Government of **Western Australia**
Department of **Agriculture and Food**

15 July 2011

Committee Secretary
Senate Standing Committees on Rural Affairs and Transport
PO Box 6100
Parliament House
CANBERRA ACT 2600

IMPROVEMENTS IN ANIMAL WELFARE FOR AUSTRALIAN LIVE EXPORTS

The Western Australian Department of Agriculture and Food (DAFWA) provides the attached documents to assist the Committee's Inquiry into the above matter.

These documents are particularly relevant to the Inquiry's Term of Reference:

Investigate and report on the domestic economic impact of the live export trade within Australia including:

a) Impact on regional and remote employment especially in northern Australia;

b) Impact and role of the industry on local livestock production and prices;

c) Impact on the processing of live stock within Australia.

DAFWA is aware that these documents, which are already in the public domain, will be posted on the Inquiry's website.

Yours sincerely

Rob Delane
DIRECTOR GENERAL

Attachments

OFFICE OF THE DIRECTOR GENERAL
3 Baron Hay Court, South Perth, Western Australia 6151 (Locked Bag 4, Bentley Delivery Centre WA 6983)
Telephone: (08) 9368 3236 Facsimilie: (08) 9368 1205

Department of
Agriculture and Food

GOVERNMENT OF
WESTERN AUSTRALIA

THE ECONOMIC IMPORTANCE TO WESTERN AUSTRALIA OF LIVE ANIMAL EXPORTS

Contributors: Ross Kingwell (Ed), Peter Cunningham, Tanmoy Nath, Lucy Anderton, Vilaphonh Xayavong, Kimbal Curtis, Richard Norris, Graham Annan, David Warburton and David Feldman

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Key Points

- WA supplies three-quarters of Australia's exports of live sheep.
- WA supplies 40 percent of Australia's exports of live cattle.
- Economic studies show that the live export trade enhances the value of Australia's red meat industry. Cessation of the trade will cause reductions in beef, lamb and mutton prices received by farmers and pastoralists.
- Economic studies show regional benefits from the live export trade can be large. Hence, regions dependent on the trade, such as WA's northern beef region and the WA southern agricultural sheep region, are likely to be particularly disadvantaged if the live trade ceases. However, meat processors are shown to benefit from the cessation of live exports in the short to medium term through access to more animals at cheaper prices.
- In some regions such as the northern WA pastoral beef industry there are few alternative enterprises or markets that are as lucrative as live export. In some other regions such as WA's southern sheep growing region, alternative enterprises are available. However, some sheep dominant businesses will experience significant transition costs if the live export trade ceases.
- The economy-wide aggregate impacts associated with a cessation of the live trade are relatively minor (in percentage terms), however the regional economy effects in particular regions, such as the northern beef region, would be large.

Executive Summary

For Western Australia (WA) the main live export industries, by economic ranking, are sheep, cattle and goats.

Currently WA annually exports around 2.5 million live sheep, although in previous years it has exported over 4 million sheep. The more than 60 percent decline in the WA sheep population since the early 1990s has reduced the number of sheep available to be exported live. However, due to similarly pronounced reductions in sheep numbers elsewhere in Australia, the live sheep trade remains strongly dependent on WA. WA continues to supply around three-quarters of the national exports of live sheep. Sheep death rates during sea transport from WA have declined since the early 1990s and now remain at approximately 1 percent. Prices paid for exported sheep remain strong, in spite of the appreciation of the Australian dollar.

WA exports around 300,000 live cattle, mostly to Indonesia. This trade grew rapidly in the 1990s and has remained strong over the last decade. It is important to WA's northern region. WA and the Northern Territory are the dominant States for live cattle exports. These states supply around three-quarters of all live cattle exports from Australia with WA supplying around 40 percent of national exports of live cattle. The WA trend in export volumes since the mid-2000s is upwards and opposite to that for WA's live sheep exports.

Since 2006 WA has annually exported less than 15,000 live goats, forming less than 15 percent of national exports.

Key historical incidents that have led to suspensions of live trade from Australia are outlined in this report.

Published studies that examine the economic importance to Australia of the live export trade are summarised. These studies typically show that the trade enhances the value of Australia's red meat industry. Studies of a cessation of the trade usually project consequential reductions in beef, lamb and mutton prices. Importantly, these studies note that the regional impacts, especially in areas dependent on the trade, such as WA's northern beef region and the WA southern agricultural sheep region, would be particularly disadvantaged. However, meat processors are shown to benefit from the cessation of live exports due to access to more animals at cheaper prices.

There are 6,074 businesses with sheep in WA and live sheep export generates income in the range of $175 million to $275 million. Sheep production occurs mostly in the higher rainfall southern parts of the WA agricultural region. The principal markets for these sheep are Middle Eastern countries: Saudi Arabia, Kuwait, Bahrain, Qatar, Jordon and Oman. Many farmers value live export markets as they believe these markets enhance competition for the purchase of their sheep.

Live cattle exports from the Kimberley region are worth around $120 million and make up 45% of the live cattle exports from WA. Exports from the Pilbara region are

relatively small at 6%, with a value of $15 million. Exports from Geraldton have a value of $27 million; however this port draws on a number of regions, but mainly from the Gascoyne and the Midwest. Fremantle, with 39% of the exports valued at $106 million, draws on several regions including portions of the southern rangelands as well as the agricultural region. In 2009/10, about 390,000 cattle were exported from WA ports. Based on a CIF value of $846 per head, the total worth of live exports was $330 million in 2009/10.

The impacts on WA businesses of a termination or phased reduction in live animal trade depend on the rate of reduction, the importance of the live trade to the particular business and the importance of the trade to the region in which the business operates. This report quantifies the sheep, beef and goat supply chains in WA and discusses which parts of these supply chains and regions are vulnerable to a loss of the live export trade.

Depending on the location and nature of the farm or pastoral business, the reductions in business profits are projected to range from minor to substantial. At the industry level, pastoral beef production is the most vulnerable. The sheep industry will also face revenue reductions, mostly for farmers greatly reliant on profits from sheep production and who are locked into sheep production. However, many other farmers who engage in mixed-enterprise farming that includes sheep or cattle production, may be able to transition to alternative enterprises and either lessen their losses or potentially gain, given current margins for some crops.

The impacts on other participants in the supply chain are strongly linked to how farmers and pastoralists respond to any reduction or cessation in the live export trade. If farmers and pastoralists choose to exit the industry or reduce their animal production in response to likely lower prices that would follow a reduction in the live export trade, then the support industries and the abattoirs eventually will suffer through reduced throughput.

Various types of analyses presented in this report indicate that reductions in live exports of sheep or cattle will lessen farmers' and pastoralists' incomes, principally through reduced prices they receive, and in the case of northern region pastoralists, greater transport costs. Meat processors are beneficiaries in the near and medium term, but not necessarily in the long term if flock and herd sizes diminish as resources are switched into alternative land uses.

The economy-wide aggregate impacts associated with a cessation of the live trade are relatively minor (in percentage terms), however the regional economy effects in particular regions, such as the northern beef region, would be large. The recent experience with the trade suspension involving live cattle sent to Indonesia has revealed the sorts of regional economic disadvantage that trade cessation can unleash. A case study of the impacts of the recent trade suspension with Indonesia is presented to illustrate actual impacts of these market closures.

Preamble

On 16 June 2011 the Senate referred the improvements in animal welfare for Australian live exports for inquiry and report. A Senate Committee is charged to:

1. Investigate and report into the role and effectiveness of Government, Meat and Livestock Australia, Livecorp and relevant industry bodies in improving animal welfare standards in Australia's live export markets, including:
   a) The level, nature and effectiveness of expenditure and efforts to promote or improve animal welfare standards with respect to all Australian live export market countries;
      i) expenditure and efforts on marketing and promoting live export to Australian producers;
      ii) ongoing monitoring of the subscription to, and practise of, animal welfare standards in all live export market countries;
      iii) actions to improve animal welfare outcomes in all other live export market countries and the evidence base for these actions.
   b) The extent of knowledge of animal welfare practices in Australia's live export markets including:
      i) formal and informal monitoring and reporting structures;
      ii) formal and informal processes for reporting and addressing poor animal welfare practices.

2. Investigate and report on the domestic economic impact of the live export trade within Australia including:
   a) Impact on regional and remote employment especially in northern Australia;
   b) Impact and role of the industry on local livestock production and prices;
   c) Impact on the processing of live stock within Australia.

3. Other related matters. The reporting date is 25 August 2011.

Introduction

On 8 June 2011 Minister Ludwig announced the suspension of the live cattle trade with Indonesia and subsequently on June 16 a Senate Committee inquiry into the live trade of all animals from Australia was announced. Submissions to that committee were welcomed.

This is a DAFWA report on the economic importance to Western Australia of the live animal export trade. It is therefore relevant to point 2 of the committee's terms of reference. This report examines the historical and current economic importance of this live trade and provides estimates of impacts if this trade were to cease.

Whilst not ignoring the recent impacts of the brief trade suspension with Indonesia, concerning live cattle exports, this report mostly considers the wider general issue of the economic and regional importance of the live trade in animals for Western Australia (WA).

Historical Perspective

For Western Australia the main live export industries, by economic ranking, are sheep, cattle and goats.

Live sheep trade

From the 1970s to the early 1990s, WA's live sheep trade was based on the export of cast-for-age merino wethers. This suited the many farmers who were interested mainly in wool

production and required an outlet for wethers at the end of their wool-productive life. It also suited traders in most Middle East countries as older wethers were heavier than young wethers, and the traders could buy on a per-head basis yet sell the meat on a weight basis.

However, following the collapse of the reserve price scheme for wool in 1991 and a subsequent period of depressed wool prices during the 1990s, many farmers switched from wool production toward cropping. Supporting this transition were other influences including: (i) a period of high grain prices in the mid-1990s and late 2000s, (ii) availability of productivity-improving innovations to support crop production, (iii) some very favourable years for grain production in the 1990s and, (iv) some consecutive dry years in the 2000s that made retaining sheep an expensive strategy. Accordingly sheep numbers in WA declined from 38.4 million in 1990/91 to 14.7 million in 2009/10. Over nearly the same period the number of live sheep exported from WA fell from a peak of 4.5 million in 1993 to 2.4 million in 2010 and the trend in numbers exported is downwards (Figure 1). The severe drought in 2010 in Western Australia has ensured further downward pressure on the size of its sheep flock and means that live exports of sheep will continue to be limited.

The more than 60 percent decline in the WA sheep population since the early 1990s has reduced the numbers of sheep available to be exported live. However, due to similarly pronounced reductions in sheep numbers elsewhere in Australia, the live sheep trade remains strongly dependent on WA as a source of live sheep (Figure 1). WA's continues to supply around three-quarters of the national exports of live sheep.

The age of sheep exported live fell during the late 1990s and into the 2000s because of the shortage of sheep and changing flock structures that increasingly favoured lamb rather than wool production. The strong competition for sheep together with limited supply and a market preference for younger sheep saw sheep prices rise substantially in the early 2000s and again in the late 2000s (Figure 2). Sheep prices have remained strong, in spite of the appreciation of the Australian dollar over much of the last decade (Figure 2).

Figure 1. WA live sheep exports

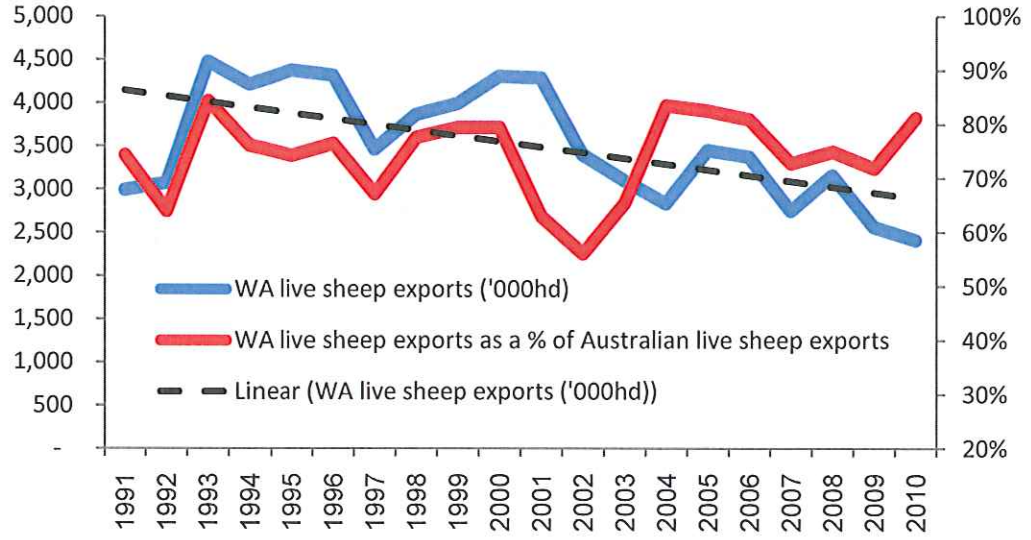
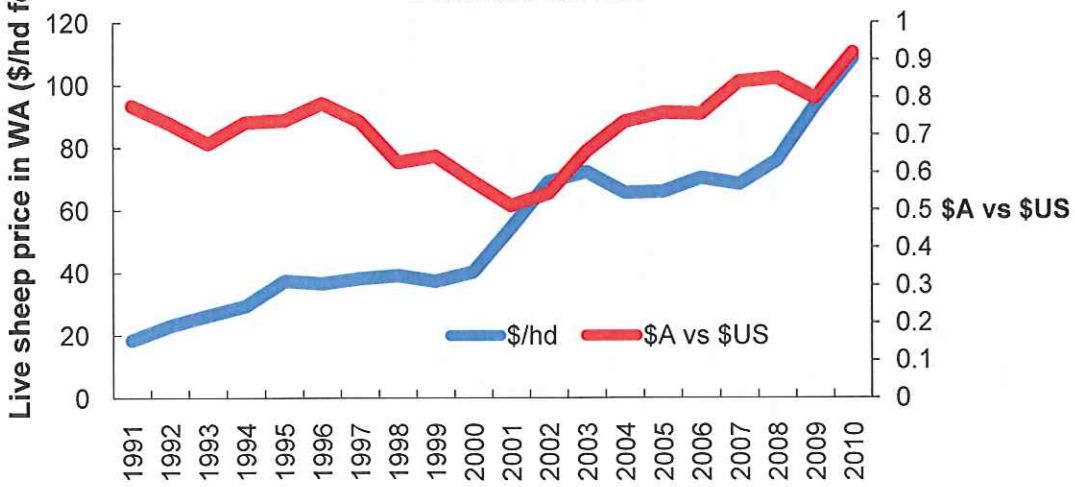


Figure 2. WA live sheep export prices and the Aussie dollar



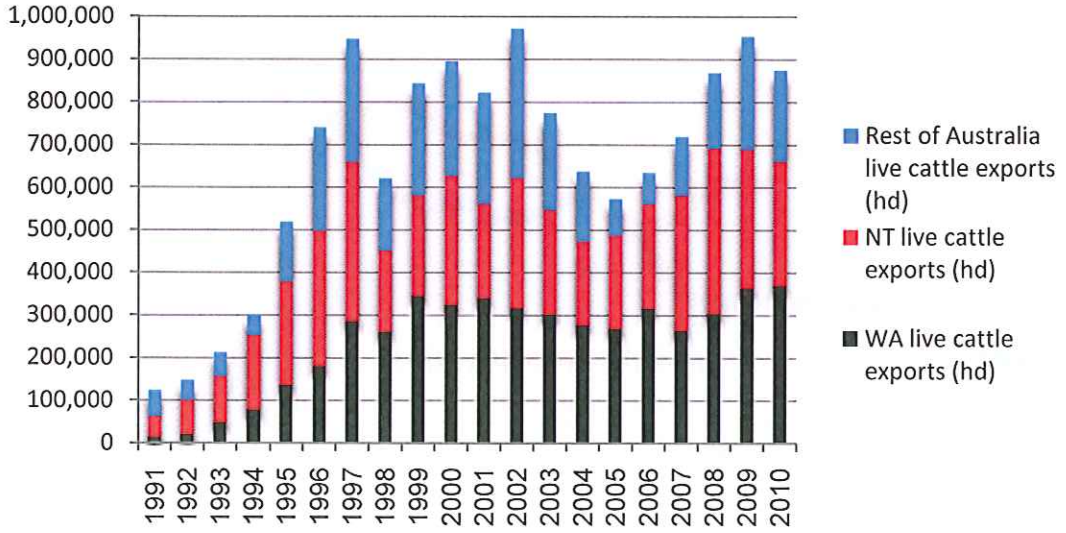
Historically, sheep death rates during sea transport from WA declined from a peak in 1992 to 2004 and have remained at approximately 1% since then (see Figure A.1 in the Appendix). The main reasons for reduced mortalities were the declining age and weight of the sheep exported (peer-reviewed research by DAFWA has shown that higher death rates were associated with older sheep and heavier/fatter animals). Other factors were improvements in land transport, preparation in pre-embarkation feedlots and efficiencies in loading onto ships as well as improvements in shipping and discharge at destination. Greater regulation of the industry through the Australian Standards for the Export of Livestock was introduced in 2004. There was further tightening of regulations for livestock ships in Marine Order 43 in recent years.

Live cattle trade

WA and the Northern Territory are the dominant States for live cattle exports. Together these states supply around three-quarters of all live cattle exports from Australia with WA supplying around 40 percent of national exports of live cattle (Figure 3). The WA trend in export volumes is upwards and thus opposite to that for its live sheep exports.

Throughout the 1990s the live cattle export trade from WA rapidly emerged to become an important feature of the WA beef industry, particularly in pastoral regions. Since the late 1990s through to just before the brief trade suspension with Indonesia in June 2011, WA regularly annually exported around 300,000 live cattle, with the main export destination being Indonesia. Early in 2010, Indonesia introduced a quota on the bodyweight and number of live cattle imported from Australia.

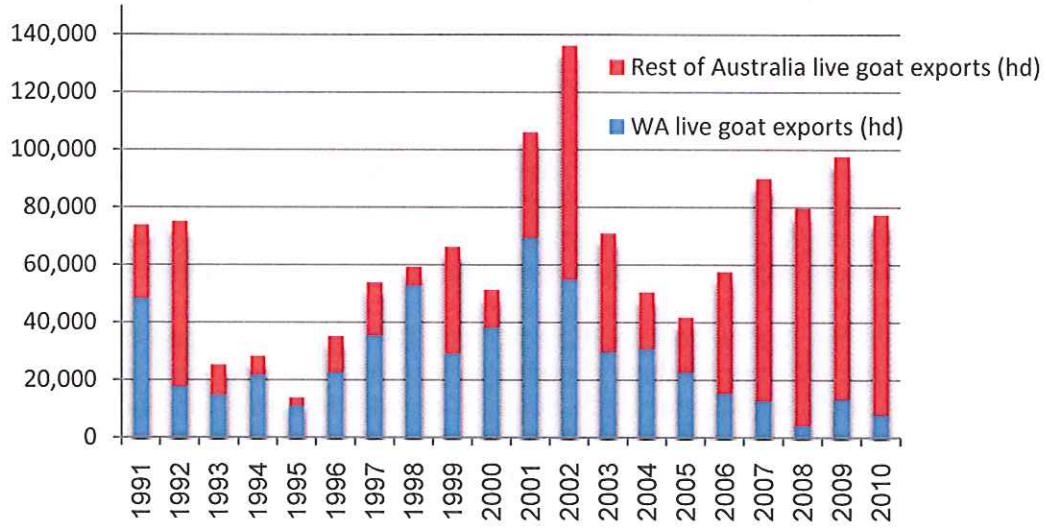
Figure 3. Live cattle exports from Australia



Live goat trade

The live export of goats from WA is a minor export industry. Since 2006 WA has annually exported less than 15,000 live goats, forming less than 15 percent of national exports (Figure 4). The trend in export numbers is downwards.

Figure 4. Live goat exports from Australia



Previous problems with the live export trade

1990

Suspensions of live trade from Australia have occurred previously for various reasons. In August 1990 following Iraq's invasion of Kuwait, the ensuing war led to the temporary suspension of the trade to that country. Later in November 1990 Saudi Arabia rejected a

shipload of 86,000 sheep on disease grounds. Of this cargo, 54,000 were subsequently unloaded in the United Arab Emirates (and disease issues were not evident), and the remaining 26,000 sheep were unloaded in Jordan but not until mid-February, 1991 (and disease problems were also not identified). In response, Minister Kerin announced a halt to the trade with Saudi Arabia, and this suspension lasted until 1999. Sheep exports to Saudi Arabia recommenced under new arrangements including age restrictions and pre-embarkation vaccination to control the disease scabby mouth.

2002

From July 2002 through until the end of October 2002 shipments into the Arabian Gulf were limited to cattle sourced above the 26th parallel and those cattle to principally be *bos indicus.* This stipulation followed unacceptably high cattle mortalities experienced on a shipment from southern Australia to the Arabian Gulf in the early northern summer of 2002. The restriction has been effective in preventing recurrence of such losses.

In October 2002 the Federal Government ordered a halt to live sheep exports from Portland in Victoria following high stock losses en route to the Middle East. Minister Truss indicated, however, the problem appeared to be related to the type of sheep and their preparation at Portland, rather than any poor shipping conditions.

2003

In August 2003 Saudi Arabia rejected a shipload of 57,000 sheep, alleging scabby mouth[1]. In the following month Minister Truss announced an indefinite halt to the live sheep trade to Saudi Arabia pending an agreement between the respective governments about conditions for resuming shipments. Negotiations with the Eritrean government led to the sheep being off-loaded over several days in late October. The shipment involved deaths of almost 10 percent of the sheep, principally due to the very protracted 80 days voyage.

Also in October 2003 Minister Truss announced a review into the livestock export industry that subsequently became known as the Keniry Review. One of the outcomes of this review was the introduction of the Australian Standards for the Export of Livestock (ASEL) in 2004. The ASEL are administered by the Australian Quarantine and Inspection Service and regulate conditions for the export of livestock from Australia.

The live sheep trade with Saudi Arabia resumed in mid-2005 following the signing of a Memorandum of Understanding between the respective governments. Around this time, the World Organisation for Animal Health (OIE) introduced guidelines for the welfare of animals, *inter alia*, during sea transport. The guidelines address the issue of a dispute over the health status of animals on arrival at destination countries after a sea voyage.

2006

A national television program, *60 Minutes*, aired footage showing cruel treatment of Australian-origin cattle at abattoirs in Egypt. Minister McGauran announced a temporary ban on the export of live cattle to Egypt. Although the ban was lifted in 2008, conditional on slaughter only in approved abattoirs, no cattle were exported to Egypt until March 2010 when 16,500 head were shipped from Fremantle to an approved cattle feedlot and abattoir in Ain Sokhna.

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[1] A veterinarian from the Saudi Arabian Ministry of Agriculture rejected the shipment on the grounds that 6% of the sheep were infected with scabby mouth, which was above the 5% acceptance level for the trade to Saudi. The Australian veterinarian on board the vessel estimated the incidence of scabby mouth to be 0.35%. Subsequently, the overall health of the sheep was confirmed by the OIE Regional Co-ordinator in the Middle-East. (see p. 29, Keniry Report (2003))

2011

A national television program, *Four Corners*, aired footage of cruelty to Australian-origin cattle being slaughtered in Indonesian abattoirs. Soon after on 8 June 2011 Minister Ludwig suspended the Australian live cattle trade with Indonesia. In early July, agreements on the conditions for the resumption of trade, and announcements by the governments of Australia and Indonesia have paved the way for a resumption of the trade in July 2011. The Indonesian Government will allow the importation of 500,000 head of cattle from Australia in 2011.

Known historical costs of trade disruption or cessation

In 2003, following the rejection of a shipment of live sheep by Saudia Arabia the Federal Government purchased the sheep and paid for their care and acceptance in Eritrea. Subsequently, the Government's costs of resolving this matter (around $10 million) were fully recouped through a levy on the live export industry. The incident also led to the Keniry Review, funded by the Government.

This review noted that "Since the closure of the Saudi Arabian market in late October 2003, wether prices in Western Australia have dropped by A$10 to A$20 per head. This highlights the significance of the livestock export trade in providing market competition with improved returns to producers." (p.15, Keniry Review (2003)). Given that formerly around 3 to 4 million wethers were exported live annually from Western Australia, the initial foregone revenue to sheep producers in Western Australia would have been around $53 million in 2004. This cost excludes any flow-on effects to other sheep prices or sheep meat substitutes such as beef.

Previous reviews and studies of the live export trade

Trebeck (1989) and McLachlan (1989) outlined the political and industrial ramifications that surrounded the attempt in 1978 by the Australasian Meat Industry Employee's Union (AMIEU) to end or at least highly regulate Australia's trade in live sheep. The events involved industrial action by the AMIEU, the Waterside Workers' Federation and the Australian Workers' Union; legal action in the Federal Court by Elders and the Commonwealth Government against the AMIEU; plus the political involvement of the state governments of Western Australia and South Australia, the Commonwealth Government, the ACTU and Trades and Labour Councils as well as a range of agro-political organizations. The legal action to cease or highly restrict the live trade failed.

Hassall & Associates (2000) describe several regional businesses in Western Australia that directly support the live sheep trade. Due to the location and nature of some of these businesses, an implication of their study is that almost certainly some of these businesses would have difficulty finding other similarly profitable end-uses for their sheep-related assets, if a sudden halt or reduction in the live sheep trade occurred.

ACIL-Tasman (2009) reported on the live sheep export trade. The ACIL-Tasman report was commissioned by the RSPCA and ACIL-Tasman made assumptions that led to their finding that cessation of the live trade would have little impact on farm businesses. They made the bold assumption that lamb and mutton prices would not change as a result of the closure of the export trade and so, of course, there is little surprise in their study's conclusion of little impact on farm businesses of closure of the live trade.

By contrast, a study by the CIE (2011) study does not impose that assumption and so generates different findings showing the farm sector would be economically disadvantaged by the cessation of the live export trade. Quirke (2011) also has presented the key findings

of the CIE study. The CIE study finds that the farm level GVP (gross value of production) for Australia's red meat industry would have been $247 million higher each year due to the live trade over the study period 2005/6 to 2008/9. The CIE found that on average across Australia, lamb and mutton prices would decline by 12 and 15 percent respectively due to cessation of live exports. Importantly, they note that the regional impacts, especially in areas directly affected by the trade (e.g. northern beef in WA and sheep in the agricultural region of WA) would be affected to a much greater extent.

The CIE study also found that processors would benefit from the cessation of live exports. Although the CIE do not highlight this finding; nonetheless it is a key finding. As shown in Table 5.4 (see below) of their report, processors' GVP increases by $108 million when live export is prohibited.

5.4 Impact of the live trade on cattle and sheep industry GVP and value added[a]

		Gross value of production			*Value added*		
		Cattle	Sheep	Total	Cattle	Sheep	Total
Total benefits							
Farm sector	$m	-128	-119	-247	-47	-64	-110
Exporters	$m	-40	-30	-71	-8	-6	-14
Processors	$m	70	38	108	18	8	25
Total	$m	-98	-111	-209	-37	-62	-99
Percentage contribution							
Farm sector	%	52	48	100	42	58	100
Red meat chain	%	57	43	100	57	43	100

[a] Average impact over the period 2005-06 to 2008-09.

Source: GMI model and CIE calculations.

By contrast the red meat industry's other two main stakeholders (farm sector and exporters) are in total worse off annually by $318 million (in GVP). By far, the principal losers are farmers (annual losses of $247 million) and the main beneficiaries are processors (annual gains of $108 million).

There are, however, limitations and potential deficiencies of the CIE study. These can be listed as:

(i) No reporting of economy-wide or multiplier impacts that would accompany cessation of the trade. Where live trade is the main industry in a region (e.g. Kimberley beef) then regional employment and income impacts are likely to be particularly severe yet this study does not capture these important social and economic consequences.

(ii) Because processing is input and labour-intensive relative to farm-level animal production, the economy-wide economic consequences of the cessation in live animal export trade may be far less than indicated by the partial analysis of the CIE.

(iii) The CIE study fails to capture important spatial and regional differences as its focus is on the Australian red meat industry. Disaggregation of impacts would highlight the particular disadvantage that WA regions would experience. Abrupt cessation of exports would unleash a major structural change, affecting farm profitability, and in regions highly dependent on the live trade, serious erosion of pastoral lease and land values could occur.

(iv) The CIE study uses coarse estimates of price elasticities of supply and demand. However, a spread of supply responses in each region and across regions is

likely. A single elasticity estimate does not capture the spread of business impacts. By illustration, a crop dominant farmer in the central wheatbelt of WA is unlikely, following a ban on live export of shippers, to drastically alter his flock management and switch into prime lamb production due to the time, expense and skill required. His supply response of sheep will be relatively inelastic. The same response is likely (in the short term) for a Kimberley beef producer. By contrast some other less crop dominant farm businesses may be much more elastic in their supply response, perhaps preferring to grow more crops rather than sheep, following a cessation of live animal exports and the likely fall in farm-gate prices for sheep and cattle.

(v) All analyses exclude the important medium term consequences of productivity impacts. If red meat production at the farm level is made less profitable then farmers have less capacity to invest in productivity-enhancing innovations and activities. The future prosperity of the red meat sector depends on such innovation and the economic consequences of a reduction in productivity performance at the farm level could be serious in the long term.

ABARES have produced one study on Australia's live cattle export trade (Martin et al., 2007) and have also produced a more general analysis of Australia's export of live animals (Drum and Gunning-Trant, 2008). Martin at al observed that as live cattle exports are very important to some regions of Australia, the economic impacts of changes to livestock export standards or fluctuations in live cattle markets are likely to be concentrated on particular producers and regions. They found that on average the financial performance of specialist live cattle export properties has greatly outstripped that of nonspecialist exporters and nonexporters in each of the six years to 2004–05, generating much higher farm business profits and higher rates of return to capital.

The study by Drum and Gunning-Trant (2008) assessed the size and value of Australia's live export sector and analysed the factors influencing global trade and Australia's share of this trade over time. They identified that foreign demand has provided Australian cattle producers with a broader network of markets for which they have adapted their production methods, particularly in northern WA and in the NT. The demand for and preference for live animals is likely to remain strong in these markets, especially as many Asian countries have a comparative advantage in the latter stages of beef production—availability of low cost agricultural byproducts used for cattle feed and low cost labour associated with meat processing. The researchers comment that if Australia were to restrict live exports then significant regional economic effects, particularly on the cattle industry of western and northern Australia, would be likely.

Regarding the export trade in live sheep, Drum and Gunning-Trant indicate that any restrictions on this trade from Australia would generate regional economic effects that would be felt particularly in the sheep industry of WA. They observe that the potential for the domestic market to absorb the surplus supply caused by a cessation in live sheep exports is limited.

MLA (2007) commissioned a research report to examine regions highly reliant on the live animal export trade. The reliant regions they identified included northern WA (cattle), the NT (cattle), Qld (cattle), southern WA (sheep and cattle) and Victoria (dairy cattle). They estimated the impact of trade cessation on on-farm incomes in the short, medium and long term. Their estimates accounted for the direct loss in income to producers of live export sheep and cattle. Although the impact on farm income was expected to decline over time, they assumed the market loss would endure, without any offsetting demand in new markets, and so the income effects were expected to be significant for at least 10 years following cessation. Under the price response and market loss assumption employed in this study, the present value of income losses over the 10 year period following trade cessation was

estimated to be over $2.2 billion in total, with southern WA sheep experiencing the greatest impact (see Table 4 from their study below).

Estimates of on-farm income impacts of trade cessation ($m)[a]

Region	Year 1	Year 5	Year 10	Present value (Years 1-10)[b]
Northern WA cattle	-56	-52	-24	-348
Northern Territory cattle	-82	-66	-56	-514
Queensland cattle	-8	-6	-4	-48
Southern WA cattle	-149	-120	-104	-939
Southern WA sheep	-27	-12	-8	-120
Victorian dairy cattle	-31	-42	-42	-291
Total	**-353**	**-298**	**-238**	**-2 259**

Source: MLA 2007

a Accounts for the direct loss in income to producers of live export sheep and cattle but does not include the loss in income to other producers within the industry as a result of domestic industry price effects or the positive, offsetting income effect for those producers who switch to alternative enterprises following the loss of live export markets. **b** Calculated over a 10-year period using a 7 per cent discount rate.

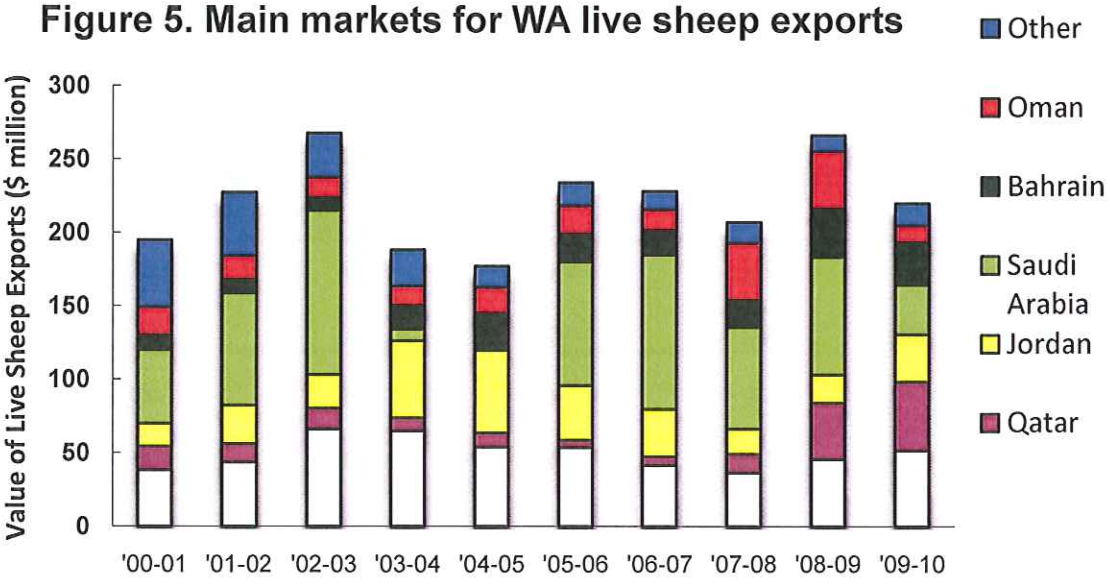
Although all the studies mentioned above often consider different time periods and use different data sets and study methodologies, they uniformly identify that WA, and particularly its farm and pastoral sectors, would be particularly worse off following any cessation to the live export trade in cattle and sheep.

Current State of WA's Live Export Trade

Main markets: trends and issues

Live sheep exports are an important source of revenue to WA's farm sector, generating annual export income in the range of $175 million to $275 million (Figure 5). The downward trend in numbers of sheep exported (see Figure 1) has been largely offset by an increase in the price paid for these sheep (see Figure 2) such that WA sheep export earnings have remained above $200 million in recent years.

Figure 5. Main markets for WA live sheep exports



The principal markets for these sheep are Middle Eastern countries: Saudi Arabia, Kuwait, Bahrain, Qatar, Jordon and Oman (Figure 6). Saudi Arabia has often been the largest importer of live sheep from WA, although as mentioned earlier, this trade with Saudi Arabia has been previously subject to suspension.

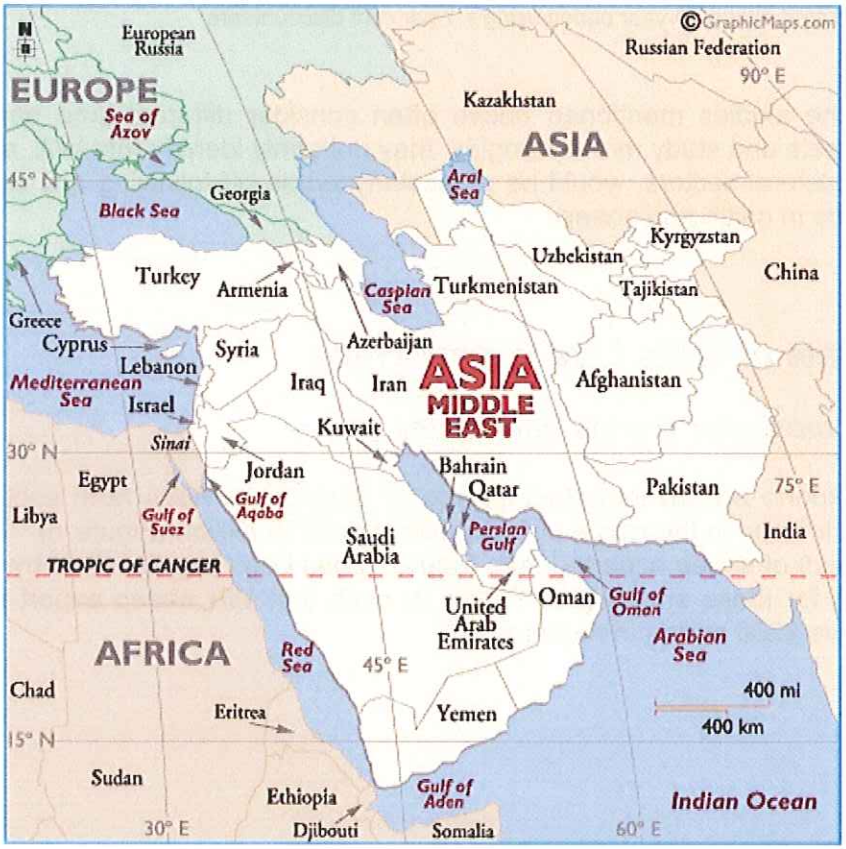
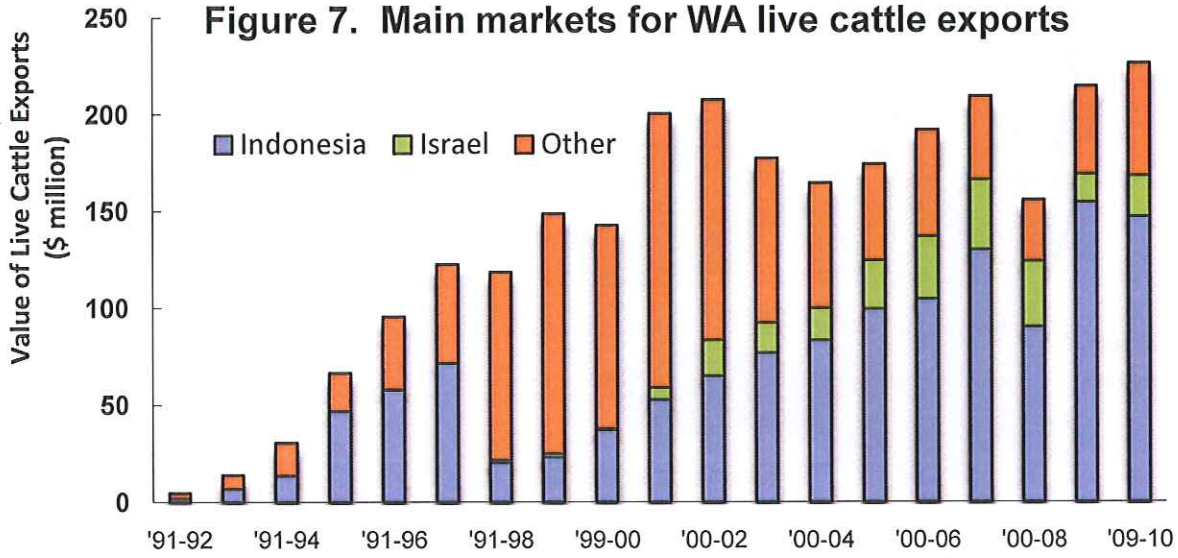


Figure 6: Middle East destinations of WA live sheep and cattle

Since the end of the 1990s live cattle exports from WA have maintained an economic importance similar to that of live sheep exports. Typically export earnings of around $200 million are generated annually from WA's live cattle exports (Figure 7). Since the late 1990s and early 2000s the volume of cattle exported to Indonesia has grown rapidly causing a decline in exports to many other destinations, apart from Israel. Indonesia has emerged during the 2000s to be by far the principal destination of live cattle exports from WA. The cattle supplied to Indonesia mostly come from the Kimberley region of the State.

Figure 7. Main markets for WA live cattle exports



Value of live sheep trade to regions of WA

There are 6,074 businesses with sheep in WA and live sheep export generates income in the range of $175 million to $275 million (Figure 5) per annum.

Sheep production occurs mostly in the higher rainfall southern parts of the WA agricultural region (Figure 8). In the medium to high rainfall areas a common flock structure is where a proportion of ewes (up to 35%) are mated to terminal sires for prime lamb production, thus still allowing for replacement of breeding ewes. Unless the merino wethers have made prime lamb specifications they are generally sold to the live sheep trade, usually at one or two years of age and any of the prime lambs that do not make specifications are also sent to that market. In the low rainfall areas wool is often the main production focus, with wethers and surplus ewes are sold to the live sheep trade.

In February 2010, DAFWA, in collaboration with MLA, conducted a survey of sheep producers' attitudes towards live sheep exports. The key findings from the 134 producers that participated were:

- 74 per cent of WA producers supplied sheep to the live export trade.
- Over 50 per cent of producers indicated 'better sale price returns' as a reason for supplying to the export market. Other main reasons were 'fits with optimal enterprise mix' (37%) and 'easier flock management' (34%).
- 80 per cent of producers supplying wethers indicated that the average age supplied was up to 2 years old indicating that the live export trade is no longer seen as just an outlet for older/cull wethers.

- When asked for other comments about the live sheep trade, the two most common comments volunteered were that it "created competition" (28 per cent), and that it was "an important market option" (19 per cent).

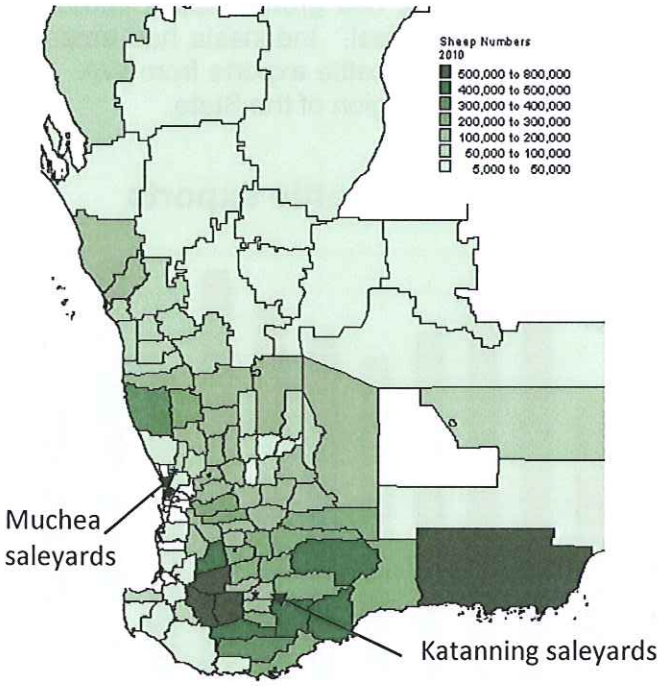


Figure 8: Sheep producing regions of WA

Table 1 outlines the regional importance of sheep production and live sheep export trade in WA. Three regions dominate the supply of sheep for live export; the Upper Great Southern and Lower Great Southern that are serviced by the Katanning saleyards and the Midlands that is serviced by the Muchea saleyards.

Table 1: The regional importance of the WA live sheep trade in 2009/10

	No. of sheep and lambs	No. of businesses	Number of wethers	Percentage of total live exports
Perth	19,956	90	4,584	0.2%
South West	1,061,798	827	220,538	10%
Lower Great Southern	3,769,863	1,344	734,026	33%
Upper Great Southern	3,943,612	1,175	697,915	31%
Midlands	3,439,193	1,653	660,106	30%
South Eastern	1,059,574	411	209,589	9%
South Eastern Rangelands	71,774			
Central	977,206	574	216,761	10%
Central Rangelands	339,908			
Total	**14,682,883**	**6,074**	**2,743,516**	**2,215,691**[2]

[2] Total number of live sheep exported in 2009/10 (Source: ABS & DAFWA)

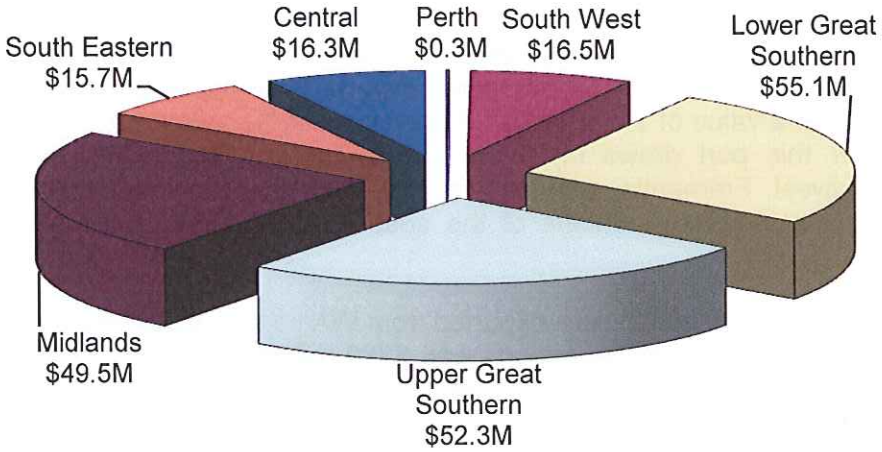
Table 2 shows the value of the trade, the numbers exported and the value ($/hd) for the last five years. The short supply of sheep and the high demand from countries experiencing increasing wealth and consequently increasing demand for protein has increased the value of sheep per head. So despite the decline in numbers the value to the farm sector remains significant.

Table 2: Quantities and values of WA live sheep exports: 2005/6 to 2009/10

	Value of trade ($ million)	Number exported (million hd)	Unit value ($/hd FOB)	Unit value ($/hd farm gate)
2005/06	234.0	3.4	68.8	52
2006/07	228.1	3.3	70.0	50
2007/08	207.0	3.0	69.1	47
2008/09	266.1	3.1	85.5	60
2009/10	219.9	2.2	99.3	75

The estimated value of live sheep exports from each region in 2009/10 is shown in Figure 9, using farm gate prices from the Katanning sale yard data.

Figure 9: Value of live sheep exports from WA's sheep producing regions



Value of live cattle trade to regions of WA

According to CIE (2011, p20) the northern Australian cattle industry has undergone significant structural adjustment to target the live export market, and that between 2006 and 2009, 39% of the cattle exported live from Australia were from northern Western Australia.

Based on the average number of cattle exported between 2005 and 2009 through the five ports that handle live exports in WA, and on the estimate of the farm gate value of $585 per

head (CIE, 2011, p29), the farm gate value of exports from WA is estimated to be $186.9m (see Table 3).

Table 3: Farm gate, FOB and CIF value of live cattle exports from WA

	Average number of cattle exported 2005-09	Total farm gate value ($ million)[a]	Total FOB value[b]	Total CIF value[c]
Broome	87,763	51.3	$57.6	$74.3
Wyndham	56,449	33.0	$37.1	$47.8
Port Hedland	17,845	10.4	$11.7	$15.1
Geraldton	31,787	18.6	$20.9	$26.9
Fremantle	125,718	73.6	$82.5	$106.4
Total	**319,562**	**$186.9**	**$209.8**	**$270.4**

[a] based on a farm gate price of $585 per head [b] based on an FOB price of $656 per head
[c] based on a CIF price of $846 per head

With an estimated FOB price of $656 per head (CIE, 2011, p29) the total value of cattle exports increases to $209.8 million as reflected in Table 3. The FOB price includes all costs associated with getting the cattle from the property onto the ship. These costs include road transport, transit insurance, agents' fees, feeding at pre-export assembly depot, wharf charges, levies, third party veterinarians, AQIS and quarantine fees and administration charges.

Finally, with a CIF (cost, insurance, freight) price of $846 per head (CIE, 2011, p29), the total revenue from live exports in WA, based on a five year average of exports is in the region of $270.4 million. CIE reports that the largest single cost item in the supply chain is the cost of sea freight, although it is highly variable over time and shipments.

Based on the above data, exports from the Kimberley region make up 45% of the live cattle exports from WA with a value of $122 million, while exports from the Pilbara region are relatively small at 6%, with a value of $15.1 million. Exports out of Geraldton have a value of $26.9 million; however this port draws on a number of regions, but mainly from the Gascoyne and the Midwest. Fremantle, with 39% of the exports valued at $106.4 million draws on several regions including portions of the southern rangelands as well as the agricultural region.

In 2009/10, an estimated 390,000 cattle were exported from WA ports. Based on a CIF value $846 per head, the total revenue from live exports was $330 million. The Northern Territory Department of Resources reported that approximately 23,000 cattle from WA were exported through Darwin in 2010, which at a farm gate value of $585 per head, would add $13.5 million to the total revenue from exports. However, as reported earlier, these estimates do not include economy-wide or multiplier effects that would accompany cessation of the trade which would be significant in regions which are almost entirely dependent on the live export trade, such as the Kimberley.

CIE makes the point that it is important to note that the estimates of the value of the export trade provided above do not represent the total value that would be lost if the live export trade were to cease, as they do not account for alternative revenue potential to producers or losses to producers in relation to lower prices received in the meat processing industry. CIE also note that *"it is widely acknowledged that without live exports farm gate returns would be*

lower because of the lower demand for livestock and the higher transport costs involved in transporting animals to the alternative markets" (CIE, 2011).

Further it claims that the live export industry is credited with *"substantially improving the regional economies in Western Australia, Western Queensland and the Northern Territory"* as reflected in higher on-farm net returns (with flow on benefits to local communities) and a broader economic base to farm incomes which has had the effect of producers having more income stability. MLA (2007) indicated that in the absence of a meat processing facility in the north of the state, the only opportunities that beef producers have are the live exports from regional ports or trucking their cattle south for live export and/or slaughter.

MLA (2007, p37) also estimated that in 2005/06, the gross regional product directly attributable (businesses that comprise the value chain) to the live export trade from northern WA was $355 per head of cattle exported and that which was indirectly attributable (other regional suppliers of goods and services) was $174 per head.

In addition to the revenue generated there are other economic, social and environmental benefits from the live export industry, including:

- Employment – the pastoral industry is a significant employer in the rangelands, the source of most export cattle. CIE (2011, p16) reported that there are 12,924 jobs in the Australian live export industry with wages and salaries of $987m, while MLA (2007) reported that there were 1,045 full time equivalent (FTE) jobs in northern WA associated with the live export trade and 1,672 FTE's in southern WA.

  The Indigenous Land Corporation reported (2010) that in 2009/10, 59 indigenous people were employed full time and 120 part time on the 28 indigenous held properties that participate in the Kimberley Indigenous Management Support Service (KIMSS) project.

- Productivity – CIE (2011, p66) report that the northern beef industry has experienced strong productivity growth in the past 20 years, with this growth being equivalent to that of broadacre cropping and higher than that observed in southern beef production. It suggests that *"these gains are likely to reflect, at least in part, the access to the live export market and considerable industry investment…instigated by the higher returns offered in the live export market relative to alternatives"* (CIE 2011, p67).

- Training – a number of properties in the Kimberley have established training facilities station hands. The focus has been on training indigenous youth in preparation for employment in the industry. They receive on-the-job training on working stations, completing certificates I and II in agriculture. Examples of properties where this training is being undertaken are Roebuck Plains, Myroodah and Noonkanbah. In 2009/10, 147 training courses were attended by indigenous people in the Kimberley facilitated by KIMSS (ILC, 2010, p87). These courses included corporate governance, land management, strategic planning and animal welfare. In the same period, there were 70 indigenous participants in the Pilbara (ILC, 2010, p88).

- Infrastructure development – the development of the livestock industry and its increased returns in recent years has facilitated investment in farm infrastructure on many properties. These developments have included water points, internal fencing to facilitate improved management, additional or improved yards and internal roads (MLA, 2007).

- Rangeland management – improved rangeland management has been achieved through seasonal reductions in stock numbers with stock being sold off at a younger age with only the breeders being retained; more intensive management which has been facilitated by water and fencing development; and the up-skilling of pastoral management which has contributed towards improved rangeland management and assessment skills (MLA, 2007).

- Regional community development – strengthening of the mainstream rural economy and providing opportunities for the participation of indigenous people through skill development, higher incomes, increased self determination, development of business acumen (MLA, 2007) and sustainable income generation through viable businesses.

A case study of impacts of the recent trade suspension

The following is a Kimberley case study. It draws upon benchmarking data collected by DAFWA and on interviews and conversations with pastoralists during the trade suspension. It is an illustrative case study The property and people are fictitious although the numbers are real, being based on benchmark survey data used with permission. The case study is the financial outlook for this illustrative business in early July, just prior to the announced resumption of the trade by Indonesia's granting of import licences for the third quarter of 2011.

The fictitious yet illustrative couple, Jim and Sandy, own 'Acacia Hills Station' in the Kimberley region. They have owned Acacia Hills in partnership with an external investor for more than 20 years. Acacia Hills supports a cattle breeding enterprise; sale of light steers and heifers to the Indonesian live export market is the business's main source of income.

Jim and Sandy also own a farm in the northern agricultural district of WA that they use primarily to finish out of specification animals, and also to produce hay for use on the Kimberley station.

Station Characteristics

Acacia Hills has an area of 210,000 hectares, held under pastoral lease, which gives a right to graze livestock but not to clear land or grow agricultural crops. Acacia Hills is typical of Kimberley pastoral leases comprising of a variety of land types that have different pastures and carrying capacity. The best grazing land is the alluvial floodplain supporting broad areas of Bundle Bundle and Ribbon Grass, though this country comprises less than 20 percent of the station. The majority of the station is sandy dune country supporting a mixed grass community with Ribbon Grass and Soft Spinifex. The station experiences tropical monsoonal rainfall with the majority of rain occurring during the 'wet' season, with an average rainfall of approximately 500mm. During the 'wet' season, the station can be isolated by road for more than a month.

Enterprise Characteristics

Jim and Sandy run a Droughtmaster herd. In 2010 they had 5,200 breeders, with bulls, calves and sale cattle on hand, giving a total herd of 11,500 head. Their primary market is live export of light animals (<340kg) to Indonesia. The majority of these sale cattle leave through the port of Broome, which is 400km by road. Cull cows or young animals outside of specifications are transferred 2000km south to their northern agricultural region farm for fattening and subsequent sale to the domestic market. Cattle sold off their northern agricultural region farm are trucked a further 400km south to the Muchea saleyards (see Figure 8).

Table 4 lists categories of livestock sold from Acacia Hills in the calendar year 2010. Live export steers made up 53% of the number sold and 57% of the total value. While fewer heifers and cows were sold and their value per kg was less, they still contributed over a third of total income.

Table 4: 2010 livestock sales

	Number	Av Weight	$/kg	Total ($)	Market
Cows	433	414	1.22	218,000	Domestic
Heifers	980	290	1.46	416,000	Live Export – Indonesia
Steers	1,831	317	1.71	990,000	Live export – Indonesia
Bulls	182	428	1.36	106,000	Live export – other
Total	**3,426**			**1,730,000**	

Table 5 represents both the livestock sales that were expected for Acacia Hills during 2011 prior to the suspension of the live export trade in June, and the sales that have been completed in 2011 to date. It is evident from this information that the suspension has had a significant adverse impact on sale prices achieved. For example, steers sold to Indonesia prior to the suspension received $2.05/kg, whereas steers sold after achieved an average $1.43/kg. This represents a 30% reduction in price received.

Table 5: 2011 livestock sales, forecast vs actual (Actual in brackets)

	Number	Av Weight	$/kg	Date Sold (pre/post suspension)	Total ($)	Market
Cows	*400*	*400*	*1.50*		*240,000*	*Domestic*
	(104)		($600/hd)	Pre	(62,400)	(Pilbara)
	(155)		($700/hd)	Pre	(108,500)	(South Australia)
	(170)	(400)	(1.05)	Post	(71,400)	(Harvey Beef)
Heifers	*1,000*	*290*	*1.70*		*493,000*	*Live Export – Indonesia*
	(200)	(270)	(1.40)	Post	(75,600)	(South West Feedlot)
Steers	*1,800*	*335*	*2.00*		*1,206,000*	*Live export – Indonesia*
	(544)	(320)	(2.05)	Pre	(363,424)	(Live export – Indonesia)
	(500)	(370)	(1.60)	Post	(296,000)	
	(170)	(300)	(1.50)	Post	(76,500)	(Domestic – South Australia)
	(200)	(320)	(0.90)	Post	(57,600)	(Live Export – Egypt)
						(Live Export – Malaysia)
Bulls	*200*	*400*	*1.6*		*128,000*	*Domestic/Live Export - other*
Total	***3,600***				***2,067,000***	
	(2,043)				**(1,111,424)**	

Jim and Sandy were budgeting that total revenue from sales in 2011 would be as much as 15% higher (in nominal terms) than in 2010. Following the suspension of live export trade, they are apprehensive that prices received in 2011 may be as much 25% lower than 2010 which represents a reduction in gross income of as much as one third. They believe that

retaining livestock planned for sale in 2011 is not a viable alternative to reduced returns to sale. Acacia Hills does not have excess grazing capacity and Jim and Sandy believe that retaining sale livestock would have a devastating impact on the condition of their rangeland that would take many years to recover.

Jim and Sandy were able to generate a small operating profit in 2010 after all costs including their own drawings, interest and expenditure on new infrastructure, was incurred. Table 6 reflects some savings they have identified in response to the suspension. However, as a direct result of the suspension Jim and Sandy are expecting to suffer a significant operating loss in 2011 despite these savings.

Table 6: Acacia Hills cost structure

Expense Type	**2010 ($ actual)**	**2011 ($ forecast)**
Fixed Costs		
Interest	90,000	90,000
Rates and rents	54,000	54,000
Repairs and Maintenance	225,000	225,000
New Infrastructure	120,000	
Other (incl admin, insurance, telephone, etc)	94,000	94,000
Variable Costs		
Labour	434,000	434,000
Fuel	95,000	95,000
Animal Health	64,000	64,000
Fodder and Supplements	114,000	80,000
Selling Costs	245,000	245,000
Mustering (incl helicopter hire)	154,000	154,000
Bull replacement	40,000	20,000
Total Costs	**1,729,000**	**1,555,000**

The Personal Perspective

Based on conversations with pastoralists during the trade suspension the following views of a pastoralist couple like 'Jim and Sandy' are typical. They consider that retaining livestock planned for sale in 2011 is not a viable alternative to reduced returns to sale. Acacia Hills does not have excess grazing capacity and Jim and Sandy believe that retaining sale livestock would have a devastating impact on the condition of their rangeland that would take many years to recover. In this sense it is *"sell and be damned, but sell anyway!"*

They plan to continue their mustering program for the balance of the season irrespective of market developments. Any longer term major decisions need to wait until after this year is finished. In the meantime they plan to defer some expenditure this year (e.g. developing some new country, erecting new fences, purchasing new equipment and possibly cutting back on supplements). They are hopeful they will not need to lay off any staff. Yet they realise they are likely to receive only 54% of budgeted sales revenue whilst still having to cover 90% of a normal year's business costs. The result is they foresee they will be carrying a 399,000 loss forward into next year.

Nature of the regional sheep supply chains

The sheep industry in Western Australia supports a variety of businesses and people. Figure 10 depicts the sheep supply chain. Sheep destined for the live sheep trade tend to be 1 to 2 year old merino wethers. They are either sold at saleyards (Katanning or Muchea) or sold on-farm direct to buyers through livestock agents receiving 5% commission. The sheep are transported to feedlots where they are prepared for up to three weeks before being loaded on to a boat at Fremantle.

The demand for live animals comes from a cultural tradition where ceremonial slaughtering is required, particularly for the religious festival known as Ramadam. However, a large proportion of these live animals, around 70% are slaughtered at country of origin in abattoirs, but the infrastructure around the live sheep trade is maintained and subsidised by overseas governments to ensure a supply for Ramadam.

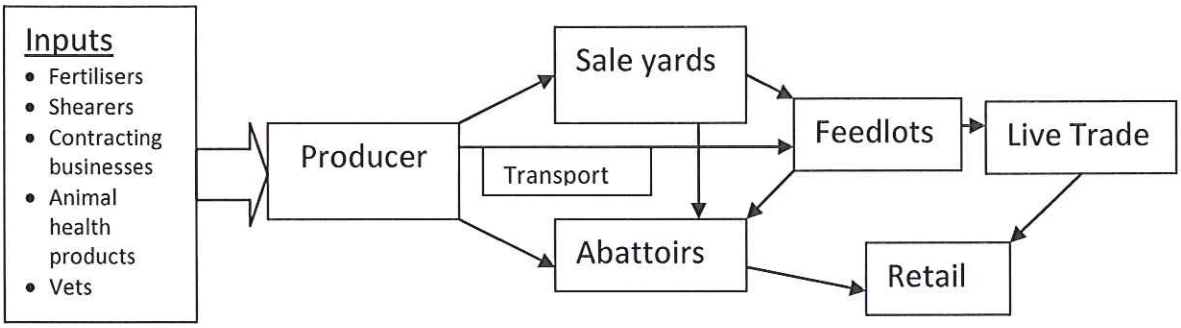


Figure 10: Key aspects of WA's sheep supply chain

The impact from a disruption or termination to the live sheep trade would vary for different components of the supply chain. The businesses directly involved with the trade will suffer the most (e.g. exporters). Many of these businesses are vertically integrated for risk management purposes, so the impact would be severe.

It is the producer's response that will be critical to other participants in the supply chain. If they choose to exit the industry or reduce sheep production in response to lower prices for sheep then the support industries and the abattoirs will suffer through eventually reduced throughput. An analysis of the likely response is provided below.

Nature of main supply chains

Beef-cattle Supply Chain

- The nature of the WA beef-cattle industry supply chains are summarised in Figure 11. Businesses in the supply chain are broadly categorised into three major sectors: Production, Processing/Wholesale, and Retailing/Export. The black arrows indicate the flow of products and links between businesses and the cattle-producing regions are illustrated in Figure 12.

Production

- In 2009/10 the WA cattle herd was 2.21 million head which supported disposals of 0.93 million head (42.08%) for processing, feeding and exporting. Disposals from the Kimberley and Pilbara were 0.199 and 0.108 million head respectively and disposals from the rest of WA were 0.613 million head.

- Pastoralists, livestock agents, on-station husbandry and stockmen, contract spaying, aircraft providers, auction/sale yards, road transport agents, fodder and water suppliers, and veterinary services are the other main parties in this sector.

Processing/Wholesale

- The processing and wholesale sector comprises five main sub-sectors: exporters of live animals, export abattoirs, domestic abattoirs, feedlotters and wholesalers. Out of WA disposals in 2009/10, 0.385 million head (41.4%) were exported live. Export abattoir received 0.113 million head (12.2%) for processing and export as boxed meat and carcases. Only 0.029 million head (3.1%) went to domestic feedlots. Domestic abattoirs processed 0.347 million head (37.3%) for subsequent sale as meat for domestic consumption. The processing share between export and domestic abattoirs was 70% and 30% respectively; resulting in 78622cwt[3] and 34,038cwt of carcase meat respectively. Interstate exports were 0.056 million live head (6%) in 2009/10.

- The main other businesses involved in the processing/wholesale sector are road transport (auction yard or farm to abattoir, abattoir to wholesalers and retailers), packaging services, and by-product exporters.

Retailing/Export

- Export markets for the WA beef-cattle can be divided broadly into four regions: 'Indonesia', 'South East Asia, US', 'Middle East, Russia, Turkey', and 'North East Asia, China'. Live cattle exports of 0.154 million head (40%) went to Indonesia, 0.216 million head (56%) to the 'Middle East, Turkey and Russia', 0.0116 million head (3%) to 'North East Asia, China', and only 0.004 million head (1%) to other South East Asian countries.

- Meat exports to the same four regions were 13,979cwt (41%) to Indonesia, 1,452 cwt (4%) to the US and other South East Asian countries, 5,918cwt (17%) to the Middle East, Turkey and Russia, and 12,688cwt (37%) to North East Asia and China.

- Product from the domestic slaughter of cattle usually goes to retailers in two main ways, through wholesalers and through direct transport to supermarkets. Of the 78,622cwt of processed meat from domestic abattoirs, around 18,618cwt (24%) goes to retail butchers, food services, restaurants and supermarkets through the wholesalers and the rest (76%) flows directly to supermarkets. Hides and other by-products are transported to tanneries and other by-product exporters and retail companies from both domestic and export abattoirs.

- A large number of agents and businesses are involved in the export sector. For live animal export livestock agents, transporters, veterinary service providers, pre-export assembly service providers at ports, fodder manufacturers, growers and retailers, port authorities, stevedores and provedores, ship agents, ship owners, government agencies (Australian Quarantine and Inspection Service (AQIS), Australian Maritime Safety Authority (ASMA)), and auditing and accounting service providers; all are involved. The meat export sector additionally requires packaging services, quarantine services, export agents, and involvement of government agencies.

- WA cattle production sector come from nine major regions in WA (Figure 12).

[3] Note: cwt stands for 'carcase weight tonne'

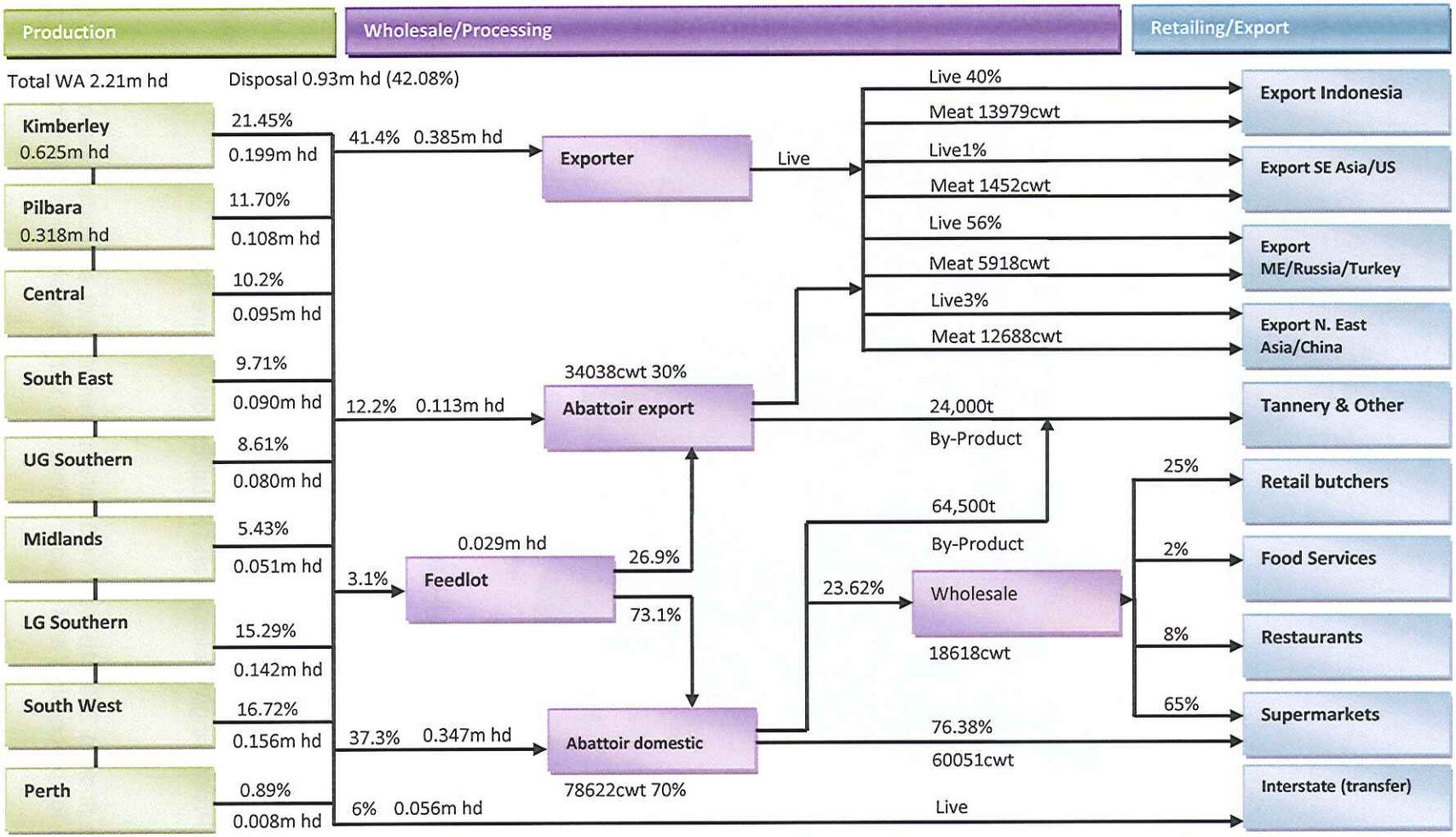


Figure 11: The WA beef-cattle value chain in 2009/10

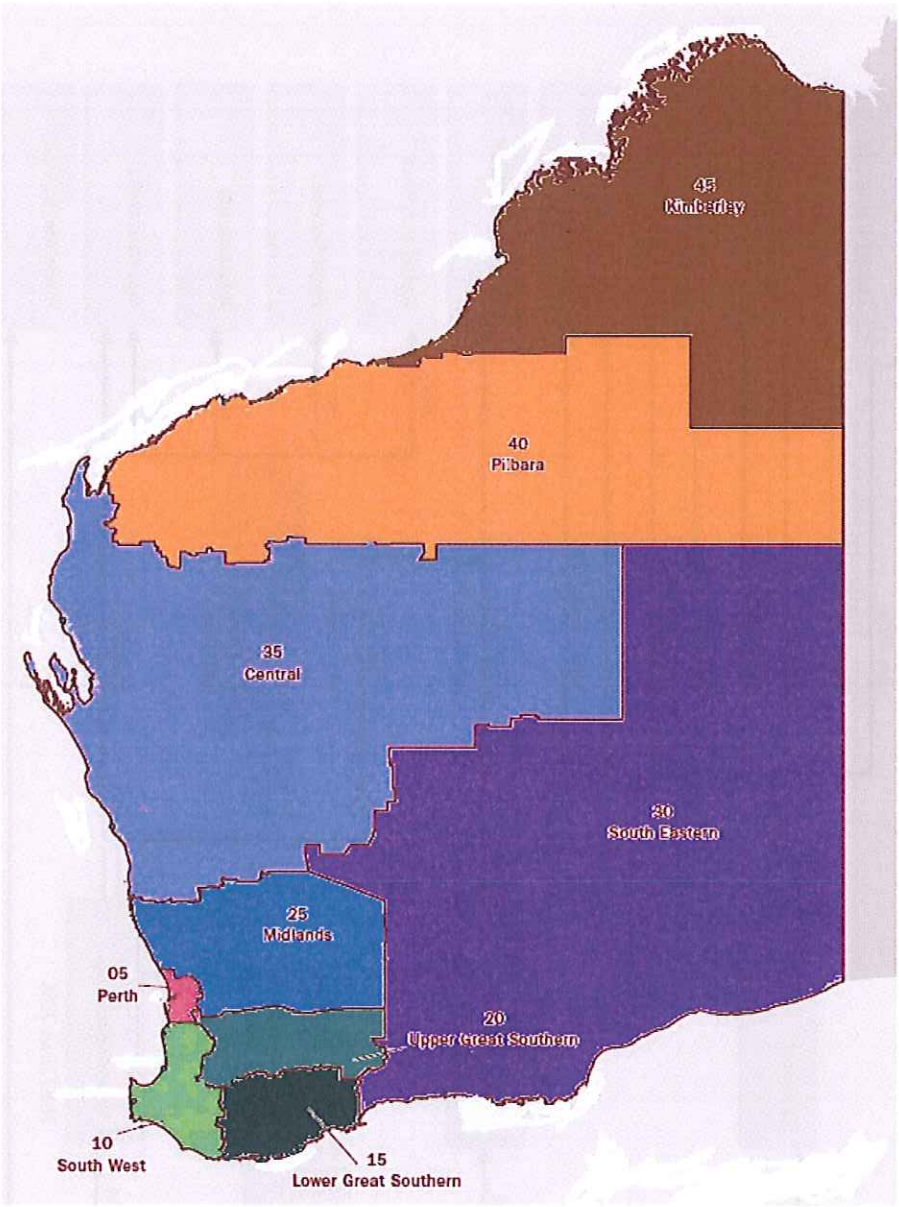


Figure 12: The beef-cattle and sheep producing regions of WA

(Source: adapted from ABS)

Sheep supply chain

- The sheep supply chain comprises three main sectors, similar to the beef supply chain; Production, Processing/Wholesale and Retail/Export (Figure 13).

Production

- WA's sheep flock in 2009/10 was 14.5 million animals that supported disposals of 5.81 million head (40%) for processing and export. There are very few sheep in the Kimberley and Pilbara regions.

- Pastoralists, livestock agents, stockmen, auction/sale yard staff, road transport agents, fodder and water suppliers, and veterinary services are the other main parties in this sector.

Processing/Wholesale

- Unlike the situation for cattle, the sheep feedlot sector tends to be more seasonal and ad hoc in nature. Hence, most sheep come directly from farms into the processing/wholesale sector that consists of four major sub-sectors; live sheep exporters, export abattoirs, domestic abattoirs, and wholesalers. In 2009/10 live export accounted for 2.15 million head (37%). Export abattoir received 2.14 million head (36.84%), domestic abattoirs received 1.37 million head (23.56%) for processing and the rest, 0.15 million head (2.6%), were transported interstate.

- The main other businesses involved in the processing sector are road transport (auction/farm to abattoir, abattoir to retailers), packaging services, and by-product exporters.

Retailing/Export

- The sheep and sheep meat export markets for WA can be divided into four main destinations: 'Middle East', 'Taiwan', 'United States of America (USA)', and 'Other regions'. In 2009-10 live exports of 1.99 million head (93%) went to Middle Eastern countries. Kuwait, Qatar, Jordan, Saudi Arabia and Bahrain were the largest destinations, accounting for 26%, 18%, 16%, 14% and 13% respectively. The rest of the live sheep, 0.15 million head (7%) went to other overseas countries.

- The main export market for sheep meat is the Middle East where 15,852cwt (36%) were sent. Exports to Taiwan and USA were similar in share, 3,610cwt (8.4%) and 3,598cwt (8.2%) respectively. The rest of the export meat (47.4%) went to other countries.

- Most meat and meat products from domestic abattoirs are transported to supermarkets by their own cold transport systems. The remaining portion is packaged and transported by wholesalers to the retail butchers, restaurants and some other supermarkets.

- Hides and other by-products went to tanneries and other by-product exporters and retailers from both domestic and export abattoirs.

- Approximately 80,000 tonnes of wool was produced from the 14.5 million sheep (4.2kg/hd greasy) in WA in 2009/10.

- Similar to the beef-cattle industry a large number of businesses are involved in the sheep and sheep meat export sector. For live sheep export: livestock agents, transporters, veterinary service providers, pre-export assembly service providers at port area, fodder manufacturers, growers and retailers, shearing contractors, port authorities, stevedores and provedores, ship agents, ship owners, government agencies (AQIS, AMSA), and auditing and accounting service providers are involved. Additionally the meat export sector includes packaging services, quarantine services, export agents, and involvement of government agencies.

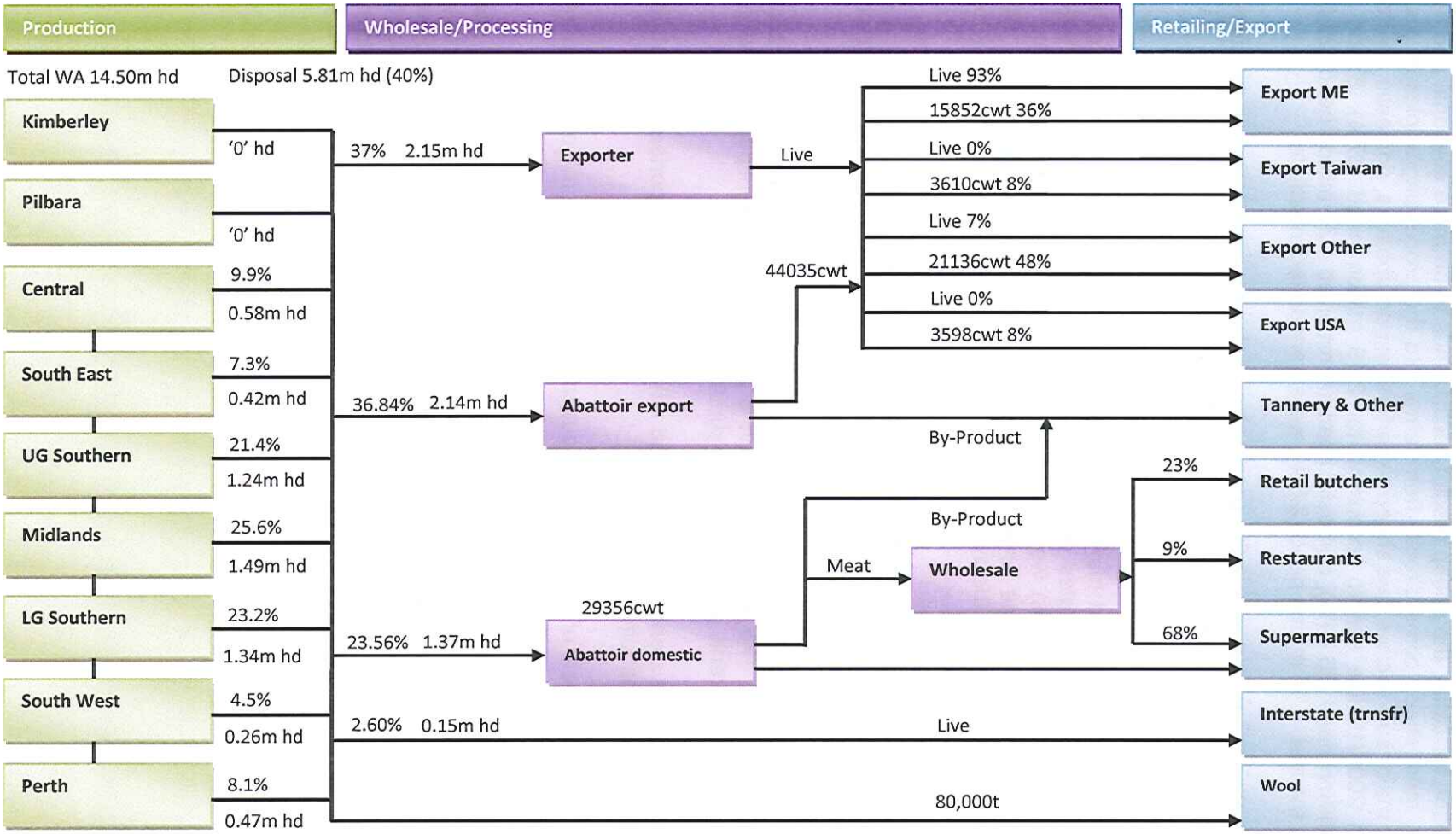


Figure 13: The WA sheep value chain in 2009/10

Goat supply chain

- The goat supply chain also comprises three main sectors; Production, Processing/Wholesale and Retail/Export (Figure 14).

Production

- WA produced 85,680 head of goats in 2009/10 for disposal. Most of the goats are produced in the rangelands. Pastoralists, livestock agents, road transport agents, fodder and water suppliers, and veterinary services are the other main parties in this sector.

Processing/Wholesale

- The processing and wholesale sector comprises four major sub-sectors; live goat exporters, export abattoirs, domestic abattoirs, and wholesalers. Out of total WA slaughter, export abattoir received 73,894 head (95%) and the rest 3,890 head (5%) was processed by domestic abattoir for domestic consumption.

- The main other businesses involved in the processing/wholesale sector are road transport (farm to abattoir, abattoir to wholesalers and retailers), packaging services, and by-product exporters.

Retailing/Export

- The main export markets for WA goat can be divided into four major destinations; Malaysia, Singapore, Saudi Arabia and other regions. A total of 7,896 head of live goats were exported to these destinations in 2010 which is approximately 46% less than the previous year. Almost all of the goats exported live from WA are transported by air.

- The other involved businesses in this sector are livestock agents, transporters, veterinary service providers, pre-export assembly service providers, fodder manufacturers, growers and retailers, airport authorities, provedores, aircraft agents, aircraft owners, government agencies (AQIS, AMSA), and auditing and accounting service providers. Additionally the meat export sector includes packaging services, quarantine services, export agents and involvement of government agencies.

Ramifications of a Cessation in the Live Cattle Trade

Vulnerable businesses and regions in WA

The primary impact of a cessation of live cattle export will be on cattle producers in regions highly dependent on the live export trade. This impact will probably be greatest on producers in the Kimberley who are almost entirely dependent on this trade, with 73% of cattle sales over the past ten years being to the live export trade.

Each pastoral or farm business will experience varying levels of impact, dependent on the structure of their business, the size of their herd, the development status of the business, and the extent of their non-farm income and assets.

Generally, pastoralists in the north of the state have less opportunity to diversify out of the live export trade and subsequently would experience greater adverse impact from the cessation than beef farmers in the south of the state whose properties can more easily switch to alternate enterprises.

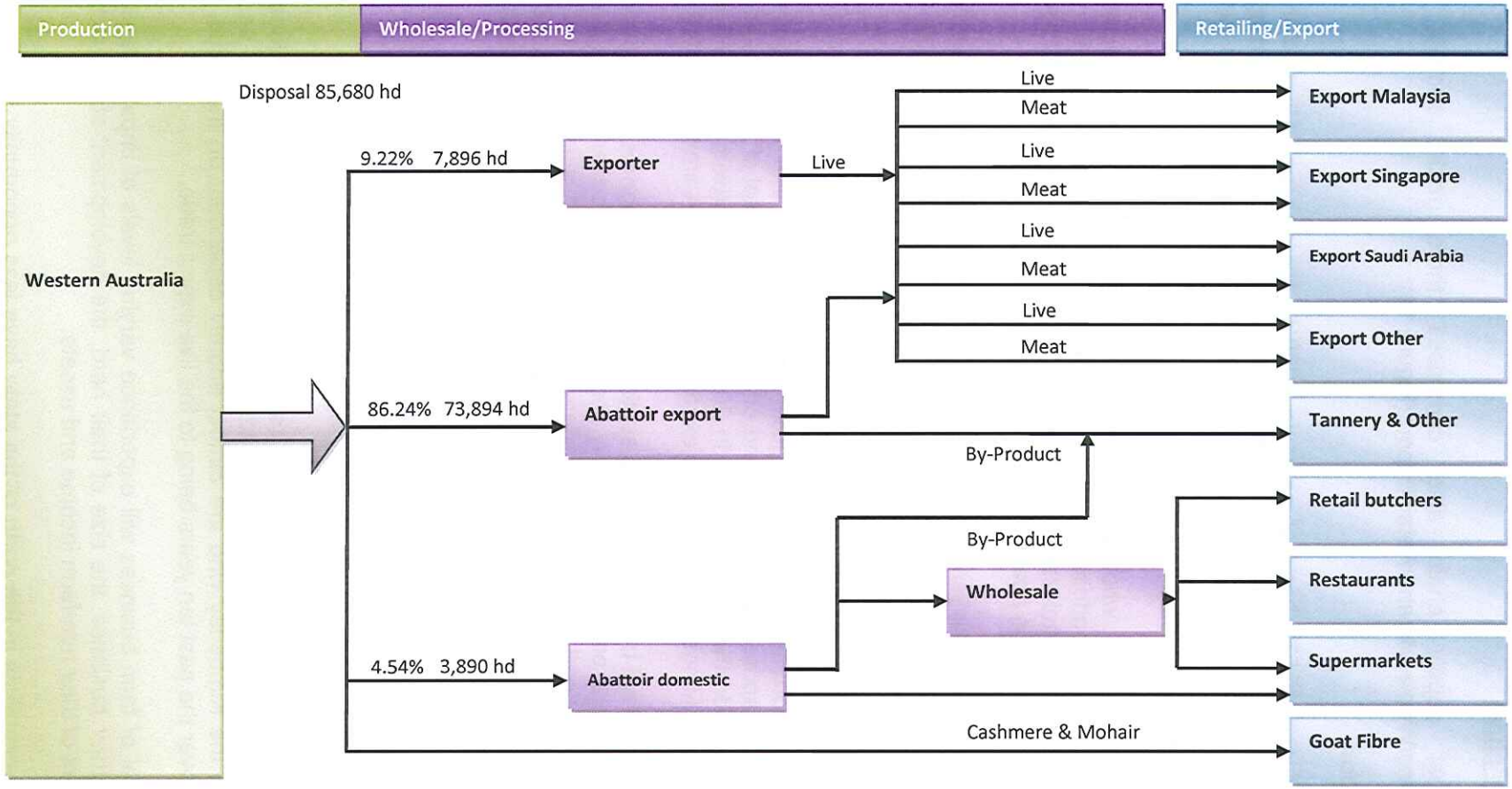


Figure 14: The WA goat value chain in 2009/10

Pastoralists, particularly those in remote regions, can expect lower returns on their cattle sold to a domestic market. The reduction in returns is due to a lower price per kilogram that the pastoral cattle receive on the local market and an increase in transport costs as cattle are transported longer distances for further backgrounding or entry into feedlots. CIE (2011) suggest that the Australian average price discount may be in the region of 7.8c/kg liveweight or $27.30 per 350kg steer; however estimates in WA are that these would be significantly higher, with reductions up to $0.40 per kg being forecast (Peggs, *pers. comm.*). A 350kg steer that previously would have been exported live from Broome would now additionally cost $115 to transport to the Perth region.

In order to manage the effects of a cessation of the live trade, pastoralists and farmers may consider reducing expenditure in the short term to manage cash flow; however these actions would have long term consequences for their businesses. Examples include deferring decisions on maintenance and replacement of plant and equipment, replacement of stock water infrastructure, fence and yard maintenance and bull purchases. These deferments may result in higher costs in the future as infrastructure may deteriorate to the extent where it can no longer be repaired and subsequently will need to be completely replaced. The impact on the suppliers of these services would also be felt in the regions. In the weeks immediately following the announced suspension of the live trade with Indonesia in June, the anecdotal evidence was that pastoral businesses were revising budgets and deleting all non-essential capital expenditure until the trade resumed.

Pastoralists (depending on their cash flow situation and access to finance) were considering reducing expenditure on items such as licks and supplements, mustering, reducing use of veterinary services for animal health issues and reducing the workforce by letting non-essential staff go. Each of these decisions was likely to impact on local businesses that provide these goods and services to the live export industry, with the level of impact depending on the percentage of income derived from this source (see Table 7).

Table 7: Participants in the live cattle export trade

Value chain participant/ancillary service provider	***Turnover earned from live export (%)***
Exporters	>80%
Assembly depot operators	>80
Marine consultants	>80
Ship owners	>80
Ship agents	>80
On-vessel stockmen	>80
Road transport providers	50 – 80
Livestock agents	50 – 80
Veterinary service providers	50 – 80
Port authorities	50 – 80
Stevedores	50 – 80
Rural contractors – mustering, fencing, etc	10 – 50
Rural consultants and trainers	10 – 50
Fodder growers and manufacturers	10 – 50
Industry associations	10 – 50
Providores	10 – 50
Regional businesses	<10
Government service providers	<10
Rural finance, auditing, insurance and legal service providers	<10

Source: AgEconPlus (2007)

The percentage turnover that businesses in WA derive from the live export trade varies from region to region and is dependent on the level of importance of the trade in the region relative to other industries. For example businesses in the Kimberley are more reliant on the live export trade whilst in the Pilbara businesses derive a higher proportion of their income from other sources. The major regions that derive significant income from the live export trade are considered below in relation to the impacts.

Kimberley

An average of 144,212 cattle were exported annually from the Kimberley between 2005 and 2009 (CIE, 2011). Approximately 73% of the cattle turned off in the Kimberley in the last ten years have been exported live, with the balance being sent to abattoirs and other domestic markets.

The main live export ports that support the Kimberley live cattle industry are Wyndham and Broome; however cattle from the east Kimberley are also exported through Darwin. The majority of the export cattle are Brahman or Brahman cross animals supplied to the Indonesian market. Cattle are also sent south and east for the domestic market but this only makes up 27% of the sales.

With the suspension of the Indonesian market, there is local evidence that orders for cattle have been cancelled. One example of this is the recent cancellation of an order for 8,000 pastoral cows after mustering at substantial cost.

There are an estimated 69 pastoral businesses in the Kimberley which operate the 94 pastoral leases (DAFWA, 2011). With a farm gate value of $585 per head (CIE, 2011) then the total value of exports at farm gate value is in the region of $97.8 million or $1.42 million per business.

Aside from pastoral businesses, the following associated businesses derive more than 70% of their turnover from the live export trade and will subsequently be significantly impacted by the cessation of the live export trade:

- Mustering contractors
- Helicopter contractors for mustering
- Road transport of sale cattle to depots near ports and for paddock carting
- Suppliers of hay and pellets to both export yards and live cattle ships
- Export yards and depots
- Casual labour employed in ports for loading cattle ships
- Live cattle vessels – crews, demand for supplies and fuel oil, return on assets as few alternative business opportunities for specialised shipping
- Fencing contractors – pastoralists are deferring decisions to develop infrastructure
- Stock and station agents supplying fencing materials and husbandry supplies and who may also have exposure to lending to pastoral businesses

The impact on the following businesses in the Kimberley is considered to be moderate:

- General freight companies supplying pastoral stations with various inputs
- Suppliers of hay for station livestock practices such as weaning and yarding
- Independent vets assessing loading operations and stock inspections
- Shops and retail businesses in regional centres
- Fuel suppliers to pastoral stations - diesel is required for power generation, pumping from bores and for plant and vehicle use
- Livestock port staff, harbour pilots and port infrastructure (reduction of live export ships utilising ports)

- Bull producers with markets in northern Australia

There will be a low impact on the following activities and businesses: agricultural shows; rodeos in regional centres; building and construction companies; earth moving/grading contractors for roads and dam building; drilling operators; many small businesses that service the pastoral community for food, clothing, saddlery, LPG cylinders and general supplies; vehicle and truck dealerships including the supply of spare parts; pump and motorbike suppliers; irrigation businesses and metal suppliers.

Anecdotal evidence from the Kimberley suggests that if permanent closure of the live trade with Indonesia occurred then:

- A local hay producer for pastoral leases and export yards was expecting to lose over $1 million in sales
- A local car dealership was forecasting lost vehicle and spare parts sales of $0.5-1.5 million in 2011
- A local saddlery supplier was expecting a loss of 20% in annual turnover if rodeos and shows became poorly attended by pastoralists

Pilbara

An average of 35,409 cattle were exported annually from the Pilbara between 2000 and 2009. Approximately 46% of the cattle turned off in the Pilbara in the same period were exported live, with the balance being sent to abattoirs and other domestic markets. It is important to note that a greater proportion of the cattle were sent to abattoirs (15%) and other markets (39%) than was the case in the Kimberley where a comparative total of only 27% were sent to other markets. This is due to the closer proximity of the Pilbara to markets in the south and emphasises this region's lesser dependence on live exports.

The Pilbara's agricultural production is dominated by the cattle industry, with 97% coming from livestock disposals (Pilbara Development Commission). According to Alan Peggs (*pers. comm.*), a specialist beef enterprise adviser, the 'typical' station comprises 200,000 ha and runs 2,650 Brahman cross breeders mated with Brahman and Droughtmaster bulls. It achieves a branding rate of 75%, retains all weaners on the property and markets them as live export steers and heifers at around 18 months of age at 325 and 305 kg liveweight respectively. These are marketed to Indonesia through Port Hedland. Cull cows and bulls are marketed at the Muchea saleyards in the south of WA.

Peggs estimates that the effects of a cessation of live trade with Indonesia would result in a 'typical' station having its return on investment reduced by 66% from 4.4% with trade to 1.5% without trade.

There are an estimated 51 pastoral businesses in the Kimberley which operate the 64 pastoral leases (DAFWA, 2011). With an estimated farm gate value of $585 per head (CIE, 2011) then the total value of exports at farm gate value is in the region of $20.7 million or $0.4 million per business.

As with the Kimberley, there will be other businesses in the region that would be impacted by a cessation of the live trade, however due to the lower level of livestock activity in the Pilbara, combined with the substantial activities of the mining industry, the impacts would be less than in the Kimberley.

The following businesses may be significantly impacted by the cessation of the live export trade as they are likely to derive more than 70% of their turnover from the trade:

- Mustering contractors
- Helicopter and fixed wing contractors for mustering
- Road transport of sale cattle to depots near ports and for paddock carting
- Suppliers of hay and pellets to both export yards and live cattle ships
- Export yards and depots
- Casual labour employed in ports for loading cattle ships
- Live cattle vessels – crews, demand for supplies and fuel oil, return on assets will be reduced as there are few alternative business opportunities for such specialised shipping
- Fencing contractors – pastoralists are deferring decisions to develop infrastructure
- Stock and station agents supplying fencing materials and husbandry supplies and who may also have exposure to lending to pastoral businesses

The impact on the following businesses in the Pilbara is considered to be moderate to low:

- General freight companies supplying pastoral stations with various inputs
- Suppliers of hay for station livestock practices such as weaning and yarding
- Independent vets assessing loading operations and stock inspections
- Fuel suppliers to pastoral stations - diesel is required for power generation, pumping from bores and for plant and vehicle use
- Livestock port staff, harbour pilots and port infrastructure (reduction of live export ships utilising ports)
- Irrigation businesses
- Bull producers

Many of the businesses that would be adversely affected by the cessation in the Kimberley such as drilling contractors, earthmoving contractors, vehicle retailer, and the like will be less affected in the Pilbara due to the strength of the mining industry in this region.

Gascoyne, Murchison and Goldfields

These regions are again less dependent on the live export trade than the Kimberley or the Pilbara due to their closer proximity to the southern saleyard markets and the agricultural area for backgrounding and feedlotting. Thirty five percent of the cattle sales from the Gascoyne and 22% of the cattle sales from the Murchison were exported live, with the balance sent to other markets. In addition to the fact that there are proportionally less cattle exported live, the number of cattle produced in this region is also considerably less than in the Kimberley and to a lesser extent in the Pilbara. Thus it is suggested that the impact on businesses in these regions would be less significant than in other regions highly dependent on the live export trade.

WA's agricultural region

This is the region which would be least affected by a cessation of live export of cattle as there is a greater level of diversification in the region, both in terms of farm enterprises as well as the market opportunities for producers.

When the recent suspension of the live cattle export trade with Indonesia occurred, investigations by DAFWA indicated that the livestock support industries (e.g. Elders, Landmark, Milne Feeds, etc) were reporting 'business as usual' with mostly a shift in attitude and sentiment rather than the experiencing of financial imposts on their businesses. Processors reported no change, although they noted some improvement in the saleyards (as opposed to previous years) of consistent/uniform quality. The cause was attributed to the lower number of live exporters mustering, and their selecting animals in uniform saleable condition to deliver onto the market.

Most southern processors in WA presently have room to increase supplies to the manufacturing beef market. A best estimate would be around 1,250 to 1,750 head per week dependent on price/suitability. This is however less than the annual average of exports from the port of Broome alone (87,700 head), and substantially less than the average weekly exports from Broome at peak season from May to October.

Throughout the recent trade suspension most financial institutions endeavoured to assist producers directly affected by the suspension; however if a permanent cessation of the live export of cattle occurred then many producers would rapidly experience financial difficulty and the response of banks would be different.

The following two live cattle trade scenarios are considered, based on the value chain models in Figures 14 and 16. Key aspects of the scenarios are:

Scenario-I: Export ban to Indonesia for a short period

- Live export suspension to Indonesia is assumed to affect 110,000hd cattle (of these, 51,171hd are from the Kimberley, 23,143hd from the Pilbara and the rest, 35,686hd are from other regions in WA). Of these cattle 80,000hd are assumed to be exported live to Indonesia in 2011, following resumption of the trade. The remainder are assumed to move interstate or to feedlots within WA.

- Most cattle are assumed to remain on the range for fattening until August. When cattle are sold to the live export trade, following the resumption of the trade, their price is assumed to be 10% less due to a few factors such as greater competition between pastoralists and higher compliance and monitoring costs that are passed back to pastoralists. The 30,000hd of cattle moved interstate, to other regions or to feedlots, are assumed to also receive a lower price (by 10%) and to incur higher transport costs (treble the road transport cost associated with live export). Because the export trade to Indonesia is assumed to resume fairly rapidly with export volumes recovering, the final meat price for exports and domestic retail sales is assumed to be unchanged.

Scenario-II: On-going ban on **all** live cattle exports

- Pastoral cattle are assumed to remain on rangelands for fattening, until mustering occurs late in the dry season. Then cattle are assumed to move interstate or to feedlots within WA. The loss of the live export market forces all cattle, whether pastoral or agricultural cattle, to be processed through Australian abattoirs. National competition among beef producers for sale of their cattle that now can only be processed in Australia is assumed to cause a 10% reduction in the sale price received by WA beef farmers. Furthermore, because pastoral beef now need to be transported further within Australia than previously occurred under live export, the cost of transport is assumed to treble.

- The loss of all live cattle export markets is also assumed to cause a 5% decline in the WA domestic meat price due to the greater volume of meat becoming available for sale on its domestic market. Many pastoralists are assumed not to have alternative more profitable enterprises to turn to and so they continue to supply similar volumes of beef cattle, in spite of their reduced enterprise profitability.

Simulation results

The annual baseline economic measures of the WA beef-cattle industry value chain in 2009/10 are summarised in Figure 15 for the three broad supply chain groups: Farms/production, Wholesale/Processing and Retailing/Exports.

The resulting effects of Scenarios I and II are illustrated in Figure 16 and the numeric estimates of both the base case and scenarios I and II are presented in Table 8.

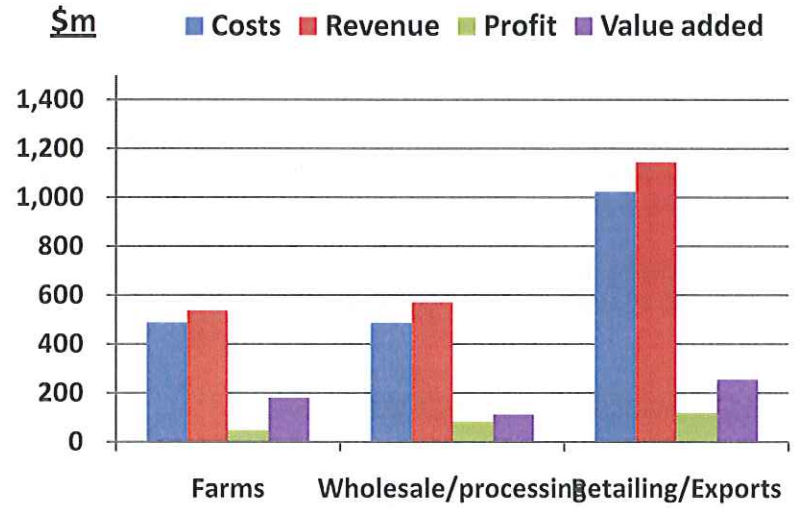
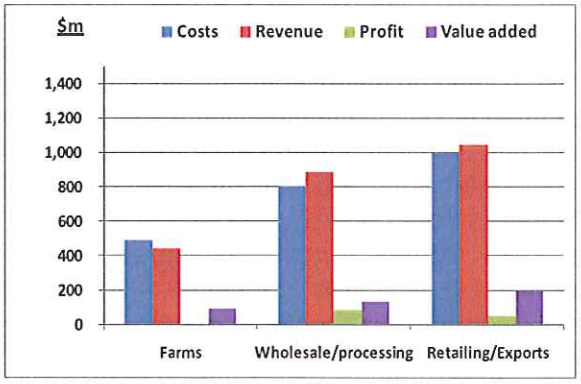


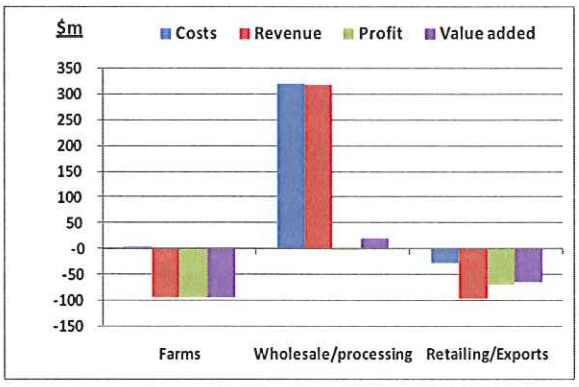
Figure 15: Base supply chain values in the WA beef cattle industry, 2009/10

Scenario I



Scenario II

Scenario I Gains and Losses



Scenario II Gains and Losses

Figure 16: Effect of scenarios I and II on the WA beef cattle industry supply chain

In scenario I farm profit declines due principally to farmers receiving a lower price for cattle they produce, plus they pay higher transport costs when selling a portion of their cattle to other regions. Profit in the retail/export sector also is reduced, principally due to loss of export income as the number of cattle exported is less in 2012. However, wholesale and processing profit and revenue increase due to greater throughput, in spite of their increased production costs due to the purchase and processing of more animals.

In Scenario II all three main parts of the beef cattle supply chain experience a decline in their profit and value adding capability. The retail/exporting sector suffers from a permanent loss of income from live cattle exports, plus lower retail prices affect revenues and profits. Increased transport costs and lower sale prices disadvantage farmers. In this scenario the the processors are hardly affected. They purchase more cattle at lesser unit prices and benefit from higher volumes of throughput.

Table 8: Supply chain values of the WA beef cattle industry (live export ban)

	Farms	Wholesale/ Processing	Retailing/ Exports
Base Value($m)			
Costs	488.5	487.2	1,025.1
Revenue	537.1	571.6	1,145.9
Profit	48.6	84.4	120.8
Value added	181.2	112.5	256.9
Effects of Simulation I($m)			
Costs	489.9	507.5	991.4
Revenue	498.4	593.5	1,102.3
Profit	9.9	86.0	110.9
Value added	142.5	115.4	247.2
Gains and losses from Simulation I($m)			
Costs	1.37	20.3	-33.7
Revenue	-38.7	21.92	-43.6
Profit	-38.7	1.63	-9.9
Value added	-38.7	2.90	-9.7
Effects of Simulation II($m)			
Costs	491.7	805.9	997.3
Revenue	442.7	890.1	1,048.5
Profit	-45.8	84.2	51.3
Value added	86.9	132.6	191.5
Gains and losses from Simulation II($m)			
Costs	3.1	318.7	-27.8
Revenue	-94.8	318.5	-97.4
Profit	-94.8	-0.2	-69.6
Value added	-94.8	20.1	-65.4

Ramifications of a Cessation in the Live Sheep Trade

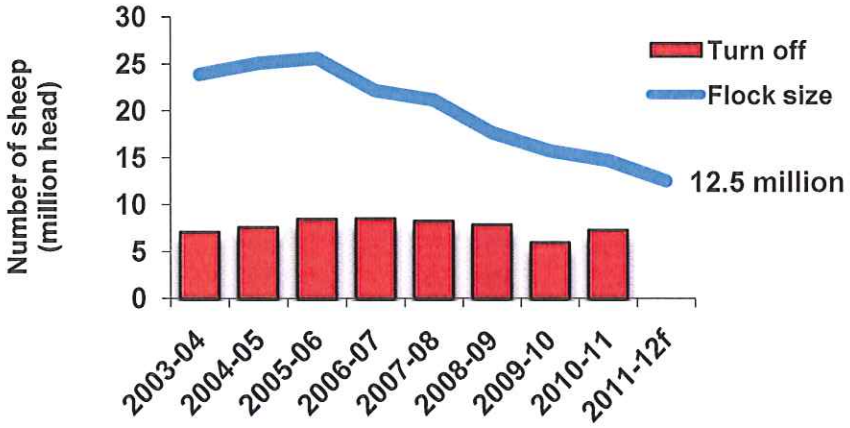
Ramifications for WA farmers

A disruption or termination of the trade would have an immediate impact by shifting the supply of animals normally destined for live export on to domestic markets, via abattoirs, or additional animals would be retained on farm for more years of wool production. The reduced competition for purchasing sheep would place downward pressure on the sheep prices, therefore reducing margins for producers whilst improving margins for processors, at least in the short and medium term.

Sheep numbers in WA would probably decline further in response to lower prices. However the response by industry participants depends on a number of factors; the alternative options for producers would have to yield more profits than the margins generated by sheep production. The regions in WA most vulnerable to the cessation of the live sheep trade are the Great Southern region (lower and upper) and the Midland region. These regions are medium to high rainfall areas, where the reliance on sheep income is higher because only 40% to 60% of farm area, on average, is cropped compared to the Central and South Eastern regions, where 70% or more of farm area is cropped.

In recent years there has already been a significant structural change within the sheep sector and sheep numbers have declined significantly largely due to the relative profitability of other enterprises and declining wool prices, all compounded by drought. Figure 17 shows how sheep numbers in WA have declined greatly in recent years and the forecast flock size for 2011/12 is only 12.5 million.

Figure 17: Changes in WA's sheep population



Associated with the reduction in the sheep population has been conversion of land to cropping. Further conversion is possible. However, land suitability constraints, when combined with the likelihood that additional cropping can increase the risk profile of a farm business (due to highly variable yields and prices, and capital requirements), suggest that a rapid switch of farm resources into extreme crop dominance is unlikely.

A better understanding of producer's decision-making in the event of a disruption or termination of the trade can be gained by examining the current profitability of the live sheep trade in comparison to other enterprises, cropping being the most likely.

Figure 18 compares current gross margins for low rainfall and medium/high rainfall enterprises with and without the live sheep trade. It shows a medium/high rainfall enterprise

gross margin for a wool enterprise is $317/ha and $302/ha for a prime lamb enterprise with current prices for shippers and wool. The gross margin without the live sheep trade, assuming prices for all classes of sheep decline, reduces to $237/ha and $214/ha respectively.

Most studies forecast that any termination of the live sheep export trade will reduce prices received by farmers for sheep, principally due to less market competition. By illustration if shipper wether prices were to fall by $30 from their current farm-gate price of around $90, and there was a corresponding proportional fall in other sheep prices, then gross margins would decrease by at least 25%. If the farmer maintained their investment in their sheep enterprise then their farm's operating surplus would reduce by 10%, which means there would be 10% less funds to meet interest payments, to invest in the farm business, to meet capital repayments and pay for personal living expenses.

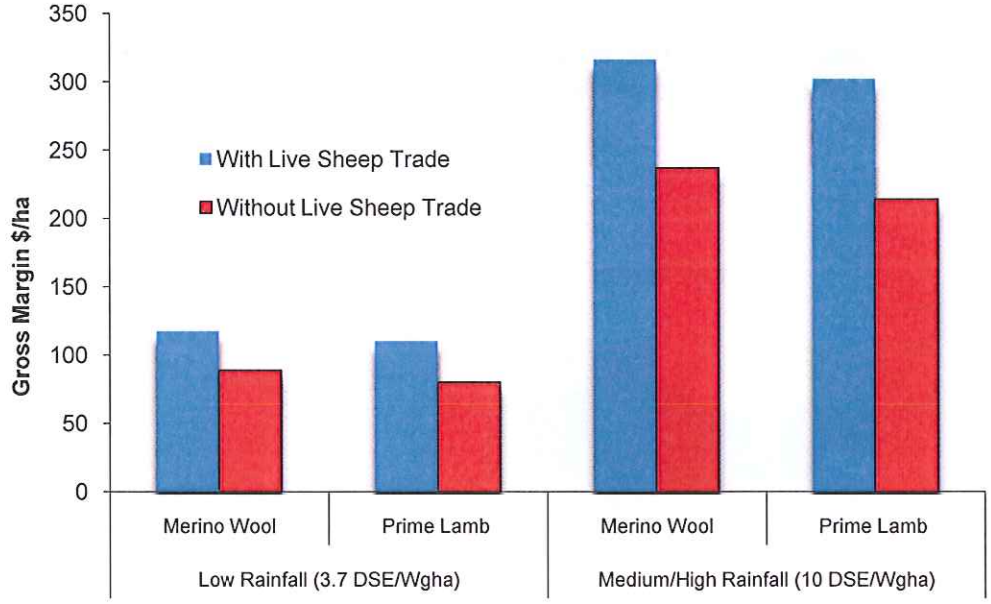


Figure 18: Gross margins for sheep enterprises in WA

In the low rainfall areas the gross margin for a wool enterprise is $118/ha and $114/ha for a prime lamb enterprise, with current prices for shippers and wool. The gross margin without the live sheep trade, assuming prices for all classes of sheep decline, reduces to $89/ha and $80/ha respectively.

In the corresponding rainfall areas the PlanFarm-Bankwest Benchmarks 2009, overhead costs are $53/ha for the medium/high rainfall and $39/ha for the low rainfall and which have to be paid from this margin. Therefore the operating surplus which is required to pay for interest, invest in the business, meet capital repayments and pay for personal living expenses is only $50/ha or $41/ha in the low rainfall areas and $264/ha and $249/ha, respectively in the medium and high rainfall areas.

For a producer the decision becomes whether alternative enterprises provide a better net margin. Table 9 lists gross margins for alternative crop enterprises with current prices and average yields.

Table 9: Gross margins ($/ha) for crops for 2010/11

Gross Margin ($/ha)	Wheat	Malt Barley	Feed Barley	Canola
Medium/High Rainfall	452	422	410	544
Low Rainfall	158	140	149	46

The cropping alternatives display higher gross margins than sheep enterprises either with or without the live sheep trade. The sheep gross margins in Table 6 include the recent increase in the wool price, currently at an all time high. The greater margins for cropping suggest that any suspension or cessation of the live sheep trade will reinforce the incentive many farmers already face in switching more resources into cropping and therefore any cessation of the live sheep export trade may be less damaging if the farmer has the skill and capital to switch into more cropping.

Further analysis reveals that the live sheep trade contributes 18% and 21% of the gross receipts for a prime lamb enterprise and wool enterprise respectively, as shown in Figure 19 for both rainfall areas.

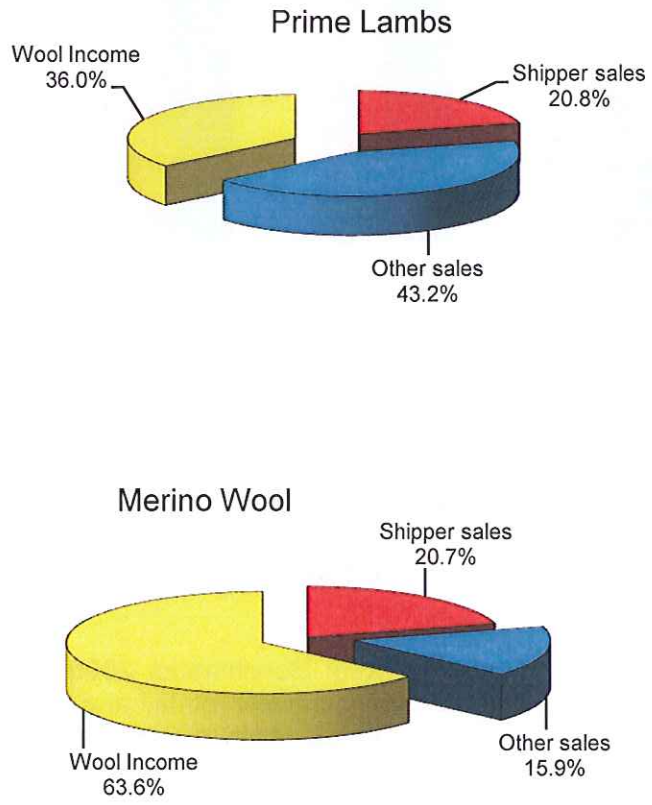


Figure 19: Income sources for the prime lamb and wool enterprises in WA (by %)

The price of wool has more impact on the gross margins because it contributes 63% to the gross receipts of wool dominated enterprise and 41% to a prime lamb enterprise using merino ewes. Currently the price of wool is at an historic high. Although it is difficult to

predict the movement in the wool price, it seems unlikely, given historical data, that the price of wool will be maintained indefinitely at such a high level. Therefore, if the live sheep trade is disrupted or terminated, the impact would be less than a decrease in the price of wool, but if both happened simultaneously then the sheep industry would be severely affected and numbers would continue to decline.

Studies by O'Connell et al. (2006) and Kopke et al. (2008) show that profit-maximising flock structures in WA's mixed enterprise farming systems in agricultural regions, up until recently when wool prices surged, very often were best structured toward lamb production rather than shipping wether production. These findings suggested that WA farmers would not be disadvantaged by a reduction in or cessation of the live sheep export trade. However, there are a number of sound reasons, apart from currently high wool prices, why broadacre farmers (particularly crop specialists) remain in wether production and so will be disadvantaged to any reduction in the export trade.

Firstly, seasonal variation can exacerbate management problems in ewe dominant flocks that focus on lamb production. Drought or poor spring conditions can greatly impact on the ease and cost of finishing lambs. By contrast, wethers can be maintained more easily and their window of opportunity for sale is much longer compared to lambs. Shipping wethers can be sold when they are between 18 months to 3 years of age. By contrast, a lamb's window of opportunity for sale as prime lamb is fairly narrow, limited to a few months. Further, prime lamb production often needs to be a specialist enterprise whereas for many broadacre farmers shipping wether sheep production is a sideline enterprise with cropping being their main management focus.

To generate the superior profits from lamb production often requires a level of managerial time and skill that crop dominant farmers may be unable or unprepared to give (Kingwell, 2011). Accordingly, these farmers prefer a sheep enterprise that is simple and flexible to run, yet which generates reasonable profits. Production of shipping wethers suits these farmers' needs, even though a flock structure more oriented to lamb production might generate more profit. The fact that Western Australian farmers have regularly annually supplied between 2.5 to 4.5 million shippers wethers over the past decade, and the fact that shipping wether production has consistently formed the main component of annual total turnoff of sheep, is evidence of farmers' strong preference for shipping wether production.

Another reason why some farmers prefer to produce shipping wethers is the price certainty they receive. By contrast, when lambs are delivered to processors there is some uncertainty as to whether all the lambs will meet the processors' specification requirements. The final price the farmer receives for her lambs is conditional on the level and frequency of price discounts applied to the farmer's draft of lambs following their processing. This price uncertainty reduces the attractiveness of lamb production to some farmers. Some farmers also distrust processors because they feel, from historical experience, that the processors have taken undue advantage of them when previous disruptions of the live sheep trade occurred.

Hence, although until recently, some farmers may have been able to generate additional profit by moving into lamb production, rather than continuing with shipping wether production, the reality is that many farmers are keen to persist with shipping wether production. If the wool price was to fall, triggering some farmers to alter their flock structures to engage in more lamb production at the expense of shipping wether production, then there would be a dampening of lamb prices and some additional support for shipping wether prices (assumed the export trade is permissible) which in combination would lessen the attractiveness of the change in flock structure.

The forecasts for reasonable market prospects for lamb and mutton and the current high price for wool, and the current under-utilisation of processing capacity in WA, suggest that a reduction in live sheep trade may not in the short and medium term markedly lessen the profitability of many farm businesses in WA. Farm businesses currently engaged in shipping wether production rather than lamb production could switch into wool or lamb production (even allowing for a lowering of lamb prices) and still generate similar profit. How this switch occurs and the degree to which it would occur are farm-specific issues. For example, one option would be for enhanced synergies between farm businesses where some farms could focus on breeding lambs but not finishing them. The finishing of lambs could become the business focus for other farms in higher rainfall, longer growing season regions.

If permanent or gradual cessation in the live sheep trade occurs then businesses already focused on lamb production, however, would face lower profits due to a likely reduction in lamb prices, due in turn to a switch of sheep industry resources into lamb production and reduced demand for ram lambs and other older sheep from live sheep exporters. Also where farm businesses were greatly tied to the live sheep trade then their costs of adjustment could be sufficiently high to erode profits during any transition period.

Farms with flock structures centred on production of shipping wethers could adjust toward more lamb production or focus on wool and mutton production or shift resources further into cropping enterprises. Farm modeling results show that a farm can adjust its enterprise mix away from sheep production (if the relative profitability of sheep production declines) often with little overall decline in farm profit (Kopke *et al.* 2003), provided the transition does not involve large capital purchases such as additional cropping gear or unforeseen large adjustment problems.

Farmers often alter their enterprise mix and management practices in response to market, seasonal and technology changes. Hence, if farmers do need to alter their farm management in response to a reduction in or cessation of the live sheep trade they will not be undertaking novel, risky activity. Obviously, the smaller and more gradual any reduction in live sheep trade, the easier it is for a farm business to accommodate through farm planning and transition management.

Overall, the farms currently most vulnerable to a cessation or gradual erosion of the live sheep export trade will be sheep dominant farms with little capacity or appetite to switch away from sheep production into more profitable cropping enterprises. Also farms that face high transition costs will be disadvantaged.

Ramifications for WA sheepmeat processors

While live exports provide substantial benefits to exporters and their suppliers it does reduce incomes to processors by increasing livestock prices and reducing throughput levels (CIE, 2011). The CIE study found that the GVP for sheep for processors increases by $38 million when live sheep export is terminated.

In WA, the two main abattoirs that process sheepmeat are Fletchers International at Narrikup and WAMMCO at Katanning. They have significant export markets, good infrastructure and modern facilities. WAMMCO recently won awards for its robotic boning and packing facilities.

Based on 2009 data there could be an additional 2.2 million sheep to process in WA, if the live sheep trade were to be terminated now. Currently most processing plants are under-utilised due to the shortage of sheep and there is additional capacity in the system to process at least 1,830,000 more sheep (see Table 10). WAMMCO could possibly increase

their capacity with a second shift but chilling facilities for the additional carcases might be a constraint for other facilities.

Table 10: Estimated capacity of WA abattoirs to kill sheep[4]

	Capacity Units/wk	Current rate of kill	Estimated current numbers	Estimated spare capacity
Fletchers (Narikup)	45,000	50%	22,500	22,500
WAMMCO (Katanning)	20,000	71%	14,200	5,800
V&V Walsh (Bunbury)	17,500	70%	12,250	5,250
Shark Lake (Esperance)	6,000	50%	3,000	3,000
Goodchild (Australind)	5,000	70%	3,500	1,500
Hillside (Narogin)	Unknown			
			55,450	**38,050**
	Number of animals (ABS)		**3,510,00**	
	Difference between (ABS)		**848,400**	

An understanding of the costs and margins involved for processors can be estimated using information DAFWA economists collected when visiting Fletchers International in 2010. The cost of production is estimated to be $40/head at a throughput of 25,000 head per week. At full capacity this cost of production reduces to $22/hd per week. If the gross income is $100/hd per animal, which is probably relatively conservative considering additional income from by products, the margin increases from $1.5 million to $3.5 million with the additional throughput.

The implications for processors if the trade were to cease is that they would become more profitable with more sheep to slaughter, assuming there is a market for the product in the frozen or chilled product. However, in the medium to long term the reduced profitability of sheep production in the farm sector would decrease numbers of sheep further and processors could be in a worse position than they currently find themselves.

Economy-wide impacts

The economy-wide CGE model for WA, called WAM, was applied to investigate the impact of a reduction in live sheep exports. The model accounts for interdependencies among agricultural and other industries in WA. The WAM database draws on an input-output table for WA. The input-output table has 108 industries and as many commodities.

Table 11 shows the macroeconomic effects of a reduction in the export of live sheep. As might be expected, the economy-wide impacts are relatively minor, causing small percentage changes in the state's gross state product (GSP), employment, export values and the CPI. Hence, the main impacts of any reduction or cessation in the export of live sheep are likely to be felt most strongly within the sheep supply chain as depicted in Figures

[4] These figures are based on information provided by the abattoirs

10 and 16 rather than across a wider group of sectors or more generally throughout the economy.

Sheep that previously would have been exported live would now flow through the meat processing sector. The ramifications would be lower domestic prices for sheepmeat and consequently a slight lessening of the CPI and a slight lessening of export revenues as more sheep meat would be consumed within Australia. As also found by CIE (2011) the sheep meat processing sector would be a principal beneficiary of any cessation in live sheep exports. The domestic meat processing sector benefits from the expansion of its activity, yet more supply of sheep meat to the domestic market causes the sheep meat price to decline.

These findings are consistent with those of CIE (2011) who found that on average across Australia, lamb and mutton prices would decline by 12 and 15 percent respectively if a cessation of live exports occurred.

Table 11: Macroeconomic impacts of 10, 20 and 30 percent reductions in live sheep exports from WA (percent change)

	Simulation: Percentage decline in volume of live sheep exports		
Macro-economic variables	10%↓	20%↓	30%↓
GSP at market price	-0.03	-0.01	0.02
Total consumption (real)	-0.06	-0.07	0.08
Consumers Price Index (CPI)	-0.03	-0.03	-0.04
Aggregate employment	-0.06	-0.12	-0.18
Total imports	0.00	0.01	0.03
Total exports	-0.07	-0.18	-0.29

However, the economy-wide impacts in Table 8 mask important regional economy impacts. Regions such as the northern beef industry of WA, that are strongly reliant on the live export trade and where few similarly profitable alternative enterprises exist, will experience large regional economic costs following cessation of the live trade. Hence, these regions would face large adjustment costs and greatly diminished profits from pastoral beef production.

Any reduction or cessation of the live trade in cattle or sheep is liable to impose significant adjustment costs on particular farm and pastoral businesses in particular regions. The recent experience with the trade suspension involving live cattle sent to Indonesia revealed the sorts of economic disadvantage that trade cessation can unleash. It revealed the magnitude of costs and adjustment issues that would accompany trade reductions and cessations of the live trade.

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Appendix A

Figure A.1. Live sheep exports from Australia

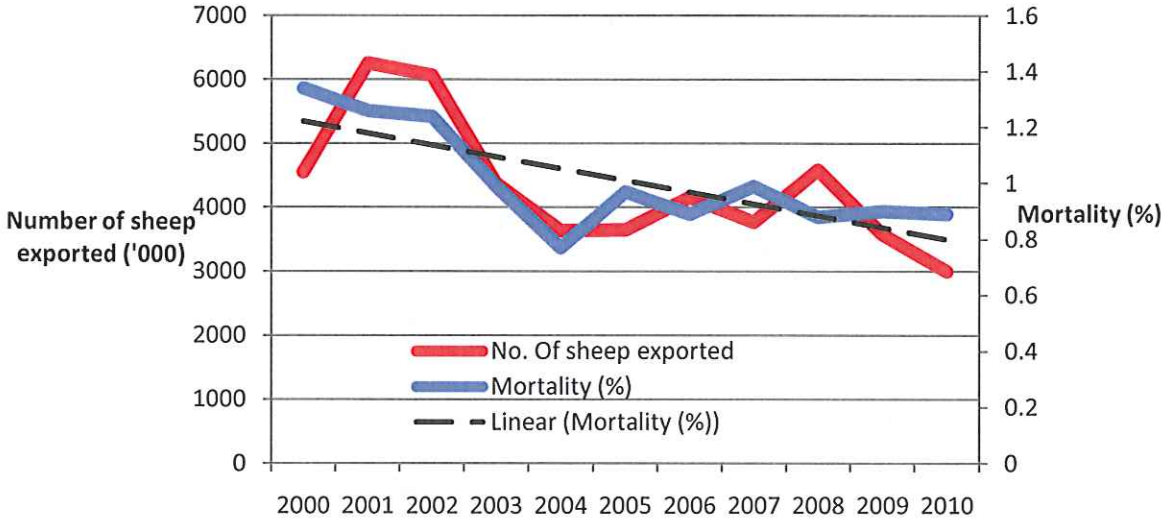
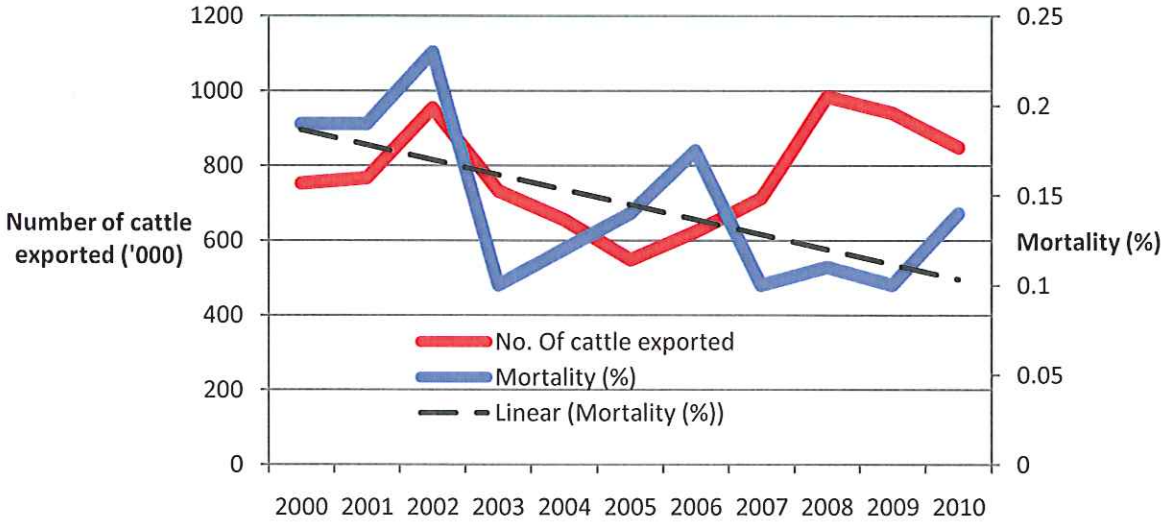


Figure A.2. Live cattle exports from Australia



Department of Agriculture and Food

GOVERNMENT OF WESTERN AUSTRALIA

Impact of suspension of live cattle exports to Indonesia Survey of pastoral businesses

Kimbal Curtis, Brad McCormick and Sandra Van Vreeswyk
Department of Agriculture and Food, Western Australia

Summary

- A total of 37 pastoralists completed a brief survey from the Department of Agriculture and Food on the impact of the suspension of live cattle exports to Indonesia on their business. The survey was conducted in mid June and provides a snapshot of their reaction at that stage.
- Short term, the main constraints on pastoral businesses are cash flow and the additional feed and water required for retained cattle.
- Restricted cash flow will result in staff being laid off, cancellation of all non-essential spending and in some cases difficulty making repayments.
- Future profitability, indeed viability, is a concern to many producers because of its impact on lease values, equity and borrowing ability. Uptake of less lucrative marketing options is being considered as a way to keep the business functioning.
- Transition to caretaker mode or the need to seek off-station employment may increase the risk of overgrazing and animal welfare issues. Deferral of mustering until markets are reopened may increase these risks.
- This information is important in outlining the impact of the suspension on pastoral and regional businesses and to assist the Department in tailoring its activities.

Background

At public meetings in Broome (17 June) and Geraldton (24 June) to discuss the suspension of live exports to Indonesia, a brief survey was distributed to gauge the level of impact on businesses and issues concerning pastoral businesses. The questionnaire was also distributed to northern pastoral businesses by email.

A copy of the questionnaire is provided as an appendix to this report. Completed questionnaires were collected at the public meetings, by email, fax and post.

The results presented reflect the situation as it was at the time of conduct of the survey, mid June. As the incident has evolved, it is expected that producers will also have moved forward in planning and action.

While the survey was distributed by email to all pastoralists, the sample was built through an 'opt-in' selection process and so may not be representative of the population.

Results

- 47 responses received – 37 from pastoralists, two transport operators, two hay/grain suppliers, two sheep producers and three other (not specified).

A total of 47 responses were received. Not all respondents completed the entire questionnaire, but their qualitative input has been included. A majority (37) of responses were received from pastoralists, but there were also responses from two transport businesses that service the live cattle trade, two hay and/or grain producers supplying feed for the export trade, two sheep producers, and a beef producer planning to change to cropping. A further three responses were not able to be categorised.

Impact of suspension

- 86 per cent of pastoralists have or are incurring additional costs.

Of the 37 pastoralist responses, 86 per cent (32) indicated that the suspension had impacted on their business. Additional costs had been incurred by 59 per cent (22) of the participating producers. Costs identified include: feeding sale cattle held in yards; cattle missing weight restriction; mustering costs and delays, staff on hand; freight costs, handling sale cattle; and loss of [export] sales, lower prices.

- 65 per cent of pastoralists have cattle ready for Indonesia.

There were 24 pastoralists (65 per cent) that had an average of 865 cattle ready for the Indonesian market with 15 indicating the cattle were already mustered. The number on individual stations ranged from 50 to 2000 head.

- 68 per cent of pastoralists are actively seeking alternate markets.

Options being considered for marketing cattle displaced from the Indonesian market include Middle East, "feedlots", "boats to other countries", "Malaysia, southern WA", Egypt, Turkey, "eastern States", South Australia, North Africa. Also included, and hinting at concern, "anywhere", "don't know" and "none for this type of cattle".

- A suspension past the end of July would lead to nine out of 25 pastoralists having 50 per cent or fewer of their cattle still within the 350 kg limit on live weight.

Of the 25 pastoralists that have cattle ready for Indonesia, seven believe that all their cattle will still meet the weight limit (under 350 kg) if trade is delayed until the end of July. Of the other 18 pastoralists, nine indicated that 50 per cent or less of their cattle will still meet the specification.

- 54 per cent of the pastoralists indicated retaining the export cattle would lead to subsequent overgrazing.

If the export cattle have to be retained due to continued suspension of exports to Indonesia, 54 per cent of the pastoralists indicated that this would lead to subsequent overgrazing.

- Nearly three quarters of the pastoralists responding have had to alter their management.

As a consequence of the suspension, 73 per cent of pastoralists have had to make other management decisions. These include reducing staff (51 per cent of pastoralists), changing mustering plans (73 per cent) and deferring maintenance (70 per cent). Other impacts include deferral of investment plans, borrowings, maintenance and capital improvements, and cancellation of bull purchases.

Other constraints impacting as a result of the suspension

- Short term, the main constraints are cash flow, and the additional feed and water requirements for retained cattle.

- Future profitability, indeed viability, is a constraint because of its impact on lease values, equity and borrowing ability.

The key constraints mentioned are "finance, feed, water, transport".

Finance was mentioned by 24 of the 37 pastoralists, more than any other constraint. The lack of cattle sales impacts directly on cash flow and hence is of immediate concern. Longer term, the impact on the profitability of these pastoral businesses may affect their value, equity and ability to borrow. This was clearly a concern for several respondents.

Feed and water as constraints are interpreted as meaning the additional amounts required to carry cattle awaiting export (or sales elsewhere) or if they are retained.

Transport is interpreted as meaning the high cost of moving (and possibly lack of capacity to move) cattle to other markets including southern feedlots and processors or to interstate markets. The state of the Tanami road is singled out as a limitation to accessing southern markets e.g. South Australia.

Expected changes to management if the suspension continues

- Restricted cash flow will result in staff being laid off, cancellation of all non-essential spending and in some cases difficulty making repayments.

- Transition to caretaker mode or need to seek off station employment may increase the risk of over grazing and animal welfare issues. Deferral of mustering until markets are reopened may amplify these risks.

- Uptake of less lucrative marketing options is being considered as a way to keep the business functioning.

Financial limitations drive most of the expected changes. The impact of a continued suspension of live exports to Indonesia on cash flow will result in staff being laid off, cancellation of capital works and maintenance, and reduced spending and difficulty meeting loan repayments. Some businesses will need to re-finance with a worst case of takeover by their bankers.

Some pastoralists expect they will have to seek off station work to gain income, move into a caretaker mode or walk off the lease altogether. These options will not stimulate cash flow from the business, and may lead to future overgrazing and animal welfare problems.

While the Indonesian export market remains suspended, some pastoralists will defer mustering until the trade resumes or other markets are indentified. This will impact on cash flow and may mean mustering in hotter months.

Faced with an extended suspension, some pastoralists suggest they will be forced to sell into less lucrative markets. Other options that were noted include: reducing cow numbers and fattening steers; selling steers into Queensland and carry heifers forward to sell to southern feedlots; and sell cattle at whatever price and close up.

The common thread in all these options is that cash flow is limiting what they can do, and in some instances, alternative management options will not deliver returns in the near term.

Appendix 1. Questionnaire

Business Name and contact details: (optional) . . . . . .

1	Has the suspension of live cattle exports to Indonesia impacted on your business?	Yes / No
2	Have you incurred additional costs as a consequence of the suspension? How much? . . . . . . What for?	Yes / No
3	Do you have cattle ready to go to Indonesia? How many? . . . . . Are they already mustered?	Yes / No Yes / No
4	Are you actively seeking alternate markets or disposals? If yes, where?	Yes / No
5	If the suspension remains until the end of July, what percentage of your cattle will still meet specification e.g. under 350 kg?	
6	If the suspension remains until the end of July, will the retention of these cattle cause subsequent overgrazing?	Yes / No
7	Have you had to make other management decisions as a result of the suspension? Reduced staff? Changed mustering plans? Deferred maintenance of plant and infrastructure? Any other?	Yes / No Yes / No Yes / No Yes / No
8	Are there any other constraints that are affecting your business as a result of the suspension e.g. transport, feed, water, finance? What are they?	Yes / No
9	If the suspension remains beyond the end of July, what changes to your usual management schedule will you have to make?	

IMPACT ON DISPOSAL OF CATTLE

Estimation of the number of cattle that might be displaced from the Indonesian trade in 2011.

Kimbal Curtis, Livestock Industries Development
Department of Agriculture and Food WA
21-June-2011

Summary

- Indonesian authorities have imposed a quota on live cattle imports from Australia of 500 000 per year.
- Up to 7 June 2011, when exports were suspended, an estimated 210 000 feeder cattle were exported to Indonesia for the 2011 calendar year to date. Given the 500 000 quota, this leaves potential for 290 000 cattle to be exported during the remaining months of the 2011 (Table 2).
- Average monthly exports to Indonesia over the last five years (Table 3) are used to distribute potential exports across the remaining months of the 2011 (Table 4).
- If the export suspension is lifted, it is likely to only apply to specific supply chains (feedlot – abattoir) that meet mandated requirements. Estimates of the volume of trade that might be approved range from below 15 per cent (only the highest standard abattoirs) through to 45 per cent (facilities upgraded to meet standards) of previous trade.
- The number of cattle that would be displaced from the Indonesian market has been estimated for a range of scenarios covering different levels of reduction in exports (15 to 45 per cent of previous trade) and different months of re-commencement of the trade (July through December) (Table 5).
- If the trade were to recommence in July at 45 per cent of previous levels (a "best case" scenario), it is estimated that 160 000 cattle would be displaced from the Indonesian markets. At 15 per cent, the number of displaced cattle rises to 247 000. A delay in the start of exports increases the number of displaced cattle
- One important limiting factor to export numbers is likely to be the "feedlot – abattoir" supply chain's capacity to process cattle. Due to capacity constraints, it is not expected that there can be a large catch up in exports during the last half of 2011.
- As a result of the suspension of exports, entry of new animals into the supply chain has halted. If exports re-commence, there will still be a lag before slaughter-ready cattle commence to be ready from the feedlots.
- Currently there is a 350 kilogram liveweight limit specified for Australian feeder cattle exports to Indonesia. If the suspension is lifted, the gap in supply occasioned by the suspension could be mitigated if heavier cattle could be accepted for import during the transition phase. These cattle would still enter the feedlots, but would reach slaughter weight in a shorter time.
- Any alterations to cattle specifications would need to be accepted by the Indonesian authorities.

- An improved estimate of the number of cattle displaced from the Indonesian market could be made when the approved supply chains are identified and their capacity can be quantified.

- Suspension of this trade will result in the need to find alternate markets for some of these cattle. At this stage, discussions with Livecorp and one major live cattle exporter indicate few opportunities to dispose of Indonesian specification northern export cattle in other markets. Malaysia and the Philippines are possible limited markets, though a lower price can be expected. The current high value of the Australian dollar may also be a limiting factor in expanding current markets or creating new ones.

- Options for diverting cattle originally intended for export to Indonesia to domestic slaughter require further analysis at this stage.

The suspension of live exports to Indonesia creates the need to find alternate markets for these cattle. This note attempts to quantify the number of cattle that will be displaced from the export trade for a range of scenarios.

Background data

Cattle exports to Indonesia by the state of origin of the cattle are presented in Table 1 together with an annual average. The five year average, 564 000, is used as a first estimate of what might have been exported in 2011.

Due to a quota of 500 000 cattle imposed by Indonesian authorities, the total per state is adjusted on pro-rata basis.

Table 1. Slaughter & feeder cattle exports to Indonesia ('000 head) by state of origin

Year	*NT*	*QLD*	*WA*	*Other*	*Australia*
2006	197	14	172	2	385
2007	286	55	174	2	517
2008	363	96	186	0	645
2009	309	184	263	0	756
2010	262	52	170	33	517
5-year average	**283**	**80**	**193**	**7**	**564**
Quota limited[1]	251	71	171	6	500

[1] 5-year average distributions of exports across states are used to estimate pro-rata exports by state under the assumption of a 500 000 head national quota.

Table 2 shows the calculation of the number of cattle that might have been expected to be exported between July and December 2011. From the estimated total for 2011, with a 500 000 quota, actual known exports to date (January-June)[1] are subtracted to give an estimate of possible exports for the rest of 2011. This indicates that a potential 290 000 cattle remain to be exported.

Table 2. 2011 monthly slaughter & feeder cattle exports to Indonesia ('000 head), by state of origin, quota-restricted estimates

	NT	QLD	WA	NSW+Vic	Australia
Estimated exports for 2011 full year, no suspension	283	80	193	7	564
Estimated exports 2011, 500k quota limit	251	71	171	6	500
Actual exports (January - June 2011)[1]	118	30	56	5	210
Expected exports, no suspension, July – December[2]	**133**	**41**	**115**	**2**	**290**

[1] Jan-April is ABS data. May & June are preliminary estimates using AQIS data
[2] July-December exports estimated based on historical distributions, and taking into account the annual 500 000 head quota limit.

The five-year average (2006-2010) month-to-month distributions of cattle exports are shown in Table 3. These values are used to distribute the rest-of-year exports across the remaining months of 2011.

Table 3. Monthly distribution (per cent) of annual slaughter & feeder cattle exports to Indonesia, by state, five year averages (2006-2010)

[1] This includes a preliminary estimate of exports for May and through to 10th June.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
NT	6.5	5.3	8.8	7.1	7.3	10.4	11.2	8.9	10.8	8.8	7.0	7.9
QLD	1.8	4.8	6.2	10.7	10.9	13.5	6.5	6.5	10.6	5.7	12.4	10.5
WA	8.7	6.3	5.9	6.3	14.1	8.6	7.6	10.5	8.8	7.9	8.1	7.2
NSW+Vic	0.0	23.5	9.0	20.1	0.0	16.5	10.6	5.6	14.6	0.0	0.0	0.0
Australia	6.5	5.8	7.5	7.5	10.0	10.3	9.3	9.1	10.1	8.0	8.0	7.9

The expected exports for the rest of 2011 (with no suspension) by month are estimated in Table 4 by allocating the total exports (last line of Table 2) in the same average proportion per month as reported for the last 5 years (Table 3).

Thus from Table 4, it is estimated that 52 000 cattle would be exported in July. Were the suspension to remain in force until the end of the November (six months), this would leave 246 000 cattle to be disposed of in other markets. Through to the end of December, the total is 290 000.

Table 4. Expected number of cattle ('000 head) that would be exported if the suspension were lifted, by month and state of origin

Month	NT	QLD	WA	NSW+Vic	Australia	Cumulative
Jul	27	5	17	1	52	52
Aug	22	5	24	0	50	102
Sep	26	8	20	1	56	158
Oct	22	4	18	0	44	202
Nov	17	10	19	0	44	246
Dec	19	8	17	0	44	290

Model estimates

If the export suspension was lifted to allow cattle to flow through accredited feedlots and abattoirs, then the exports might be reduced to between 15 and 45 per cent of previous levels.

Table 5 estimates the number of cattle that would need to be disposed through alternate channels for different export re-commencement dates (July through December) and different levels (15 – 45 per cent) of expected exports. This includes trade lost through June since the introduction of the suspension.

If the trade were to re-commence from July, but at a level equivalent to 15 per cent of expected exports (only the highest standard feedlot – abattoir supply chains approved), then 247 000 cattle would be displaced from the Indonesian market in 2011. If trade were to commence from July at 45 per cent, then there would still be 160 000 cattle displaced from the 2011 total.

Table 5. Number of cattle ('000 head) that will be displaced from the Indonesian export trade in 2011 for different re-commencement months and different levels of trade re-commencement relative to expected levels

		Month exports re-commence					
		Jul	Aug	Sep	Oct	Nov	Dec
Per cent	15%	247	255	262	271	277	284
of	25%	218	231	243	257	268	279
expected	35%	189	207	224	244	259	275
trade	45%	160	183	206	231	251	271

A further complication arises in that a partial recommencement of the trade is likely to favour those states from which cattle are sourced for the approved feedlot – abattoir supply chains. This may favour the Northern Territory due to the availability of corporately owned stock.

Estimates of the number of cattle displaced from the trade might be improved when it is known which feedlot – abattoir supply chains are approved for processing of Australian cattle. Once these

are identified, their capacity and throughput could be used to refine the estimates presented in Table 5.

Out of specification cattle

As a result of the suspension of exports, entry of new animals into the supply chain has halted. From the re-start of exports, there will still be a lag before slaughter ready cattle commence to be ready from the feedlots. If the suspension is lifted, the missing cohort might be replaced if heavier cattle could be accepted for import during the transition phase. These cattle would still enter the feedlots, but would reach slaughter weight in a shorter time.

This alteration to specification would need to be accepted by the Indonesian authorities, but it could contribute to more rapidly restoring some beef supplies, and assist in meeting the demands of Ramadan.

Opportunities for displaced cattle

Alternate live markets

Discussions with Livecorp and one major live cattle exporter indicate few opportunities to dispose of Indonesian specification northern export cattle in other markets. Malaysia and the Philippines are possible limited markets, though a lower price can be expected. The strong Australian dollar will mean that the expansion of supply into existing and new Middle Eastern and South East Asian markets offers very limited opportunities.

There may also be animal heath issues e.g. Blue Tongue to address in other markets (some states of the Middle East).

Finish for slaughter in Australia

Within Western Australia, there is limited prospect of finishing northern cattle. The feedlots are in southern WA and don't usually handle northern cattle and if they do the prices are discounted as it costs them more to feed pastoral cattle than southern bred cattle. The high cost of freight from the Kimberley is another consideration. Some feed lots may consider commission finishing, but expect that if the pastoralist did the sums, then they would decide it is not economically viable

Retain on station

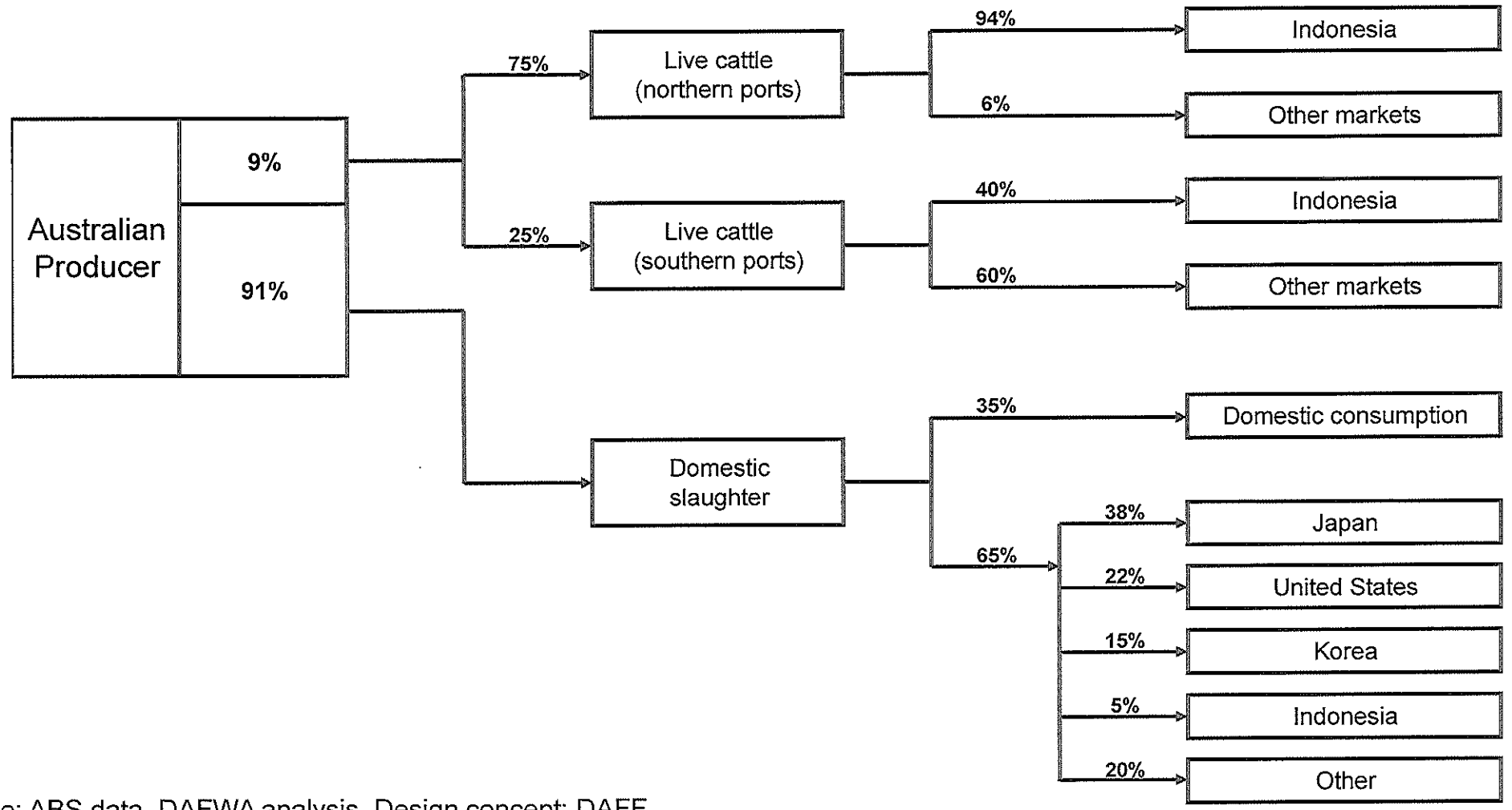
In some areas, there may be an opportunity to take advantage of abundant feed following good seasons to finish the cattle ready for other markets. The economics of this need to be considered against alternatives, and markets for those finished cattle identified.

There is also concern that if properties are already stocked at levels close to carrying capacity and have to retain cattle that would normally be sold, there will be impacts on range condition and possible animal welfare issues.

Department of Agriculture and Food

GOVERNMENT OF WESTERN AUSTRALIA

Australian cattle industry – 2009-10



Source: ABS data, DAFWA analysis. Design concept: DAFF.

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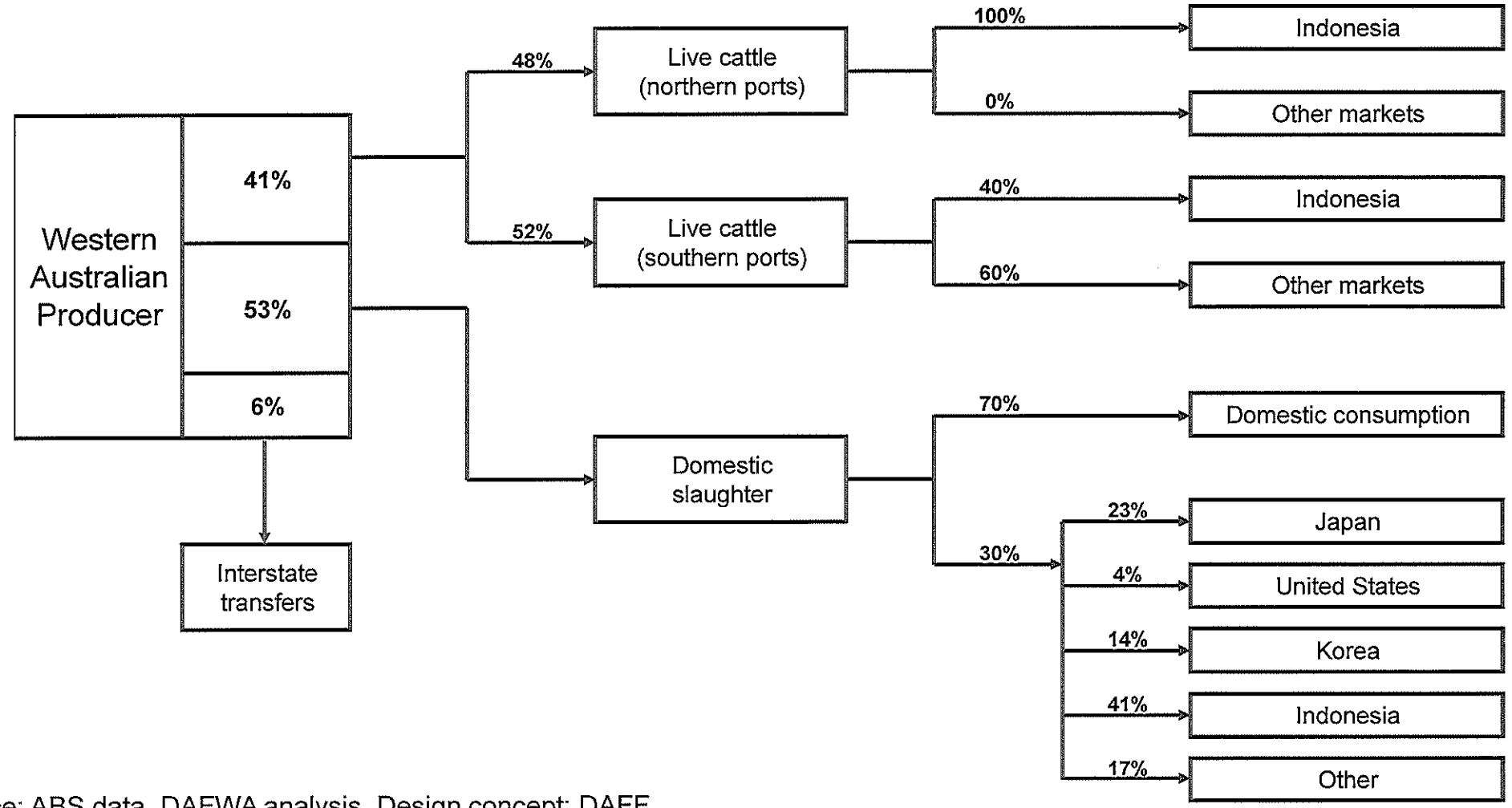
GOVERNMENT OF WESTERN AUSTRALIA

WA cattle industry – 2009-10



Source: ABS data, DAFWA analysis. Design concept: DAFF.