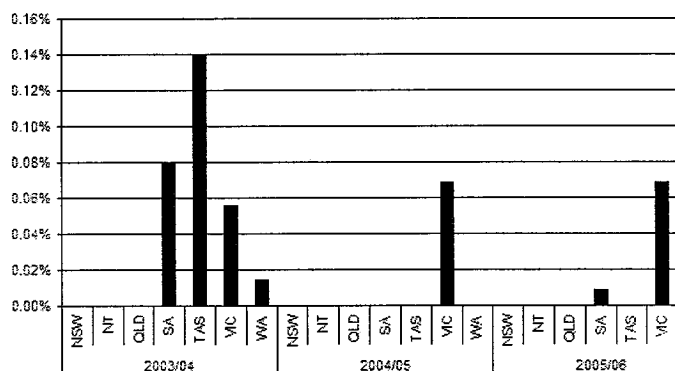


Chart 4.4d : Samples as % of throughput per state Live Export depots

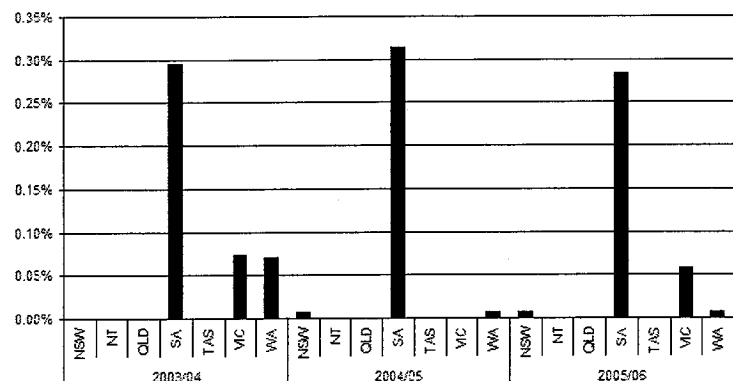


Chart 4.4e : Samples as % of throughput per state Saleyards

4.5 Buffalo

The limited amount of data collected for buffalo suggests that while throughput is highest at live export depots, animals suitable for sampling are best found at domestic abattoirs.

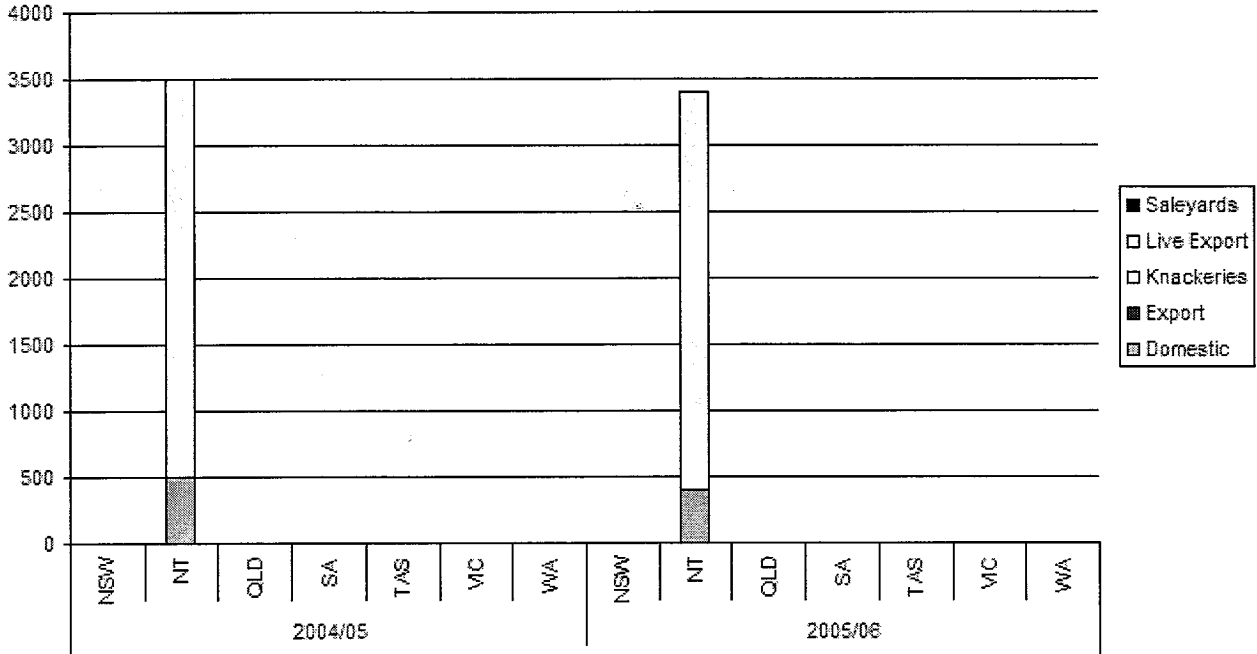


Chart 4.5a : Buffalo throughput per point, per state

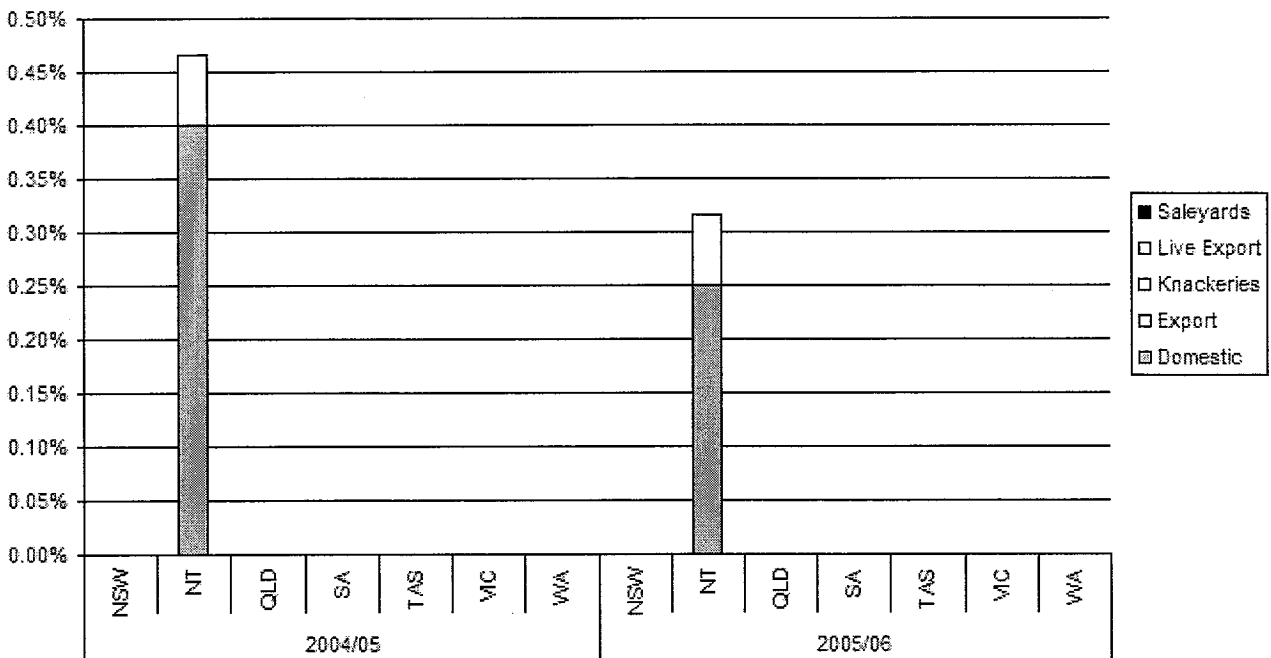


Chart 4.5b : Buffalo samples as % of throughput per point, per state

4.6 Goats

Data was collected for goats in all states except Tasmania. The highest proportions of animals suitable for sampling were presented at export abattoirs.

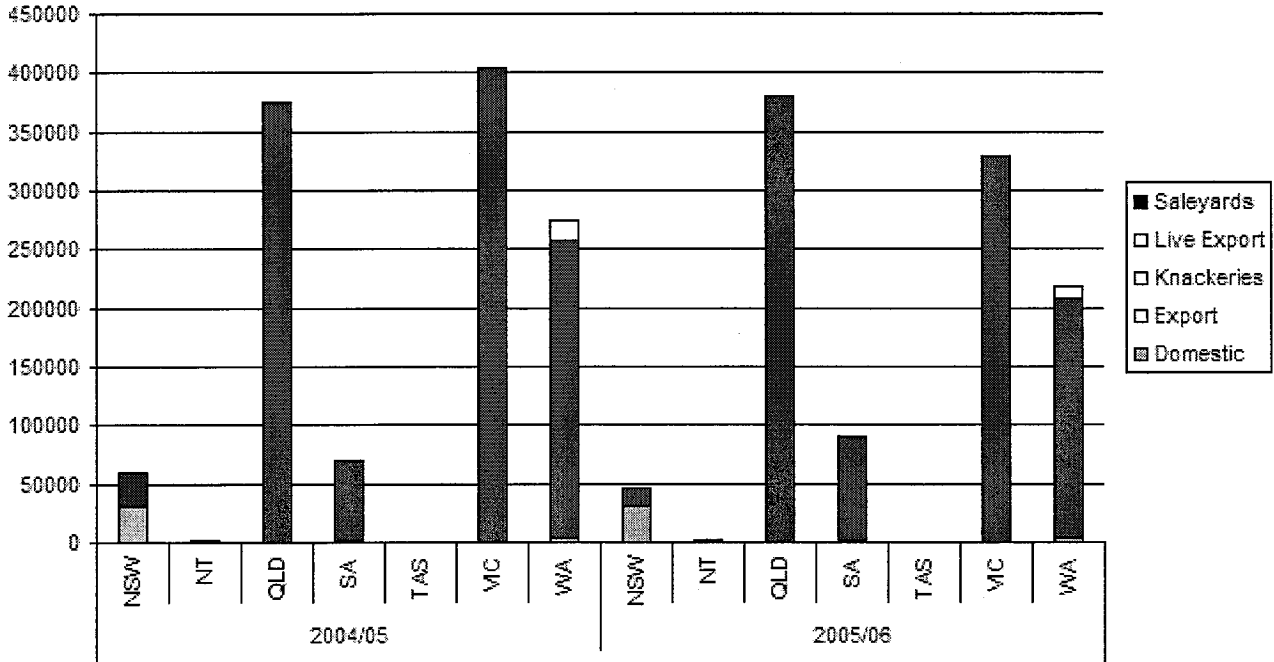


Chart 4.6a : Goat throughput per point, per state

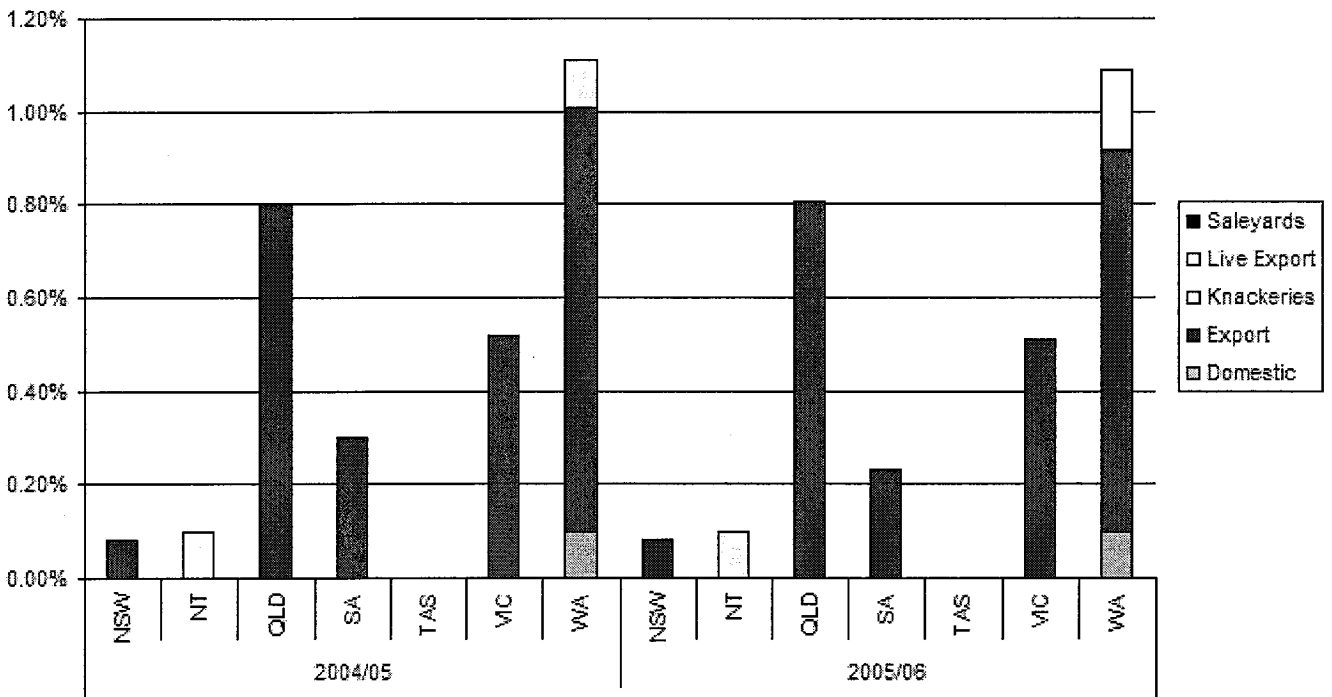


Chart 4.6b : Goat samples as % of throughput per point, per state

5. CONCLUSION

The TSE008 Aggregation Point Study commenced with the aim:

To develop, evaluate and describe cost-effective methods for the identification of eligible risk animals (both cattle and sheep) presented at different types of aggregation points such as meatworks, saleyards, knackeries and live export facilities.

It is clear that the Study proved that it is possible to source certain types of risk animals (cattle, sheep, buffalo and goats) from different types of aggregation points throughout the country.

It is also evident that seasonal and market factors will have an impact on the number of animals the are presented to each aggregation point, as well as having a bearing on the number of animals at each point that are suitable for sampling.

It is however very difficult to make solid conclusions regarding the impacts of those factors with the data supplied due to:

- limited spread of data; ie: only 3 years
- possible data errors / anomalies
- similarity in seasonal and market conditions across the 3 years.

It is expected that more compelling evidence of the links between throughput, sample numbers and season / market factors would emerge from a data set that covered a longer time span (eg: 10 years) and which included fluctuating season conditions (dry seasons and wet seasons).

Some broad conclusions can however be made, viz:

- Drought causes a higher than expected presentation of animals in poor condition to aggregation points.
- A downturn in one market (eg: live export) can cause a boost in the throughput numbers of another market (eg: domestic).

It is also clear that knackeries are the best source (in terms of percentage of total throughput) for the sampling of "4D" animals.

Finally, it is also clear that livestock producers are adhering to Animal Welfare Codes of Practice and good management practices and ensuring that livestock that are not in a fit condition are not normally presented to abattoirs, saleyards or live export depots.

REFERENCES

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Australian Bureau of Meteorology - <http://www.bom.gov.au/index.shtml>

Meat and Livestock Australia – Projections Reports, 2004, 2005, 2006

Livecorp - <http://www.livecorp.com.au>

APPENDIX A – Terms of Reference



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CONTEXTUALISATION OF THE TSE008 AGGREGATION POINT STUDY

Terms of Reference

The aim of the Aggregation Point Study is to develop, evaluate and describe cost-effective methods for the identification of eligible risk animals (cattle, sheep, buffalo & goats) presented at different types of aggregation points like saleyards, abattoirs, knackeries, railheads and live export facilities. This will provide Australia with the ability to quickly deploy surveillance methods requiring post-mortem sampling in public places.

The study has been run over three consecutive years with summary data being provided to Animal Health Australia from the jurisdictions. The summary data will be provided to the consultant.

The consultant will be required to contextualise the data received from the jurisdictions as part of the TSE008 Aggregation Point Study, paying particular attention to:

1. International and domestic market trends and drivers;
2. International and domestic trade implications;
3. National, state and regional seasonal conditions; and
4. Any other relevant factors.

