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The Australian beef industry and integration into China and Southeast Asia

A report for ACIAR Project
“Beef Markets and Trade in China and Southeast Asia”



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SPEKTRUM

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1. Highlights

The Australian beef industry is the 7th largest beef producer in the world and in 2015 the world's second largest exporter of beef. In 2015 there were 26.3 million head of beef cattle which is down from 29.1 million in 2013. The decline in cattle number is a result of an extended drought in eastern Australian. It is expected to take another 2 to 3 years for the Australian herd to rebuild.

Production of beef cattle in Australia is predominantly from the grazing of native and improved pastures. The industry has a large feedlot sector based on the feeding of grains such as Wheat, Barley and Sorghum. In 2015 approximately 29% of the adult slaughter cattle were finished in a feedlot.

Breeds include British, European and Tropicably adapted breeders to suit the variable climatic conditions across Australia.

There are a number of market chains focused each on the various export and domestic markets for both beef and live export cattle.

The processing sector is well developed and dominated by large export accredited abattoirs. Food hygiene, food safety and quality assurance systems are well established in the industry.

The 2015 annual turnoff from in industry is 8.7 million head; with 7.6 million head processed for beef production and 1.1 million head sold as live export cattle. The key markets for the beef are domestic consumption (28% of the beef), US market (22% of the beef) and Japan (17% of the beef). The key live export markets in 2015 were Indonesia (54% of live export), Vietnam (22% live export) and China (5.8% live export).

Trade with Asia is critical for Australia, with almost half of the Australian cattle and beef production going to Asian markets. There is the potential to increase Australia's contribution to the Asian beef production.

2. National industry

2.1 Background – National Industry

Australia is amongst the top ten beef producers in the world, and produces beef predominantly for export. Worldwide, it is the second largest beef exporter. The Australian beef industry is therefore highly dependent on the international beef market. Australia exports both chilled and frozen beef as well as live animals. The industry is internationally recognized as being free of most major livestock diseases. The Australian meat and livestock industry has had a long-term commitment to animal health and welfare, food safety, product integrity and traceability. The quality assurance systems implemented in Australia are considered to be some of the best in the world.

Cattle are typically bred on large extensive cattle properties in north Australia, with cattle grazing native pastures. Grower cattle are typically grown and finished on smaller farms with more nutritious native vegetation and improved pastures in eastern and southern Australia. Many grower cattle are also finished in feedlots in eastern and southern Australia.

Australian cattle breeds are divided into two main groups: temperate breeds (*Bos taurus*), which are derived from British and European stock, and tropical breeds (*Bos indicus*). Temperate breeds are largely confined to southern Australia, while tropical breeds are well suited to the extreme temperatures of the north.

The Australian beef industry is highly dependent on rainfall to grow the pastures and grain for feedlots. The seasons have been well below average for the last 3 years which has resulted in additional sale and slaughtering of cattle, resulting in a significant decline in herd numbers. Strong demand on the international market and limited supply for the next 2 to 3 years is likely to result in higher cattle prices.

2.2 Macro production Statistics

Australia is the seventh largest beef producer in the world (3.7%, USDA 2015) and the world's second largest exporter of beef (18.9%, USDA 2015). This is impressive when you consider that Australia's 26.3 million head of cattle is only around 2.7% (USDA 2015) of the total world cattle herd of 971 million head. In 2015 Australia exported 72% of the beef it produces. The national beef herd within Australia has varied between 26 and 29 million head of cattle over the past 20 years.

The off-farm value of the Australian beef and cattle industry was \$18.21 billion in 2014-15 (ABS, MLA estimate). Cattle are estimated to contribute 22% of Australia's off-farm value of \$53 billion in 2014-15 (ABARES, 2015). Beef production and live export contributed 1% of Australia's gross domestic product in 2014-15 (ABARES, 2015).

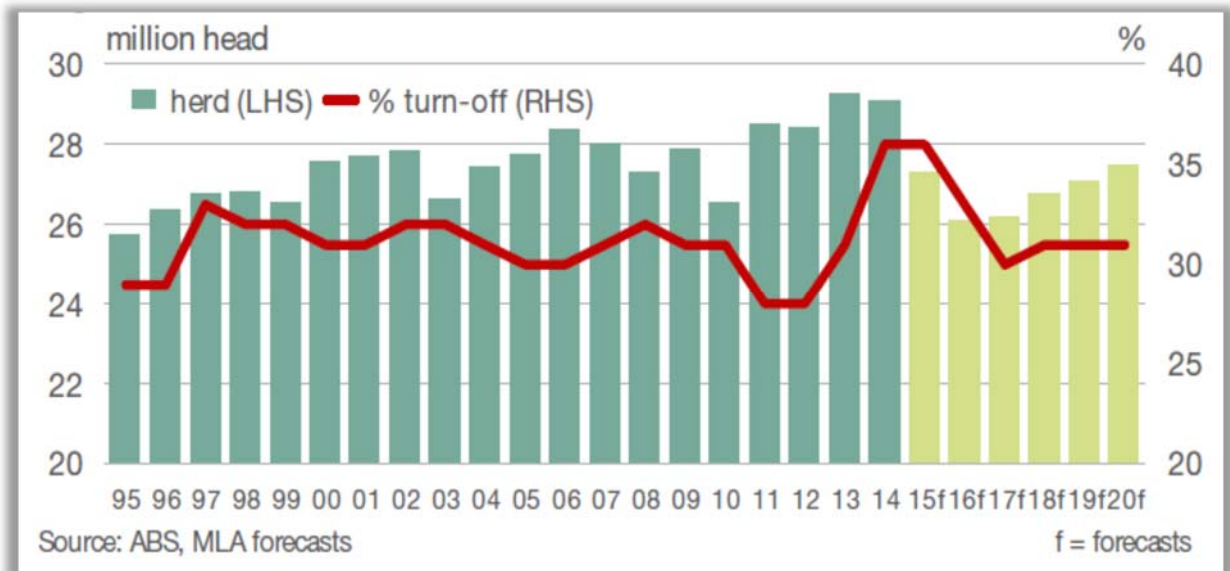
There are 74,600 properties in Australia that run the 26.3 million cattle with an average of 352 head per farm in Australia (ABS, 2014-15). These farms employ about 200,000 people. Cattle are raised on nearly half of the Australian land mass and the herd has 13.3 million breeding cows and calves.

The seasonal conditions have been well below average across the major beef production regions in Australia for the last 3 years. This has resulted in an increased number of cattle turned off, and a decline in herd numbers (Figure 1). Total Herd slaughter and female slaughter have been at an all-time high and this is expected to impact turnoff from the Australian herd for the next 2 to 5 years. A decline in turnoff and consistent increase in international demand is likely to result in strong cattle

prices in the near future. From a cattle supply point of view, numbers over the coming two years will fall to levels not seen in more than twenty years. It is expected that the reduction in supply will be partially offset by higher average carcass weights for slaughter cattle.

Beef and veal exports are expected to fall as a result of lower production, rather than falling demand. The prediction for the Australian dollar to average between 68-78US¢ will be positive for the industry, but this needs to be balanced against the heightened competition from Brazil in many markets, the expectation of high US poultry and pork production, higher year-on-year US beef production and significantly weaker US beef markets compared 2014.

Figure 1. Australian cattle herd and turnoff for 1995 to 2014 and forecast numbers and turnoff to 2020 (MLA 2016).



2.3 Macro drivers of industry change

The key driver for beef demand and beef prices in Australia is the international beef market and seasonal conditions within Australia. Australia currently exports 72% of the beef production and the proportion of production being exported is increasing over time (MLA 2015). Domestic consumption, i.e. 28% of production, has less impact on beef prices and demand in Australia. The Australian population has a very slow growth rate (1.4% ABS, 2015) and the average consumption for beef is declining over time, resulting in relatively stable consumption of beef within Australia.

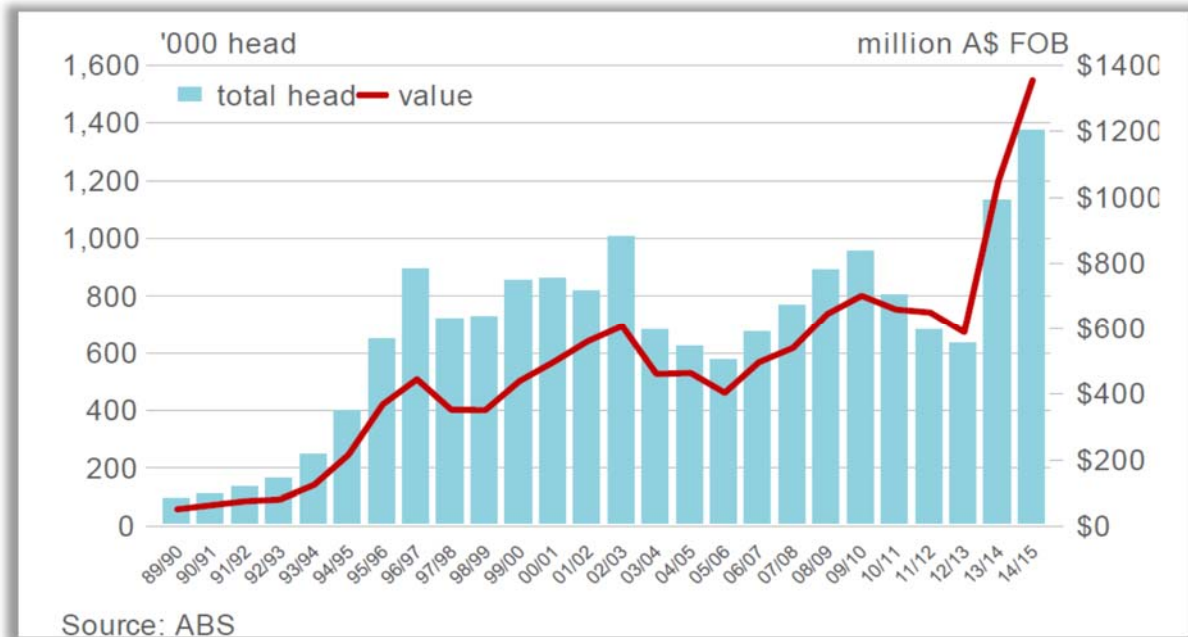
The main Australian export markets are listed in Table 1. The key export markets are; USA, Japan and Korea. These markets are well established and are likely to continue to be the key markets in the future, although volume will vary from year to year. The exports to China has increased significantly in the past 3 years (Figure 3). The exchange rate for the Australian Dollar has also impacted the price and demand within these markets, with the A\$ expected to vary between 68 to 78 US¢ in the near future.

A key driver of international demand for beef is the growth in China and SE Asia. As the GDP and population of these countries has increased, so has the demand for beef. These trends have been noted in other chapters of this report and are expected to continue.

Australian beef that is exported is sold as either beef(chilled or frozen), or as live export cattle. The number and value of the live cattle exported from Australia has been increasing since 1989/90

(Figure 2), with approximately 1,400,000 head exported in 2015, valued at over \$1,300 million. The majority of the live exports in 2015 have been to SE Asia (73.3%), with the key markets being Indonesia (55.1%) and Vietnam (11.6%). The demand for live export cattle has significantly changed the Australian beef industry, with grower cattle 250 to 360 kg being bred in north Australia and exported live on ships to SE Asia. This has reduced the number of cattle being transported from north Australia to southern and eastern Australia to be grown out for processing.

Figure 2. Total live export numbers and value of exports from Australia

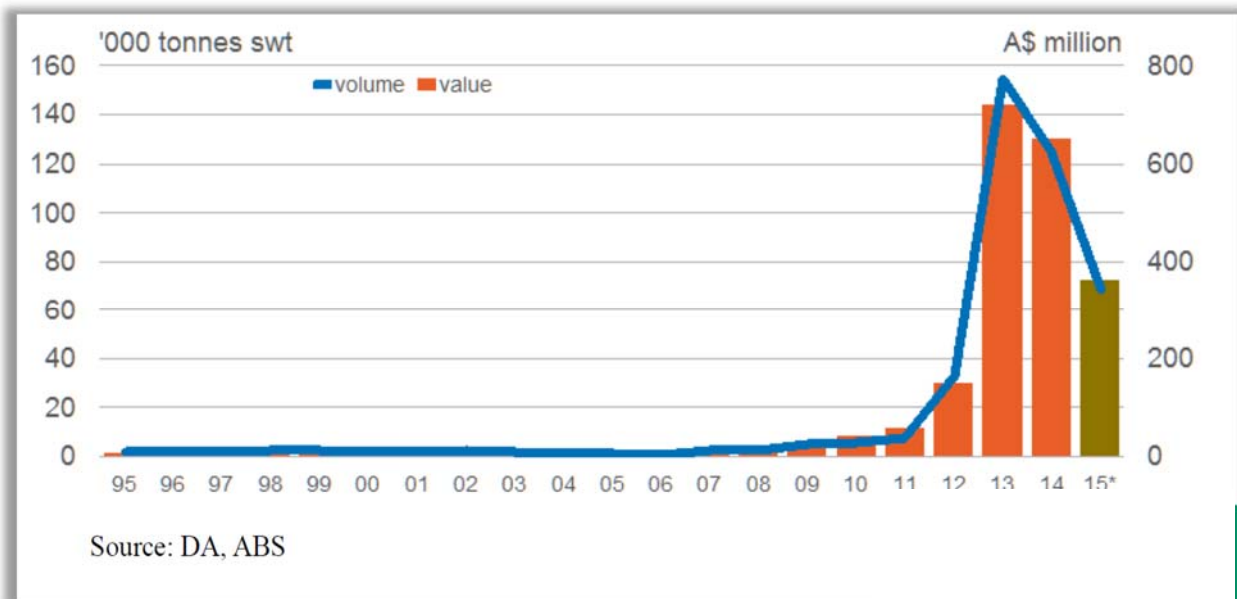


The poor seasonal conditions has resulted in an increased number of cattle turned off and a decline in herd numbers (Figure 1). From a cattle supply point of view, numbers over the coming two years will fall to levels not seen in more than twenty years. This alone will more than likely stimulate strong competition between restockers, feedlots and processors for the limited availability.

Table 1. The key markets for Beef and volume supplied in 2015 (excluding live export) within Australian.

Destination	Volume (tonnes '000, sw)	Percent	Estimated number cattle
Australian domestic	491.2	28%	2,518,974
US	397.9	22%	2,040,513
Japan	293.8	17%	1,506,667
Korea	150.9	8%	773,846
China	124.6	7%	638,974
Middle east	59.8	3%	306,667
Indonesia	53.1	3%	272,308
Taiwan	36.4	2%	186,667
Philippines	34.4	2%	176,410
Malaysia	13.1	1%	67,179
Thailand	5.4	0.3%	27,179
Other	118	7%	603,077
Total	1,778		9,118,974

Figure 3. The volume and value of beef exports to China



3. Regional distribution & issues

The distribution of beef cattle in Australia can be considered on a state by state basis. In 2015 there were 26.3 million head of cattle in Australia and the estimated number of cattle within each state has been described in Figure 4. Each state has areas of extensive production and intensive production. The majority of the cattle (49%) are in Queensland (QLD), with breeding and growing cattle grazing native pastures on extensive pastoral properties. The finishing of the animals occurs in feedlots and in more intensive farms in the SE of the state. QLD supplies all of the key Australian beef markets and live export markets. In New South Wales (NSW), the cattle are also bred and grown in extensive properties with native and improved pastures in the north and west of the state. Finishing of the cattle also occurs in feedlots and high productivity farms in each state. In Victoria (VIC) and Tasmania (TAS) cattle graze on high quality improved pastures and are either finished on these pastures or through local feedlots.

The majority of the cattle in the Northern Territory (NT) are bred and grown on native pastures on extensive properties across the state. A large proportion of the cattle in the NT are sold into the live export market. There are small areas of intensively managed flooded native and improved pasture in the north of the state that are used to grow cattle for the live export market or to finish them for the abattoir based in Darwin. About half of the cattle in Western Australia (WA) are bred and grown on native pastures on extensive pastoral properties. The remaining cattle in WA run on high quality improved pastures in the south west of the state and are either finished on these pastures or through feedlots. The cattle in the north are typically sold into the live export market, or transported south as stores and the cattle in the south are typically processed for the domestic beef market. Some of the cattle in the south are also sold as live export cattle to Egypt and the Middle East. The majority of the cattle in South Australia (SA) are bred and grown on native pastures on extensive properties in the north and south west. There is a small feedlotting and finishing industry in the south east of the state. The majority of the cattle are processed for beef and sold into the respective beef markets.

The cattle numbers within each state have been relatively constant over the past 10 years (Figure 5), in spite of the seasons and variable market conditions. The largest decline in herd numbers due to drought has been in QLD in the 2014/15 period. Figure 5 also demonstrates the relative population of the beef herd in the respective states.

Figure 4. The regional distribution of Beef Cattle in Australia in 2015

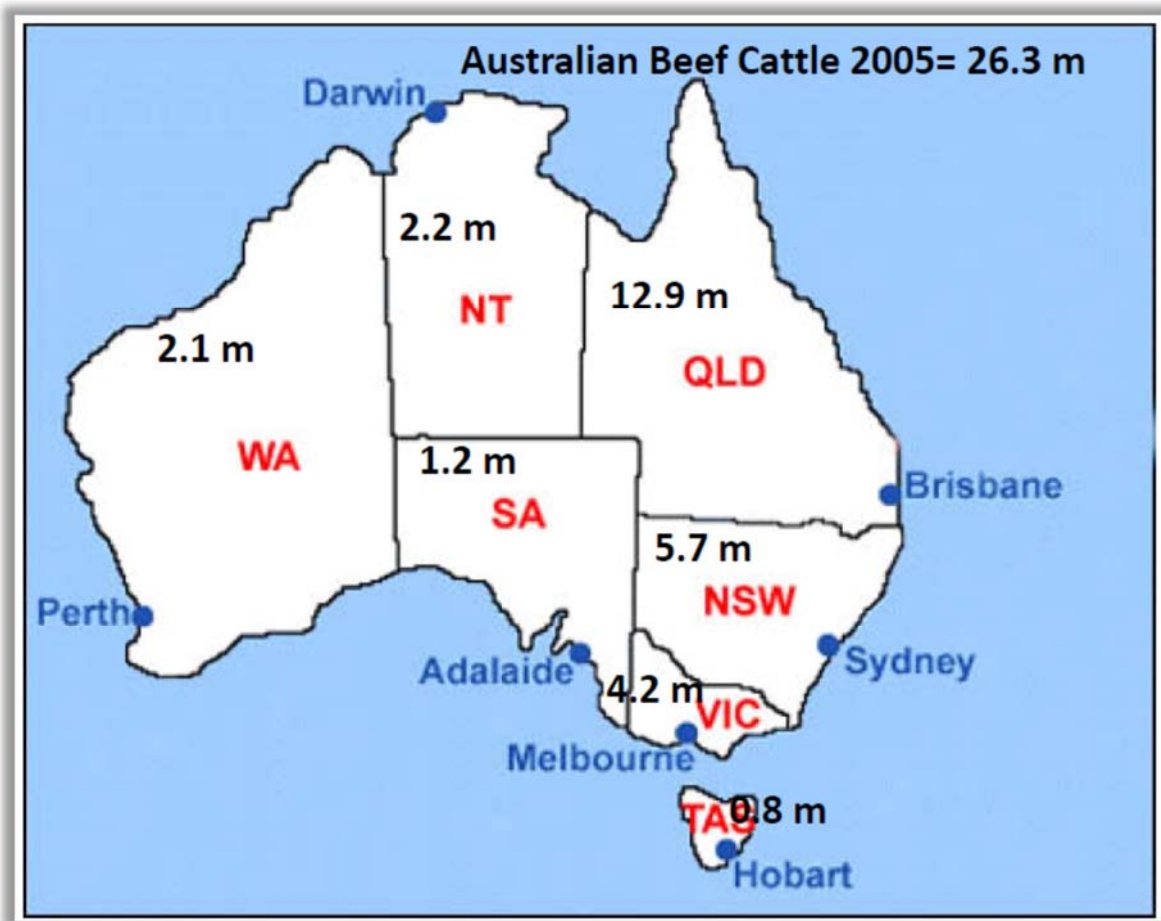
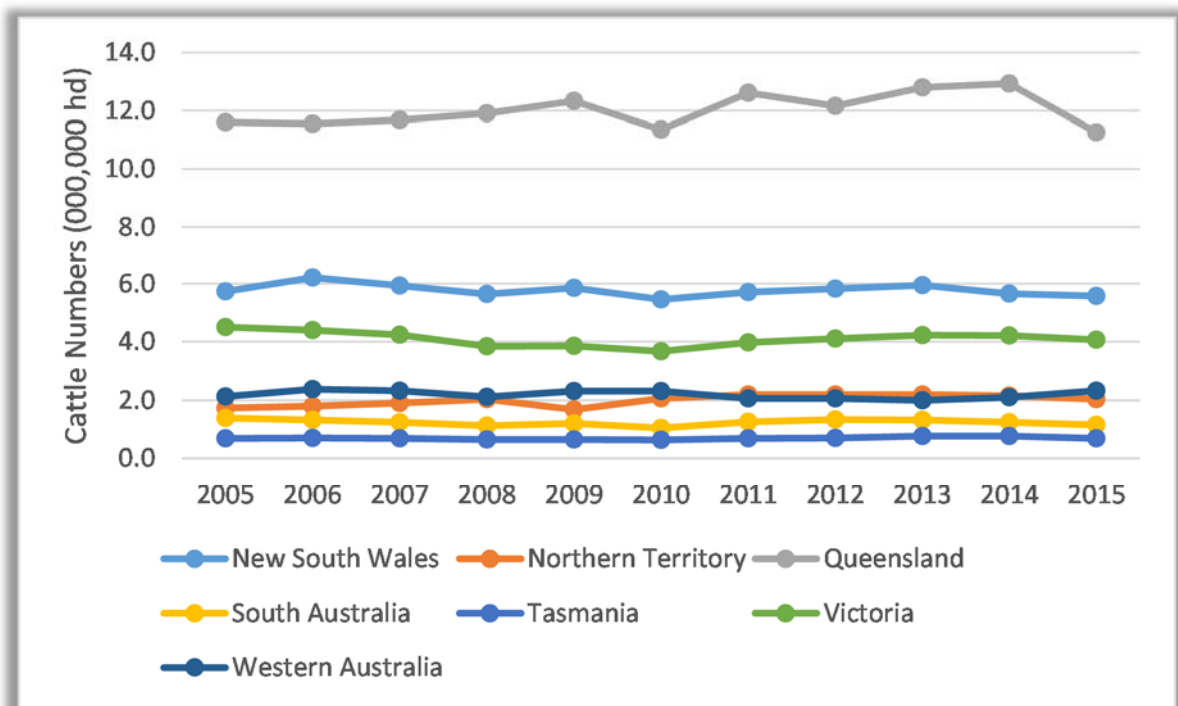


Figure 5. The number of cattle by state over the past 10 years in Australia



4. Policy

The Australian beef industry has an advanced and comprehensive policy and regulatory systems for production, feedlotting, live export and processing of beef (Table 2). These policies and regulatory systems have been implemented by the Federal Government, State Governments, Local Governments and Industry Bodies. These policies are aimed at protecting the respective industries, assisting with market access and protecting the wider public and customers. These policies tend to be complex and are regularly reviewed.

The implementation of these policies has also increased the cost of production for the respective sectors. It has been estimated that these policies collectively cost the producer 10 – 15% of gross value of production (GP), with the cost to the feedlot industry being in the order of 4.4% of GP, live export industry 9.2% of GP and the meat processing sector of 3.3% of GP (ProAnd, 2016). Collectively this is a significant cost, that increases the cost of Australian export beef and live cattle. Although this is the case, the higher standards that result from these regulations also provide Australian producers with preferential access to higher quality markets that demand a safe, clean, green product, such as the USA, Japan and China.

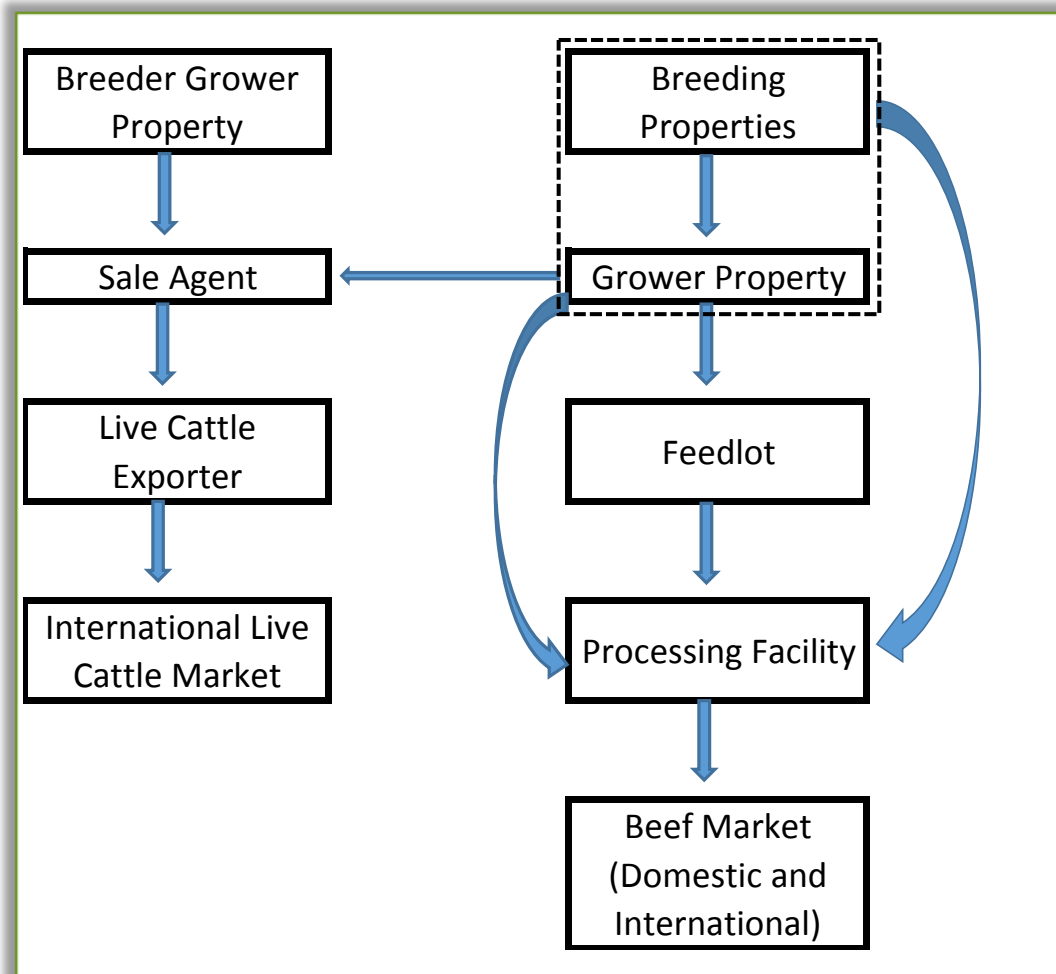
Table 2. Policy and regulation that impact the beef production, feedlotting and processing industries within Australia.

Regulation/Policy Type	Governing Body	Intent and benefits
Biosecurity	Federal, State Industry bodies	Restrict international disease and pest importation, disease management protocols
Market access	Federal	Free trade agreements, trade access, importation restrictions, tariffs
Animal welfare	Federal, State, Industry bodies	ESCAS management (defined below), improved animal health and welfare, manage welfare groups
Disease control	Federal & State	Food security, market access, improve animal welfare, maintain productivity, maintain quarantine.
Environmental	State	Minimise soil erosion, maintain water quality, manage greenhouse gas emissions, capture carbon credits
Food safety	Federal, State, Industry bodies	Market access, food security, customer health, export meat inspection systems (AEMIS)
Indigenous	Federal & State	Share development benefits, preserve sites, ensure equitable access to land, ensure equity for Aboriginal people
Land use	State	Sustainable grazing manage clearing native vegetation, restriction on plant introduction, weed management, visual amenity
Labour	Federal, Industry bodies	Worker compensation, superannuation, minimum wages, retirement benefits, safety
Industry levies	Federal, Industry bodies	Marketing products, disease control, R&D, food safety systems
Transport	Federal & State	Road safety, road transport protocols, shipping transport protocols, shipping safety, government revenue
Utilities & rate	State, local government	Road access, access to utilities, local services

5. Beef Value Chains

The Australian beef value chain is focused on the target markets of beef production or live export cattle production (Figure 6). Cattle are bred on a breeding property or a mixed breeding finishing property, are grown out in a feedlot or on grass, processed and sold into the beef market for domestic or international customers. Other producers in northern Australia breed grower animals, they are sold to an agent and then to a live cattle exporter. This exporter markets these cattle to south east Asia or the Middle East live cattle markets.

Figure 6. The dominant value chain in the Australian beef industry



6. Inputs sector

6.1 Feed

The feed requirements for the breeding growing component versus the feedlot component of the Australian beef industry are very different and will be discussed separately below.

Breeding and growing component

The main source of feed for breeding and growing cattle in Australia is grazing of the native pastures, with over 40% of the land mass of Australia grazed by cattle and sheep. These native pastures vary from high nutrition annual grasses to very low digestibility spinifex based pastures. Much of the native pastures have low digestibility and are deficient in nutrients during the dry season period, which limits production. There are considerable areas of introduced pastures in QLD, including Buffel grass (*Cenchrus Ciliaris*) and Creeping Blue Grass (*Bothriocloa insculpta*).

Cattle grazing native pastures are also regularly supplemented with a range of products. These include; Urea, Molasses, Cottonseed meal, Copra Meal, Palm Kernel Cake and many additional protein supplements. These supplements are strategically provided to specific classes of cattle or during periods when the native pastures do not provide sufficient nutrients for that class of cattle.

In the more temperate regions of Australia including parts of NSW, Victoria, South Australia, Tasmania and Western Australia cattle graze on improved pastures that are of sufficient quality that enable young cattle to reach slaughter weights at a young age.

Feedlots

Feedlots are used to finish grower cattle to slaughter weights. Cattle are generally fed for 80 to 150 days. Feedlot diets are based on a grain with a protein additive. The most commonly used grains in feedlots in Australia include; Barley, Sorghum, Wheat and Maize. These grain crops are grown using the natural rainfall in a region. The grains used for the feedlot diet are often the second grade grain, that does not meet the receival standards for other markets. The feedlots diets also include roughage (i.e. hay), minerals and vitamins and protein meal (e.g. Cottonseed meal, Lupins, Copra meal, etc.). These ingredients are carefully formulated into a diet by a nutritionist to ensure maximum weight gain for the feedlot cattle.

6.2 Breeds and breed improvement

There is a large variety of breeds in the Australian beef industry. This range covers the large differences in climatic conditions and the specific market focus of the production system (Figure 7). The herds in north Australia are based on the tropically adapted *Bos Indicus* and adapted Taurine/Sanga breeds. The herd in southern Australia are based on the British and European breeds that perform better in these environments.

Figure 7. The range of breed groups in Australia (Cummings, 2007)

British	Angus, Hereford, Poll, Herefore, Shorthorn, Galloway, Murray Grey, Devon
Large British	South Devon
European	
Dual Purpose	Simmental, Gelbvieh, Maine, Anjjou, Brown Swiss
Meat – large mature size	Charlolais, Romagnola, Chianina
Meat medium mature size	Limousin, Blonde Aquitaine
Double-muscled	Belgian Blue, Pledmontese
Bos Indicus	Brahman, Sahiwal
Adapted Taurine / Sanga	Tuli, Senepol
Dairy	Holstein, jersey
Japanese	Black Wagyu, Red Wagyu
Composite	
Bos indicus composite	Santa Gertrudis, Braford, Brangus, Droughtmaster, Charbray, Belmont Red

The great majority of breeding occurs using natural means, using a bull run with the cows. Artificial insemination (AI) is restricted to specialise breeding programs, given the complexity of using AI on a large scale. Breed improvement is achieved either through genetic selection within breed, using crossbreeding or the development of composite breeds. The resulting hybrid vigour from cross breeding or composites provides significant gains within a short period of time.

Longer term gains are being achieved through breed selection for specific traits, such as fertility or weight gain. Australia has a world class system for genetic evaluation of livestock and this, provides producers with objective data on the genetic merit of a particular bull or stud cow which are expressed as “estimated breeding values”(EBV’s) Most bulls sold now come with EBV’s. This system has resulted in significant genetic gain within the Australian beef industry.

6.3 Disease and veterinary service

Australia has a well-established disease monitoring and management system, administered by the state government, federal government, private veterinarians and other groups. This system includes regional based vets in each state who are involved in disease monitoring and disease testing for a range of diseases. Co-ordination of the state based monitoring system is managed by the federal government and Animal Health Australia (AHA).

AHA are a not-for-profit group that facilitates innovative partnerships between four broad groups;

- Australian government, state and territory governments
- Livestock industry organisations
- Service providers
- Associate members.

AHA’s collective programs aim to improve animal and human health, food safety and quality, animal welfare, livestock productivity and national biosecurity.

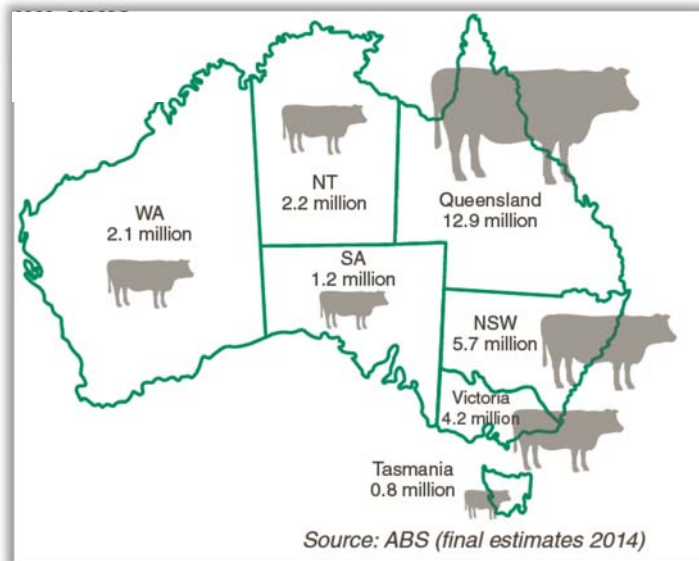
One of the key programs for disease surveillance is the monitoring of cattle at slaughter in the abattoir. All slaughter animals are examined before and after slaughter by an approved veterinarians or health inspectors. Findings of diseases and conditions that could affect public health or animal health have to be reported to the management of the abattoir, the veterinarian as well as the farmer or the farm of origin. The surveillance and monitoring schemes are generally based on the Terrestrial Animal Health Code of the World Organisation for Animal Health. Another key program is the quarantine program established by the Federal Department of Agriculture that monitors all

animals and products that enter Australia. This program and the natural isolation of Australia have provided an effective barrier to any exotic diseases to date.

7. Cattle production systems

There are 26.3 million beef cattle in Australia in 2015. The distribution of beef cattle across the states of Australia is presented in Figure 5. The Australian beef industry can be general broken up into northern production system, southern production systems (Figure 6) and feedlots.

Figure 5. Distribution of beef cattle across Australia in 2014 (MLA 2015)



Northern Production Systems

In the north (QLD, NT and upper regions of WA), cattle are run extensively on large cattle stations, grazing on native pastures at very low stocking densities. The average farm size is 23,700 ha carrying 1,600 head of cattle with a turnoff ratio of 32% (ABARES 2013). There are approximately 8,800 beef cattle producing farms in northern Australia and approximately 96% of these farm businesses were located in QLD and a further 2% in both the NT and WA. The focus of the beef cattle industry in QLD is primarily beef export markets, whereas in the upper NT and northern WA the focus is on the live cattle export trade.

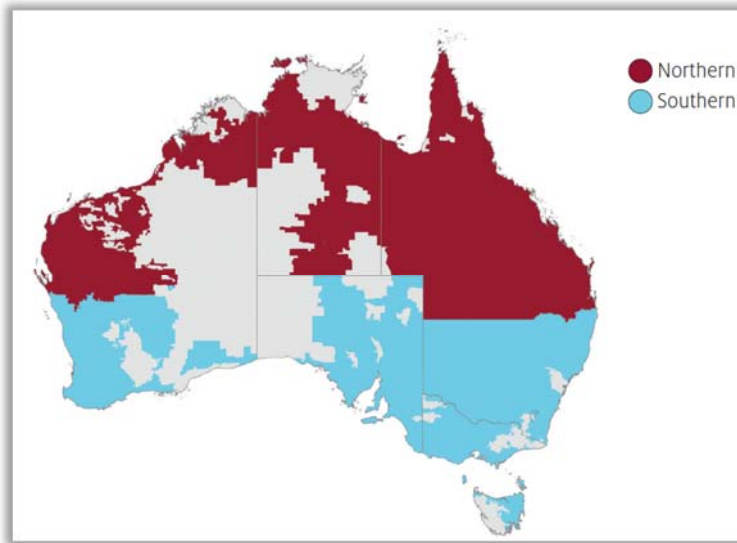
Rainfall in northern Australia is dominated by monsoon systems with distinct wet and dry seasons. The wet season usually occurs from November to March and the dry season usually occurs from April to October. This seasonal rainfall limits the growing season for pastures and makes it difficult to finish cattle for markets in one production year, as can be achieved in southern Australia (ABARES 2013). Rainfall is variable and the intensity of the wet and dry seasons varies depending on the latitude, topography and distance from the coast.

An important part of normal management practice and response to differing seasonal conditions across northern Australia is the transfer of beef cattle between the individual landholdings of large family-owned and corporate farm businesses. Transferring cattle between holdings located in different regions often provides significant flexibility in managing variable seasonal and market conditions.

To be economically viable northern properties tend to be much larger in terms of average herd size and the area of land operated than properties in the south. For example, in northern Australia 87%

of the beef cattle herd is on properties with over 800 head of cattle, while in southern Australia 62% of the beef cattle herd is on properties with fewer than 800 head of cattle.

Figure 6. Northern and southern production systems



Southern Production Systems

In the south, cattle are grazed more intensively on smaller farms sown with introduced pastures and fodder crops. The average farm size is 8,830 ha carrying 425 head of cattle with a turnoff ratio of 43% (ABARES 2013). The industry here supplies small, young animals chiefly for the Australian domestic market and high-quality stock for the Japanese market and other chilled beef markets around the world, including the United States.

Rainfall in southern Australia is winter dominant with cool wet winters and springs (May to November) and hot dry summers and autumns (December to April) The growing season varies from 6 to 10 months in these regions The pasture is dominated by improved pastures and the production of fodder crops allow for much higher stocking rates.

Feedlots

Feedlots are mainly involved in feeding cattle in a confined area with cattle on feed mainly purchased from other producers. Cattle are fed sorghum, wheat or barley based diets with roughage. It has been estimated that 2.8 million head were grown in a feedlot in 2015 which is 29% of adult slaughtering. Feedlots vary in size from 2,000 head to 40,000 head. Cattle are fed a grain plus protein meal, typically for 80 to 150 days and have an exit weight between 400 and 600 kg. The

feedlot industry typically supplies quality beef for the Japan Ox, Korean and Domestic markets.



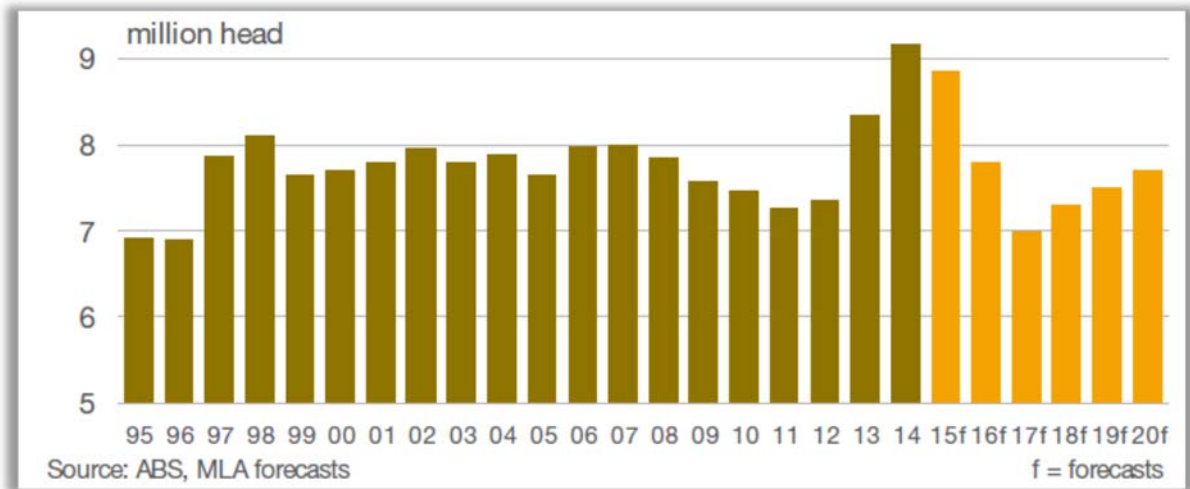
8. The processing sector

The Australian beef processing sector processes cattle for Australian and International customers. The industry processes 7.0 million to 9.1 million cattle per year and sends this meat to over 120 countries. The key markets for Australian beef in 2015 are listed in Table 3, with the domestic, US and Japan being the dominant markets. The slaughter numbers peaked in 2014 and 2015 due to the droughts in Queensland (Figure 7). This is likely to result in a decline in numbers processed in the following years.

Table 3. The volume and estimated number of cattle processed for Australia's key beef markets in 2015 (ABARES 2016)

Destination	Volume (tonnes '000, sw)	Percent	Estimated number cattle
Australian domestic	491.2	28%	2,518,974
US	397.9	22%	2,040,513
Japan	293.8	17%	1,506,667
Korea	150.9	8%	773,846
China	124.6	7%	638,974
Middle east	59.8	3%	306,667
Indonesia	53.1	3%	272,308
Taiwan	36.4	2%	186,667
Philippines	34.4	2%	176,410
Malaysia	13.1	1%	67,179
Thailand	5.4	0.3%	27,179
Other	118	7%	603,077
Total	1,778		9,118,974

Figure 7. Cattle processed in the 1995 to 2014 period and the forecast numbers for the 2015 to 2020 period in Australia



The Australian beef processing sector employ the latest technologies to ensure continued improvement in production efficiency without sacrificing high levels of meat safety. The Australian beef industry strives to maintain its international reputation as a leader in food safety and quality. This commitment is backed by Australian government regulations and industry quality assurance (QA) programs (MLA 2016).

All Australian export beef processing and packing plants are regulated by the Australian government through the Australian Quarantine and Inspection Service (AQIS). AQIS is certified by the U.S. Department of Agriculture (USDA), the Canadian Food Inspection Agency (CFIA) and the Mexican Secretaria de Agricultura, Ganaderia, Desarrollo Rural, Pesca y Alimentacion (SAGARPA) to inspect and regulate Australian export beef for the North American market.

As one of the world’s largest red meat exporters, the Australian red meat industry continually strives to maintain the highest standards worldwide. In today’s demanding world marketplace, accountability and state-of-the-art HACCP-based food safety systems are essential to producing safe meat and earning consumer confidence. Australian beef producers and processors are committed to HACCP and delivering the safest meat possible to Australians and to consumers in over 120 countries throughout the world. More information about Australia’s meat safety systems and standards are available at www.safemeat.com.au.

Figure 8. Typical beef chiller in an Australian Abattoir.



9. Live exports

Live exports became a significant trade for the northern Australian beef industry in the early to mid-1990s, encouraged by a growing feedlot industry in South-East Asia, particularly in Indonesia and the Philippines. In recent years Indonesia continues to be the dominant live export market (Figure 9). The number of cattle exported live has also significantly increased in the 2013/14 and 2014/15 year periods (Figure 10).

Generally, farm businesses with the greatest reliance on the sale of live export cattle are located in the far northern and west of northern Australia. Farm businesses located relatively close to the live export ports of Darwin, Broome, Wyndham and Port Hedland derived more than 70 per cent of their total beef cattle receipts from sale of cattle for live export, on average, in the three years ending 2010–11. Businesses in the south of the region and in QLD generally, are far less reliant on live export sales (Gleeson et al. 2012). This region contains around 1,500 farm businesses.

Figure 9. Live export cattle by destination for the 2013 to 2015 period (MLA 2016)

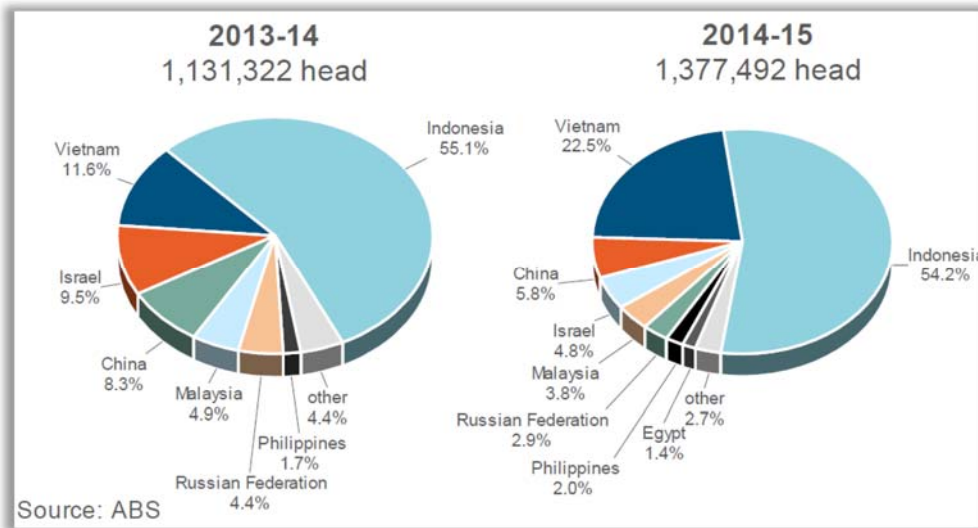
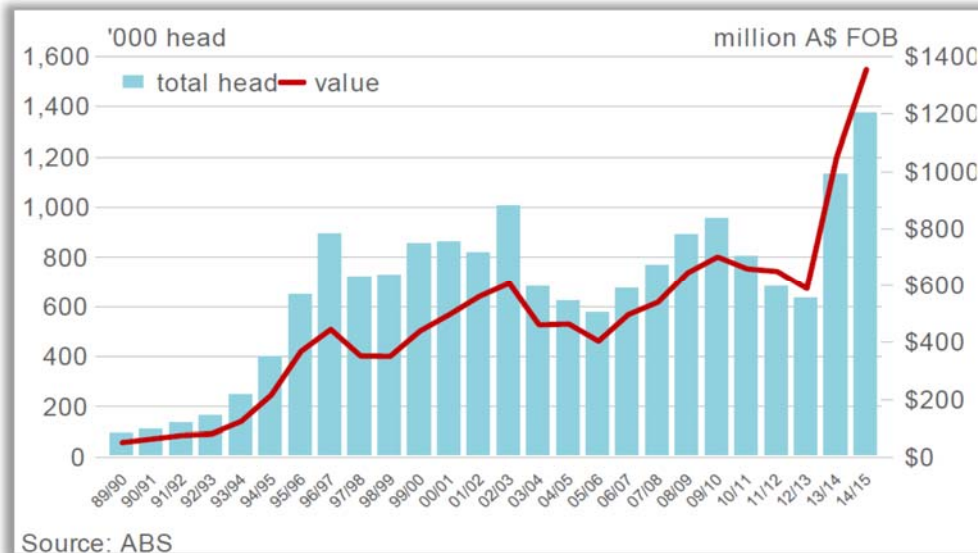


Figure 10. Total live exports from Australian over 1989 to 2015 year period (MLA 2016)



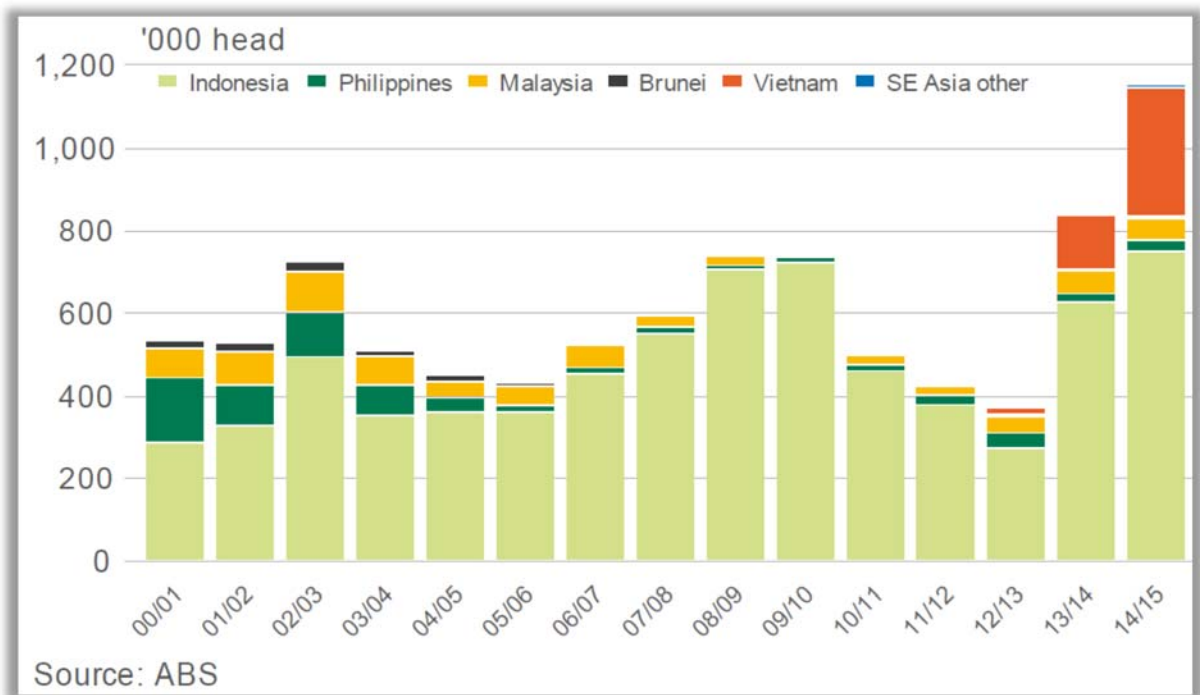
Indonesia has been the largest market for feeder and slaughter cattle from northern Australia for the past 15 years. Live cattle exports to Indonesia peaked at close to 700,000 head in 2008–09. However, from January 2011 the Indonesian government began to implement the policy of targeting 90% self-sufficiency in beef production by 2014 and imposed weight limits and quotas on live cattle, and quotas on boxed beef imports. The desire to achieve self-sufficiency in meat production has been Indonesian government policy since 2000, with the target completion date of 2005 postponed firstly to 2010 and then to 2014. Implementation of the policy has put pressure on the future of beef producers in the northern live export region. Enforcement of a 350-kilogram weight limit and imposition of an import quota by the Indonesian government contributed to exports falling to 456,000 head in 2010–11.

In addition to the reduction in Indonesian imports, animal welfare concerns pose a serious risk to the live cattle trade. Video footage taken by animal welfare activists of animal cruelty in a number of Indonesian abattoirs, which was broadcast on Australian national television and social media, led to a public outcry against the live export trade and temporary suspension, on 8 June 2011, of export to Indonesia of all livestock for slaughter. In response, the Australian government implemented a

through-chain animal welfare assurance framework that ensures all Australian livestock exported for feeder or slaughter is treated at or above World Organisation for Animal Health standards. The supply chain assurance regulations applied to Indonesia when trade resumed in July 2011.

The Indonesian quota was further reduced for 2012 and exports declined to 375,000 head in 2011–12. Exports to Indonesia increased to approximately 750,000 head in 2014/15, due to an increase in quota’s over this period. The decision to allow the importation of Indian buffalo meat into Indonesia in mid-2016 is likely to have a negative impact on demand from Australia. The likely impact of this decision is not fully understood. Vietnam has also commenced importation of larger numbers of live cattle in the 2012 to 2015 period, further increasing the live exports into south east Asia (Figure 11).

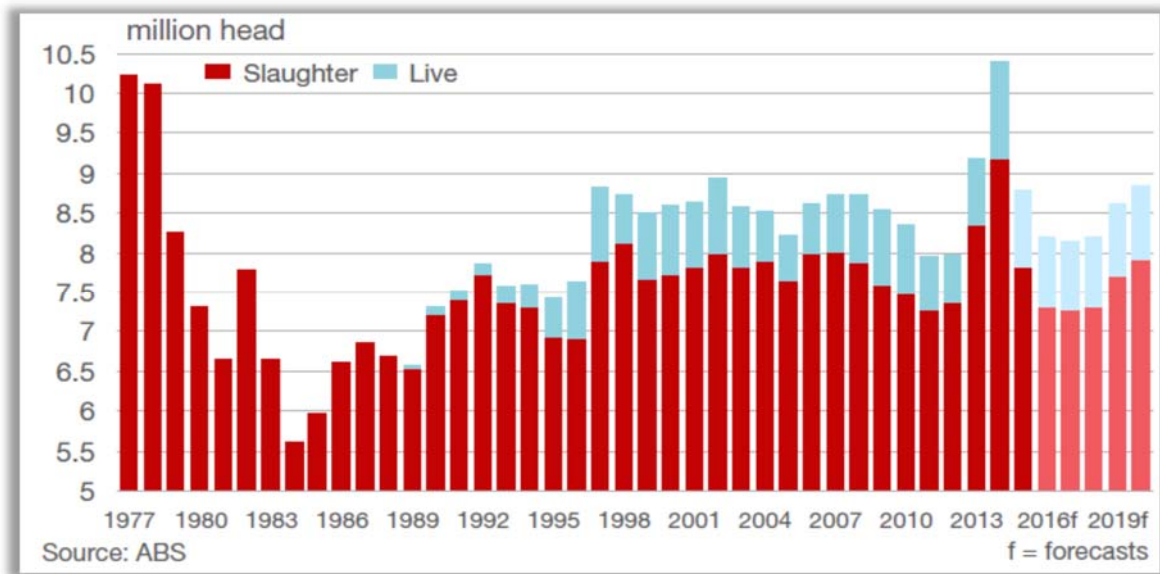
Figure 11. The cattle exported to SE Asian customers in the 2000 to 2015 year period.



10. Beef supply and consumption

The annual supply or turnoff of cattle within Australia can be split into slaughter cattle for beef and live export cattle. The cattle turnoff in 2015 was in the order of 8.7 million head, down from over 10 million head in 2014 (Figure 12). There were 7.6 million cattle slaughtered in 2015 and 1.1 million cattle exported live. This supply is expected to decline further from 2016 to 2018 and strengthen in the years following this (MLA 2016). The key markets for Australian beef is listed in Table 3 and the key markets for Australian live cattle are listed in Figure 9.

Figure 12. The turnoff from the Australian herd split into slaughter and live export cattle for the 1977 to 2015 and forecast until 2020 (MLA 2015)



Beef consumption in Australia has been declining over the past 3 years to 2015 (Figure 13), with consumption in 2015 averaging 664,000 tonne carcass weight. This is in spite of the fact that the growth in GDP is expected to average 3% from the 2015 to 2019 period, and the Australian population is growing by 1.4% per year in 2015 (to 23.7 million people in 2015). The decline in consumption is a result of strong beef prices, relative to other meats (Figure 14) and a decline in real net disposable income per capital, which is likely to have an impact on discretionary spending (MLA 2016).

Figure 13. Beef consumption in Australia over the 1988 to 2015 period and forecast to 2020 (MLA 2016)

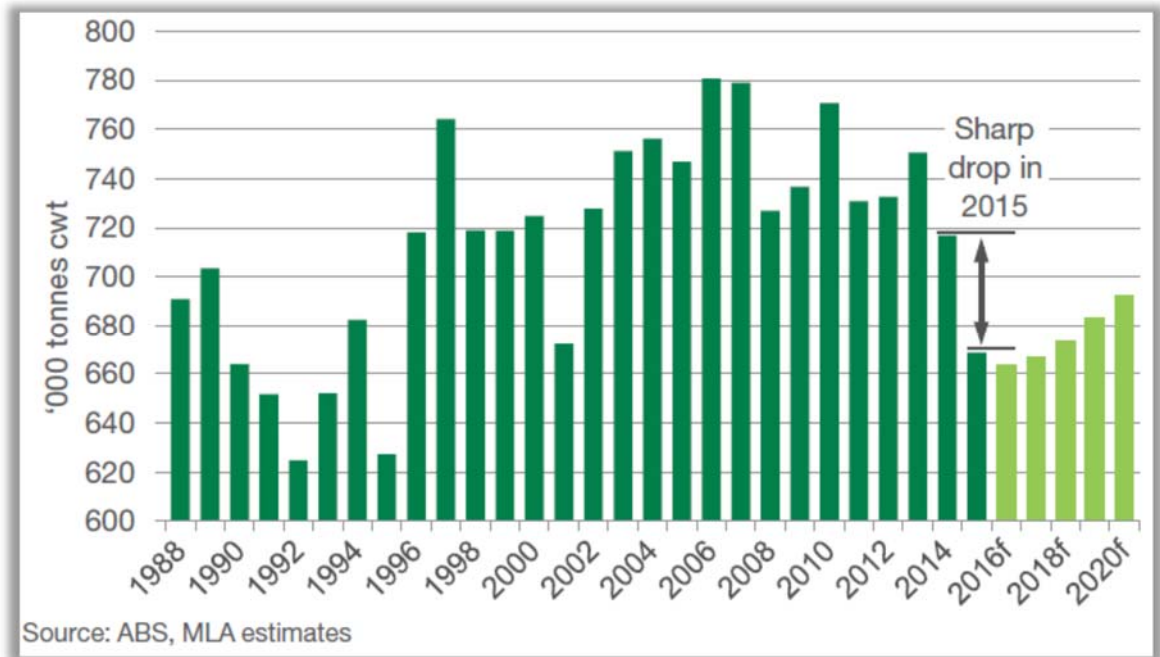
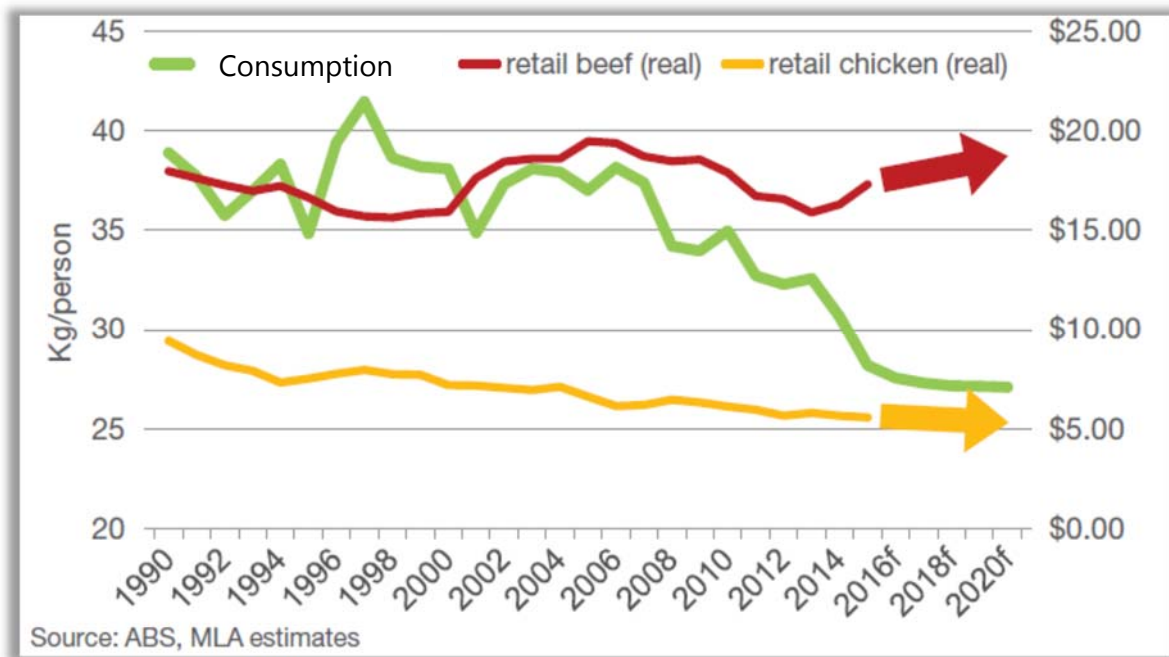


Figure 14. Beef consumption per capita and retail beef and chicken prices per kg (MLA 2016)



The supply of cattle for beef and live exports has been forecast to decline or at least not increase in 2016 to 2018 period (Figure 12). Demand for live export cattle has been increasing (Figure 11). There is strong demand for beef in the domestic and international markets. As a result of the decline in supply and yet a strong demand, the cattle prices have increased (Figure 15). The rising price has impacted domestic consumption and will also impact demand from international markets for Australian beef and live cattle. These factors plus the low exchange rate suggest cattle prices in Australia will remain strong for the next 3 years and the export volumes will decline until 2018.

The factors that will impact demand and cattle prices over the next 3 years include;

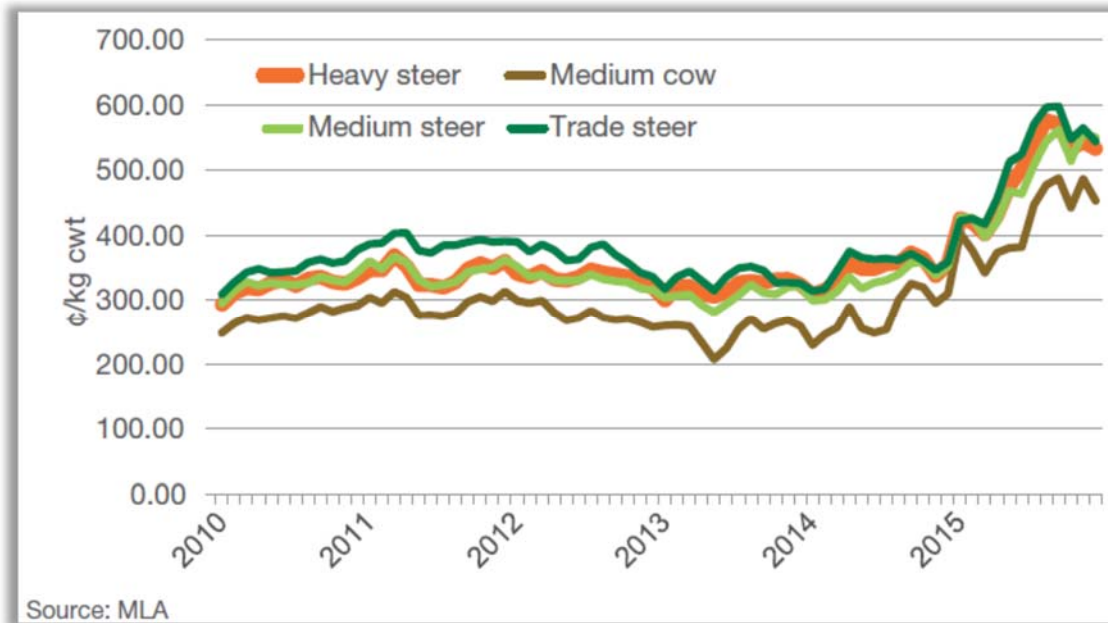
- A further fall in the US cattle prices
- The impact of the Indian Buffalo meat’s importation into Indonesia on the demand for feeder cattle from Australia
- Demand for live cattle from China. Live export of cattle to China is expected to increase the demand for Australian cattle in China. This would be a move away from processing in Australia to live export from Australia.
- Exchange rate of the Australian Dollar
- The seasonal conditions over the next 12 months in Australia
- Tariff reductions in Korea and China may reduce the barriers to trade

The likelihood of live exports to China and strong demand for live export cattle into Vietnam is expected to more than compensate for the decline in demand for live cattle from Indonesia. If this is the case, there will be an increase in number of cattle exported live and a decline in number of cattle processed in Australia and shipped overseas. Although, 90% of the cattle are slaughtered in Australia and either consumed or exported as beef; these markets are relatively stable, suggesting minimal change in the structure of the Australian beef industry.

Cattle prices

Prices across most categories of cattle have been increasing during 2015 (Figure 15) and are likely to increase further in 2016. This is a function of the tight availability of cattle, the low exchange rate and firm prices for key export markets, including the US, Japan and Korea. The tight availability of cattle is a result of the decline in herd numbers due to the droughts through QLD and NSW over the 2013 to 2015 period, which have resulted in a decline in the Australian herd numbers and after recent scattered rain there is strong demand for store and breeding cattle.

Figure 15. The national sale yard cattle prices for Australia over the 2010 to 2015 (MLA 2016)



11. International trade with Asia

11.1 Beef Exports to Asia

The beef trade to Asia includes live cattle and either chilled or frozen beef. The volume, estimated cattle number contributing to this volume, and cattle exported live for the key Asian destinations are listed in Table 4 in descending order of volume. Japan, Korea, Indonesia and China are the key markets for Australian beef in Asia in 2015. Of the total 8.7 million head of cattle turned off in Australia in 2015, 50% of these were destined for Asia. The Indonesia and China markets accounted for about 8% of the Australian production each.

Table 4. The beef, estimated cattle numbers as beef and live cattle exports to Asia in 2015 (ABARES 2016)

Destination	Chilled and box beef		Live export cattle to Asia	Total sold by destination
	Vol. (t '000, sw)	Est. No. cattle		
Japan	293.8	1,506,667	-	1,506,667
Korea	150.9	773,846	-	773,846
Indonesia	53.1	272,308	443,960	716,268
China	124.6	638,974	75,238	714,212
Philippines	34.4	176,410	21,774	198,184
Taiwan	36.4	186,667	-	186,667
Vietnam	-	-	129,090	129,049
Malaysia	13.1	67,179	38,870	106,049
Thailand	5.4	27,692	8,200	35,892
Total	712	3,649,744	717,132	4,366,876

11.2 Protocols and tariffs to trade live cattle in Asia

There are a range protocols and tariffs to trade live cattle in Asia. The tariffs are complex and constantly changing, and vary between countries, class of cattle and cuts of beef. A high level overview of the price tariffs in 2015 is summarised in Table 5 and the range in tariffs for beef and carcasses is based on the products (e.g. bone in and bone out). Thailand, China and Vietnam have the greatest tariffs for beef and carcasses and China has the greatest tariffs for live animals.

Under the China/Australia Free Trade Agreement the tariffs for beef will be phased down to zero by 2024. Although this is the case, there is a clause in the agreement that allows increases in customs duties once the volume of exports of beef to China exceeds 170,000 tonnes. The volume in 2013/14 was 161,000 tonnes so it is likely the volumes will exceed the threshold in 2014/15 and additional custom duties will be applied. Therefore, the value of the FTA will be diluted to a large extent. China and Vietnam are the key markets where there is likely to be an increase in demand for beef and live animals from Australia. These markets currently have high tariffs.

Table 5 The importation tariffs for imports of Beef and carcasses and live animals into key Asian markets.

	Beef and Carcasses		Live Animals	
	Frozen	Fresh	Slaughter/Feeder	Breeding
Vietnam	12% - 20%	14% - 30%	2.5%	5%
Indonesia	5%	5%	2.2%	3.3%
Philippines	10%	10%	3%	1%
China	16.3% - 25%	12%	5%	10%
Thailand	50%	50%	2.5%	5%
Malaysia	0%	0%	0%	0%

Other protocols include the requirement for export standards in Australia, tractability through the live export process, disease protocols, hormonal growth promotants exclusion, quarantine requirements and slaughter requirements. A summary of these requirements for live cattle exports has been presented in table 6. The key requirements of the Australian government are the exporters compliance with the Australian Standards for the Export of Livestock (ASEL) and the implementation of the Exporter Supply Chain Assurance System (ESCAS) to ensure individual tractability of these cattle through the value chain. Individual countries then have their own requirements as listed in table 6.

Table 6. Other protocols for Australian cattle live exported to key Asian markets

Market	Class	Requirements	Pre export treatment	Treatment in destination country
China – North	Feeder - northern Australia	<ul style="list-style-type: none"> • No HGP's • Not detectably pregnant (ASEL) • No cull animals • ASEL rejection criteria • No signs of infectious disease, visibly free of external parasites and fit to travel 	<ul style="list-style-type: none"> • 3 months on farm origin • 7 day quarantine • Australian Standards for the Export of Livestock (ASEL) • Parasite treatment 	<ul style="list-style-type: none"> • Feeder cattle – processed in 3mth • Exporter Supply Chain Assurance System (ESCAS)
China – North	Slaughter - northern Australia	<ul style="list-style-type: none"> • No HGP's • Not detectably pregnant (ASEL) • No cull animals • ASEL rejection criteria • No signs of infectious disease, visibly free of external parasites and fit to travel 	<ul style="list-style-type: none"> • 3 months on farm origin • 7 day quarantine • Parasite treatment • ASEL 	<ul style="list-style-type: none"> • Slaughter cattle – processed in 14 days • ESCAS
China – South	Feeder - northern Australia	<ul style="list-style-type: none"> • Not allowed 		
China – South	Slaughter – northern Australia	<ul style="list-style-type: none"> • No HGP's • Not detectably pregnant (ASEL) • No cull animals • ASEL rejection criteria • No signs of infectious disease, visibly free of external parasites and fit to travel 	<ul style="list-style-type: none"> • 3 months on farm origin • 60-day quarantine in BTV free zone and test • Parasite treatment • ASEL 	<ul style="list-style-type: none"> • Slaughter cattle – processed in 14 days • ESCAS
China – North	Feeder – southern Australia	<ul style="list-style-type: none"> • No HGP's • Not detectably pregnant (ASEL) • No cull animals • ASEL rejection criteria • No signs of infectious disease, visibly free of external parasites and fit to travel 	<ul style="list-style-type: none"> • 3 months on farm origin • 7 day quarantine • Parasite treatment • ASEL 	<ul style="list-style-type: none"> • Feeder cattle – processed in 3mth • ESCAS

China – North	Slaughter – southern Australia	<ul style="list-style-type: none"> • No HGP’s • Not detectably pregnant (ASEL) • No cull animals • ASEL rejection criteria • No signs of infectious disease, visibly free of external parasites and fit to travel 	<ul style="list-style-type: none"> • 3 months on farm origin • 7 day quarantine • Parasite treatment • ASEL 	<ul style="list-style-type: none"> • Slaughter cattle – processed in 14 days • ESCAS
China - South	Feeder – southern Australia	<ul style="list-style-type: none"> • No HGP’s • Not detectably pregnant (ASEL) • No cull animals • ASEL rejection criteria • No signs of infectious disease, visibly free of external parasites and fit to travel 	<ul style="list-style-type: none"> • 3 months on farm origin • 30 day quarantine and test • Parasite treatment • ASEL 	<ul style="list-style-type: none"> • Feeder cattle – processed in 3mth • ESCAS
China – South	Slaughter – southern Australia	<ul style="list-style-type: none"> • No HGP’s • Not detectably pregnant (ASEL) • No cull animals • ASEL rejection criteria • No signs of infectious disease, visibly free of external parasites and fit to travel 	<ul style="list-style-type: none"> • 3 months on farm origin • 7 day quarantine • Parasite treatment • ASEL 	<ul style="list-style-type: none"> • Slaughter cattle – processed in 14 days • ESCAS
Indonesia	Feeder	<ul style="list-style-type: none"> • Maximum 350 kg • ASEL pregnancy requirements – not pregnant • ASEL rejection criteria • No signs of infectious disease, visibly free of external parasites and fit to travel 	<ul style="list-style-type: none"> • ASEL • Parasite treatments 	<ul style="list-style-type: none"> • 2 months on feed minimum (rec.) • ESCAS
Indonesia	Productive heifers	<ul style="list-style-type: none"> • ASEL pregnancy requirements (not within third trimester) • ASEL rejection criteria 	<ul style="list-style-type: none"> • ASEL • Testing • Vaccinations • Parasite treatments 	

		<ul style="list-style-type: none"> • No signs of infectious disease, visibly free of external parasites and fit to travel 		
Vietnam	Feeder and slaughter	<ul style="list-style-type: none"> • ASEL pregnancy requirements – not pregnant • ASEL rejection criteria • No signs of infectious disease, visibly free of external parasites and fit to travel 	<ul style="list-style-type: none"> • ASEL • Parasite treatments 	<ul style="list-style-type: none"> • ESCAS
Malaysia	Feeder and slaughter	<ul style="list-style-type: none"> • ASEL pregnancy requirements – not pregnant • ASEL rejection criteria • No signs of infectious disease, visibly free of external parasites and fit to travel 	<ul style="list-style-type: none"> • ASEL • Parasite treatments 	<ul style="list-style-type: none"> • ESCAS
Malaysia	Breeder	<ul style="list-style-type: none"> • ASEL pregnancy requirements (not within third trimester) • ASEL rejection criteria • No signs of infectious disease, visibly free of external parasites and fit to travel 	<ul style="list-style-type: none"> • ASEL • Testing • Vaccination • Parasite treatment 	
Philippines	Feeder	<ul style="list-style-type: none"> • ASEL pregnancy requirements – not pregnant • ASEL rejection criteria • No signs of infectious disease, visibly free of external parasites and fit to travel 	<ul style="list-style-type: none"> • ASEL 	<ul style="list-style-type: none"> • ESCAS

Philippines	Breeder	<ul style="list-style-type: none"> • ASEL pregnancy requirements (not within third trimester) • ASEL rejection criteria • No signs of infectious disease, visibly free of external parasites and fit to travel 	<ul style="list-style-type: none"> • ASEL • Testing • Vaccination • Parasite treatment 	
Thailand	Feeder and slaughter	<ul style="list-style-type: none"> • ASEL pregnancy requirements – not pregnant • ASEL rejection criteria • No signs of infectious disease, visibly free of external parasites and fit to travel 	<ul style="list-style-type: none"> • ASEL • Parasite treatments 	<ul style="list-style-type: none"> • ESCAS
Cambodia	Feeder and slaughter	<ul style="list-style-type: none"> • ASEL pregnancy requirements – not pregnant • ASEL rejection criteria • No signs of infectious disease, visibly free of external parasites and fit to travel 	<ul style="list-style-type: none"> • ASEL • Parasite treatments 	ESCAS

11.3 Australian’s capacity to contribute to the Asian regional trade

Australia has significant capacity to contribute to the Asian regional trade, in live cattle and beef. This is well beyond the current large proportion of supply of Australia’s beef production, as live cattle, to be value added as quality beef for consumption in the Asian region.

The Australia beef industry has capacity to work with Asian countries to increase local production and supply of beef through;

- Supply of additional female and male breeding cattle
- Supply of highly productive genetics to increase production in specific value chains and environments
- Supply of additional grower cattle to be value added in feedlots
- Supply of additional types of cattle to be value added

Similarly, the Australian government and beef industry has developed technology and production systems that have the capacity to improve production, quality, tractability and disease management. This could include;

- Animal identification systems and traceability
- Disease surveillance
- Research and Development support (MLA, ACIAR, DFAT)
- Genetic diversity
- Cattle production technology
- Support Industry development (e.g. ACIAR, DFAT, MLA)

There is also the capacity and government programs within Australia, to invest in the productions systems within Asian countries. This could include;

- Private JV partnerships (Wellards, CPC)
- Government investment in industry development (ACIAR, MLA, others)
- ESCAS training, animal welfare training, etc.

References

- ABARES (2015). Agriculture.gov.au, *ABARES Outlook 2015: Record year forecast for beef and lamb exports*. [online] Available at: <http://www.agriculture.gov.au/abares/media-releases/2015/beef-lamb> [Accessed Aug. 2016].
- ABARES (2013). Agriculture.gov.au, *ABARES Outlook 2015: Record year forecast for beef and lamb exports*. [online] Available at: <http://www.agriculture.gov.au/abares/media-releases/2013/beef-lamb> [Accessed Aug. 2016].
- ABS (2015). Abs.gov.au. *7218.0.55.001 - Livestock and Meat, Australia, Jun 2016*. [online] Available at: <http://www.abs.gov.au/ausstats/abs@.nsf/mf/7218.0.55.001> [Accessed 20 Aug. 2016].
- Cattle Council of Australia (2015). Beef 2015 & beyond, *National strategies for the Australian Grassfed Beef Sector*, Available at: <http://www.cattlecouncil.com.au/assets/documents/Beef%202015%20and%20beyond.pdf>
- Cummings, B (2007). Primefact 623. *Cattle Breed Types*, NSW DPI. Available at: http://www.dpi.nsw.gov.au/__data/assets/pdf_file/0003/148080/Cattle-breed-types.pdf
- Gleeson, T, Martin, P & Mifsud, C (2012). Northern Australian Beef Industry: Assessment of risk and opportunities, *ABARES report to client prepared for the Northern Australian Ministerial Forum*, Canberra, May. Available at: <http://industry.gov.au/ONA/Reports-and-publications/Documents/20120621-abares-final-report.pdf>
- Martin, P, Phillips, P, Leith, R & Caboche, T (2012). ABARES, *Australian beef Financial performance of beef cattle producing farms, 2010–11 to 2012–13*, Research by the Australian Bureau of Agricultural and Resource Economics and Sciences.
- MLA (2016) Australian-meat.com. *Processing of Australian Beef*. [Online] Available at: http://www.australian-meat.com/Foodservice/Proteins/Beef/Processing_Australian_Beef/ [Accessed Aug. 2016]
- ProAnd (2016) Meat and Livestock Australia publication. *Regulatory costs in the red meat and livestock industries*. Available at: <http://www.mla.com.au/files/6ab25235-91dc-47a2-ad5f-a62f00abbc33/Final-June-2016-ProAnd-Assoc-Regulatory-Costs-Report.pdf>
- Thomas, B (2015) Meat and livestock Australia. *Australian Cattle – Industry projections 2015*, [Online] Available at: <http://www.mla.com.au/Prices-markets/Trends-analysis/Cattle-projections> [Accessed Aug. 2016]
- Thomas, B (2016) Meat and livestock Australia. *Australian Cattle – Industry projections 2016*, [Online] Available at: <http://www.mla.com.au/Prices-markets/Trends-analysis/Cattle-projections> [Accessed Aug. 2016]
- USDA (2015) Fas.usda.gov. *Beef And Cattle | USDA Foreign Agricultural Service*. [Online] Available at: <http://www.fas.usda.gov/commodities/beef-and-cattle> [Accessed Aug. 2016]