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ESCAS and LGAP in the Australian Live Cattle Export Trade: A Value Chain Perspective

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Abstract

The cattle industry is one of the most important agricultural sectors in Australia and the live cattle export trade is one of the largest sources of export revenue. However, in recent years it has attracted much attention and criticism from the government, the public and animal welfare groups. In this paper the live cattle export value chain and the drivers of performance are critically evaluated with a focus on the recently introduced ESCAS and LGAP export regulations. The main objective is to evaluate the effectiveness of these initiatives and their respective impacts on this value chain's ability to maximise surplus. The introduction of ESCAS has improved animal welfare standards but imposed a major cost and regulatory burden on the industry. Consequently, LGAP was introduced to improve the regulatory framework through simplification. Whilst LGAP has removed some of the problems, it requires even higher animal welfare standards to be met. In order to safeguard the competitiveness of the industry, it is suggested that through negotiating a global umbrella treaty, a single framework is used by all exporting countries; and the government conducts a value chain analysis program to eliminate waste and reduce regulatory costs.

Key words: ESCAS, LGAP, Live Cattle Export, Value Chain

Background

The Australian live cattle export value chain is as one of the largest exporters of beef (MarEx, 2017). Recent animal welfare concerns after the airing of the ABC Four Corners report "A Bloody Business" have led to public outrage due to the mishandling of Australian exported cattle in Indonesian abattoirs (ABC, 2011). As a result, the live cattle export trade was halted and the Exporter Supply Chain Assurance System (ESCAS) was introduced to regulate the value chain and ensure animal welfare standards are followed. More recently, the government has introduced a new measure called the Livestock Global Assurance Program (LGAP) to ensure animal welfare standards are met but major cost burdens are removed from the value chain (ABC, 2017; ALEC, 2016b).

This paper takes a close look at the Australian live cattle export industry in light of the ESCAS and LGAP regulations. It aims to assess whether the intervention was justified and how the value chain can generate a larger surplus in the future. The report will start by highlighting the importance of the industry before covering the value chain map, strategy and performance drivers. It will also discuss

how well the chain is achieving its objectives in light of the obstacles impacting performance. Finally, it will discuss the case for intervention and make improvement recommendations.

The Importance of the Live Cattle Export Value Chain

The beef cattle industry is one of the most important agricultural industries in Australia. Australian cattle farmers run around 28 million cattle across more than 200 million hectares (PWC, 2011). Based on these numbers Australia is relatively small in comparison to other major producing countries, only owning 3 per cent of the world's cattle inventory and producing 4 per cent of the world's beef supply (MLA, 2016). However, due to production far exceeding domestic consumption, the majority of the beef produced is exported to 84 countries making Australia an important player in the world. It ranks as the second largest beef exporter after Brazil with an export value of \$7.5 billion. With increasing global demand for proteins such as beef, the future of the industry is predicted to be bright (MarEx, 2017; PWC, 2011). In addition to the financial contribution of the sector to the economy from large export volumes, livestock production employs directly and indirectly up to 10,000 people (Department of Agriculture, 2015). The future sustainability of the livestock export industry as a major global exporter is crucial to the continuity of the sector and its contribution to the economy (MLA, 2016).

The live cattle export industry operates in a liberalised environment in which the industry is faced with unlimited and unrestricted competition in international markets against countries that mostly provide assistance in the form of subsidies to their producers. In response, the industry has reached a high degree of efficiency in order to save costs and stay competitive (PWC, 2011). Nonetheless, the introduction of ESCAS was seen as major cost and process burden by the industry (Department of Agriculture, 2015). Table 1 provides some estimates of the high costs associated with ESCAS compliance per animal. The sector needs to effectively use performance drivers aligned with its value chain strategy to maintain its leading global export position whilst creating maximum profits for its stakeholders. Therefore, the study of this value chain in light of the impacts of ESCAS and LGAP on the sustainability and profitability of the chain are crucial to ensure past and present issues are scrutinised and a roadmap for the future is proposed.

Table 1: Cost per Animal for Compliance with ESCAS (Department of Agriculture, 2015)

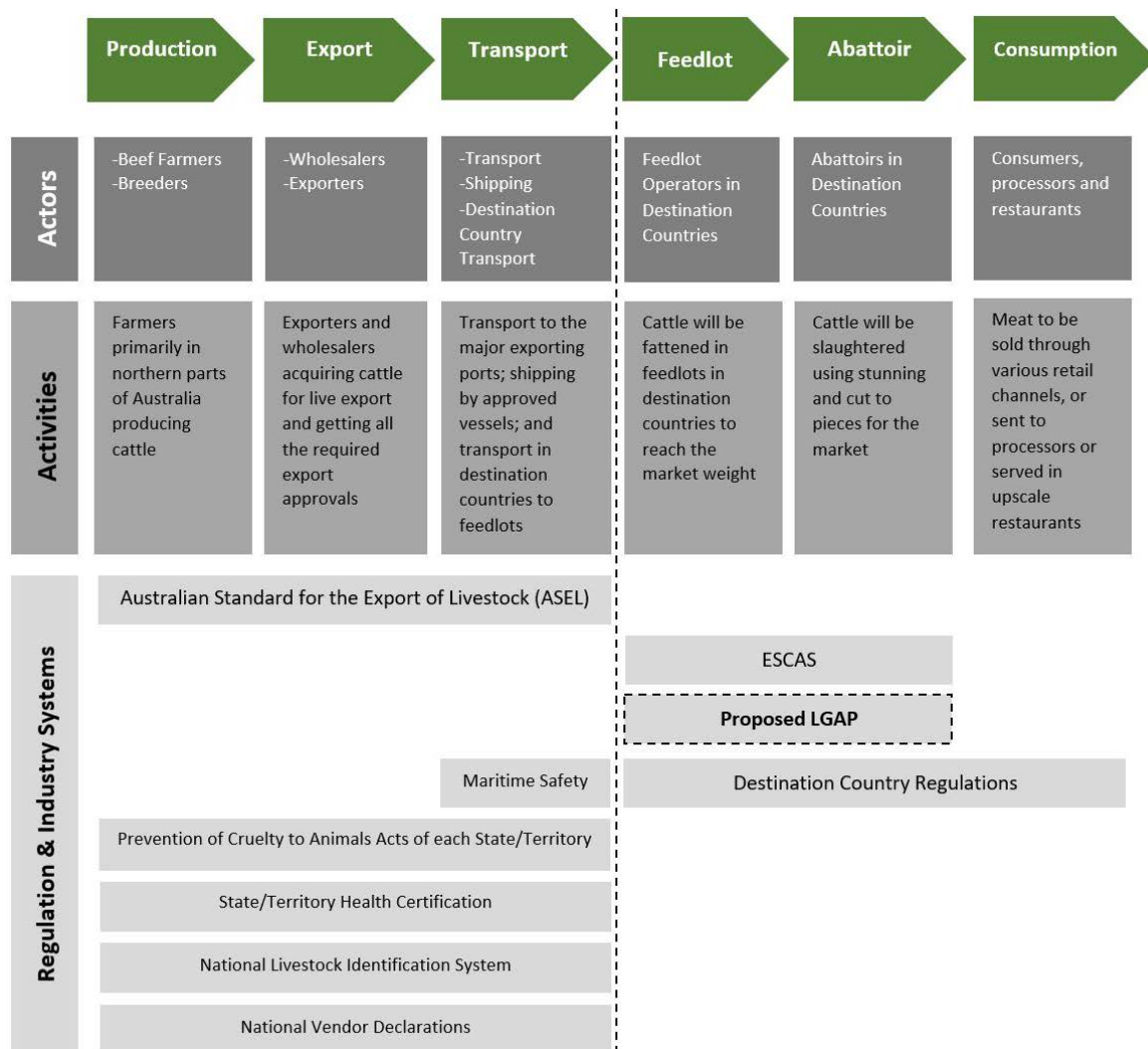
Species	Transport Mode	High	Low	Mode
Cattle	Sea	\$45.00	\$8.00	\$9.00
Sheep	Sea	\$0.77	\$0.77	\$0.77
Sheep	Air	\$14.00	\$10.00	\$13.00

Value Chain Map

The value chain map illustrated in Figure 1 highlights the main stakeholders and activities involved in the trade. Additionally, all the Australian and destination country regulations and policies that apply to each stage have been shown in the map.

Value Chain Strategy

The value chain strategy has to be aligned with the competitive strategy of the industry to facilitate the flow of cattle to international markets whilst keeping costs at a minimum (Chopra and Meindl, 2016) but also meeting obligations to all stakeholders.

Figure 1: Live Cattle Export Value Chain (ALEC, 2016a; Deards et al., 2014; MLA, 2017a)

On the one hand, the Australian government needs to ensure that the live cattle export value chain is competitive as it supports major regional areas and employs thousands of people. In addition, 65 per cent of the value of live export goes directly to regional farmers. In order for the value chain to achieve its strategic goals, any regulation needs to support the value chain's ability to best meet the needs of its target customers i.e. consumers of beef in foreign countries such as Indonesia and the Middle East (Chopra and Meindl, 2016; MLA, 2006). So the industry desires the live cattle export value chain to operate at its lowest cost to ensure competitiveness and be highly responsive to quickly satisfy international demand for live cattle (ABC, 2017).

On the other hand the government often has to respond to the views of other stakeholders such as consumers in Australia who have strong animal welfare beliefs. There is more often than not a major difference between the preferences of the industry and the preferences of other stakeholders, and few regulatory regimes can fully satisfy both parties. Griffith, Umberger and Gow (2011) believe that intervention through regulation in primary industry networks solely based on public good arguments are hard to justify.

The industry view is that the government through the imposed ESCAS regulation (via the four ESCAS principles including the handling of animals based on the World Organisation for Animal Health standards (OIE); control mechanisms for all supply chain processes; traceability of live cattle during

all stages of the chain; and the compliance verification through independent auditing), has focused predominately on the social acceptability of the sector whilst constraining the value chain to achieve its strategic objectives (Department of Agriculture, 2015), as these regulations result in less responsiveness and higher costs in serving international consumers.

Value Chain Drivers of Performance

Value chains and the respective functions need to focus on satisfying both stakeholder and customer needs. In order to achieve the objectives and reach optimum performance levels, logistical and cross-functional drivers need to be utilised (Chopra and Meindl, 2016). In the case of the Australian live cattle export value chain and the effectiveness of ESCAS, two logistical drivers i.e. facilities and transportation and two cross-functional drivers i.e. information and pricing will be considered. The aim is to find out the impact of these drivers on the value chain strategy i.e. cost efficiency and high responsiveness in generating surplus.

Facilities

Prior to ESCAS there was a complex regulatory system in place that monitored and controlled animal welfare standards on farms and during inland transport up until the live cattle arrived in the destination country. All facilities were monitored and audited and welfare issues reported. However, ESCAS extended the system beyond Australia to cover all facilities in destination countries up until animals were slaughtered. Under the regulation, the handling of all animals in all facilities have to comply with OIE guidelines and the exporter must ensure compliance. Through external auditing of the facilities, the government ensures that ESCAS requirements are met and the exporter can maintain its license through only sending cattle through approved feedlots and abattoirs. The requirement of the government through the regulation to control and monitor facilities in other countries has been globally unprecedented (Department of Agriculture, 2015).

Based on Chopra and Meindl (2016), facilities have a major role impacting supply chain performance. Through responsive and low cost facilities, value chains increase their surplus and achieve higher returns. However, ESCAS has placed a requirement for every individual facility to be certified by every exporter limiting the choice of facilities and reducing the responsiveness of exporters to switch between facilities. The certification requirement of every overseas facility not controlled by the exporter has resulted in major costs imposed on the value chain and limited its ability to achieve its objectives (ALEC, 2016a).

Transportation

Moving livestock from Australian farms to shipping vessels and into the destination country up until the point of slaughter involves a complex and multi-faceted system of different transportation modes controlled by various stakeholders. Transportation choices and regulatory requirements can have large impacts on the cost of the final product (Chopra and Meindl, 2016; Department of Agriculture, 2015). ESCAS implies that animal welfare has to be maintained at all stages of transport throughout the cattle's journey. Additional monitoring requirements include auditing transport modes and the actions of different stakeholders involved in the process. Livestock have to be traced at all stages by exporters. Such strict regulatory requirements increase the burden on the industry and impose extra expenses limiting its ability through the impact on the transportation driver to yield high performance (Department of Agriculture, 2015).

Information

ESCAS through various training programs have spread the word on the importance of animal welfare for Australian livestock overseas. It has resulted in a change of culture in countries where the handling of animals has previously not been a concern. Through the sharing of experiences and insights, the conditions of Australian and local animals were improved. In fact, participation of awareness programs throughout the supply chain have increased as a result of the pull factor created by ESCAS. These training initiatives have helped the industry to get to this stage in regaining public trust but were funded by the industry (ABC, 2016; Department of Agriculture, 2015).

In addition to running training programs, information sharing throughout the value chain has been required and closely monitored by the government. These were achieved through CCTV cameras, reports and regular reporting (Department of Agriculture, 2015). As Chopra and Meindl (2016) confirm, information sharing is the biggest driver of performance not only impacting the performance of the chain but also influencing other drivers i.e. pricing, transportation and facilities. In practice, ESCAS through information has improved animal welfare conditions in facilities and during transportation resulting in a more responsive value chain that is socially more acceptable to Australian consumers. However, additional costs of the different programs and in establishing the information sharing technologies resulted in additional costs to the industry impacting chain surplus (Department of Agriculture, 2015).

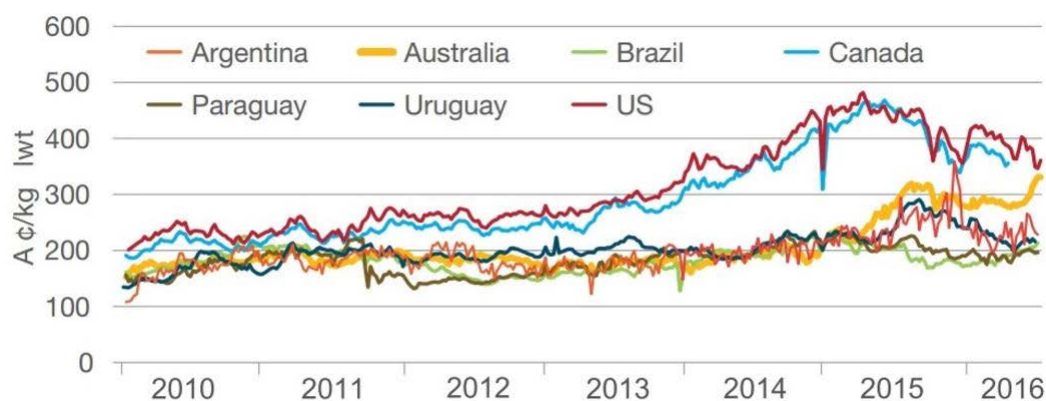
Pricing

Pricing determines how much can be charged for the products and services offered in relation to how much consumers are willing to pay. Additional charges imposed on the value chain should ideally be offset by customers willing to pay a premium. The concept of price is closely linked to cost efficiency and responsiveness of the value chain to further meet customer requirements through reaching a balance in making cattle highly available in overseas markets at competitive prices (Chopra and Meindl, 2016; Department of Agriculture, 2015). After assessing the live cattle export value chain, it is evident that most consumers and importers in destination countries place a greater value on low costs rather than responsiveness. In fact, Australia competes purely on price with other live cattle exporting countries such as Brazil and Argentina as the international live cattle trade is highly competitive.

Based on Condon (2016), Australian cattle prices in comparison to other exporting countries as illustrated in Figure 2 have significantly increased in recent years. This is despite high cost countries such as the US and Canada experiencing price declines. All additional costs imposed through the monitoring and compliance requirements of ESCAS are unlikely to be offset by consumers unwilling to pay a premium for animal welfare concerns. Therefore, one of the main concerns raised when the regulation was first introduced, was its likely cost/price impact on Australian exporters and producers (Department of Agriculture, 2015).

Supply Chain Obstacles Impacting High Performance

After the public outrage around animal welfare conditions in Indonesia, the export industry was stopped for a few months and ESCAS was designed within only a few weeks. It was first launched for the export to Indonesia but has since been rolled out to all live cattle export markets. By providing a process to handle mistreatments, the aim was to ensure there will not be any future incidents that might negatively impact farmers and exporters and the sustainability of the chain (Department of Agriculture, 2015). Fearne and Martinez (2012) confirm that supply chains have to focus beyond creating financial value on long-term sustainability. Nevertheless, there has been considerable difficulty in maintaining certain export markets after the introduction of ESCAS.

Figure 2: World Cattle Prices (Condon, 2016)

An example is Saudi Arabia in which no exporter was able to get an export license. Regardless of the examples of losing certain Middle Eastern markets or gaining few Asian markets such as Vietnam, Cambodia and Thailand, the program has imposed an estimated \$17.6 million additional costs every year on the industry totalling \$43 million between 2009 and 2015 (Department of Agriculture, 2015). These costs funded by the industry bodies MLA and LiveCorp along with additional regulatory and compliance burdens have caused major trouble for Australian exporters in maintaining their leading position in the global market and competing effectively with other countries without ESCAS-like regulations. Based on research, amongst the 100+ live cattle exporting countries, Australia is the only country in the world that places the responsibility of maintaining animal welfare irrespective of any ownership transfer in the chain, on the exporter (Laursen, 2017).

ESCAS has been effective in improving animal welfare standards but this has been against the competitive strategy of the value chain. In addition, it has been against the government's stated commitment of increasing rural prosperity and reducing red tape (ALEC, 2016a; Department of Agriculture, 2015). The main question that remains is whether the same level of animal welfare standard could have been achieved through a different system with lower costs and policy constraints that maintain high value chain performance?

Intervention to Overcome Value Chain Obstacles

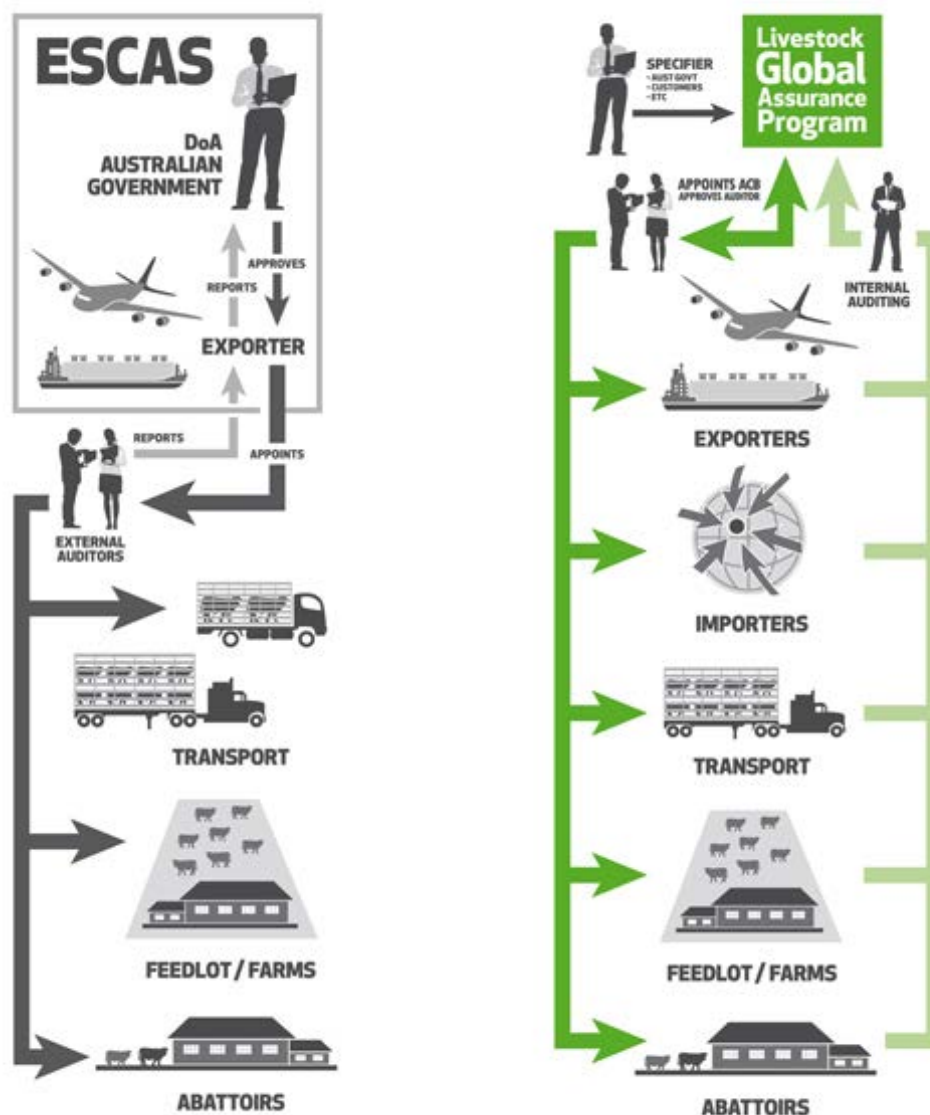
ESCAS was simplified and improved in various stages and new auditing requirements were introduced for destination country facilities that streamlined processes and remove duplications. However, these changes were not viewed as sufficient for facilitating the trade that is now valued at \$18 billion globally (Department of Agriculture, 2015; MarEx, 2017). In 2015, the Minister for Agriculture stated that there are significant opportunities to improve and simplify ESCAS with the goal of reducing costs, improving flexibility and still maintaining high animal welfare standards. The minister was of the opinion that the industry should be given a greater responsibility in managing supply chain risk (Department of Agriculture, 2015).

Following the implementation of ESCAS and major concerns raised by the industry, the government commissioned an independent review of the livestock trade (Schuster Consulting, 2016). The review was based on acknowledging the increasing trend towards sustainability and higher animal welfare standards whilst keeping a focus on meeting industry demands to streamline export processes and save costs (ABC, 2015; ABC, 2016). Its outcome was the LGAP regulation which runs independent from the government and the industry (MLA, 2017a).

The new program was proposed in 2016 with the aim of ensuring animal welfare standards and industry best practices are met. It was developed using a consultative committee chaired independently and involving representatives from the live cattle export industry, government bodies and in-market stakeholders from around the world. LGAP was developed based on international guidelines provided by OIE, ISO and WTO (Schuster Consulting, 2016). It has been piloted to ensure all components of the new regulation including the application process; internal and external evaluations; handling of non-conformity; assessing and ranking of risk; monitoring practices; and the issuance of export certificates, function as expected and drive performance (MLA, 2015). The government has committed \$8 million to maintain the program over the next four years (Dupe, 2017).

As illustrated in Figure 3, ESCAS is different from LGAP.

Figure 3: Major Differences between ESCAS and LGAP (MLA, 2017a)



The former is a license given by the government enabling them to export livestock to an approved country. An external auditor is employed by the exporter to ensure all aspects of the license are adhered to in the destination country and findings are presented back to the government through the exporter. Under the latter, there will be a program owner acting as the certifying body with approved auditors ranked under them. The auditors will monitor importers, exporters,

transportation, abattoirs and feedlots with the findings going back to the program owner. Under the new changes, all facilities in destination countries, in addition to external audits existing under ESCAS, will be able to utilise internal audits that act as self-checks. The program owner will have discretion whether to certify individual facilities and bodies based on conforming to the guidelines. The burden of getting certified has shifted from exporters in Australia to individual facilities in destination countries providing considerable flexibility to Australian exporters whilst minimising the direct involvement of the Government (MLA, 2017a).

Performance Improvements Beyond LGAP

Based on MLA (2017b), LGAP improves the shortcomings of ESCAS. However, it is still a regulation controlling all parts of the value chain as illustrated in Figure 4 and not a self-regulatory framework. In fact, in terms of animal welfare standards, LGAP surpasses the OIE guidelines and imposes even higher standards. It provides standards for facilities at three levels that might be used for local and other imported cattle not just Australian livestock. It is still a regulation that Australian exporters have to comply with and absorb its costs and burdens (Department of Agriculture, 2015).

Figure 4: Summary of the LGAP Value Chain Control Measures (MLA, 2017c)

Summary of control measures

RISK FACTORS	CONTROL MEASURES
Traceability - movement	Reporting and reconciliation Movement through the supply chain Accounting for animals on Facility entry / exit
Traceability - identification	Appropriate identified used Appropriate use of identification
Monitoring	Operational nonconformities Traceability nonconformities
Scopes	Facility Levels Segregation of animals under differing Levels
Operations	Supply chain structure Frequency of operation Site access
Welfare (Abattoirs)	Restraint method used Use of stunning Slaughter method used Use of slaughter teams
Performance	Past Program performance Current Program performance

LGAP undoubtedly meets the needs of stakeholders with strong preferences regarding animal welfare and contributes to the ongoing sustainability of the live cattle export trade. However the trade-off has been a constraint on the ability of the value chain to achieve its strategic and value chain objectives. In order to move to a higher chain surplus, it is suggested that the government sponsors a comprehensive and formal Value Chain Analysis project. This initiative should be aimed at live cattle export with the goal of assessing the current state of the sector and future opportunities to eliminate waste, reduce drivers of cost and increase the chain surplus. A similar project was sponsored by the United Kingdom government for the red meat industry (Simmons et al., 2003).

In addition, negotiations have to commence between the export countries to create an international agreement on live export conditions and handling of animals that will ensure a worldwide umbrella treaty is in place. Such a treaty could be negotiated in phases with the first phase proposed to be around the transport of cattle to be signed by all signatory countries (Brand, 2015). Such an international approach will spread the cost burden away from the Australian value chain to all exporting countries.

Conclusion

The live cattle export value chain is a significant contributor to the Australian economy through export revenues and regional employment. This value chain needs to be competitive at the global scale through minimising costs and increasing responsiveness so that it can achieve its strategic objectives and maintain Australia's place as one of the world's leading live cattle exporters. However, the introduction of ESCAS to ensure animal welfare standards are maintained has impacted all value chain performance drivers. In fact, it was seen as an obstacle by the industry that negatively impacts the transport, information, facilities and pricing drivers resulting in lower chain surplus. After the government acknowledged these shortcomings, LGAP was introduced. Despite simplifying certain processes, the new regulation requires an even higher animal welfare standard to be met hindering Australian exporters to best serve their international customers. It is recommended that through conducting a value chain analysis project and starting negotiations for a global umbrella treaty, the interests of the Australian live cattle export value chain can be better served.

References

- ABC (2011), A Bloody Business, viewed 20st March 2017, <http://www.abc.net.au/4corners/special_ed/20110530/cattle/>
- ABC (2015), The Big Business of Beef, viewed 30th May 2017, <<http://www.abc.net.au/news/rural/2015-05-04/rockhampton-beef-week-abc-coverage-2015/6394594>>
- ABC (2016), Cattle Trade-Ban Anniversary: High-Tech Traceability and 93 per cent Stunning Rates Confirm Animal Welfare Gains in Asia, Says Live Export Industry, viewed 31st May 2017, <<http://www.abc.net.au/news/rural/2016-05-31/live-export-ban-five-year-anniversary-animal-welfare/7424896>>
- ABC (2017), Report Finds Animal Welfare System Makes Australian Livestock Exporters Less Competitive, viewed 31st May 2017, <<http://www.abc.net.au/news/rural/2017-05-05/report-finds-welfare-rules-hinder-trade/8496764>>
- ALEC (2016a), Productivity Commission Inquiry into the Regulation of Australian Agriculture, viewed 20th March 2017, <http://www.pc.gov.au/__data/assets/pdf_file/0009/197388/sub078-agriculture.pdf>
- ALEC (2016b), Future of Australian Livestock Export Jobs and Businesses at Risk from Regulatory Cost Burden Despite Strong 2015 Export Figures, viewed 31st May 2017, <<http://auslivestockexport.com/wp-content/uploads/2016/02/ALEC-Media-2015-live-cattle-figures-18022016-FINAL.pdf>>

Brand, S. (2015), Australian Live Animal Export: A Comparative Examination of Viable Alternatives, viewed 31st May 2017, <<http://www.ojs.unisa.edu.au/index.php/uslr/article/view/1244>>

Chopra, S. and Meindl, P. (2016), *Supply Chain Management: Strategy, Planning, and Operation*, Pearson, Boston.

Condon, J. (2016), MLA Comparison on World Cattle Prices Show Australia Close to Top, viewed 31st May 2017, <<http://www.beefcentral.com/markets/mla-comparison-on-world-cattle-prices-show-australia-close-to-top/>>

Deards, B., Leith, R., Mifsud, C., Murray, C., Martin, P. and Gleeson, T. (2014), Research by the Australian Bureau of Agricultural and Resource Economics and Sciences: Report to client prepared for the Live Animal Exports Reform, viewed 20th March 2017, <<http://www.herefordsaustralia.com.au/Portals/0/PDF/ABARES%20Live%20Export%20Trade%20Assessment.pdf>>

Department of Agriculture (2015), Exporter Supply Chain Assurance System: Report, viewed 30th May 2017, <<http://www.agriculture.gov.au/SiteCollectionDocuments/biosecurity/export/live-animals/livestock/escas/escas-report.pdf>>

Dupe, C. (2017), Live Exporters Welcome Welfare Push, viewed 31st May 2017, <<https://thewest.com.au/countryman/news/live-exporters-welcome-welfare-push-ng-b88474533z>>

Fearne, A. and Martinez, M.G. (2012), 'Dimensions of Sustainable Value Chains: Implications for Value Chain Analysis', *Supply Chain Management: An International Journal*, 17, 6, 575-581.

Griffith, G., Umberger, W. and Gow, H. (2011), 'What is the role of local governments in new global food markets?', Paper presented at the 5th International European Forum on System Dynamics and Innovation in Food Networks, Igls, Austria, February.

Laursen, W. (2017), Live Export: How Australia's Industry Stays Alive, viewed 31st May 2017, <<http://maritime-executive.com/editorials/live-export-how-australias-industry-stays-alive>>

MarEx (2017), Australian Live Export Not Competing with Meat Industry, viewed 31st May 2017, <<http://www.maritime-executive.com/article/australian-live-export-not-competing-with-meat-industry>>

MLA (2006), The Live Export Industry: Value, Outlook and Contribution to the Economy, viewed 31st May 2017, <<http://www.aph.gov.au/DocumentStore.ashx?id=be27cae4-44ee-414d-bf24-6ea8b74240da>>

MLA (2015), Livestock Global Assurance Program (LGAP) to be Piloted, viewed 30th May 2017, <<http://www.livestockglobalassurance.org/lgap-news/livestock-global-assurance-program-lgap-to-be-piloted>>

MLA (2016), Fast Facts: Australia's Beef Industry, viewed 26th May 2017, <https://www.mla.com.au/globalassets/mla-corporate/prices--markets/documents/trends--analysis/fast-facts--maps/mla_beef-fast-facts-2016.pdf>

MLA 2017a, Fostering World's Best Practice in the Welfare and Management of Animals, viewed 30th May 2017, <<http://www.livestockglobalassurance.org/>>

MLA (2017b), Changing Behaviour, viewed 30th May 2017,
<<http://www.livestockglobalassurance.org/improving-welfare/lgap-changing-behaviour>>

MLA (2017c), Continual Improvements, viewed 30th May 2017,
<<http://www.livestockglobalassurance.org/ensuring-conformance/lgap-continual-improvement>>

PWC (2011), The Australian Beef Industry: The Basics, viewed 28th May 2017,
<<http://www.pwc.com.au/industry/agribusiness/assets/australian-beef-industry-nov11.pdf>>

Schuster Consulting (2016), Certifying Animal Welfare and Management Across the Globe, viewed 30th May 2017, <<http://www.schusterconsulting.com.au/case-studies/certifying-animal-welfare-and-management-across-the-globe>>

Simmons, D., Francis, M., Bourlakis, M. and Fearne, A. (2003), 'Identifying the Determinants of Value in the U.K. Red Meat Industry: A Value Chain Analysis Approach', *Chain and Network Science*, 3, 2, 109-122.