



AUSTRALIAN MEAT PROCESSOR CORPORATION
FUTURE SCAN

2ND EDITION 2015



McKINNA *et al*
Strategic Insight
Global Outlook

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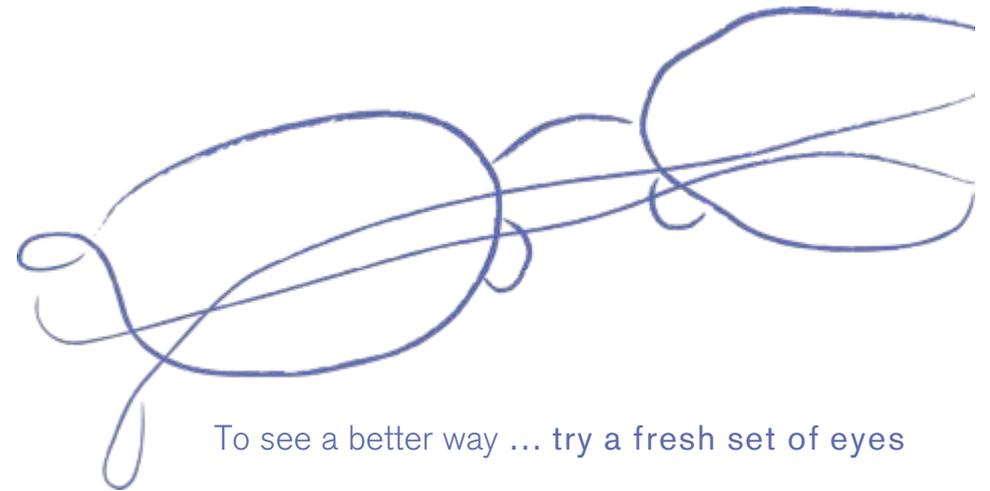


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PART A: INTRODUCTION

This document presents a summary of issues in the operating environment that have the potential to impact the future of AMPC and its members



About this document

This AMPC future scan is the organisation's second edition. The first edition termed 'Environmental Scan' was produced in 2012.

The purpose of the scanning exercise is to inform the development of a 10 year strategic plan. The future scan provides an overview of the macro, uncontrollable environmental factors that have the potential to impact the Australian red meat processing sector in coming years and as such, should be considered in the organisation's strategy.

This edition of the scan introduces some new features, including a risk profile for each section of the report plus a scenario analysis that scopes out a range of hypothetical situations that the Australian red meat processing sector might experience over the next decade.

The use of the PESTEL research framework (explained next page) to structure the plan, necessarily results in a significant amount of repetition as often the same issues impact a number of parts in the supply chain, on both the supply and demand sides. This duplication is required in order to provide a comprehensive summary of the issues.

The future scan is not intended to be a rigorous academic study or literature review. It is intended to stimulate thinking and visioning. It draws on industry opinion; the extensive meat sector project experience of the consultants; the collective wisdom of participating AMPC board members and staff; anecdotal knowledge; as well as a distillation of data from an array of industry and external sources.

Methodology

What is a future scan?

A future scan is the McKINNA *et al* term for an environmental scan. The intent of this future scan is to identify external or uncontrollable factors that are likely to impact the Australian red meat industry over the horizon of the forthcoming strategic plan. These factors are what former US Defence Secretary Donald Rumsfeld famously termed the “*known unknowns*.”

In developing the future scan, the authors have applied a PESTEL framework to the research and analysis. The PESTEL framework enables examination of the issues in every part of the scan through the following lenses:

Political	Local, state, federal, global and industry politics and policy influences
Economic	Micro and macro economic factors
Social	Impact of demographic, social, cultural, lifestyle, values and behaviours trends
Technological	Impact of current and future technology developments
Environmental	Factors impacting the natural environment
Legal	Impact of local, state, federal and global regulations and protocols

The future scanning process begins by scanning relevant databases to identify factors that will impact the red meat industry, guided by the above headings. The approach taken in this report is to divide the scan into two basic streams - ‘Demand’ and ‘Supply.’

“It is always wise to look ahead, but difficult to look further than you can see”

Winston Churchill

At the next level, the 'Supply' factors have been analysed along a supply chain line, breaking down the information into the key links: On-farm, Processing, Value-adding and Supply Chain.

The 'Demand' section is broken down into the 'Domestic' and 'Export' market sub-sections.

Each section of the PESTEL analysis identifies the risk profile and flags implications for the Australian red meat processing industry.

To set the scene and provide important context, Section 1 of the future scan begins with a high level assessment of the ten 'mega trends' impacting the industry.

PART B: MEGA TRENDS

The 10 megatrends that will define the face of the Australian red meat industry over the next five years bring both opportunities and challenges



Section 1 | Ten mega trends impacting Australian meat processing

Megatrend 1: Sustainability demands increase

Increasingly, agrifood businesses at every level of the supply chain will be required to demonstrate and provide evidence of their sustainability credentials. In the current environment, sustainability relates to the triple bottom line, so businesses now require Economic, Environmental and Social accountability. Economic viability is no longer the sole evaluative criteria of business performance; businesses must be also environmentally viable and socially responsible.

There are two major threats to sustainability - climate change and water. There will be increasing pressures on agribusinesses to reduce their carbon and water footprint. Pressures will come in the form of either regulations or incentives/penalties.

Megatrend 2: Provenance becomes more relevant

Consumers and customers now want to know where their food comes from and the story behind it. This includes where the food was grown, how it was grown, and where and how it was processed.

The growing interest in food provenance is being driven by a number of factors including: television programs such as Masterchef as well as retailer and consumer concerns about food safety, environmental sustainability and ethics.

Megatrend 3: Social licence is required to operate

Agri-food businesses and industries now need the blessing of the general public to operate. Social media and the hyper-connectivity

that it enables, provides individuals with a powerful tool to voice their concerns. Broadly speaking, social licence issues include: animal welfare, environmental sustainability, health and nutrition, ethical treatment of workers, fair trade and accountability as a corporate citizen. Businesses and industries must respond to and manage the social licence agenda. Society now expects and demands greater transparency.

Megatrend 4: Shift from commodities to brands

The consumer and customer desire to be informed about food provenance has provided the opportunity for meat processors to develop brands to target specific market segments with tailored value propositions. Progressively, the red meat industry is transforming from what once was essentially a commodity trading model to one where an increasing proportion of the product is sold under proprietary brands.

Processor branding strategies are becoming more sophisticated. Now specific value propositions, underpinned by integrity protocols, are being used to target narrow market segments. As processor brands become more prominent, there will be a reduced need for generic marketing.

Megatrend 5: Switch in market emphasis from domestic to global

Historically the market for red meat was split more or less equally between the domestic and export markets. This is now shifting, with a greater emphasis on exports. The switch is being driven by declining per capita consumption of red meat in domestic markets; and a growing demand for Australian meat from overseas,

particularly Asian markets. The ratio is now approximately 70:30 exports to domestic consumption.

Growth in export demand is being driven by the rapidly expanding Asian middle-class who is seeking quality, safe animal protein products. At the same time, the consumption in the domestic market is in long-term decline due to shifts in food preferences and eating styles, as well as a changing demographic structure. The increasing price gap between red meat relative to chicken and pork will continue to drive a decline in the domestic market.

Megatrend 6: Supply chains become more integrated

The Australian red meat industry is moving progressively to vertically integrated supply chains, facilitated either through equity ownership or strategic trading alliances such as closed-loop supply chains or branding agreements.

The historic trading model of buying livestock from sale yards and selling commodities on an entirely opportunistic basis is shifting to one where interlinked supply chains and supply agreements prevail.

Megatrend 7: Viability of the family farm model declines

The bulk of red meat supply has traditionally come from a vast number of small family farms. There are increasing threats to the viability of these family farms, many of which are only marginally profitable due to their lack of scale, high levels of capitalisation and debt, reluctance to embrace new ideas to improve productivity and rising land prices. Overarching this is a transition time bomb as the majority of farmers approach retirement age without a business transition plan. Because of rising input costs, farms need to increase scale just to maintain incomes and the successful operators are

expanding. But high land costs and high levels of debt make expansion difficult for many. In many areas, these small commercial farms are now transitioning into lifestyle farms and this land is being lost to livestock production altogether.

Megatrend 8: Corporatisation and foreign investment increase

In contrast with the declining small scale family farm model, is a trend towards farm corporatisation. Corporatisation is being driven by investment from: superannuation schemes and high net worth individuals who see an opportunity in agriculture; processors seeking to vertically integrate to protect their supply chains; sovereign funds seeking food security; foreign investors seeking supply for their own outlets; and large family farming enterprises who are embracing corporate business models. Increased corporatisation is occurring at every link in the supply chain.

Megatrend 9: Market access tactics change

Recently negotiated FTAs are likely to shift the market access agenda. While, officially, trade appears to be opening up, this is being countered with increased technical trade barriers. Although the recently negotiated FTAs will assist Australia's price competitiveness, it does not necessarily mean that market access is assured. Increasingly, technical trade barriers, based largely on biosecurity matters, are blocking market access. Sometimes these barriers are politically motivated. Technical trade barriers are highly bureaucratic and time-consuming and very frustrating to manage. Often they involve much wasted effort attempting to validate information in response to a politically motivated demand.

A related issue is that the trade regulations in Australia's largest export market are not being enforced, which is putting Australia at a competitive disadvantage.

Megatrend 10: Power of technology and big data grows

Rapidly evolving digital technology provides unlimited opportunities for data mining beyond seamless supply chain traceability. RFID enabled technology gives processors the means of sophisticated data collection to better understand market behaviour; provide feedback to producers; benchmark performance and more. The aggregation of multisource databases and the ability to apply algorithms to multiple data sets provides potent tools that could be applied widely across the red meat sector.

PART C: OVERVIEW OF THE AUSTRALIAN RED MEAT INDUSTRY

While it would appear that the red meat sector is booming, global competitiveness and the ability to maintain supply could slow momentum



Section 2 | Australian red meat industry snapshot

2.1 Australian beef industry

DOMESTIC BEEF PRODUCTION			
	2014	2015 FY	2020 FY
Total cattle ('000)	28,456	26,800	27,900
% Change	-2.9%	-8.5%	-2.0%
Slaughter ('000)	9,914	8,830	8,400
% Change	8.8%	-10.5%	-15%
Total production cwt	2,595	2,286	2,229
% Change	9.5%	-11.3%	-14%

Source: MLA statistics database

Production highlights

- Herd numbers are expected to hit a 20 year low in 2015, rebuilding through to 2020, assuming average conditions.
- Slaughter levels to fall by 11% in 2015, although still strong.
- Production constrained by 5 year herd building priorities despite strong world demand.

DOMESTIC BEEF CONSUMPTION			
	2014	2015 FY	2020 FY
Total (cwt)	660	610	612
% Change	-6.9%	-8.0%	-14%
Per capita (kg cwt)	27.6	25.9	-22%
% Change	-0.7%	-5.7%	-15.0%

Change = 2020 growth versus 2014

Consumption highlights

- Restricted supply and increased global demand are driving prices up which is curbing local demand and underpinning a shift to lower value cuts, particularly in the food service channel.
- Beef remains the main meat protein consumed domestically, although changing demographic mix in Australia will bring changing protein preferences, which will on balance further reduce per capita consumption.

BEEF EXPORTS			
	2014	2015 FY	2020 FY
Live Cattle ('000 head)	1294	990	950
% Change *	52%	-23%	-27%
Beef (MT '000 swt)	1,290	1,150	1,100
% Change *	-0.7%	-5.7%	-15.0%

BEEF EXPORTS BY MARKET			
Export by market (MT '000) **	2014/15	2019/20	% Change
USA	283	300	6%
Japan	260	220	-15%
Korea	135	150	11%
China	135	170	26%
Indonesia	52	60	17%
TOTAL	1,045	1,093	5%

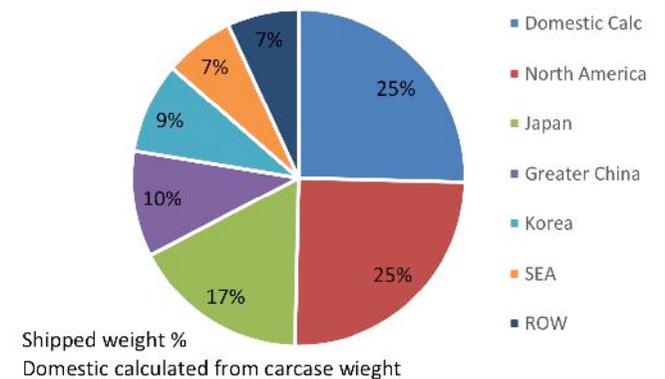
Change = 2020 growth versus 2014

Source: Export by market Weeks Report 2014

Export market highlights

- In 2014, 74% of Australian beef production was exported. The proportion exported has been gradually creeping higher over the past decade i.e. from 62% in 2003, to 69% in 2013, however, given the strong international fundamentals, it is anticipated that this percentage will at least hover around 70% for the coming years.(Thomas, 2015)
- Live exports are likely to be restricted by supply through to 2020 as northern Australia recovers from drought. However, Indonesian trading challenges may alter this.
- Beef exports will be constrained by supply to 2017 then should increase as herds expand.
- 2014 saw record exports driven by US and Chinese demand for beef and Indonesian demand for live cattle.

Distribution of Australian Produced Beef & Veal 2014



Source: MLA statistics database

- Economic market access is set to improve with the implementation of the Korean FTA, Japan EPA and the China FTA as well as easing of the Australian dollar. However, technical market barriers are likely to become more problematic.
- Regional geopolitics and the economic conditions are causing some uncertainty about the consistency of demand.

2.2 Australian sheepmeat industry

DOMESTIC SHEEP MEAT PRODUCTION			
	2014	2015 FY	2020 FY
Total sheep & lambs ('000)	71,630	69,800	71,000
% Change	-3.2%	-2.6%	-0.9%
Slaughter ('000)	32,337	27,037	31,300
% Change	+2.7%	-10.6%	+3.8%
Total production cwt	721	642	688
% Change	4.9%	-11%	7.2%

Change = 2019 growths versus 2014

Source: MLA statistics database

Production highlights

- Contraction of flock numbers is occurring due to drought in a number of production areas, together with a long term shift away from wool to cropping.
- The reduced breeding ewe flock is expected to impact negatively on lamb slaughter through to 2016, before a recovery through to 2019.
- Production constrained by 5 year flock building priorities, despite strong world demand.

DOMESTIC SHEEPMET CONSUMPTION			
	2014	2015 FY	2020 FY
Mutton Total (cwt '000)	11	9	10
% Change	10%	-22%	-7%
Lamb Total (cwt '000)	207	215	216
% Change	-5.9%	3.9%	4.3%
Mutton Per Capita (kg cwt)	0.5	0.4	0.4
% Change *	0.0%	-20.0%	-20%
Lamb Per Capita (kg cwt)	8.8	9	8.6
% Change *	-7.4%	2.3%	-2.3%

Source: MLA statistics database

Consumption highlights

- The domestic market is still the largest single sheepmeat market accounting for 42% of sales.
- Restricted supply and increased global demand has driven up prices, which is curbing local demand, particularly in the food service channel. This trend is likely to continue, at least until the flock rebuilds.
- MLA forecasts that lamb consumption will recover beyond 2015.

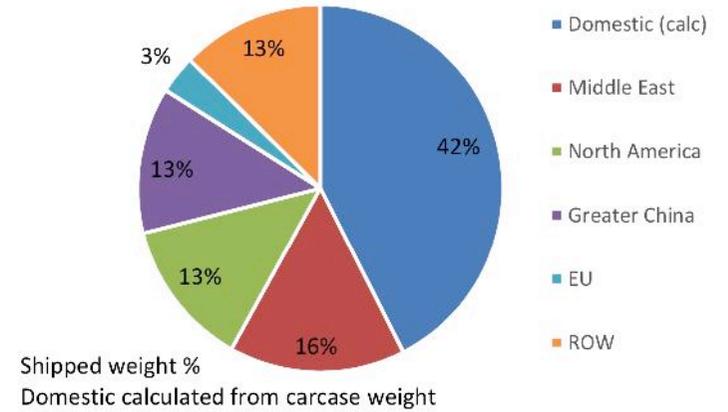
SHEEPMEAT EXPORTS			
Export ('000T cw)	Volume Estimate 2014	Volume Forecast 2019	% Change
Mutton	223	176	-21.1%
Lamb	280	285	1.8%
TOTAL	503	461	-8.30%

SHEEPMEAT EXPORTS BY MARKET					
Mutton Export ('000T swt)	Volume Shipped 2014	% Change	2014 Q1	2015 Q1	% Change
Middle East	52.8	29%	15.6	15.1	-3%
China	50.1	-14%	14.7	10	-32%
SEA	25.7	35%	6.5	7.1	9%
USA	13.3	52%	4.5	3.9	-13%
Taiwan	8.1	22%	2.1	1.8	-15%
ROW	36	-8%	10%	7%	-34%
Total	186	8%	53.4	44.5	-17%

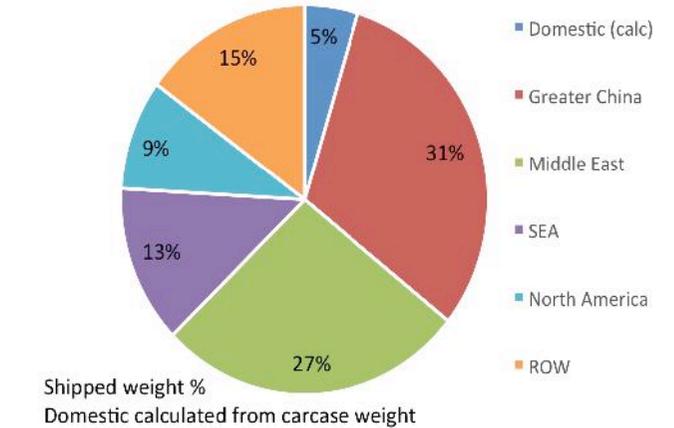
Source: (Thomas and Matthews, 2015)

Export highlights

Distribution of Australian Produced Lamb 2014



Distribution of Australian Produced Mutton 2014



Source: MLA statistics database

- Live sheep exports are set to build on the momentum from 2013 and 2014, with another year-on-year increase expected in 2015, largely assisted by demand from the Middle East. This trend is likely to continue for the remainder of the projection period (to 2019), assuming uninterrupted market access. This will put further pressure on supply.
- Lamb exports have grown by 1.8% in 2015 whilst mutton has declined by 21.1% due to reduced supply.
- The three biggest markets are Middle East, China and USA although SE Asia is significant and growing strongly.
- The proportion of sheepmeat production sold in the Australian market is forecasted to remain around 43% to 2019, down from levels above 50% prior to 2012. (Thomas and Matthews, 2015)

2.3 Australian goatmeat industry

GOATMEAT PRODUCTION					
	2004	2013	2014	YOY % Change	10 YR % Change
Slaughter ('000 head)	1128	2073	2129	2.7%	89%
Production ('000 tonnes cw)	17.2	31.7	32.9	4%	91%

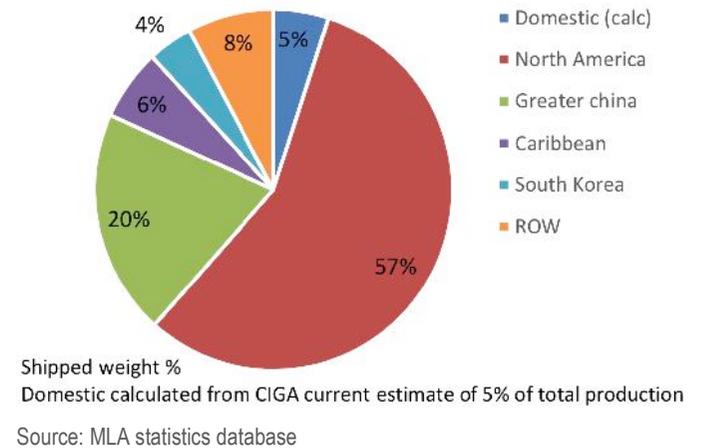
Source: (Mathews et al., 2015)

Production highlights

- The 2012 ABS survey of managed goat herds estimated goat numbers at 516,142. The wide distribution and the ability of goats to breed quickly in favourable conditions makes rangeland estimates difficult. In 2011 it the rangeland herd was estimated to be between 4 to 6 million head.
- Slaughter numbers have been increasing strongly over the last 10 years, driven by export demand, which accounts for 95% of production. Recent years of drought have also contributed to the move towards managed operations as opposed to opportunistic mustering.

GOATMEAT EXPORTS BY MARKET					
Goat meat Exports ('000 T sw)	2004	2013	2014	YOY % Change	10 YR % Change
Total	16.9	32.7	35.8	9.5%	112%
USA	8.75	15.48	19.09	+23%	118%
Taiwan	5.16	3.86	5.07	+31%	-1.7%
Caribbean	1.36	2.54	2.39	-5.9%	+75%
Canada	.98	1.9	2.22	+17%	+126%
South Korea	0	.93	1.52	+64%	
China	.14	4.74	1.11	-77%	296%

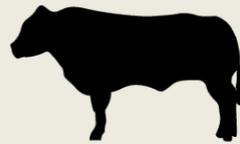
Distribution of Australian Produced Goatmeat 2014



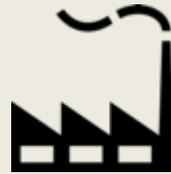
Export highlights

- Goatmeat is the number one meat consumed in the world. World goat meat production in 2011 was 5.1M tonnes and the global trade was estimated at only 1% of this at 55 000 tonnes. Australia has approximately 52% share and is the largest exporter. (Mathews et al., 2015)
- The largest consuming nations source goatmeat locally; consequently, Australia's key export markets are non-traditional goatmeat markets with a wide diversity of migrant goatmeat eating cultures, e.g. Hispanic cultures in the USA.
- 2014 saw strong growth in exports to the USA assisted by the weaker A\$. (GICA, 2015).

PART D: SUPPLY FACTORS



On farm



Processing



Value-adding



Supply chain





Section 3 | On-farm

There are a number of emerging short, medium and long term threats to livestock supply over the next decade including the impacts of climate change, water, increasing land values, family farm transition and urban encroachment.



ESTEL

Political

1 Sovereign risk

The Federal parliament poses considerable sovereign risk to the Australian farming sector. With Green and independent senators holding the balance of power in the Senate, there is a danger that extreme single issues could gain traction as a trade off for the passing of mainstream policies. Political issues of direct relevance to the meat-processing sector with respect to on farm aspects of supply include:

- The future structure and funding of RDCs
- Animal welfare/live trade exports
- 417, 465 and 457 visa policy
- Political interest in buyer concentration, market power and foreign ownership of agrifood companies
- Policy on foreign investment in farm land
- Water policy
- GMOs.

“I have, and as does everybody, concerns about state-owned enterprises, because if we didn't there wouldn't be a \$1 limit before it has to go to the Foreign Investment Review Board”

Barnaby Joyce
ABC News, June 2015

2 Agricultural competitiveness white paper

The recent white paper published by the Department of Agriculture in July 2015, outlines five priority areas:

1. A fairer go for farm businesses
2. Building 21st century water, transport and communications infrastructure



3. Strengthening our approach to drought and risk management
4. A smarter approach to farming
5. Access to premium markets

The paper focuses on farm profitability and proposes initiatives to protect farm gate prices such as increasing the ACCC's focus on the sector as well as introducing a commissioner dedicated to agriculture.

Investment (\$13.8M) is being made available to equip farmers to establish new business models. The tax system for farmers is also being addressed and while details are limited, a favourite political promise – *lower, simpler, fairer* – is being rolled out.

Major areas of infrastructure including water, transport and connectivity are earmarked for attention. The National Water Infrastructure Fund (\$500M) aims to improve water security, the CSIRO's transport network strategy will expand to support future decisions on transport infrastructure to benefit agriculture, and mobile black spot areas are being addressed along with the NBN rollout in regional areas.

Risk management for producers, including preparing for drought, and having access to support during drought is earmarked for expenditure, but the funds are spread across many initiatives.

Research, development and extension are receiving investment with the focus again being to improve on-farm returns. The aim is to access the most advanced technologies and help industry 'farm smarter'. This includes improving access to skilled and reliable labour. The paper proposes a review of the occupations listed under the 457 visas and making other visa programs more flexible (e.g. Seasonal Worker Programme and 417 and 462 visas).

International trade will be advanced through addressing technical barriers, improving biosecurity surveillance and modernising export traceability systems. (Australian Government, 2015a).

While infrastructure investment and trade development will also assist processors, the focus of government initiatives in the white paper is squarely aimed at the on-farm end of the supply chain

“Australia's new white paper has been given a mark of 7 or 8 out of 10 by the nation's peak farm lobby group, the National Farmers Federation”

Weekly Times headline
July 2015



3 Developing Northern Australia white paper

The Australian Government's white paper on Developing Northern Australia released in 2015, recognises the undeveloped potential of the area. On sheer scale alone, it is 40% of Australia's land mass and the most proximal point of Australia to Asia.

The Government states it is committed to fixing the roads and telecommunications in the north, building dams, and changing land-use laws. It also aims to drive down the costs of operating in the north, making it a more attractive place to invest and work. The report identifies five key areas of focus to achieve this:

A. Land and water

- The Government plans to work with a number of stakeholders, including indigenous communities, to simplify land arrangements, creating more certainty for investors.
- A \$200 million water infrastructure fund will be set up and river systems across the north will be studied to see if they can support dams, or other storage options.

B. Business, trade and investment

- A number of investments will be made, aiming to: build business links with Indo-Pacific countries; establish research centres; expand biosecurity surveillance; and establish a 'single point of entry' in Darwin to simplify regulatory processes and cut red tape.

C. Infrastructure

- Investments in high priority infrastructure to support population growth and improve accessibility to markets, especially in remote areas is planned, including:
 - *A roads package to improve major arterials*
 - *Upgrading airstrips*
 - *Analysing rail freight needs and opportunities*
 - *A beef roads fund to improve cattle supply chains.*

"We will drive down the costs of operating in the north for business, making it a more attractive place to invest and work"

Tony Abbott
SMH, June 2015



D. Workforce

- As with almost all parts of regional Australia, there is the opportunity to encourage investment, raise employment, and generate higher incomes and living standards, by investing in developing a more skilled, engaged and flexible workforce.
- The North faces more challenging seasonality than most regions with some businesses effectively shutting down in the wet season while working extended hours in the dry.
- The Government's plans include, reforms to higher education, skills and training, a new Jobs and Small Business Package, assisting the Northern Territory Government to streamline recognition of occupational licences from other jurisdictions, and supporting remote job seekers through reforms to the Remote Jobs and Communities Programme.
- Improved access to foreign workers is also on the Government's agenda by increasing flexibility in visas and the Seasonal Work Programme.

E. Governance

- The Government will look to initiate closer ties with the North as its investment programs are realised over the next 20 years. This includes working with Indigenous Australians, the northern jurisdictions and industry. (Australian Government, 2015b)

4 Threat to farmland from mining

The issue of mining on prime farmland has become contentious in recent times. In particular, a high profile case of a proposed coal mine in the Liverpool Plains, NSW, is causing division within the coalition government. Coal seam gas is an issue in farming communities nationwide and in addition to farm access concerns, it is feared it will compromise under ground water resources right across critical catchment areas.

The National Party is lobbying for legislation to protect farm land and the right to farm. The issue is that farmers do not have title over resources below their land.



P S T E L E conomic

1 Flat productivity and profit squeeze on family farms

Family farms have always been vulnerable to a cost/price squeeze, whereby the prices received for produce (being market driven), do not systematically follow the cost of production. As a consequence, farm returns have always been highly cyclical.

Superimposed over this is a long term trend whereby average farm profitability is declining because returns have not kept pace with rising costs. Historically, this trend has been sustainable because of the on farm productivity improvements available in previous decades. Unfortunately the rate of farm productivity growth in Australia has now slowed to the point where an increasing number of family farms are not profitable or sustainable businesses over the long term. Meanwhile, competitor countries like Brazil are lifting their productivity. As a consequence, Australian farms need to increase their scale just to maintain the same income levels. With the prices of quality agricultural land increasing (due to investor interest and lifestyle farmers), together with high levels of debt, buying more land to generate scale is not an affordable option for many.

2 Rising farm debt and under-capitalisation

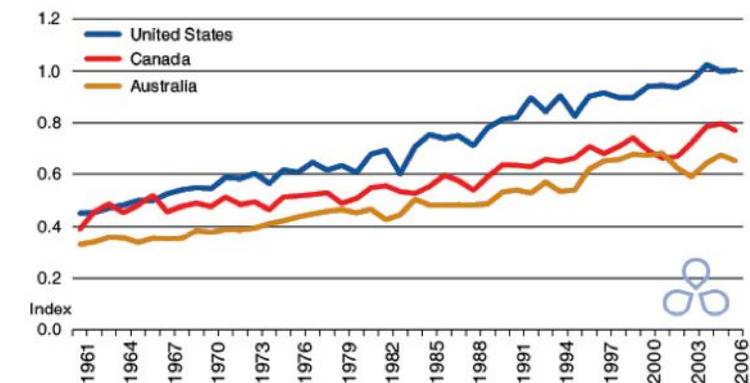
A factor in farm profitability is the high level of farm debt. Debt levels grew substantially during the prolonged drought last decade as producers borrowed to survive, having to buy water and feed. The recent, more localised droughts have added to debt stress in some regions. High levels of debt combined with cyclical profitability has put many in a vulnerable position. A significant increase in interest rates, or a tightening of credit, which are both likely to occur in the medium term, could put deeply indebted farms in an untenable situation.

In the context of global competitiveness, on average Australian family farms are under-capitalised. To be globally competitive in an environment of rising costs, farms must improve their productivity by investing in technology and scale. This typically requires large amounts

“The rising cost of production over recent years has eroded the competitive position of Australian agriculture in the world market and turned a spotlight on the slowing productivity growth”

Rabobank, 2015
Unlocking productivity growth report

Total Factor Productivity Trends for Australia, US and Canada



Source: Farm Institute 2013



of capital that are beyond the reach of many and not sustainable with bank financing, given the already high levels of indebtedness.

Culturally Australian family farms are reluctant to take on external equity capital, which is becoming more available, for fear of loss of business control and due to an attachment to land.

3 Labour

Labour is an issue at every link of the supply chain, including on farm. Being able to recruit a reliable, motivated and stable workforce; availability of seasonal labour; worker skill levels and labour costs are all challenges. The compliance and risk associated with engaging employees means many small farm owners are trying to do more of the work themselves, meaning some properties are becoming run down and pastures degraded.

Because of the adoption of more on farm technology, there is an increasing need for up-skilling and capability building, particularly in large scale farms.

These labour challenges means farms are outsourcing specific tasks to labour contract companies (e.g. fencing, lamb marking, drenching, etc.), some contractors employ 417 and 457 visa holders to do the work. There has been recent adverse media covering mistreatment of visa labour by contract labour companies, which could lead to changes to visa policies. Under the law, farmers are liable to uphold employee rights, even if they are engaging workers through contract labour firms.

4 Increasing foreign investment

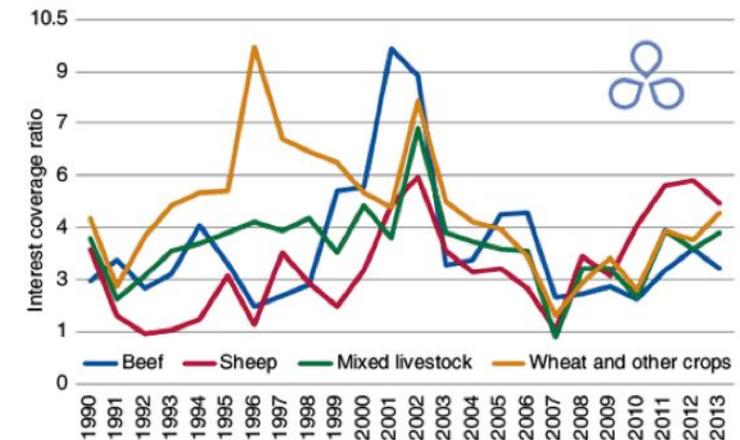
There is an increasing level of interest by foreign investors in Australian agribusinesses and farm land. This is variously coming from overseas superannuation funds, high net worth individuals, businesses seeking to establish vertically integrated supply chains and sovereign funds seeking food security. Foreign investment is occurring at every level of the supply chain, including significant investment in prime agricultural land.

Foreign investment has potential implications for supply as many of these investors plan to develop their own supply chains, effectively by-passing local processing.

“The majority of Northern Beef producers are not economically sustainable as they are not able to fund present and future liabilities”

MLA, 2013 Northern Beef Situation Analysis

Interest coverage ratio for beef, sheep, mixed livestock and grain farms, 1990–2013



Source: (Tomlinson, 2014)



5 Availability and cost of water

Water is becoming an issue in many areas due to the combination of climate change and tightening of water policy. The Murray Darling Basin environmental buyback has reduced the overall pool of water available for commercial agriculture in Australia. Many areas of the country are forecast to be subject to more frequent and severe drought with climate change. Progressively water will become more expensive and economic forces will drive it to its highest value use. This poses a potential threat, albeit with seasonal volatility, to livestock producers because relative to horticulture, irrigation of pasture, even for hay and silage, is a low value use of water.

6 Transparency of processor feedback

Livestock producers are critical of the quality and transparency of feedback from the processing sector. Progressive producers are investing in generic technologies and new production methods to produce superior carcasses that they believe better meet market requirements. However, they feel that they are not being rewarded by the processor value-based payment systems for this extra effort and expense. It is claimed that the grid system is highly imprecise and produces an averaging affect that disadvantages quality-focused producers. There are also issues relating to the integrity around how these payment systems function, with the belief that they are applied and are being manipulated by processors to accommodate market shifts. Producers claim that this is a disincentive for them to invest in carcass improvement.

Although most processors have feedback systems, they vary in terms of their level of detail and transparency. From the producers' point of view, there is considerable room for improvement in relaying market signals and incentivising for quality.



1 Producers are demanding greater accountability from the processing sector

The competitive tension that has always existed between producers and processors has risen to a new level in the recent period of high livestock prices. The tension stems from the belief by producers that processors are receiving an inequitable share of the profit pool and that producers are not benefiting from the current price boom to the extent that they should. Producers believe that it is their right to be informed about market prices and that there needs to be greater transparency. Processors on the other hand, feel they are entitled to recover lost margins while the market strong. This issue has now reached the stage that The Senate Rural and Regional Affairs and Transport Reference Committee will conduct the enquiry: *The effect of market consolidation on the red meat processing sector*. A report is now due March 2016.

2 Social licence around farming

Increasingly the farming sector is coming under closer scrutiny by community action groups empowered by social media. The key issues on the radar are:

- Animal welfare
- Environmental sustainability
- Use of chemicals, HGP's and antibiotics
- Ethical workplace practices.

The hyper connectivity enabled by social media has provided a powerful platform for like-minded people to collaborate on a common cause. This platform is being employed with great effect to pressure politicians for regulatory intervention.

Similarly, supermarkets have leveraged the social licence trend as a marketing strategy. For example, HGP was not a consumer issue before the supermarkets made it one through their



own promotions.

There is growing consumer pressure over the use of antibiotics in livestock. Although this is currently targeted at the chicken industry, red meat is likely to be next.

3 Transition planning time bomb

Despite much industry and government promotion of the issue, a large proportion of farmers are reaching retirement age without a succession or business transition plan. In many cases their children have no interest in taking over the family farm and in other cases there is not enough value or scale to divide the asset and give each family member a viable share. In the absence of a long term business transition plan, farmers stay on their land beyond the point when they can effectively manage the property and typically underinvest in improvements necessary to keep the farm economically viable. As a consequence, the productivity of these farms is falling and a large underperforming cohort is holding productive land below its potential.

Because it usually impacts productivity and can take decades to resolve, transition planning has serious implications for the long-term supply of livestock.

4 Social change in regional communities

Further to the above point, while the aging of Australian farmers is a well-publicised fact, a related social implication is the aging of some regional communities more generally. Talented younger people are being lost to cities for jobs, experiences and education. While some return, the loss of amenities in regional communities as populations decline, means the more talented agribusiness professionals are unlikely to return to apply that knowledge on farm. A shortage of agribusiness professionals means most can qualify for jobs in cities or regional centres.

5 Impact of lifestyle farmers

There is increasing incidence of city dwellers buying rural properties for lifestyle reasons, particularly in areas within a two-hour drive of major capital cities. Typically, these lifestyle farmers have independent sources of income and are not reliant on the farm income. Often their skill level as farmers is substandard and they have a propensity to invest in lifestyle enhancements rather than commercial productivity improvements.

“What sets farming apart from other occupations is the lowering rate of exit from farming amongst farmers aged over 65 - since 1991 the population of farmers aged over 65 has increased by 55 per cent.”

Neil Barr, RIRDC, 2014



Again, the incidence of lifestyle farmers has potential consequences for long term livestock supply because of declining productivity and the tying up of land holdings. The other impact of lifestyle farmers is that commonly they are bidding up the price of land beyond levels that make economic sense for commercial agriculture; so operating farmers are not able to expand to achieve scale.

Lifestyle farmers also pose potential biosecurity threats due to their inexperience in managing pest, disease and weeds.

6 The right to farm

In peri-urban areas close to large population centres, there is increasing tension between farmers and urban dwellers on the issue that has become known as *'the right to farm'*. As these peri-urban areas become more populated, there is growing protestation around their impact on quality of life, including issues such as odour, use of chemicals, noise, use of heavy equipment at night, dust, etc. Local councils are reacting by increasing restrictions and implementing land planning reforms that restrict farming operations.

7 Land values

Prices of agricultural land have risen in many areas under the influence of factors such as:

- Growing interest by investors who commonly pay a premium over the market in order to aggregate large parcels of adjacent land.
- The legacy of the MIS schemes of the 1990s, particularly in forestry. The competition between companies, plus the need to establish projects quickly to meet the taxation provisions, forced up land prices substantially. Even though the schemes have essentially finished, the expectation of landholders regarding land values remains high.
- The impact of lifestyle farmers as discussed above.

High land prices have two impacts: the first is that it is hard to get an economic return sufficiently high to service the return on capital requirement. Secondly, it makes it difficult for producers to purchase more land to generate necessary scale, or young people to enter the sector.

David Blackmore the high profile Wagyu producer is coming under pressure from local residents on the basis of the smell and noise of cows and that they are attracting obnoxious birds which are creating noise and mess.

The Murrindindi shire has ruled that the farming operation must close down because it is considered to be intensive farming, which is not permitted within the zone. The contentious issue is that he began to supplementary feed his cattle, which enabled heavier stocking rates. His farm has been operating on the site for over 11 years.



P E S T E L T echnological

1 Impact of emerging technologies on farm

Increasingly, farming is becoming a high-tech business with more progressive farmers investing in new technologies to improve productivity, such as:

- Genomics
- GPS – precision farming
- Smartphone apps being applied across a range of uses
- Drones
- RFID enabled technologies
- Digitisation
- Water management technologies
- No-till farming.

For reasons outlined earlier, investment in technology is important to improve productivity and lift farm profitability. Unfortunately, adoption of these technologies is not happening at the required rate because of lack of capital, conservatism, or shortcomings in infrastructure.

Many of these new technologies require reliable mobile phone and fast broadband connectivity, which is a widespread problem across regional Australia. Slow Internet speed and mobile phone black spots are common. There have been several government announcements regarding investment to rectify connectivity but with minimal action.

Another consequence of on-farm technology improvement is that it requires up-skilling of the workforce, capability building and the availability of specialist support services. As was



highlighted earlier, the availability of labour with the appropriate skill levels is problematic in regional Australia.

2 Changing farming practices

There are a number changes in farming practices that are impacting livestock supply.

What were once mixed farming businesses in Victoria and Southern NSW are now becoming dedicated cropping farms. This trend started five or so years ago when sheep and cattle prices were relatively low and grain prices were strong. A contributing factor to this trend is the widespread adoption of no-till farming which obviated the need for rotations that usually involved livestock. Commonly, fences have been removed on these farms to make it easier to use large equipment, therefore returning to a mixed farming business model would require significant expense.

Farm leasing for cropping has also become more popular of late which takes grazing land out of production.

Dorper sheep became popular in some areas during the period when prices of medium class wools were depressed to the point that they barely covered shearing costs. Dorper is a shedding breed that does not require shearing.

In a similar vein, there has been a return to boutique heritage breeds on some farms. Frequently these novelty breeds are service-killed and sold locally outside of mainstream processing supply chains.



PESTL Environmental

1 Climate change

The climate change sceptics are now succumbing to growing evidence of its impact, particularly on agriculture, including:

- Increased average temperature, and more frequent and longer heat waves
- Reduced rainfall and changes in rainfall patterns resulting in more frequent and severe droughts
- More extreme weather events
- Changed migration patterns of pests and diseases.

Climate change is a significant threat to livestock supply with production cycles becoming more pronounced and seasonal trends harder to read, which has consequences for throughput in processing works and more cyclic pricing. Increased average temperature and extended heat waves will mean that livestock will become more exposed to heat stress and in some areas investment will need to be made in shelter belts, spraying or housing. More extreme heat and cold weather events will lower feed conversion and reduce productivity. Heat stress and stock shelter could become the next target for animal welfare groups.

2 Carbon footprint

As a consequence of climate change there is global pressure on governments to implement policies to reduce the nation's carbon footprint, including penalties and rewards. Plantations for carbon credits have now become an alternative source of income, but returns are so low that this is unlikely to displace much livestock.

Of particular importance to livestock industries is the issue of methane gas emissions from

New research using a machine imported from America to analyse the methane emissions in cattle belches, has the goal of creating a low-gas diet.

The University of Adelaide project will develop feed supplements and region-specific diet regimes that should benefit both the environment and producers' profits.



ruminants, which is increasingly coming under the scrutiny of scientists and growing in public awareness. It has been the key focus of environmental and vegetarian activists who are publicising the notion that methane emissions from animals is the largest contributor to global warming. This data on emissions is widely distorted, although the UN's FAO estimates livestock accounts for 18% of global emissions.

Federal parliament passed legislation in June 2015 to cut the renewable energy target (RET) from the original 41,000 gigawatt hour target to 33,000 to reflect lower overall energy demand. Trade-exposed industries will be exempted from the target and two-yearly reviews were scrapped. Instead, the Clean Energy Regulator will provide an annual statement to Parliament and the government of the day on progress towards the target, what impact it is having on electricity prices, and whether the scheme is at risk of default (ABC News, 2015)

3. Whole farm planning

Increasingly environmentalists are driving the agenda of natural resources management and sustainability to producers through programs that emphasise return on investment to the farmer rather than through the viewpoint of the so-called 'greenie'. Groups such as Landcare and programs such as Whole Farm Planning and others are achieving cultural change through advocating the financial benefits of investment in water efficiency and sustainable land management as part of a long term asset protection strategy that will improve returns to farmers.

"Globally, the sector (livestock) contributes 18% of global greenhouse emissions".

Source: www.fao.org



PESTE Legal

1 Land planning, urban encroachment and the right to farm

The 'right to farm' is as much a legal issue as a social one. Increasing tension is mounting between farming communities and urban rate payers with respect to land use, particularly in areas close to peri urban centres. In addition to the sensitivity around the impact of farming on quality of life, debate around increases in council rates for farms adjacent to large population centres is intensifying. As land values are being inflated by lifestyle farmers, large scale producers are copping heavy rises in rates. Cash-strapped councils have no room to negotiate.

Local councils are responding to urban rate payer pressure through more restrictive land use planning policies. Land use planning is a particular issue for the chicken industry whereby it is becoming increasingly difficult to be granted a permit to construct a new poultry facility. This level of attention is now shifting to feedlots and feed pads where some ambiguity around planning exists.

Increasingly cattle producers and dairy farmers are introducing feed pads, largely for mud management. Some councils have taken the view that feed pads are considered to be feedlots which violates the land use provisions. A recent case in Echuca, Victoria was settled in the producer's favour, but only after a long battle with the shire. This case has put the issue on the radar.

2 Employment and OH&S risk

Farming remains the highest risk workplace in the nation. Risks include:

- Working alone
- Handling unpredictable animals
- Quad bikes



On Farm

- Heavy machinery
- Handling chemicals
- Animal borne diseases such as Q fever.

The cost of legal compliance in employment generally and OH&S specifically, is a disincentive for farmers to hire employees. As a consequence, many producer businesses are under-resourced. Hence many smaller farms are even less productive than they could be if there was sufficient labour to drive them harder. With over 47% of farmers also requiring off farm income to be viable (ABS 2008), many smaller properties are being neglected from lack of labour, which is limiting supply.



RISK PROFILE

1. On farm risks:
 - Low profitability
 - A shift from grazing to cropping and dairy
 - Flat productivity
 - Aging of farmers
 - Impacts of climate change
2. Sovereign risk (animal welfare, use of chemicals, water policy, 457 / 417 labour, other)
3. Social licence risk, particularly around animal welfare
4. Political interference in sector (market power, trading transparency)
5. Climate change which could impact supply and increase the seasonality of production
6. Rising land values shift farmers to higher value industries and away from grazing



IMPLICATIONS	
1.	<p>Climate change</p> <p>1.1 The direct and indirect impact of climate change will add to on-farm production costs, result in greater volatility and give environmental activists a platform to discredit the sector.</p> <p>1.2 There will be increasing commercial incentives to reduce carbon footprints.</p>
2.	<p>Water</p> <p>2.1 Economic incentives to use water more efficiently will increase, such as 'cut and carry' feed systems and improved water management technologies and practises.</p>
3.	<p>Availability of resources</p> <p>3.1 Labour shortages will constrain on-farm production growth. The response requires a three-pronged approach:</p> <ul style="list-style-type: none"> • Invest in labour-saving technologies/methods • Develop an integrated program to attract and retain labour • Improve the appeal of the livestock sector as a career prospect. <p>3.2 Succession planning will need to be dealt with to prevent a possible loss of production.</p> <p>3.3 New farm ownership and management models need to be promoted, such as share farming, collective farming, etc.</p>
4.	<p>Land</p> <p>4.1 Shrinking land area requires a significant increase in land use productivity.</p> <p>4.2 Increasing land values are making it uneconomic to graze livestock in some areas.</p> <p>4.3 New technologies and investment in more intensive farming is required.</p>
5.	<p>Farm productivity</p> <p>5.1 The industry needs to focus on identifying opportunities to improve productivity in livestock production and invest in appropriate RD&E. The agricultural competitiveness white paper gestures at this.</p>
6.	<p>Corporate investment</p> <p>6.1 Corporate farming models are likely to continue to evolve. This will have significant implications on the evolution of supply chains, notably closed-loop and integrated models.</p>
7.	<p>Government investment</p>



<p>7.1 Both the recent white papers from government flag considerable investment targeted at infrastructure and R&D for on farm productivity which will contribute to addressing both supply and road issues to some extent, particularly in the north of Australia.</p>
<p>8. Social responsibility and accountability</p> <p>8.1 The red meat industry will need to continue to develop its animal welfare programs and stay ahead of the wave of societal expectations.</p> <p>8.2 The red meat industry also needs to monitor and develop responses to other social agendas, including environmental sustainability, food miles and workplace conditions.</p> <p>8.3 The red meat industry needs to understand and participate in rapidly evolving social media technologies.</p>
<p>9. GMO policy</p> <p>9.1 The red meat industry needs to develop an agreed position and strategy regarding GMOs. Consumer education is critical.</p>
<p>10. Live animal export trade</p> <p>10.1 A prolonged disruption to the live cattle trade would have a significant impact the northern cattle industry in the long term. In the short term it will make more cattle available for processing. It will inevitably lead to renewed interest in re-developing the northern processing sector.</p>



Section 4 | Processing

As the Australian processing industry becomes more export focused, it will increasingly come under pressure due to its high cost structure relative to global competitors.

While focus is currently on investing in processing technology to improve labour productivity and to extract the maximum value from every beast slaughtered, there are also opportunities to leverage technological advancements to value-add and differentiate products.

The processing sector faces threats on several fronts in the processing link of the supply chain.



ESTEL

Political

1 Sovereign risk

As is the case in the on-farm sector, the processing sector faces similar policy risk due to the delicate balance of the Senate with minor parties and independents. This has the potential to result in policy compromises. Issues of particular risk to the processing sector include:

- Animal welfare/ live trade
- 417/457 visas
- Renewable energy targets
- Concentration and consolidation of the processing sector, competitiveness, transparency and equity around the profit pool
- Foreign ownership
- Food labelling regulations and religious certification.

The current interest in the meat-processing sector by particular senators illustrates the sensitivity around this area.

2 Parliamentary enquiries

There were a number of parliamentary enquiries proposed or underway at the time of writing, which have the potential to impact the red meat processing sector, they include:

- A senate inquiry led by the Rural and Regional Affairs and Transport References Committee on 'Effect of market consolidation on the red meat processing sector'. Under the terms of reference, the committee will consider selling structures and processes, and



the regulatory environment covering livestock, livestock agents, buyers and meat processors.

- A joint committee 'Inquiry into the seasonal worker programme'
- A joint committee 'Inquiry into the business experience in utilising Australia's FTAs'
- The outcome of a recent inquiry into 'Industry structures and systems governing the imposition and disbursement of marketing and research and development levies in the agriculture sector' recommended changes to the record keeping and data bases to simplify levy collection and a review of the process for amendments to levies.
- An inquiry into product labelling is proposed including investigation of the cost of Halal certification.

3 Privatisation of the inspection service

Relative to its direct competitors, Australia is the only country with a 'full cost recovery' meat inspection service. This puts Australian processors at a competitive disadvantage and is arguably inequitable given the public good benefits of the meat-processing sector as a regional employer and export earner.

The government view is that relative to other countries the Australian service is more efficient as there are continual pressures to reduce cost, whereas in the subsidised countries there is less incentive to improve efficiency of the service.

A related issue is the speculation that the government intends to privatise or outsource the service. There are pros and cons to this proposal. The underlying rationale for privatisation is efficiency improvement, but the downside is that private companies need to get a return on capital so costs are unlikely to reduce.

A more fundamental issue around inspection is the gross inefficiencies due to replication both within government and across customers. The development of a harmonisation framework with standardised modules that importing-countries and customers alike could build upon would drive significant efficiencies.



4 The future of RDCs

The structure and funding of agricultural research and development corporations (RDCs) is frequently being questioned and scrutinised by government, as witnessed by the current Senate enquiries. To some extent the issue is being driven by industry discontent and tension across the various sub-sectors. Levy payers are demanding greater say and accountability as to how levy monies are spent.

The fragmented voice and the different points of view regarding RDCs across the red meat supply chain confuses and distracts decision makers and results in a dilution of effort.

Politicians are divided as to whether RD&E effort should be subsidised by government. The case for investment is being put forward by agricultural academics and industry think-tanks but needs to be delivered more powerfully with a united voice from a red meat industry perspective.

5 Food labelling

Food labelling laws are currently being reviewed with a particular focus on country of origin. Country of origin issues are unlikely to impact the red meat sector, which is almost all locally produced. However, the change may result in a different expectation regarding labels in general that may trigger closer scrutiny with regard to other aspects such as nutritional labelling. This could be damaging to red meat given the adverse views of the health profession in relation to saturated fat and the cancer implications of a diet high in red meat. It is also likely to significantly add to labelling costs.



1 Competitiveness of the Australian processing sector

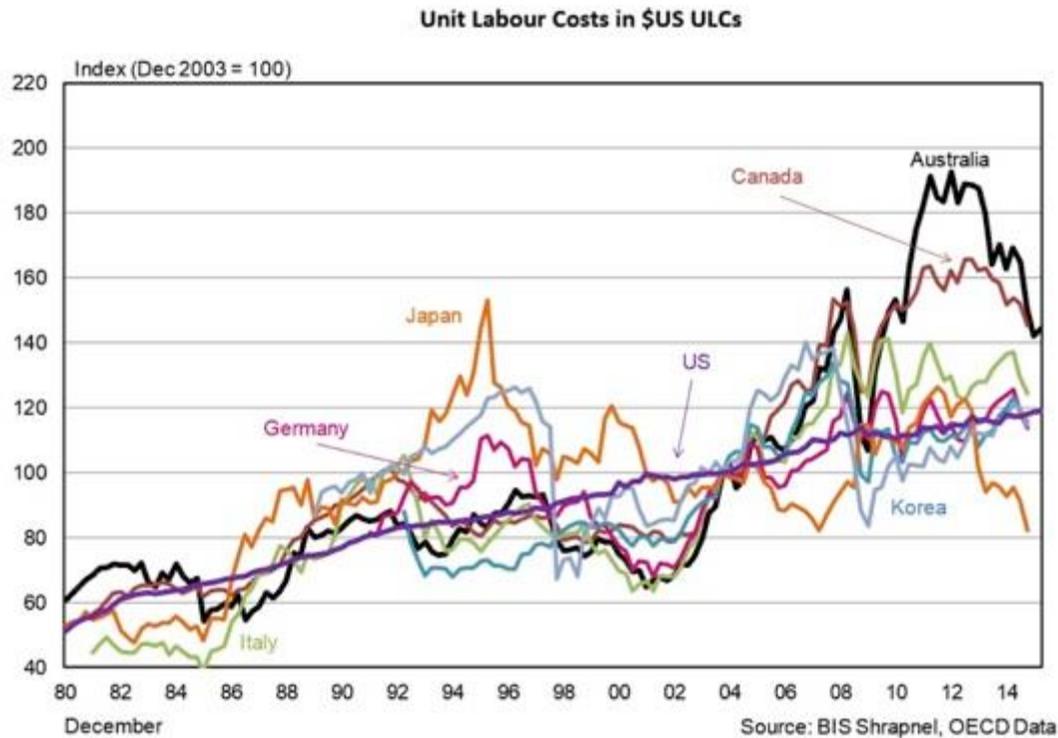
The Australian processing sector is uncompetitive in a global context. Major processors indicate that Australia's beef processing cost per carcass is double that of the US and 2.7 times that of Brazil.

The major reason for this is labour cost. Wage rates, penalties and on-costs make Australia's workforce the most expensive in the world. With the unlikely prospect that labour rates will decline, the focus needs to be on improving labour productivity.

Part of the labour issue is that historically the industry has not been a best practise employer. The approach to labour management has generally been about solving industrial relations problems and cost cutting. Gender imbalances in supervisory and management roles are particularly noticeable and there is a heavy reliance on 417 visas in the casual workforce in some regions. There has not been a widespread culture of workforce development or strategies to improve casual worker retention. There are obvious exceptions to this in some plants.

Other significant costs include energy, WorkCover, water and wastewater treatment, compliance and inspection costs as well as transportation.

Part of the problem is that meat-processing plants in Australia are old and inefficient and even though processors are making major investments, the existing footprint of the plants acts as a constraint to efficiency gains.



Source: Businessinsider.com.au

2 Marginal and cyclical nature of processor profitability

A common theme to emerge from the consultation with processors during the research for this scan is that the sector, on average, works on very thin profit margins relative to other sectors of the food industry. However, because meat-processing companies in Australia are predominantly privately owned, they are not required to report their financial performance, therefore the point is difficult to validate.

The issue is that processing plants have very high fixed costs because of the level of capital investment required, which makes it imperative that they drive plant throughput even when

As a rule of thumb the business case for investment requires a return of capital threshold of 10-15% depending on the weighted cost of capital. Because of the large amount of capital required and the thin and volatile nature of margins, it is difficult for meat processing projects to achieve these hurdle rates.



the margins are low or even negative.

Processors compete on two fronts as both a buyer for the supply of livestock as well as a seller in the global market place. These two drivers operate independently of each other with the result that profit margins are highly variable and cyclical.

Returns are driven by the seasonal nature of livestock supply and market conditions. A key driver of profitability is the ability to dispose of all of the components of the carcass at the best prices. This is challenging with the extreme market volatility in demand for specific cuts across a range of destination markets. As a consequence, processors experience extreme boom and bust cycles.

To a large extent the low profitability of the processing sector is a self-perpetuating outcome. The low return on capital acts as a disincentive to invest in new plants and major upgrades that would drive efficiency gains. Recent projects at Darwin and Broome are the only significant new plant investment in the processing sector in the past 20 years.

3 Direct, value based sourcing of livestock

A growing proportion of livestock is now being sourced directly from farms, by-passing saleyards. Predominantly these transactions are based on carcass attributes and weight defined by a grid value system. There is increasing economic pressure to improve the accuracy of the specifications of the payment systems and to expand them to take into account the quality of offal, skin, etc.

Processors are now beginning to establish long term strategic alliances with producers that are underpinned by quality protocols to produce a product to be sold under processor brands.

4 Low interest rate environment

The global economy, including Australia, is experiencing one of its lowest interest rate periods in history. Interest rates in the USA are close to zero and negative in Japan. It is a predictor that interest rates in Australia will remain low for several years because of the sluggish state of the economy and the low inflation rates.



Processing

The prospect of a prolonged low interest rate period is favourable to investors. This, together with the current period of profitability in the processing sector would make it attractive to processors to invest in new plant and equipment.

On the other hand, the low global interest rate will also stimulate investment in competitor countries. If competitors invest in new technology but Australian companies do not, it will result in Australia becoming even less globally competitive.



1 Social licence and social media

The meat-processing sector is high on the social agenda for closer scrutiny. The sector undeservedly suffers from the reputation of poor animal welfare practices, being environmentally irresponsible, unsafe work practices, unethical business practices, and a poor record as a corporate citizen. This makes it a target for attention from social media movements.

2 Chemicals, HGPs and antibiotics

The processing sector is coming under more scrutiny with respect to chemicals in processing and use of drugs. The major supermarkets have driven the HGP agenda as a marketing strategy, which has added cost to the industry and raised consumer concerns around the integrity of the product. Antibiotics is the next hot issue. Major supermarkets and food service buyers such as McDonalds are moving to ban the use of antibiotics commonly used in human treatment in chicken production. There is the potential for this position to spread to red meat.

3 Provenance and traceability

Increasingly consumers and therefore customers are becoming interested in the provenance of their food, wanting to know where and how it was grown and processed. This is a result of increased general interest in food and cooking as well as concern about safety and sustainability. The trend is a key driver for the growing popularity of provenance brands.

The other dimension of this trend is the growing importance of traceability. Supermarkets, corporate food service customers (e.g. McDonalds) and increasingly governments, are insisting on traceability down to the cut level. The emerging technology is driving the expectation in this regard. Through quick response codes consumers are able to use their mobile phones to learn about the provenance of the products they are buying. The pressure to improve traceability will grow in line with the technology advancements.



P E S T E L T echnological

In the post farm gate part of the supply chain, there has been little application in the way of ground-breaking technologies in meat processing for a number of years. Most of the R&D effort in plants has gone into further refining existing technologies, the main ones being:

- Processing technologies that improve labour productivity and OH& S, notably robotics and automation
- 3D imaging and visioning technologies
- RFID enabled data and inventory management including paddock to consumer traceability
- Extraction of incremental value for low value cuts, co-products and waste
- New thinking around hot boning
- New developments in packaging particularly smart films, vacuum packing and MAP
- Water treatment and recycling
- Renewable and co-generation energy.

The concept of a totally robotic plant is on the horizon for sheep but still a long way off for cattle because of the variability in carcass. Robots are increasingly being used for repetitive tasks.

The focus of investment in technology applied to processing plants has been around reducing cost, particularly labour. Researchers are of the view that the industry focus should now be shifting in favour of technologies that actually add value or extract greater value from the total carcass, such as imaging with robotics to achieve better yields from cutting, extraction of higher value products from offal, blood and waste water, tenderising treatments, etc.



Processing

Some of these 'value-adding' technologies in the next horizon of technological advancements could include:

- Applying recent advancements in high omega grain breeding to lift omega 3 levels in red meat and improve consumer health outcomes
- Extracting another level of by-products from processing waste such as chemicals, biofuels, protein ingredients for other food manufacturing, industrial chemicals and fertilizers
- Applying more meat science technology around guaranteed tenderness outcomes (e.g. ultrasonic/shock wave treatment, pulse electric field)
- Producing digestible, nutrient-dense meat for the aging population
- Packaging advancements to achieve shelf stable or low chill fresh meat (e.g. high pressure and/or thermal processing that also tenderises)
- Packaging advancements to cater for lack of cold chain logistics in Asian markets with a focus on cuts suitable to Asian cooking styles
- Packaging advancements to cater for the growth in value-added, heat and serve meals for institutional catering
- Packaging advancements that reduce water loss (and there by retain value per kilo)
- General improvement in vacuum packing to reduce variability
- Technology to improve HACCP protocols and reduce ecoli risk
- Packaging that offers greater retailer and consumer convenience
- Processing techniques that combine a number of technologies to enhance quality e.g. hot boning, fast chill and smart stretch.

Shelf stable, fresh red meat would be a 'game changer' for the Australian industry, in addition to reducing transport and storage costs, it has the potential to open new markets in Asia where cold chains are limited. It could also potentially overcome a number of non-tariff trade barriers around biosecurity.



In the longer term, the prospect of cultured meat is still a reality. Scientists in The Netherlands have successfully produced a hamburger from stem cells from a cow. Work is currently underway to improve the taste. The project was aimed at reducing the environmental impact of cattle. In the current planning horizon, the prospect does not pose a serious threat to Australian processors because the technology is unlikely to be economically viable within the next 10 years. The use of foetal calf serum will make it acceptable to too much of the market. The cost of production is prohibitively high, but scientists are now working on improving that with the aim of achieving a \$65 per kg target.

A further issue in the technology scan is that there is an urgent need to build capability in Australian meat technology and science. Australian meat scientists and researchers are being lost in a 'brain drain' to overseas institutions and a strategy to 'future proof' technology research and application is required.

There is believed to be a world wide decrease in industry-funded technology research. Processors globally are cutting investment in value-adding technology as markets increase in competitiveness. This supports the argument for greater government/industry investment. Government endorsement of technology can be critical in selling products made with new technology in overseas markets.

Many in the wider food industry believe that Australian processors lack the consumer insights necessary to deliver market-driven research in new technology, despite the opportunities being great (e.g. 30% of the world is iron deficient). There is a mismatch between where the research and technology investment is being made and the market need. As in most industry sectors there is a need for greater collaboration between scientists and marketers. FMCG food companies in other categories are far more advanced in this respect than the meat processing sector. Researchers also agree that more 'in plant', 'ready to apply' technology research is required rather than research in the lab or pilot plants.

A further blocker to technology adoption is that long term research requires years to execute, which is at odds with an industry culture that demands short term returns due to the trading mentality that prevails.

There is a need to develop an innovation culture across the industry to unlock thinking about 'blue sky' R&D.



PESTLE Environmental

The processing sector is on the radar for its environmental credentials on two fronts:

1. Carbon foot print because it is a major user of energy and creator of carbon emissions
2. Its water footprint including waste-water disposal.

It is inevitable that this will come under increased scrutiny and require a response from the industry. There will be increased regulatory and financial pressures to improve performance in these two areas.

There is a strong likelihood that there will be an agreement at the conference on climate change in Paris late in 2015 for a global commitment to carbon reduction targets. This will put immense pressure on Australian politicians to introduce further carbon reduction policies, which will inevitably put a cost impost on processing businesses.



PESTE Legal

1 WorkCover

The meat processing sector is seen by authorities as being an unsafe workplace and has not been given due recognition for the measures that it has taken to improve workplace safety. As a consequence, WorkCover costs are high and the on-going liability for workplace claims is a major burden on the processing sector, impacting its profitability.

2 Compliance

The burden of compliance continues to grow both in its complexity and accountability requirements. Local, state, federal and foreign governments, as well as customers are all driving the compliance agenda. These parties are requiring greater accountability and evidence of compliance. The compliance burden commits companies to a major cost and bureaucratic burden. The frustration is that there is a large amount of duplication and replication because of the unwillingness of the various jurisdictions to harmonise compliance frameworks.

3 Food safety

The meat industry is exposed to a significant risk associated with a potential food safety incident. Even though the industry has world-class food safety systems, processors could be held accountable for incidents beyond their control (e.g. contamination in foreign supply chain). A major food safety incident would be damaging for the companies involved as well as the industry, and could threaten export markets.



RISK PROFILE

1. Sovereign risk (animal welfare, live trade, 417/457 labour, foreign ownership, competition policy)
2. Long term supply of livestock
3. Declining global cost competitiveness and lack of investment
4. Increased scrutiny over use of chemicals, HGP, antibiotics, etc.
5. \$A appreciation/volatility
6. Social license/social media (animal welfare/diet and health)
7. Environmental sustainability
8. Changed labelling laws/ stricter traceability
9. Food safety incidents
10. Employment risk (contractor ethics, WorkCover)



IMPLICATIONS

1. **Sovereign risk**
 - 1.1 The processing sector is highly vulnerable to change in policy relating to labour, RET, food labelling and transparency of the processing sector.
2. **Competitiveness**
 - 2.1 The lack of competitiveness and lack of major investment in the processing sector exposes the industry to global competition. Australia is heavily reliant on market access to premium markets. The industry strategy must focus on marketing premium products that underpin the critical importance of safety and product integrity.
3. **Social licence and social media**
 - 3.1 The red meat industry will come under wide pressure from social media. It must respond by dealing with the issues of interest to the social licence movement, demonstrate social accountability and proactively manage social media.
4. **Technology**
 - 4.1 The lack of any new game changing technology is concerning. The technology focus is on further developing existing ideas. Whilst this is important, emphasis needs to be increased on 'blue sky' research.
5. **Environment**
 - 5.1 It is inevitable that there will be increasing regulation and/or economic pressure to reduce the carbon and water footprint. This should be a priority area of investment.
6. **Compliance**
 - 6.1 The burden of compliance, accountability and transparency will not reduce but instead become more demanding and complex. The red meat industry needs to invest in IT technologies to reduce the compliance and administrative costs.



Section 5 | Value-adding

The value-adding sector will endure an increasing cost/price squeeze due to rising costs and will be unable to pass these on because of consumer frugality and the impact of supermarket power.



1 Urban encroachment and land planning

A large proportion of value-adding businesses are located in urban areas, commonly in the inner suburbs. Historically these were once industrial suburbs where housing and industry happily co-existed, residents were tolerant because it was also their place of work. However, over time these areas have become gentrified, with dense housing and trendy eating and retail establishments. This environment does not sit well with meat value-adding plants that, even with best practice operations, often involve some odour, noise and heavy vehicle traffic. A similar situation is occurring in outer suburbs where urban encroachment is creeping into areas that were once outer industrial precincts.

Councils and environmental protection authorities are responding with closer scrutiny, increased restrictions and more stringent planning requirements when businesses seek to expand or renovate. Many businesses are coming under pressure to relocate.

2 The politics of food labelling

Driven by growing consumer sensitivity, food labelling has become a political issue around both country of origin and nutritional information. There is pressure by the health profession for more comprehensive nutritional labelling and more aggressive warnings of the dangers of a diet high in red meat. Further details on the parliamentary inquiries into both labelling proposals have been discussed in previous pages.



1 Cost/price squeeze

In the current environment of rising red meat prices, value-adders find themselves in a cost/price squeeze whereby it is difficult to pass on price increases because of consumer/customer resistance, especially in the face of significantly lower chicken and pork prices. Furthermore, the aggressive price war between domestic supermarkets is leading to a devaluation of food products generally and declining margins for food processors and value-adders as is discussed further below.

2 Supermarket power

Value-adders that sell through the supermarket channel have experienced strong downward price pressure in recent times. Supermarkets have leveraged their market power to drive down buying prices. The price war between Coles and Woolworths, catalysed by the spectacular growth of Aldi, has resulted in aggressive price negotiations, increased trading terms and more frequent, deeper price promotions. In addition, supermarket private label product has grown to the point where it now holds 21% of market share and is forecast to reach 25%. The impact of private-label is to devalue overall categories. Typically, suppliers to supermarkets have not had a price increase for several years, despite significant increases in production costs. As a consequence, profit margins have been eroded significantly.

3 Labour costs and availability

Because of their greater labour intensity, value-adders are arguably more heavily impacted by the cost, skill level and poor availability of labour. Commonly unions in this sector have forced high pay rates, comfortable conditions and particularly generous overtime penalties. Value-adders have therefore focussed investment in new technology aimed at reducing labour costs and improving labour productivity. This approach requires a more skilled but smaller



Value-adding

workforce that comes at a higher cost and requires ongoing training. The ultimate consequence is likely to be a transition to a smaller workforce with highly skilled teams running automated production at an overall lower cost.

4 Compliance burden

As for processing plants, food companies are subject to a myriad of compliance requirements on two fronts: government regulations; and customer quality assurance and product integrity systems. The issue is that each of these is subject to third party audits at the company's expense. The frustration is that typically customers have their own individual requirements resulting in a large amount of duplication. Commonly the same third party contractor audits the same facility on the same criteria on behalf of a number of different customers.

5 WorkCover costs

As for the processing sector, value-adders experience very high WorkCover premiums because of the perception, in some cases the reality, that their workplaces are more dangerous. In the case of a safety breach, premiums escalate.

6 Rising energy costs

Value-adders tend to be heavy users of electricity and gas, both of which have experienced exponential cost increases over the last decade.



P E S T E L
Social

The value-adding sector is particularly vulnerable to social media pressure because of the sensitivity around food. Those who have invested in brands, put them at risk when there is an integrity issue associated with them.

A key issue over the past year has been the provenance of food and the growing preference for Australian grown/made. Other issues that come under the spotlight of social media include the use of artificial additives and preservatives, truth in labelling and food safety.

P E S T E L
Technological

The value-adding sector has invested heavily in technology, largely to improve labour productivity, improve yield, and to differentiate products in an environment where commodity items are heavily discounted.

There is increasing interest in High Pressure Processing to produce shelf stable or extended life products, or to improve the eating quality.

There has been significant investment in new packaging including smart films to improve shelf life or make products microwave or oven ready. With concern about food safety, tamper evident packaging and packaging that indicates temperature change will be more important.

This sector has most to gain from investment in new technologies that can add value rather than simply reduce cost. If the new technology can be protected by a brand or IP there is a real opportunity to improve margins.



P E S T L
E nvironmental

The value-adding sector faces the same environmental factors as the processing sector, which includes sustainability, carbon and water footprints and treatment of trade waste. There is also increasing pressure for greater use of recyclable and biodegradable packaging.

P E S T E L
L egal

Value-adders are being held more accountable for food safety. The penalties for food safety breaches are large, often to the point where they can make the company insolvent.



RISK PROFILE	
1.	Cost/price squeeze undermining profitability
2.	High profile food safety incident
3.	Inability to recruit labour
4.	WorkCover cost blow out
5.	Sovereign risk relating to 417/457 and other visa regulations
6.	Social license/social media (animal welfare/diet and health)
7.	Environmental sustainability
8.	Changed labelling laws/ stricter traceability
9.	Food safety incidents
10.	Employment risk (contractor ethics, WorkCover)



IMPLICATIONS

1. Urban encroachment

1.1 There will be increasing pressure on value-adding businesses adjacent to urban areas to relocate. This provides the opportunity for development of greenfield sites with state-of-the-art technology.

2. Food labelling

2.1 There is a reasonable chance that value-adders will be forced to adopt nutritional labelling. This will put pressure on the industry to improve the health credentials of its product.

3. Cost/price squeeze

4.1 In an environment where passing on cost increases will be difficult, there will be pressure to adopt new technologies to improve productivity and develop differentiated products. Such products require an emphasis on healthy eating, allergy-free and enhanced nutritional functionality.

4. Technology

4.1 The red meat value-adding sector has been slow to invest in developing break through technologies to the same extent as the wider food processing sector. There will be a need to improve consumer / customer insights so that investment is targeted on areas that will deliver a competitive advantage.



Section 6 | Supply chain

Increasingly the red meat supply chain will become even more vertically integrated and more customer focused. Critical to improving supply chains will be a comprehensive and transparent information flow (leveraging big data advancements) and accurate value-based payment system that is equitable and provides incentives for producers who supply stock that can better meet customer needs.



Fragmented messaging from peak councils

Politicians are becoming confused by the mixed messages coming from the various bodies that represent the red meat industry. At any one time, each of the Peak Body Councils tend to be driving a narrow agenda of issues specific to their interests at that time on an ad hoc basis. Commonly the different interests are at odds with each other on the same subject. This reflects the natural competitive tensions that occur between the different levels of the value chain but is unhelpful to the industry overall.

There is a danger that in the absence of a balanced holistic view of the industry, that it will result in a less than optimum policy outcome.

In an era where politicians are ultra-responsive to shifts in community sentiment, the impact of a disjointed industry voice on influencing general public views should also be considered.



1 Integration of supply chains

Progressively, red meat supply chains are becoming more vertically integrated, either through ownership models, strategic alliances, or customers. This is being driven by a trend towards closed-loop supply chains serving specific markets, which fulfil the need to assure continuous supply, more consistent quality or more predictable pricing.

2 Provenance branding

Related to the above point, an increasing proportion of red meat is now marketed through propriety brands based on a specific value proposition, targeted at specific market segments. This is tapping into the consumer/customer need for greater understanding of the origin of the food they consume as well as increasing faith in the product promise. Commonly, the brands are sourced through integrated supply chains underpinned by tight quality protocols.

Trade brands have been used in the industry for many years but provenance brands are now targeting end users. Beef and lamb brands are now commonly listed on restaurants menus.

3 Inefficient infrastructure

The global competitiveness of the Australian red meat industry is being impacted by poor infrastructure including:

- **Road:** quality, and B Double and road train access
- **Rail:** old and inefficient rail and rolling stock, and lack of standard gauge access
- **Energy:** connectivity, capacity and reliability
- **IT connectivity:** Phone and broadband reliability is critical to enable new technologies.

Examples of vertically integrated supply chains:

- Australian Country Choice acquires Opal Cattle Station and feedlot.
- Hungry Jacks considers investment in farms to ensure beef supply.
- Bindaree Beef is leasing farm land and entering into joint ventures for backgrounding cattle before they enter their feedlot. It also purchased the Myola feedlot.



1 Traceability

As already noted, customers, consumers and regulators are demanding total and transparent product traceability.

2 Food miles

There is growing consumer sensitivity around food miles, driven by concern about environmental sustainability. Because transport costs in Australia are high, there will be increasing pressure to process red meat closer to its source. Because of consolidation in the processing sector, the average travel distance for livestock has increased significantly.

For producers developing boutique direct-to-consumer businesses, access to short run service-kill facilities in close proximity to where the livestock is grazed is an important part of their 'buy local' selling proposition.

3 Sustainability

The issue of sustainability is also a social issue. It has been covered at length already in this scan.



PESEL Technological

1 Information technology

There is a major opportunity for the red meat industry to embrace information technology to improve feedback, traceability and market signals. For example, MLA has recently launched its DataLink program which links slaughter data from the NLIS and MSA databases with analytical tools, benchmarking reports and an industry feedback library. This technology has been taken up by JBS.

There is growing potential to adapt big data capability to deliver competitive feedback as well as far more effective traceability.

2. Advanced packaging technology

Advancements in packaging and logistics technology are evolving rapidly. Examples such as those already noted in previous sections (HPP, modified atmosphere, thermal and ultrasonic treatment) have the potential to deliver improved product integrity at lower temperatures or even in ambient conditions. These technologies present the opportunity to be real 'game changers' in both saving refrigeration and transport costs as well as improving market access and in-market product quality.



PESTLE

Environmental

Sustainability

As has been highlighted, there is increasing pressure on red meat supply businesses to demonstrate sustainability credentials to both customers and the general public.

PESTLE

Legal

Labelling

As has been highlighted, there will be growing pressure on the meat industry to increase transparency and comprehensiveness of the labelling system.



RISK PROFILE

1. Fragmented messaging to key decision makers resulting in sub optimum policy outcomes
2. Lack of precision of value-based payment systems resulting in efficiency leakages and inequities
3. Compliance duplication, inefficiency and cost recovery models lead to on-going cost blow outs
4. The under investment in up-skilling by the industry is likely to constrain productivity growth which is essential to improve the global competitiveness of the Australian red meat industry
5. A significant food safety/product integrity incident has the potential to cause a drop in demand in both domestic and export markets
6. Social license/social media: (animal welfare/diet and health)
7. Environmental sustainability
8. Changed labelling laws/ stricter traceability
9. Food safety incidents
10. Employment risk: contractor ethics, WorkCover



IMPLICATIONS

1. **Fragmented messaging**

1.1 The fragmented messaging coming from the red meat industry is disadvantaging the industry in policy and funding considerations and blocking the opportunity to change general public perceptions.

2. **Sustainability**

2.1 There will be economic, regulatory and social pressures in the red meat industry to demonstrate its credentials. Benchmarking research would be useful.

3. **Information technology**

4.1 The Australian red meat industry would benefit from applying big data technology to improve market signals and traceability.

PART E: DEMAND FACTORS

The swing in market emphasis from domestic to export has redefined the concept of 'demand'



Domestic market



Export markets





Section 7 | Domestic market

There are considerable threats facing the Australian domestic red meat market that should be of concern to the industry. Although collectively export markets are significantly larger, the Australian domestic market is still the largest single market and historically has been the most profitable.

Per capita consumption on the domestic market is facing long term decline due to a number of factors, including:

- Changed eating and dietary habits
- The aging of the population
- The increasing incidence of vegetarianism
- High red meat prices and the growing price gap with pork and chicken

A long term swing away from red meat will be difficult to reverse.

At the same time, the industry will come under threat on a number of fronts. The power of social media will continue to drive closer scrutiny around industry practices particularly those concerning animal welfare. There is a possibility that the health regulators, under pressure from an obesity crisis and health cost blow out, could introduce draconian health labelling regulations for red meat.



PESTE L

Political

1 Political impact of economic policy

The senators that hold the balance of power have singled out economic policy as a point of leverage in their negotiations with the government. The contentious issues are superannuation, pensions, dividend imputation, taxation and negative gearing. Policy changes in these areas have the potential to impact specific cohorts, which will have flow-on effects on their discretionary income. The hung parliament is making it difficult for the government of the day to implement the economic changes that are necessary to reduce the deficit and put the economy on strong foundations. This is putting Australia at great economic risk with the prospect that living standards will decline.

There is growing debate about the need to increase to GST and to expand the base to include fresh foods. A GST of 15-20% is being considered. An additional 5 or 10% on top of already high red meat prices would further drive a shift to cheaper proteins especially chicken and pork.

2 The obesity epidemic and health costs

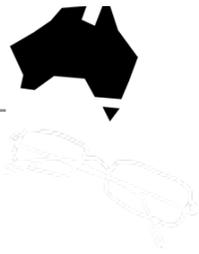
The looming issue of an obesity epidemic impacting the health budget is pressuring politicians to implement policies to change eating and lifestyle patterns. There are already early signs of what is to come with talk about fat and sugar taxes and aggressive health warnings of the type used on cigarette packaging. This is in line with the move to more preventative health strategies as a long term cost saving measure for governments. The health profession has red meat high on its agenda on the basis of saturated fat content and cancer risk factors.



3 Supermarket power

The National Party and some of the independent senators are driving the agenda around supermarket power and its impact on food deflation, particularly milk, meat, fruit and vegetables. This has led to the introduction of a voluntary code of practice that, at the time of writing this report, had not been signed off by the big two supermarkets.

Largely because of the political sensitivity around supermarket power, the ACCC is closely scrutinising supermarket behaviour as is evidenced by its recent case against Coles on unconscionable conduct. This issue has been raised in the government's agricultural competitiveness white paper.



1 Shift in emphasis from domestic to export markets

Historically, the market for red meat was more or less equally split between domestic and export markets, and as a general rule, returns from domestic markets were higher than exports. Over the past few years the balance has steadily shifted in favour of exports and because of the rising demand, returns from exports are increasingly superior to those achieved in the domestic market.

The shift is being driven on two fronts: the declining per capita consumption in Australia; and the strengthening demand from export markets due to growing affluence.

2 The Australian economy is delicately poised

The Australian economy is in a precarious position with concerns by some analysts suggesting that it could easily fall into a recession. Growth rates are slow despite the historically low interest rates, as consumers and businesses lack the confidence to spend or invest.

The Australian economy is highly susceptible to a number of domestic and global factors that are out of its control, including:

- Softening demand for iron ore and lower coal prices
- Weakening Chinese economy and share market, and the impact of a possible meltdown in the Greek economy is influencing the stock market
- Concern that the housing bubble could burst which would be highly disruptive to the economy
- APRA is concerned about the Australian banking system and its exposure to the housing

RED MEAT EXPORTS 2014/15 Tonnes Shipped Weight	
Beef and veal	1,347,487
Mutton	168,745
Lamb	241,561
Goat	34,284
Pork	21,597
Fancy meat	205,538
TOTAL	20,19,211
Source: Department of Agriculture Statistics - Total Meat Exports By State of Production	



Domestic market

market

- Lack of competitiveness in Australia's manufacturing sector and the exit of the automotive industry will impact employment rates
- The slow down in population growth
- Declining workforce participation rates.

The state of the economy has an impact on demand for discretionary items. With rapidly rising red meat prices, the better cuts of meat are quickly becoming luxury items.

3 Australian living standards are slipping

Australia's ranking in terms of purchasing power is slipping and predicted to drop to 1990 levels within two years. (Greber, 2015) This is being driven by flat productivity rates, declining global competitiveness and the slow down in the mining boom. There are warnings by prominent economists that Australia is living beyond its means with high and growing budget deficits and high personal debt levels.

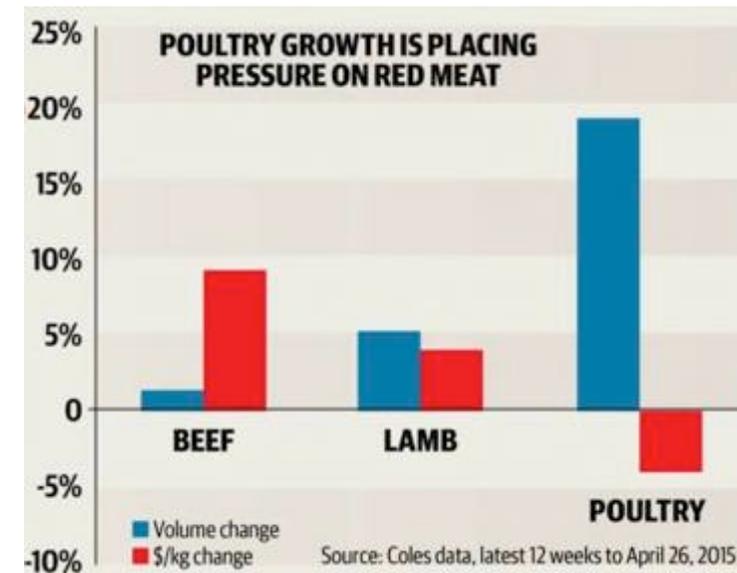
The aging population and the resultant blow out in pension and health costs will heavily impact the economy. Economists are predicting that there may never be a cut in wage costs.

4 Rising red meat prices

High red meat prices are driving a shift to chicken, pork and seafood. Red meat prices have been steadily rising in the face of tight supply and strong export demand, while at the same time chicken and pork prices have declined, largely due to genetic improvement and improved feed conversion rates. Prices of red meat in South Australia for example have doubled in the past three months. Prices are increasing on all cuts.

Supermarkets have attempted to absorb some of the increase by reducing their margins because red meat is an important destination driver. However there is a limit as to how long they can do this. Some retailers have increased the minimum portion of popular lines such as mince to support sales volumes.

High red meat prices are also impacting food service outlets, which are being pressured by high labour costs. In the current era of consumer frugality, restaurants have found it difficult to pass





Domestic market

on food costs and have been forced to reduce portion size, downgrade the quality and put more pork, poultry, seafood and vegetarian dishes on their menus.

The decline in per capita red meat consumption that has been evident for many years is likely to accelerate. The concern for the red meat industry is that this will be difficult to reverse.

5 The supermarket dynamic

The Australian supermarket sector is experiencing its most dynamic period in history. This began when Wesfarmers acquired Coles and installed a new management team that embarked on a dramatic turnaround strategy. This strategy included hard-nosed negotiations with suppliers, aggressive price discounting, a major investment in store refurbishment and an ambitious roll out of private label. Woolworths once consistently out performed Coles on every measure and still held the world's highest supermarket margins, but it has felt the impact of the Coles strategy. Figures in at the end of April 2015 show that Coles has outperformed Woolworths for 23 consecutive quarters.

The tables have now turned with Coles consistently outperforming Woolworths largely because it has significantly cheaper prices (Mitchell, 2015). Woolworths' management has also been distracted by the poor performance of the Masters hardware business.

The other disruptive factor in the Australian retail sector has been the rapid expansion of Aldi. Although it was slow to take off, shoppers have flocked to Aldi because of its very low prices, quality product ranges and excellent value private label products. Aldi now has a 13% market share, which is growing rapidly. It is expanding its footprint into South Australia and Western Australia. The success of Aldi has sparked a price war between the big two supermarkets. Independent Metcash Group has been the hardest hit because it does not have the buying power to match prices.

The other disruptive force in retail has been Costco who is also rapidly expanding its store footprint in Australia. With its big box format and club model, Costco is particularly attractive for bulk shopping and is now a significant supplier to smaller food service businesses.

The scene is set for the next level of shift in retail. With Woolworths share prices low and an increase in short selling, there is speculation that it could be a takeover target either from an equity consortium or a global supermarket. Walmart is high on the list of potential buyers. Given its profit margins are the highest in the world, Woolworths would be attractive to an

“Record cattle prices are threatening to push steak off the menu.

Some beef cuts have spiked by as much as 50% in the past six months thanks to strong overseas buying – driven partly by the softening Australian dollar – and drought conditions.

The big price rises are putting the squeeze on margins in the meat processing industry and sparking warnings that shoppers need to get used to paying more for beef.”

Source: (Low, 2015)

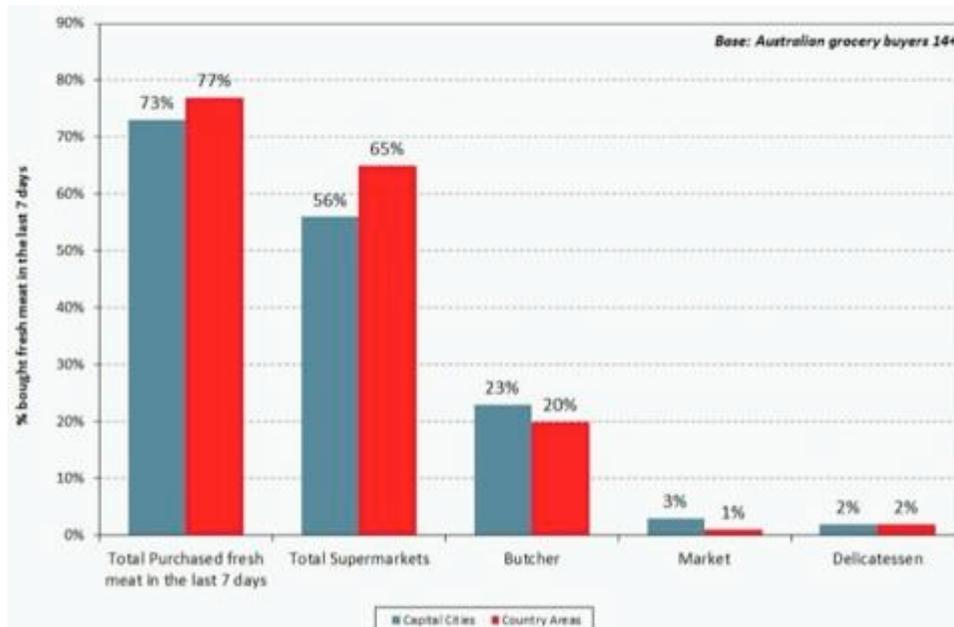


Domestic market

overseas chain.

The other takeover target is Metcash whose share prices are low and being short sold. Metcash would make a logical entry point for an overseas chain with its national distribution footprint. Even though the stores are independently owned there are many members with a multi store network who would sell out at the right price giving a new entrant sufficient critical mass. There are rumours that another discount operator, the German supermarket chain Lidl is also looking to enter the market.

The supermarket dynamic is highly relevant to the red meat industry. Fresh foods are a critical part of a supermarket strategy because they drive shopper visitation. All supermarkets have recently announced plans to invest heavily in their fresh food offering. Red meat is important as it is the centrepiece of the fresh food offering. Supermarkets have the ability and an incentive to cross-subsidise meat with other categories, as has been evidenced by the fact that some have absorbed the recent price rises.



Source: Roy Morgan Single Source (Australia), July 2013 – June 2014 (n=16,809).



The other critical point is that supermarkets have progressively taken market share from independent butchers. Supermarkets have also driven structural adjustment within the industry by introducing closed-loop supply chains.

6 Concentration in the food service sector

As in the supermarket sector, there has been significant structural adjustment in food service distribution. The key trends in food service include:

- Discretionary spend sector:
 - *The growth of chain, themed restaurants*
 - *The growth of high end, signature restaurants*
 - *The decline in middle tier restaurants and bistros*
 - *The growth in low price outlets such as clubs and pubs that can cross subsidise food with alcohol and gambling*
 - *The crippling impact of labour costs, particularly penalty rates for weekends and public holidays*
 - *The plate/cost squeeze whereby outlets cannot pass on the increased cost of ingredients to diners, causing them to trade down either in portion size or quality of cut*
 - *The strong trend toward healthier menus and allergy free menu choices.*
- Institutional side:
 - *The outsourcing of meals to contractors*
 - *Central kitchen and 'heat and serve' models*
 - *Increase in allergy free meals.*
- Distributor side:
 - *Rationalisation through mergers and acquisitions*



Domestic market

- *The market power of corporate players such as Bidvest*
- *The extension of their range to include fresh foods had enabled them to take market share from specialist operators*
- *Increasing adoption of closed-loop supply chain models.*

7 Reduced red meat usage in food service

The recent increase in red meat prices has impacted the food service sector significantly. Food service establishments, both in the discretionary and institutional market segments, have strictly controlled plate costs. As a rule of thumb, a restaurant works on food costs being one third or one quarter of the menu price. This has been exacerbated by the increasing penalty labour costs. Because of diner frugality, they have not been able to pass on the increased red meat costs. As a consequence, restaurants have had to substitute proteins or down grade the size or quality of meat cut used.



1 The changing demographic landscape

The Australian demographic landscape will continue to evolve over the next decade due to the ageing population and the impact of migration.

The Australian population is forecast to grow to almost 40 million by 2055. Although there has been resurgence in the birth rate, population growth in Australia is mostly driven by migration, which has slowed in the past year. In addition, there has been an exodus of New Zealanders who have returned home due to improved economic conditions.

Estimated net overseas migration (the number of migrants minus the number of Australians leaving) over the next 40 years will grow by a conservative estimate of 215,000 per year. The forecast of total arrivals for 2014 was 500,000 (The Treasury, 2015).

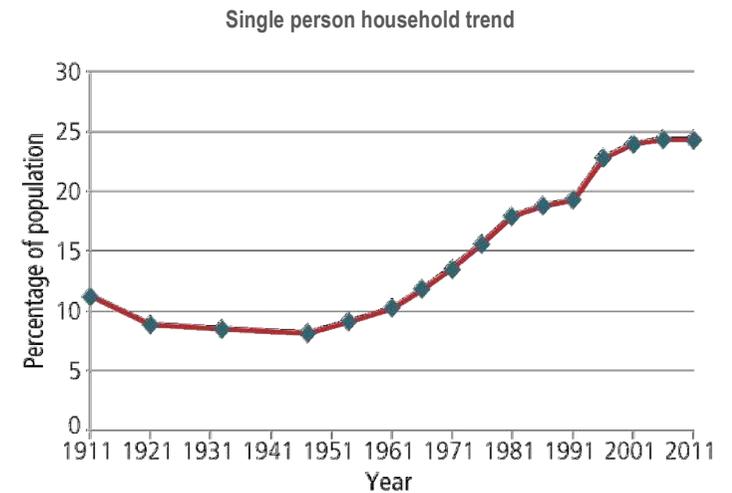
Australia is moving into an ageing demographic bubble as the post war baby boomers reach retirement age. Life expectancy is rising due to better lifestyle and rapidly advancing medical technology. By 2055, nearly a quarter of the population will be over the age of 65.

Intergenerational values and lifestyle values impact food consumption and choices. Baby boomers are less price sensitive and will pay a premium for a superior product or added value. Generation X has a reputation of being incredibly disloyal to brands. They are cynical and sophisticated thinkers in relation to advertising and shopping. Generation Y was raised in a world of technology and carry a label of being programmed for instant gratification. While generation Z on the other hand, are discerning consumers who think a lot about their purchases. Not only do they have high spending power, they influence family purchasing choices. Vegetarianism is common among generations Y and Z.

Population growth, the ageing population, smaller families and increased single person households are all projected to lead to an extra 3.5 million Australian households by 2035. This

The number of Australians aged over 65 is expected to double by 2055

Source: 2015 Intergenerational report



Source: aifs.gov.au



Domestic market

will impact food choices significantly, especially packaging and portions per pack.

2 Food choices and eating styles

Australian eating styles continue to be influenced by a rich, multicultural society that continues to evolve. A 'meat and three veg' history has given over to an eclectic, rotating menu of authentic Asian, European, Sub-continental and Middle Eastern regional cuisines.

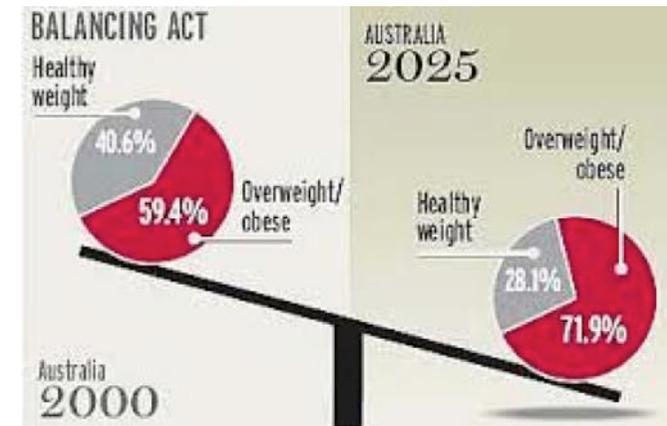
The more recent consumer frugality that evolved during the GFC has lingered. Despite low interest rates and relatively low unemployment rates, consumer confidence levels remain low. To this end, there has been a shift to private label groceries. Consumers have become less loyal to brands and readily switch to those on special.

In general, educated consumers have become more health conscious choosing lower fat, sugar and salt grocery options as well as gluten-free and consuming more fruit, vegetables and grains. The so-called 'worried well' cohort is leading the trend toward healthier eating. Despite this trend on one hand, the obesity epidemic continues to grow out of control, particularly in lower income areas. The prevailing approach to weight loss continues to be lower carbohydrate/sugar and higher protein diets, the Paleo diet being the latest high protein fad.

Vegetarianism is still prominent particularly among younger females driven by a combination of health, principle and dislike for red meat. The latest research from Roy Morgan shows that there is a steady trend towards meat-free or minimal meat diets. Furthermore, it is 27% more likely for a vegetarian to be under the age of 35 than the average Australian (Source: Roy Morgan Research, 2013). Vegetarianism has also grown as a result of increased Indian and Sri Lankan migration. The 2011 Census indicates that the vegetarian religion 'Hinduism' is the fastest growing religion in Australia.

There has been a rapid increase in the marketing of 'free from' foods as the diagnosis of allergies has grown exponentially (much of this is believed to be self diagnosis). Gluten-free is now a major retail product category.

Food marketers continue to respond to the quest for convenience with ready-to-serve meals and meal components growing in availability and popularity. While at the same time, the popularity of Master Chef style TV cooking programs continues to drive an interest in cooking from scratch and fine dining. Recreational 'chefs' are becoming more experimental with food, attending cooking classes and trying new ingredients and cooking styles. Furthermore, new



10% of the population agree with the statement: "the food I eat is all, or almost all vegetarian"

Roy Morgan Research 2013



Domestic market

appliances such as the multi-purpose Thermomix have encouraged homemakers to become more adventurous cooks and embark on activities such as making their own pasta, stocks and breads.

The widespread interest in food is being manifested in a desire to understand its provenance, with more consumers asking 'who made it, where and how was it grown / produced?' Connected to this line of questioning is a significant switch in preference for Australian grown and processed food. The recent incidence of food poisoning from frozen berries imported from China has intensified consumer concern about food safety and country of origin labelling.

3 Hyper-connectivity enabled by social media means greater accountability

Social media has allowed people with similar interests and social agendas to gather in the virtual world and mount a formidable and very fast response. The Indonesian live cattle incident is an example of the damage that social media can do at lightening speed.

The social issues of greatest vulnerability for the red meat industry have been outlined previously in this report but include: animal welfare, environmental sustainability, treatment of foreign workers, use of chemicals, antibiotics and food additives, truth in labelling and corporate citizenship.

Agricultural industries in general are not particularly skilled at handling social media. It is essential that social media is constantly monitored and that there be a strategically managed and swift response delivered through credible spokespersons adept at handling the media.

4 Virtual food communities

Social media has also created numerous virtual communities of cooks who share recipes, shopping and diet tips, often via YouTube. Recipes are known to be the highest of Google search categories. Coles and Woolworths have ensured that their recipe websites are the first hits in any search.

These virtual communities are also extremely active in restaurant reviews and blogs with photos of dishes and detailed analysis of the ingredients and their provenance.

Red meat marketers will need new marketing skill sets to raise the profile of their products on the internet via these food, diet and nutrition focused virtual communities.



PESEL Technological

The impact of disruptive technologies

The Internet and smart phone technologies have enabled the creation of a whole new generation of disruptive business models including:

- On line shopping
- Uber (taxi services)
- Air BnB (accommodation booking services)
- Trip Advisor (travel reviews)
- Apple pay (alternative to credit cards)
- Netflix (movies and TV shows on demand and streamed to any device)

These technologies are termed disruptive because they have abruptly caused serious damage to what were very successful businesses or industries, undermining their top and bottom lines.

In the context of the meat industry, the Internet has enabled an emerging on-line, direct-to-consumer channel to market for producers of gourmet red meats. This has created an unsatisfied demand for service kill for small runs.



PESTLE Environmental

Packaging

Largely due to pressure from local councils, householders are becoming increasingly conscious of the need for recycling of packaging. Shoppers are showing a preference for environmentally friendly packaging and some are shying away from products that are perceived to be over packaged.

Councils are facing rising costs associated with garbage collection, as there is a shortage of suitable landfill sites. Some local councils have instigated green waste bins in the weekly rubbish collection.



PESTE Legal

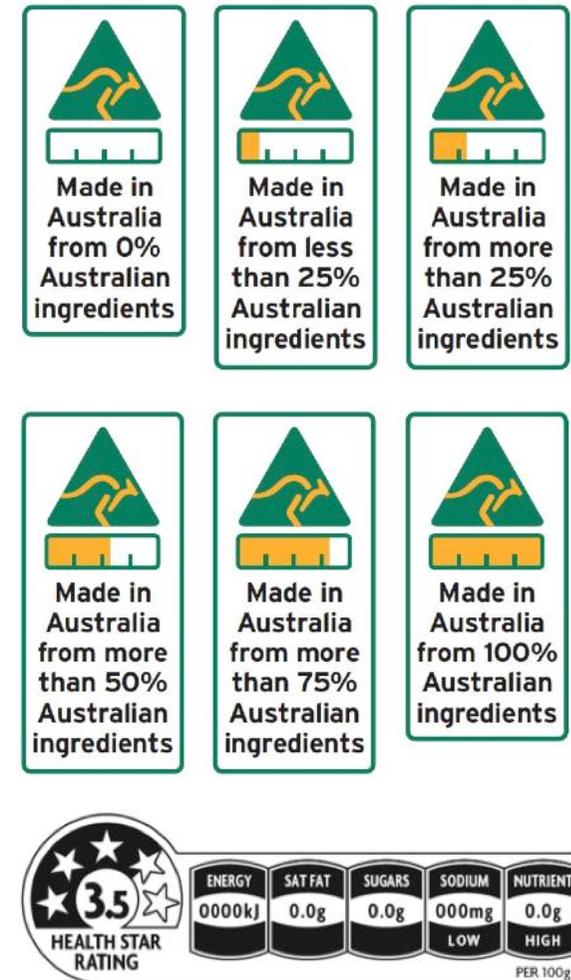
Food labelling

Food Standards Australia and New Zealand (FSANZ) is working on a number of recommendations stemming from an independent review of food labelling law and policy released in 2011. Two areas of food labelling in focus are 'country of origin' and 'nutrition'.

The Federal Government announced in July 2015 plans to introduce new packaging legislation later this year. This new wave of labelling legislation will indicate the proportion of Australian ingredients and whether the food product is Australian grown, made or packed. Visual indicators with the Australian made green and gold triangle icon, and larger text are proposed.

There has also been an attempt to introduce a new level of nutritional labelling. A health star rating system was introduced in 2014 and is due to be reviewed in 2016. The system has met with considerable criticism from the food industry and the health profession on the basis that it is supposed to simplify the system but in reality is more complex. It has become misleading and misused by the industry as a marketing tool.

At this stage both changes to the labelling are voluntary for food processors. While the labelling legislation does not apply to the meat industry, there is a likelihood that it will in the future, given the negative position of the health profession in relation to red meat.





RISK PROFILE

1. Uncertainty around the economy and low consumer confidence levels may curb discretionary spending, dampening demand for higher value meat cuts and driving demand for secondary cuts.
2. High red meat prices in the domestic market may drive a long term shift towards consumption of chicken and pork and away from beef and lamb. The industry needs a strong domestic market as protection against export volatility.
3. Social licence and social media will demand increased transparency, accountability and closer scrutiny of the meat sector. It will also guide food and restaurant trends through a number of virtual communities.
4. There is a threat to red meat consumption due to the negative stance by the health profession.
5. Over time, the ageing of the population will put downward pressure on per capita red meat consumption and change the packaging and portions required.
6. Food labelling regulations may demand tighter protocols around traceability.
7. There will be increasing regulatory pressure to improve the environmental friendliness of packaging.
8. Medical authorities could force negative health labelling on meat due to the established linkages between saturated fat, heart disease and various cancers.



IMPLICATIONS

1. The economy

1.1 There are serious question marks over the domestic economy due to a number of external influences. Because of the deficit blow out and rising health costs, there will be increasing pressure on the government of the day to implement policy measures that will impact discretionary income. Being relatively high priced, red meat consumption will be adversely impacted by any cut in discretionary spending.

2. Reduced red meat consumption in food service

2.1 It is highly likely that with rising menu costs, the switch to alternative protein sources will accelerate. This situation will be difficult to reverse when/if prices come down again. Investment in technology and chef training to develop new products from cheaper cuts of meat will be beneficial.

3. The Internet

3.1 Red meat marketers will need new skills to influence opinion, food trends, cooking tips, shopping advice, restaurant selection and raise nutritional awareness via virtual food communities on the Internet.

4. Food labelling

4.1 There is a chance that the industry could get caught up in the new nutritional labelling regulations that are at present, voluntary. An investment in scientific research to support the case about the positive nutritional qualities of meat would allow the industry to better put its case in response.



Section 8 | Export markets

The prospects for export trade for red meat for the next few years is optimistic on the back of record growth rates in demand; a global shortage of red meat; and a more favourable exchange rate. The biggest challenge for the Australian industry will be being able to source the livestock supply to fulfil the demand.

The price rises as a result in growth in global demand, means export markets are pricing the Australian domestic consumer out of the market. The swing in emphasis from domestic to export markets as discussed already, will gain momentum.

As the emerging markets continue to become more mature, there will be shifts in the type of product required. The trend will be towards higher end cuts, grass fed and chilled product. The latter will require more work by Australian processors to improve in-market cold chain integrity, which if done well, could be leveraged as a competitive advantage.

Export demand will be helped by the recent signing of multiple FTAs, but this won't guarantee market access. It is likely that technical trade barriers will become more problematic as trading partners try to find new ways to control imports.



1 FTAs and market access

The signing of three free trade agreements and the prospects of more to come is generally good news for the red meat industry because in theory, it will improve its competitiveness. The FTAs are the CHAFTA (China), KFTA (South Korea) and JEAPA (Japan). Negotiations are also well advanced on the TPP (Trans Pacific Partnership) involving a mix of countries in the Asia Pacific region that involves much more than market access. There are also exploratory talks in play with India, although this will be a long way off reaching a conclusion.

'Free trade agreement' is a somewhat misleading term as in many cases it involves a reduction in tariffs over an extended period of time. For most there will be a level of tariff remaining. Furthermore, although these FTAs have been negotiated, they are not yet locked in stone. For example, China has announced that it may withdraw from the agreement if it cannot get a satisfactory solution to the use of Chinese labour for Chinese operators in Australia. The Labour Party has announced that it will attempt to block the Chinese FTA agreement being passed in parliament, on the basis of the Chinese labour requirement.

While the benefits to Australian beef producers are immediate, China still maintains its policy to become a net exporter of meat products and become self sufficient. Currently demand for beef by Chinese consumers cannot be met by domestic farmers (Lee, 2014).

Importantly, the FTAs are not a guarantee of market access. Although the tariffs are reducing there is an increasing imposition of non-tariff barriers, some of which are purely politically motivated and others based on legitimate sanitary or biosecurity matters. Effectively, trading partners are using non-tariff barriers to control imports.

Technical trade barriers are problematic as they involve a prolonged and frustrating bureaucratic processes. They often require a large amount of scientific work to validate claims,



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many of which are spurious. Often they involve wasting effort trying to solve a political problem with a scientific solution. Time and effort can be wasted finding scientific proof only to discover that a new obstacle is put forward. To some extent the presence of technical trade barriers reflects Australia's relative bargaining position. Presumably, rising global demand for red meat will ultimately quell or at least soften these market access issues.

2 Geopolitics

There are two geopolitical tension points that have the potential to impact the red meat industry. The first is the growing tension brewing in the South China Sea with China occupying a number of contested islands and developing military bases there. Japan, Vietnam, and South Korea are in dispute with China and the USA is also weighing in. As the tension grows, the issue for Australia is that it may be forced to make a choice between an alliance with China (where its economic interests lie), and the USA (where its defence is aligned). If Australia is seen to be siding with the USA, there is a real chance that China may introduce trade sanctions. China recently signed an agreement to give a preferential deal to Brazil for iron ore. Australia's large and growing red meat market could be at risk.

The second tension point is with our closest neighbour Indonesia. The political relationship between Australia and Indonesia is at an all time low, due to a culmination of issues including: people smuggling of illegal migrants via Indonesia; the execution of two Australian drug smugglers; the Australian Government spying incident; and live cattle trade. Australia recently withdrew its ambassador to Indonesia.

Indonesia has a reputation for making irrational policy decisions. In July 2015 the live cattle import quota from Australia was reduced by 75% without notice. As Indonesia is a critical market for live trade, this reaction was highly disruptive. Because of unmet demand in Indonesia, it is likely that an alternative boxed meat market will grow there as chilled supply chains improve.

3 Transparency with Halal certification

The transparency and integrity of Halal certification is increasingly becoming problematic for the Australian red meat processing sector. The issue is that each Muslim country has its own certification requirements and administration systems and their assessors in turn need to be licensed by the Australian Government. Within each country there are a number of certifying



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agencies, which are essentially private businesses that are competing for business. In some cases there is a monopoly granted that is sometimes contested between providers. There is also no consistency around charging policies. Processors are being forced to pay because of the critical reliance on specific Halal certification for access to each individual export market.

Almost all Australian sheep meat is processed to Halal specifications and 70% of beef. It is estimated that Halal certification costs the industry \$30 million per year.

The prospects of rectifying this problem are remote because of the highly political nature of the subject. It is unlikely that the Australian government will attempt to intervene in this area given the sensitivities.

4 Food security

Global food security has elevated in importance as an issue in recent years. Historically, wars have been fought over food security. As has been mentioned previously, food security manoeuvres are occurring at a micro level with food companies investing in supply chains to guarantee their ongoing supply. At the macro level, sovereign funds are investing in agriculture to ensure the food security of their citizens. Examples include, the governments of Qatar, Saudi Arabia, China and Singapore, which have made major agricultural investments in Australia through state-owned subsidiary companies.

5 Carbon footprint

There is growing pressure on the world stage for countries to introduce policies to reduce the carbon footprint. Australia is looking increasingly backward on the world stage in this respect with China and the US championing the issue and many smaller countries implementing far more aggressive measures than Australia. Sweden is even proposing a 'meat tax' on purchases to offset the methane generated in production.

The Liberal Party-led coalition government has wound back a number of policies and government bodies established under the last Labor government to address climate change. At most significant decision-points on environmental issues, the coalition has proposed to reduce targets and take less action rather than do more to decrease Australia's impact on the environment. The coalition dropped the carbon tax and has significantly reduced the forecast



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emissions targets for 2020, saying Australia will easily meet its commitment to reduce greenhouse gas emissions by five per cent on 2000 levels.

The Abbott government also abolished the Climate Change Authority, Climate Commission, the Energy security fund and the Clean Energy Finance Corp.

The coalition and Labor reached an agreement on the renewable energy target for 2020 in May 2015. The target has been reduced to 33,000 gigawatt hours from the initial bipartisan target of 41,000 gigawatt hours. Also under this agreement, the coalition scrapped a proposal to continue reviewing the target every two years.



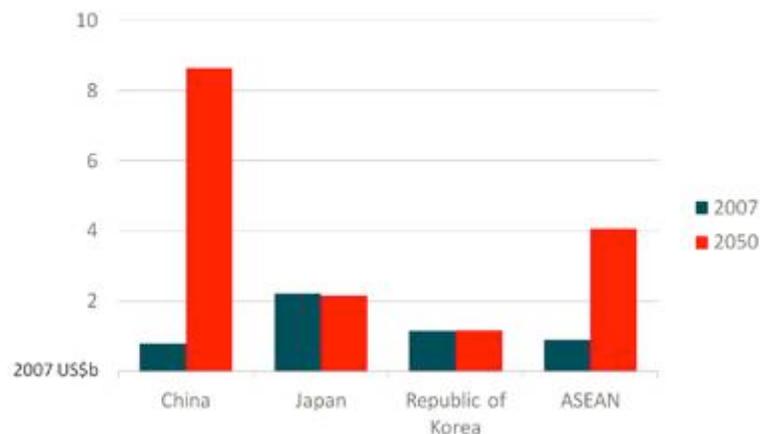
P E S T E L E conomic

1 Growing global demand for food

The global demand for food, especially animal protein, is predicted to grow exponentially over the next 20 years. This is due to the overall world population growth along with an increasingly affluent middle-class, most notably in Asia and India.

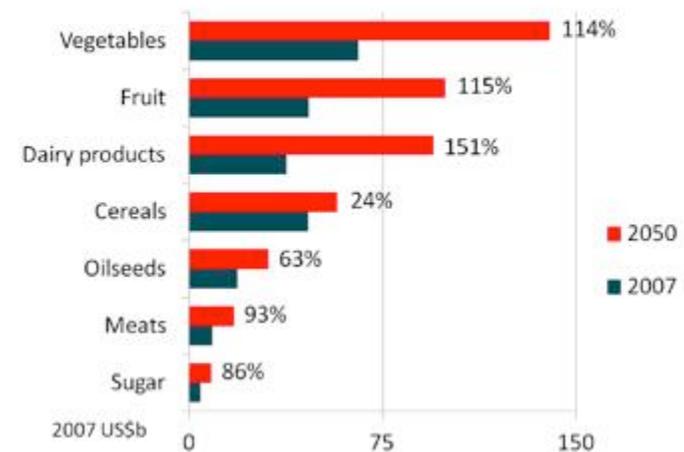
Discussions around the growing demand for food from Asia tend focus on China, which is currently the biggest food market. However other markets, particularly in Southeast Asia also have exciting growth potential. Although they are developing at different rates, the middle-class cohorts of the ASEAN countries are also growing exponentially. While India will take over China in population size by 2028, it does not have a large meat eating culture.

Asian beef imports to rise



Source (Penm, 2014)

India's food consumption to rise





It is apparent that there is a steady but significant shift in global economic power. For a long time the Chinese economy was powering forward looking to pass the USA as the world's largest economy. However in recent times the situation has reversed, with the US economy enjoying a strong recovery as the economy in China slows. China had enjoyed double-digit economic growth due to its rapid industrialisation and urbanisation on a massive scale. There are now signs that this growth has slowed, sitting at around 7% per annum.

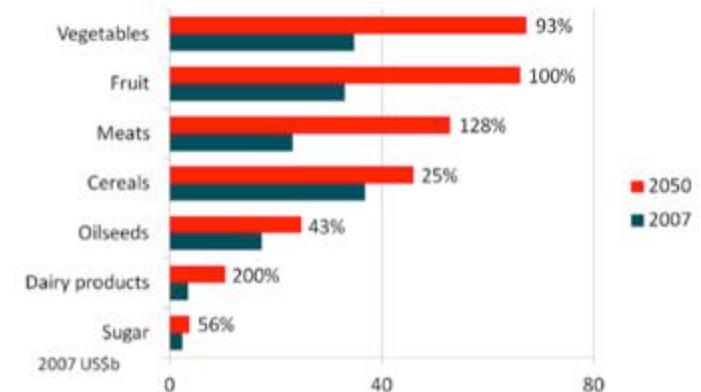
Both exports from China and imports to China have subsided significantly. Being Australia's largest trading partner, this has obvious flow-on effects to the Australian economy, the most noticeable being a softening of demand for iron ore. The recent crash of the Shanghai stock market is an indication of the delicate nature of China's economic foundation. Government intervention in the economy and a lack of transparency, makes the Chinese market very unpredictable.

The Greek economic crisis creates a large amount of uncertainty around the world but especially in Europe where it is feared that the contagion may spread via the banking system and financial markets. At the time of conducting this scan the future of Greece and its impact on the rest of Europe was uncertain, but the risk of continued volatility seems present for some years to come.

The economies of the ASEAN countries continue to grow rapidly, albeit at varying rates. Singapore has risen to being the wealthiest country per capita basis, although it is now maturing. Malaysia and Indonesia are similarly enjoying rapid rates of growth with the result that there is a burgeoning middle-class, and a large appetite to purchase quality and safe foods, and branded products.

The performance of the economies of Japan and South Korea are of great importance to trade in meat processing industry, being consistently among Australia's largest markets. The Japanese economy is showing signs of limping out of a long-term recession with modest growth rates predicted and a slow recovery. The South Korean economy has enjoyed continued and spectacular growth that has driven an enviable improvement in living standards and quality of life.

Prospects for growth in ASEAN food consumption





2 Switch in market emphasis

Global economic shifts are likely to manifest in significant swings in demand for Australian red meat from the traditional markets of USA, Japan, South Korea and Europe, to Asia and the Middle East. This has implications for the quality, type of product and cuts in demand. Whereas the traditional markets have largely sought premium cuts, particularly grain fed beef (with the exception of the US that has been a major market for grinding beef), the emerging markets tend to have a stronger demand for secondary cuts and offal. These cuts are more price sensitive and more forgiving on quality because of the tendency towards wet cooking. Furthermore, with a growing interest in healthier eating, demand for grass fed product should grow.

3 Australian dollar

Processor returns from exports are heavily sensitive to the exchange rate. Although a high percentage of the export volume is traded in \$US, the other cross currency exchange rates are also important notably the RMB, Yen, Won, Euro and NZ dollar.

The most important currency relationship is the Australian against the US dollar. In July 2015, the Australian dollar reached a six-year low relative to the US dollar settling at \$0.73. This has been due to a number of factors including a softening of demand in iron ore from China, strengthening of the US economy, and uncertainty regarding the economic meltdown in Greece. The 30%+ depreciation of the \$A against the \$US has provided a much needed lift in returns to Australian producers and processors.

Many economists are of the view that the Australian dollar is still overvalued. This is based on the trade weighted index, which indicates that the true value of the Australian dollar should be around \$0.70. Should a \$0.70 or below rate eventuate, it would give the Australian economy a major boost and would drive meat exports higher, strengthening prices.



1 Changing consumption patterns

Growing affluence in developing countries chiefly manifests itself in increased demand for food overall, followed by changing preferences and consumption habits. After satisfying basic hunger, the next step is to improve the quality of food eaten. In most developing countries this means a shift from carbohydrate-based diet to a protein-rich diet, and within protein, a shift from pork and poultry to red meat and premium seafood.

As affluence grows consumers tend to switch from shopping in wet markets in favour of supermarkets and hypermarkets because of concerns about food safety and hygiene. These retail outlets usually offer more imported food. As affluence grows even further, home refrigeration and cooking appliances also improve. More varied restaurant eating experiences follow which then leads to a shift in home food preparation towards the inclusion of Western style meals.

Over time this diet evolution will lead to a shift in the type of products being imported into these markets. Traditionally these markets have been major consumers of offal and secondary cuts. There is often a preference for lower quality meat as it suits popular braising and hot pot cooking styles. However, as is already being seen, there is likely to be a shift to higher end cuts from better quality carcasses and more grass fed beef over time. There will also be an increasing trend towards fresh chilled meat, away from frozen.

2 Asian on-line shopping trends

Urban Asian consumers have been especially high adopters of on-line shopping – even of daily grocery needs. On-line grocery sales rose 50% in China in 2014. As a culture used to constant social disruption, they are early adopters of new ideas.

40% of Chinese consumers buy their food on line”

McKinsey & Co 2014



Export markets

Virtual social communities are becoming extremely powerful in Asian markets. Many Asian communities can communicate quicker and faster because they have better IT connectivity than Australia and a preference for hand-held technology. Asian businesses are tapping into the consumption boom by building their marketing around these communities and building strong brand loyalty in the process.

3 Western influence in food service

Although traditional restaurants and street foods are still the mainstay the food service offering across developing Asia, the growth in Western style restaurants is expanding. This includes high-end fine dining, themed and family restaurants, western steakhouses and grills, and quick service chain restaurants such as McDonalds and KFC.

4 Food Safety

In Asian markets wealthy consumers pay attention to food safety for good reason. Affluent consumers tend not to trust locally produced food for fear of contamination from poor handling. Australia has benefited from this fear because of its systems and reputation for safe foods. Commonly the Australian food industry refers to this as the 'clean and green' factor, however, global research by MCKINNA *et al* indicates that in Australia's key export markets, the image for 'clean and green' is actually owed by New Zealand and Argentina. Australia is seen to be *dry, hot and dusty*. However Australia is globally recognised for the safety and the integrity of food, largely due to at the investment in compliance systems and government regulation of this. In this respect, Australia is in front of New Zealand whose image has been tarnished by milk contamination incidents.

5 Brand Australia

The fact that Australia has a competitive advantage in food safety raises the question about whether this needs to be underpinned by an Australian provenance brand. MLA in conjunction with NFF has recently launched the 'True Aussie' brand as an umbrella endorsement brand to promote Australia's food safety and sustainability credentials. There is a healthy debate within the industry as to whether this is the best strategy. Although there is a lot of support for the True Aussie initiative, there are some who believe that it is not necessary because of the high-profile processor brands that now exist in global markets.





Export markets

Another contentious issue is whether this brand should be promoted as a consumer brand to the public, or a trade brand targeted at importers and distributors. If it is to be promoted as a consumer brand, it will require a large investment over an extended period of time. Given the size and disparity of the Asian region this would be a complex and expensive exercise. It would also involve a large and complex administrative framework to ensure compliance with the conditions of the brand. It is also likely, as frequently occurs, that this brand could be exploited through counterfeiting in these markets, which is expensive and difficult to police.

Keeping it as a trade brand is far more practical and achievable, but some will argue that it is not necessary given that processor brands are strongly identified with Australia and serve the same purpose.

6 Growing criticism of red meat as a food source

With the global population at 7 billion and expected to reach 9 billion by 2050 (unfpa.org) there is growing concern about sustainable food sources and the ability to feed the world. Some NGOs and global think tanks are starting to question the moral and ethical case for animal protein on the basis that it is more efficient and sustainable to feed the world with plant foods. This is another tangent of criticism that the global red meat industry will face in future. At this point in time it is a fringe issue driven by extremists, but it has the potential to gather momentum if and when global food shortages emerge.

7 Genetically modified organisms (GMOs)

The issue of GMOs within the meat industry is with respect to animal feeds. GM technology is being more widely adopted by the grain industry. Until now, some countries and customers have imposed a ban on GM that has created export problems.

Given the increasing global food security pressure, and the need to increase productivity in producing countries, there is a strong likelihood that there would be more liberalisation with respect to GMO.



P E S T T echnological

1 Cold chain integrity

As emerging economies in Asia become more affluent and shift towards chilled beef, the integrity of cold chain logistics will become more important. Typically, in developing areas of Asia, cold chains are notoriously poor with limited refrigeration, substandard logistics, and poor handling practises mostly because of a lack of training and education of operators. This issue is of critical importance to the Australian red meat processing sector.

The industry cannot dismiss this issue on the basis that it is not directly responsible for product once it has landed, because any food safety incident involving Australian meat, regardless of who caused the problem, will have significant ramifications for the industry. Governments in Asia take food safety seriously when it comes to imports and are likely to overreact to any incident, which could jeopardise Australia's market access, even if the problem was caused by inadequacies in the market country.

The Australian industry will need to invest in technologies and training to improve the integrity of the in-market cold chain for chilled product. These technologies include tamper-evident packaging, RFID temperature probes and temperature tracking technologies. As a solution Australian companies could offer a complete supply chain solution as a value-added service.

2 Technical trade barriers

The issue of non-tariff trade barriers has been covered already. In many cases these are politically motivated and require a negotiated agreement. However, in some cases the trade barriers are based on legitimate biosecurity concerns that require a scientific or technical solution.



PESTLE Environmental

Global warming

Global warming has the potential to seriously impact the world's food supply. Like Australia, the rest of the world is facing climate volatility with lower than average rainfall and changed rainfall patterns resulting in prolonged droughts, increased average temperatures, longer and hotter heat waves and more extreme weather events. The volatility this causes in production will impact the supply of food to the world. For example, the prolonged drought in the US is one of the factors driving increased demand for Australian grinding beef.

Global warming is an issue on the radar of all nations, however some developed markets are reacting more strongly in a policy sense. Sweden has gone as far as proposing a Meat Tax to reduce consumption and offset omissions caused by methane production from livestock.



PESTE Legal

1 Integrity of trading partner legal systems

With the steady increase in trade with emerging countries, Australian processors are increasingly becoming exposed to trade risk from the vagaries of legal systems that lack the integrity of those in developed countries. In countries such as China, Indonesia and the Middle East the legal system can be subject to political interference making it very difficult for a foreign company to get a fair hearing. Foreign companies have found themselves innocently caught in legal challenges instigated because of political interference. Often the legal system is corrupt and lacks the transparency and accountability expected in the Australian legal system.

By way of example, although India, has a legal system based on the British tradition, it takes an extended period of time to achieve an outcome and invariably this is adverse to the foreign party's interests. The experience of Australian journalist Peter Greste in the Egyptian courts is a specific example of the irrational nature of political interference.

It is almost impossible to protect a global trademark or brand because many of the emerging countries are not signatories to the WTO treaties protecting trademarks. Even very large companies such as Apple have been frustrated in their attempts to protect their brands.

Similarly, it is extremely difficult to enforce contracts or other legal agreements.

Because of a reputation for product quality and safety, substitution products are often passed off as being Australian. This counterfeiting is almost impossible to effectively police but potentially damaging to Australia's reputation.

2 Illegal market channel into China

Despite recent trade breakthroughs, a significant amount of trade into China goes through the so-called 'grey channel' whereby it enters illegally through Hong Kong, Taiwan, Vietnam or



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other points. Often the importers lack legal market access and in other cases the motivation is to avoid duties or taxes.

The grey channel facilitates competition from countries that do not have legal access into China (e.g. India). Also, a significant percentage of Australian product, much of which has legal market access, enters through this channel at the initiative of the customer who for various reasons, prefers to trade in this way.

Exporters whose products go through the grey channel are exposed as the channel can be closed down at short notice by the authorities, (which is increasingly happening under the anti-corruption focus of the current leadership) and the shipment lost. The Chinese government has an inconsistent approach to the policing of the grey channel. An abrupt closure of the grey channel can be extremely damaging as experienced by the Southern Rock Lobster industry. The abrupt closure caused a dramatic drop in prices and many of the industry's customers were arrested indefinitely, disrupting trade relationships and supply chains.



RISK PROFILE

1. Uncertainty in global economy could lead to softening demand in some markets
2. Geopolitical risks (particularly China and Indonesia) could impact demand / market access
3. A slowdown in the China economy and / or political interference (e.g. disruption to grey channel) could impact demand
4. The trend towards targeted markets for particular products / cuts concentrates market risk
5. FTAs could lead to an escalation of technical trade barriers, some politically motivated
6. Pressure from global customers and consumers for increased standards of product integrity and accountability
7. Appreciation / volatility of the \$A relative to major trading partners
8. Biosecurity incursions FMD, BSE
9. Food safety / product integrity incidents in global markets that damage Brand Australia



IMPLICATIONS

1. Market access

- 1.1 To the extent that there are growing biosecurity and food safety risks, investments in scientific research to remove contamination risks would be beneficial.
- 1.2 New technology, particularly in shelf stable meat packaging, may be a way of overcoming technical market access issues as well as mitigating risk from transit and in-market cold chain deficiencies.

2. Growth in export demand

- 2.1 It is highly likely that the swing in emphasis from the domestic market to export markets will continue. As new markets emerge, it would be beneficial to invest in market research to develop carcass characteristics, cuts and supply chain solutions that better meet the market needs and which deliver premium pricing.

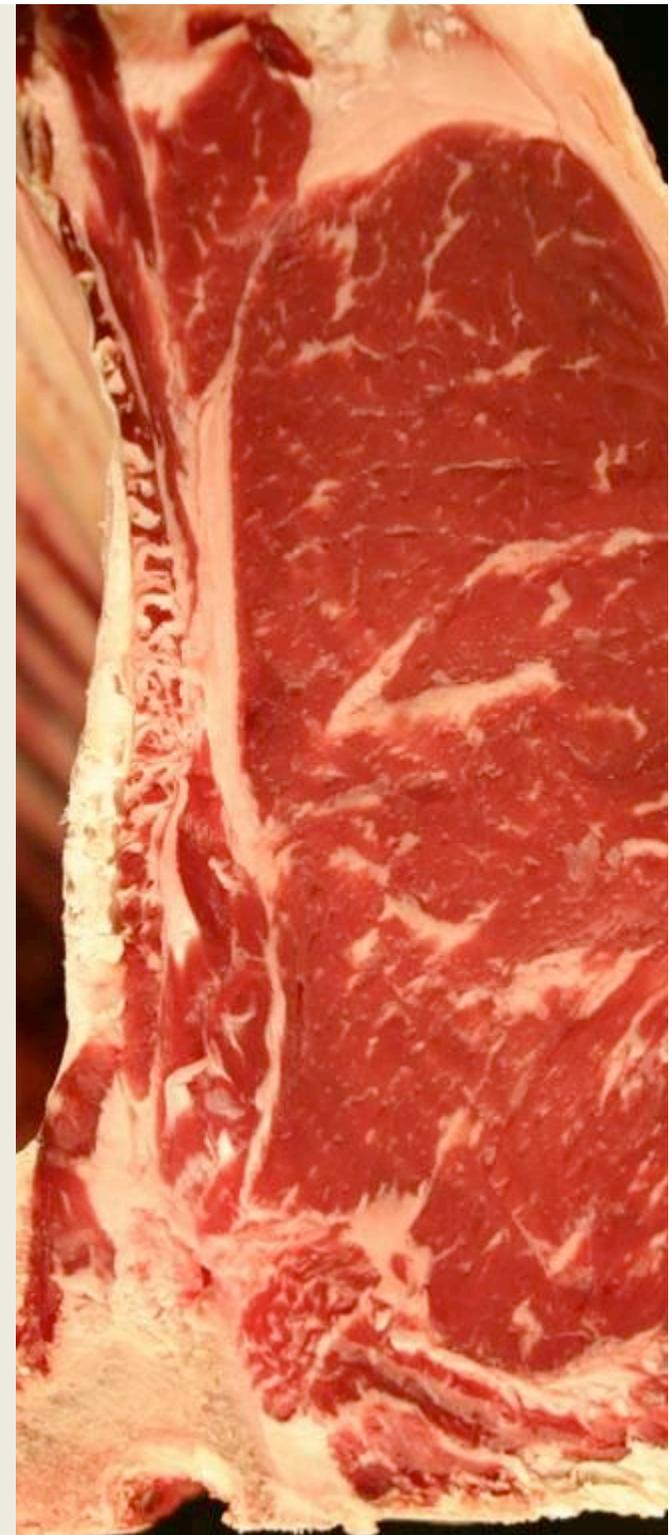
3. Food safety and cold chain integrity

- 4.1 As emerging markets open up in developing countries, food safety and supply chain integrity will become more critical. This represents both a challenge and opportunity. The challenge is that Australia (and potentially directors of in-market subsidiary businesses in China) will be held accountable for food safety incidents, to the point that it could become a market access or personal liability issue if an incident occurs.
- 4.1 The opportunity is to invest in supply chain solutions as a value-add as a point of competitive advantage.

4. Branding

- 4.1 More work needs to be done around the branding issue as without doubt, provenance branding will be very important in emerging markets. The question for processors is whether they should invest in their own brands or an industry brand. A second issue is whether the True Aussie brand should be a trade or consumer brand and what is the ability of AMPC members to influence this. Because of its critical importance, this issue requires further consideration by AMPC members.

PART F: SCENARIOS



Scenario overview

The purpose of this section is to develop a number of scenarios that paint a word picture of the possible macro environments facing the Australian red meat processing sector. Three scenarios are presented: optimistic, pessimistic and mid-range. The scenarios are intended to stimulate thinking with regard to future strategic directions, particularly to identify risk areas by outlining the spectrum of what is possible. The scenarios are necessarily hypothetical. Because of the stochastic nature of the driving factors, it is unlikely that any one scenario will line up exactly as is outlined.

The scenarios have been developed on the basis of a 5 to 10 year horizon.

The final part of the scenario analysis identifies what is known as a 'Black Swan' event, i.e. an event that could come out of the blue, but was always possible, and if it occurred would have a devastating impact on the industry.

Scenario One | Optimistic

1.1 Supply

The livestock herds/flocks are steadily rebuilding as strong prices for beef and lamb give producers the confidence to invest in productivity improvements including genetic improvement, pasture improvement and the adoption of new farm technologies. The optimism surrounding agriculture is buoyed by strong demand from Asia and has attracted professional investors both from Australia and overseas, whose large capital base and low debt levels have enabled them to develop state-of-the-art farming businesses with the scale to produce large numbers of consistent quality cattle, sheep and goats. New technology and improved farming practices have allowed producers to better manage the changing and increasingly volatile climatic conditions and improve water efficiencies.

Many producers have now entered into long term, strategic supply alliances with processors to support their branding programs. These alliances include incentives to produce carcasses that better meet specific market needs. Producers are satisfied that their relationship with processors is transparent and that they are receiving an equitable share of the profit pool.

The producer peak bodies have worked with MLA and state agricultural departments to develop national on-farm protocols relating to animal welfare and animal husbandry, which have satisfied the animal rights groups

1.2 Processing

The processing sector is enjoying its most profitable and stable period in its history. Global demand and pricing is strong, helped by the \$A exchange rate sitting at around 74 US cents. The market conditions allow processors to move all components of the carcass to a diversity of markets at strong prices.

Livestock supply is returning to a more normal situation, helped by the fact that processors are now sourcing a larger proportion of their kill through strategic alliances with producers, linked to their branding programs on a tighter value-based payment system which pays

producers the premium they need to deliver a better quality beast at a profit.

A large and increasing proportion of the total slaughter is now being marketed under processor brands that have clear value propositions and are targeted at specific market segments. These brands are underpinned by Australia's reputation (underpinned by its governance systems) for safe and sustainable food.

The restored profitability and stability has given processors the confidence to invest in major plant upgrades involving state-of-the-art technologies that not only improve labour productivity, but also increase yield and the value of all components of the carcass. Processing technology has advanced to the point that large parts of the processing plant will soon be totally automated. The optimism about the industry's future has got to the point that some companies are considering investment in greenfield plants.

There is also a large investment in technologies to reduce the carbon footprint including co-generation of power and solar energy; wastewater treatment and methane capture which has improved the industry's sustainability credentials.

Processors are now finding it easier to recruit and retain skilled labour. The stable government policy around 417 and 457 visas and the cleaning up of the contract labour sector has provided security around the seasonal labour situation. Through investing in training and the development of career pathways, the leading processors have developed a skilled and stable workforce with gender balance at all tiers. This shift to a culture of 'HR rather than IR' has also improved the level of professionalism of their management teams, equipping them for the growing complexity of their businesses. There are now more women working in the processing sector and this has contributed to cultural change and new ideas. There is great pride in being able to work in the processing sector as part of the nation's 'dining boom' and management roles are highly contested.

The processing sector is also being rewarded for its improved work practices and safety outcomes through lower WorkCover premiums and an improved labour to sales performance ratio.

Although the compliance burden is still high, it has been relieved somewhat from the agreement by major customers to harmonize large parts of the process by accepting

standardized quality assurance modules on which they can build their own specific requirements.

The processing sector is no longer under the close scrutiny of the social license lobbyists because, through skillful use of social media, it has been able to convince these pressure groups of its improved corporate citizenship credentials. The fact that it is now both the largest regional employer and largest manufacturing sector in Australia is now recognized by governments who are now able to identify the differences between on-farm issues and processing issues.

The overall economic value of the sector has grown enormously due to industry investment in sophisticated market insights that have empowered processors to invest in new product development. Market leaders have commercialized cutting-edge research in packaging technology, process improvement and meat science to produce shelf-stable meat, nutritionally-enhanced meat, lower-priced tenderized cuts and a variety of 'easy to digest', plate-ready' or 'heat and serve' products. New product development has been tactically targeted to deliver to the needs of specific export markets, recognizing their individual flavour preferences, shopping patterns and cooking styles. Further to this, additional value has been found in the carcasses through a more sophisticated array of by-products that include food additives, biofuels, fertilizer and more.

1.3 Markets

Australia continues to hold a dominant position in global red meat markets. The dining boom is truly being realised as global demand grows through rising affluence in China and South East Asia. Australia's reputation for safe and sustainable food has provided a competitive edge over other suppliers to the region, particularly at the premium end of the market. The strength of the export market is allowing processors to move all of the carcass components profitably, including offal and skins at historically high returns.

The impact of the FTAs with China, Japan, and Korea are starting to be felt, improving Australia's price competitiveness and streamlining the trading process. Progress has also been made with many of the technical trade barriers, which has resulted in better market access. The strong demand has persuaded government officials in the export markets to

abandon the non-tariff trade barriers that they were using to control volumes. For example, the chilled beef market in tier two cities of Western China has now been opened up due to the input of the Australian industry in improving cold chain integrity.

Processors are enjoying great success with their provenance brands, which are now gaining traction with end users and commanding a substantial premium over commodity meat.

As the world's most widely eaten meat, goat has become a more substantial niche market and the increased price has meant the consistency of local supply has improved.

The decline in domestic red meat consumption has been arrested, largely due to a cooperative effort between the industry and the major supermarkets to promote secondary cuts and the health benefits of eating red meat. There is broad community awareness of the fact that many people are iron deficient and that red meat is the best solution for addressing this.

While the price of premium cuts has risen domestically, Australian consumers now appreciate the high quality of the product available to them and those who are able to will pay a premium for it. Many regional boutique producers are now servicing the high end market through direct-to-consumer channels such as farmers markets or on-line sales. There is now a wide array of heritage breeds and provenance branded meat available to the discerning Australian shopper and chef. The premium brands have strong consumer awareness as they appear on menus as prominently as wine brands and are equally appreciated.

Scenario Two | Pesimistic

2.1 Supply

The supply of beef, lamb and mutton has become very tight due to the poor seasonal conditions that have impacted herd rebuilding following the 2015 market peak. A prolonged dry across South East Australia (due to the impact of climate change), a shortage of water and high feed prices have coincided to force many producers to sell stock early. This has caused prices to drop temporarily and resulted in poorer quality carcasses coming onto the market. Producers have been forced to sell off their breeding herds/flocks with the result that the rebuilding stage will be set back for a number of decades.

Exacerbating the poor season is the long term decline in beef and sheep production due to the combination of: a shift by farmers to cropping and dairying where returns are superior; the loss of prime land to lifestyle farmers; urban encroachment; retiring farmers whose properties are degrading; planning issues requiring special zoning for feed pads; and the rising cost of water.

The grazing sector has come under a sustained attack from PETA who is lobbying to change animal husbandry practices. A particular issue is heat stress on animals due to the prolonged heat waves and lack of shelter belts on farms or shade on feedlots.

Large scale farms owned by foreign investors are by-passing local supply chains and selling into their own vertically integrated supply chains, taking substantial supply volumes out of the local market.

2.2 Processing

The processing sector is frustrated by the fact that it cannot source the livestock in the consistent volume and of the quality to service the booming global market demand. Prices of livestock have reached levels that make it uneconomic, because the consumer 'price ceiling' has been reached, notwithstanding the high global prices. The Eastern Cattle Indicator is approaching the historic high of \$6 per kilo carcass weight. The processors are frustrated that

the producers who once were engaged in a strategic alliance for the branding programs have abandoned them and taken advantage of the higher sale yard prices. The situation has been exacerbated by the strong live trade, especially due to the recently signed protocol for China, which has taken a large number of stock out of an already tight supply situation.

The producer peak-bodies are strongly lobbying government to legislate for processor transparency in reporting on the basis that they believe producers are not receiving equitable share of the profit pool.

The processing sector has also been severely impacted by tightening up of 417 and 457 visas and contract labour companies. Processors are finding it difficult to recruit staff to the point that in extreme cases there are some days that they cannot operate. There have been some high profile court cases where processors have been held accountable for the mistreatment of workers by contractors. Owners of those companies have had their company director rights removed as a result.

A further issue has been the implementation of a carbon tax. The federal government buckled to the pressure of the Greens and independents to introduce a tax, following the signing of the Paris protocol. One of the direct effects of this has been a 15% increase in electricity prices and a tax imposed on methane released from settlement ponds.

The processor profit margins have been squeezed because of price resistance from customers on one hand and rising costs on the other. The major markets are being flooded with product from competitor countries, which is making it difficult for processors to pass on the substantially increased cost of livestock.

2.3 Markets

Demand on the domestic market has slowed down sharply in the face of record high beef and lamb prices. Consumers have shifted to significantly cheaper pork and chicken as substitutes. Even the cheaper cuts of red meats have become prohibitively expensive for the average consumer, whose discretionary income is under pressure on many fronts. It has reached the point where supermarkets can no longer afford to cross-subsidize beef and lamb and are now passing on the full cost increase to the shopper. Food service customers have

also moved away from red meat because of the high plate cost.

Under pressure from US trade discussions, the government is talking of opening up domestic market access for US frozen beef, with the secondary aim of giving Australian consumers some price relief.

Although demand is still relatively strong in the key export markets, processors are experiencing price resistance with increasing competition from other exporting countries. China has signed a treaty with Brazil to import beef in retaliation for Australia allowing a US military base in Northern Australia for surveillance aircraft in the South China Sea.

The situation has been further exacerbated by the significant appreciation of the Australian dollar, which has risen by 15% in the last six months due to uncertainty in the US, Japanese and European economies and a recovery in iron ore prices. Having predicted the appreciating currency trend, traders with stockpiles of frozen product in China and Taiwan are disrupting the supply / demand dynamic and manipulating market prices.

Australia has also been caught up in a meat substitution scandal in the Middle East when goatmeat was labeled as mutton. A small processor, frustrated by the inability to source affordable mutton fell to the temptation of substituting goat. All exports to this region have been halted overnight until further notice. Containers in transit are potentially lost and Australia's global reputation has been seriously damaged.

McDonalds, a major user of red meat has introduced a 'no antibiotics' policy for beef, which has spread to other major buyers. This has put industry to the expense of developing a protocol and compliance framework to guarantee antibiotics freedom.

Under pressure from the health sector professional community, the government has introduced warning labels on meat packaging highlighting the risks of obesity, cholesterol, diabetes and cancer associated with high levels of red meat consumption.

The numbers of vegetarians are rising due to migration and because Gen Z continues to purport the widely held view that eating red meat is an offense against the planet due to the poor conversion of water into food and the amount of methane generated by livestock.

Senario Three | Mid-range

3.1 Supply

The supply situation for beef and lamb is gradually improving as the herd / flock rebuilding cycle approaches its upper level again. The return to more normal seasons appears imminent in the absence of an El Niño forecast and the breaking of the drought throughout Victoria, NSW and Southern Queensland.

The record high prices for livestock has encouraged many mixed farmers to reconsider their business mix and evaluate focusing on animal enterprises rather than cropping. Weighing on this decision is the fact that high livestock prices make restocking expensive, in an environment where grain prices are also strong.

Producers and processors alike are wary of making major business investment decisions as seasonal fluctuations and extreme weather events are becoming more pronounced under the influence of climate change. In particular, the shift in rainfall patterns is forcing producers to change their farming practices, which is influencing the seasonality of their turn off.

The rise of mid-range wool prices has encouraged many sheep farmers to shift away from Merino breeds to mixed-purpose breeds, which is to some extent, compromising the quality of lamb carcasses and their suitability for the most lucrative export markets.

An increasing proportion of sheep and cattle producers are entering into strategic alliances with processors to produce an article for a specific market, which is sold under a processor brand. Increasingly, producers are becoming more satisfied with the processor value-based marketing system and feedback reporting. This is encouraging the better producers to invest in genetic technology and new farming systems. The processors that do not have strategic alliances with producers are more highly exposed to the market and the inconsistent supply through sale yards. Almost all the better quality, high volume producers already have a strategic alliance locked in.

3.2 Processing

Processor profit margins remain strong. Livestock prices have eased off from the record highs as production levels increased on the back of the herd/flock rebuilding. Demand from overseas markets remains buoyant, heavily influenced by the depreciating Australian dollar. The increasing tendency by processors to employ closed-loop supply chains has introduced more stability into the supply chain, to the mutual benefit of producers and processors.

The improved profitability has provided processors with a confidence to invest in major plant upgrades with a focus on robotics and automation to improve labour productivity and cutting yields. The improved technologies are also making it more viable to introduce co-generation, renewable energy and the generation of cash flows from wastewater and other by-products. There has also been an investment in data transfer technology to provide a more comprehensive and transparent carcass feedback system.

Reforms to the 417 and 457 visa regulations have made it easier for processors to recruit and retain skilled staff. There has been cultural change across the industry in respect to workforce development and a job in meat processing is now highly sought after.

The compliance burden remains as government stands firm on its full cost recovery model and major customers progressively make their compliance requirements, frameworks and transference requirements more complex.

3.3 Markets

The domestic market continues to decline due to changes in eating patterns, shifts in demographics, but particularly the increasing differential in price between red meats and other protein substitutes. This is driving long-term shifts in eating habit that will be challenging to reverse. Australia's changing demographic is accelerating that shift as greater Indian and Chinese migration, as well as an aging population influence our national diet. The industry however has been driving a focused social media campaign to counter this decline.

At the same time, export markets remain strong, largely due to the growing affluent middle classes in Asia and India. The impact of the FTAs is now starting to be felt and the rising

demand is influencing governments to pull back from the non-tariff trade barriers they were using to control imports. The Australian dollar continues to fluctuate around 70 US cents mark.

The industry is noticing a shift in the demand patterns across the different markets. The more affluent of the emerging countries are showing increasing demand from premium cuts and a pronounced shift toward premium grass-fed beef. The markets for secondary cuts and offal remains strong in the developing markets.

The Black Swan Event | CJD

As defined by Wikipedia a Black Swan event is: *“A metaphor that describes an event that comes as a surprise, has a major effect, and is often inappropriately rationalised after-the-fact with the benefit of hindsight. Black Swan events are usually of large magnitude in consequence and have a dominant profile in history”*.

The purpose of incorporating a Black Swan event is to ‘pressure test’ the system and provoke thinking about what could happen and how it could impact in the industry.

The outbreak of variant CJD

A potential Black Swan event is the outbreak of variant Creutzfeldt Jacobs disease (CJD) in Australia. CJD is the human presentation of BSE, (Bovine Spongiform Encephalitis) which has come to be commonly known as *‘mad cow disease’*. The contagion also occurs in sheep where it is called a *‘scrapie’*. BSE is a rare and fatal neurodegenerative condition. Scientists believe that BSE is spread by feeding meat and bone meal to animals as a source of protein.

The variant form of CJD, (referred to as vCJD) has been detected in the UK and France. It affects younger people and presents with noticeably different symptoms. People with vCJD begin with serious psychiatric problems or problems with their senses (ears, eyes or smell). This first set of symptoms is followed weeks or months later by poor muscle coordination, muscle spasms, and mental confusion. The illness lasts for at least 6 months and on average people with vCJD die approximately 13 months after their symptoms begin. When patients' brains are examined by autopsy, there are clear changes in brain tissue structure, including many "spongiform," or open spongy-looking areas, abnormal clumps of prion protein called ‘plaques’ and other areas with less prominent accumulations of abnormal prion protein.

The variant form of CJD is believed to be spread through contaminated animal food products. Although there are strict protocols that prevent this occurring from food produced in Australia, there is a possibility that a person could be affected either when travelling overseas or from food illegally brought into Australia.

The outbreak of a vCJD event in Australia would have a devastating impact on the red meat industry. Firstly, it would cause panic in the domestic market where consumers would dramatically reduce their consumption of red meat, even with the reassurance of the health authorities as has occurred in countries that have experienced an outbreak.

A more devastating affect however, would be the reaction from our major trading partners. It would cause serious questioning about the safety and integrity Australian meat. Overnight it would destroy Australia's image for safe food, underpinned by world-class integrity systems, which is the basis of the 'brand Australia' value proposition.

At another level, an outbreak could cause some countries to question Australia's market access and would stimulate a whole new level of technical trade barriers which would be difficult to overcome and compromise Australia's overall trade for many years to come. Worse still, it would lay open the opportunity for many producing countries who are denied access to Australia on the basis of BSE, to argue the should be granted market access. An outbreak would seriously compromise Australia's market access negotiations. If red meat imports were allowed in from other countries, Australia's biosecurity would be at threat and the country exposed to outbreaks of other diseases including FMD.

If this event occurred, it would have an abrupt and paralyzing impact on the Australian red meat industry, from which it would never totally recover. It would close down markets overnight, which would take a long time to re-open and would significantly add to compliance cost and complexity.

A vCJD outbreak is entirely possible given the increased international travel of Australians particularly in activities such as 'voluntourism', which takes them to remote countries. The rise in refugee intakes from developing countries presents further risk.

Another possible Black Swan event considered was the break of FMD. Based on the research for this project, this is believed to be far less likely than vCJD, but not impossible.

APPENDICES



Appendix 1 | BEEF export market snapshot

1.1 USA

Internal supply

Rising production costs exacerbated by recent prolonged drought in key US cattle regions, has seen a steady decline in herds and turnoff rates. Production has been flat since 2005. (Thomas, 2015)

Despite improved conditions in some areas in 2015, herd replenishment will remain the focus over the next 5 years (Dependant on climate). USDA anticipates production to be down by 1.7% in 2015. 2014 declined by 5.7% the lowest in over 20 years. (Thomas, 2015)

Internal competition

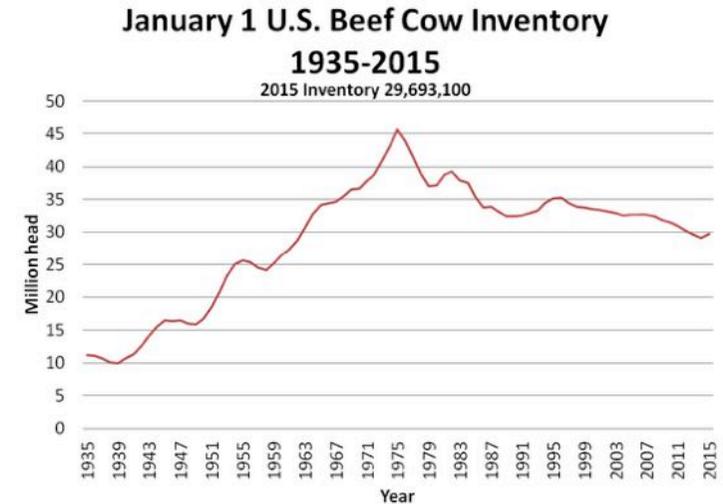
Chicken and pork are the key protein competitors within the US market. They are expected to reach record high production rates in 2015. (Thomas, 2015)

Internal demand

Restricted supply, caused by both decline in herd and growth in exports has led to price increases. Increased price, and to a lesser extent some negative associations of red meat consumption for health has led to a decline in per capita consumption as consumer seek alternate sources of protein both within and outside the market for meat. (Thomas, 2015)

However, internal demand is expected to grow over the next 5 years due to population and income growth. Rising incomes are anticipated to drive demand in upper income groups for chilled higher value cuts. The large part of the demand will remain in ground beef, which represents 50-60% of demand currently. (Thomas, 2015)

Australian grass fed beef is finding appeal in the growing niche for natural/organic/lean products as well as the segment of consumers looking for the stronger flavour grass fed beef provides over corn fed.



Source: (USDA NASS, 2015)

This trend is evident also in the ground beef segment, mainly used in hamburgers, in which Australia overtrades (70% of exports). Australia's advantage in this area is the production of a generally leaner product. Even in this lower value segment there are opportunities to trade consumers up to the growing niche categories. (Weeks, 2014) (Thomas, 2015)

External competition

The key suppliers to the US market, Australia, New Zealand and Canada are all experiencing stock shortages in 2015, partly due to high demand in 2014 and also due to adverse climatic conditions. Earlier in 2015 the US was sitting on stockpiles though this is expected to sell through by midyear.

Almost 70% of beef sent to the USA is manufactured product, principally for the fast food/hamburger trade.

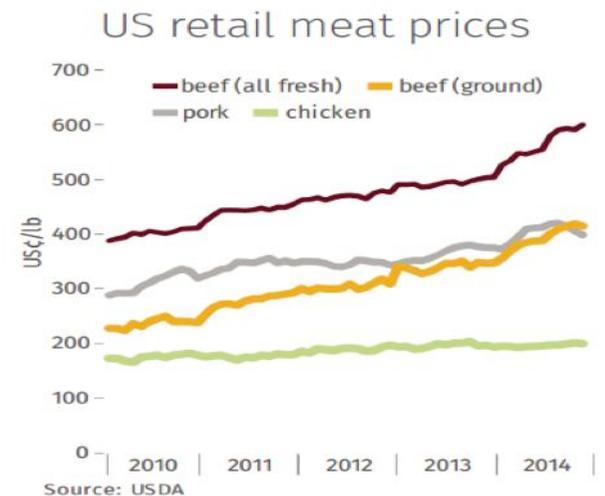
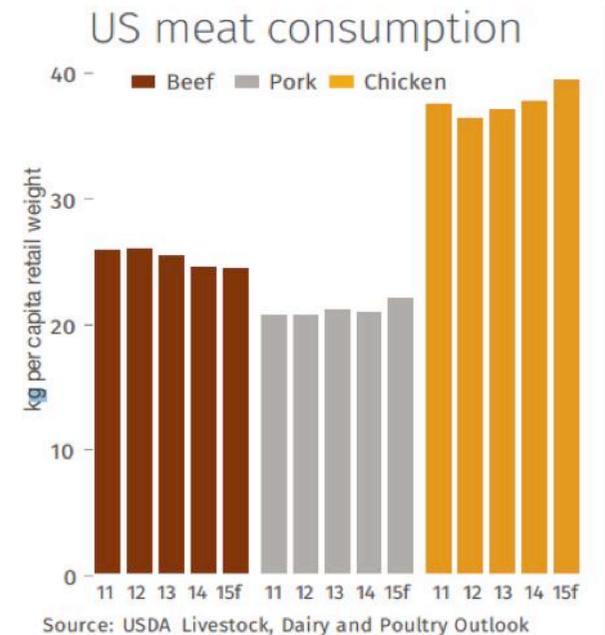
Pricing

Prices are expected to be strong despite the competition from cheaper proteins. This reflects the strong underlining demand in the market.

Most retail beef prices, on average, are at record highs, even after adjusting for inflation. ERS now predicts beef and veal prices will increase 5.5 to 6.5 per cent in 2015 (ERS, 2015).

Opportunity

The opportunity for Australian beef lies in the niche grass fed and short fed chilled marked both for the consumer and food service. This is where Australian has a competitive advantage. (Weeks, 2014)



1.2 Japan

For nearly 20 years Japan has been Australia's top export market. However in the face of increasing competition and a weakening Japanese economy, exports have been steadily declining. In 2014 the USA took over as the top export destination. (MLA Ltd, 2015c)

In 2014 saw the halt in volume decline that had been occurring since 2003, with a small volume increase of 2%. Prices, however, were encouragingly robust. Japan will remain a crucial market for Australian beef exports over the next 5 years. (MLA Ltd, 2015c)

Japan is also the foundation of the Australian grain fed industry, taking more than half of total grain fed beef shipments in 2014. (MLA Ltd, 2015c)

Full set imports have declined dramatically in favour of cuts that reduce inventory costs (for Japanese buyers) and maximising returns (for Australian exporters). (Kondo, 2014)

The CL (Chemical lean) market has seen some decline due to poor performance of the western fast food segment.

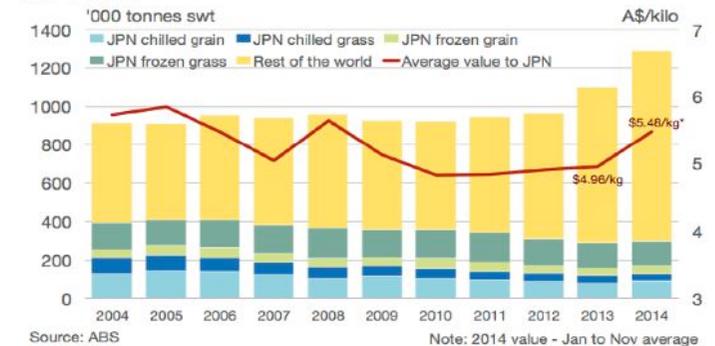
Internal supply

Beef production in Japan is focused on the premium, high marbling end of the market. Wagyu beef, which is approximately three times the price of imported product. (MLA Ltd, 2015c) The majority of the remainder of the market is dairy stock then F1 Wagyu Holstein cross.

Japan's local industry has been under pressure over the past 10 years due to increasing costs and economic hardship. Coping with poor national economic performance has come off the back of the impact of BSE in 2001, foot and mouth outbreak in 2010 and radioactive contamination in 2011. Stock numbers declined sending stock costs up while the imported stock feed, which Japan is reliant upon, also increased in price. Consumer demand also softened as a result of the economic conditions. (Kondo, 2014)

The number of beef cattle farms in Japan declined from 116,500 in 2000, and 65,200 in 2012, to 61,300 in 2013. Farm numbers have been declining in the face of these challenges and an aging population of farmers. (Kondo, 2014)

Figure 27 Australian beef exports - Japan and rest of the world



Source (Thomas, 2015)

Despite this, Japanese beef production was relatively stable to 2013. However by 2014 the impact of market conditions were showing with declines in productions in all categories. (Kondo, 2014)

Only a small proportion of Japanese beef is exported, largely Wagyu, though prices are high at approximately \$68 / kg. The government is committed to growing this market. Key markets are Hong Kong, US, Singapore and Thailand. (Kondo, 2014)

Internal demand

Underlying demand in Japan has been falling. Key drivers are a weakening currency, rising inflation, continued low household income and an aging population. (Thomas, 2015)

As the local beef market gradually declines, demand for export product will grow. Japan is already the major protein buyer in the world, being number one for pork and poultry, and three for beef. (MLA Ltd, 2015c)

Restricted supply in Australia and the US and continued devaluing of the Japanese Yen will put pressure on prices and curb the ability to meet local demand. MLA

Market structure

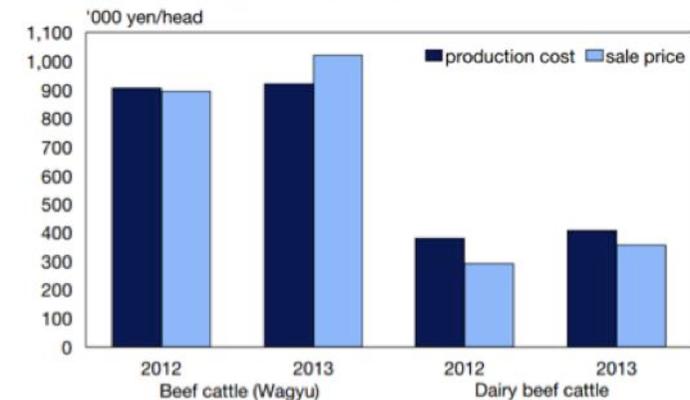
Retail

An aging population and increase in single person households has driven the convenience store sector initially at the expense of traditional grocery. This caters for the growing preference for smaller, more frequent basket size and closer to home. The preference to eat at home is reflected in the growth of both sectors in recent years at the expense of foodservice. Convenience stores grew by 21% in 2014. (MLA Ltd, 2015c)

The growth of distribution of Nakashoko (takeaway meals sold for consumption outside the commercial premises) were estimated to have grown 3% in 2013. This trend also caters to the Japanese preference for smaller more varied food portions. (Kondo, 2014)

The impact of the JAEPA on retail should be positive or demand of chilled products. (Thomas, 2015)

Japanese cattle prices - averages



Source: ALIC 'Beef cattle arming stabilisation support measure' November 2012 and 2013 averages

Foodservice

The profile of foodservice demand has changed in recent years with a slowdown in the western style fast food sector and growing popularity of Japanese/Korean style BBQ (yakiniiku) outlets. The former is the key market for Australian manufacturing beef exports, and as a result of high prices and local food scares in Japan, sales have been down.

On the positive side, the growth of the yakiniiku outlets has seen an increase in demand of Australian beef offal, Japan being one of the largest export markets for Australia.

Western style family restaurants and fine dining restaurants are the key markets for the premium beef cuts such as loin. This has been a growth segment and an area for further opportunity for Australian.

External competition

Australia's key competitor into Japan is the US, followed by New Zealand, Mexico and Canada. Australian exports to Japan declined by 1% in 2014 to 280,842 tonnes swt while the US's grew by 1% to 280,842 tonnes swt. (MLA Ltd, 2015c)

Some of the US pressure will ease in the short term due to the US's own supply shortages and high prices, though competition will increase as supply increases and US BSE bans lift. (Weeks, 2014)

The US Meat Export Federation (USMEF) noted that it aims to increase its beef exports to Japan (including offal) by 3% during 2015, despite its tight supplies and strong US dollar.

Strong competition is expected in the lower value segments especially forequarter cuts and manufacturing beef from Korea, China and US (Weeks, 2014).

Pricing

Average Australian export value (\$/kg) improved significantly year-on-year (from A\$4.96/kg in 2013 to A\$5.48/kg in 2014*), proving the market's ability to keep up with increasing world beef prices.

Figure 28 Foodservice and retail performance in Japan



Source: (Thomas, 2015)

Prices are gradually increasing in retail and foodservice as smarter operators review their market offer in order to move away from unsustainable price competition. (MLA Ltd, 2015c)

Tariff reductions on both chilled and frozen beef in 2015 and 2020 will provide small boosts to imports via more attractive pricing.

The opportunity

Japan Australia Economic Partnership Agreement (JAEPA) will bring Australian beef import tariff reductions, providing some price advantage versus other imports.

The significantly aging population will drive demand for tailored health choices. The health positioning available to beef will have appeal for this audience.

1.3 Korea

Korea has been Australia’s third largest export market since 1995. Volume rapidly increased post bovine spongiform encephalopathy (BSE) outbreak in Canada and the US in 2014. The rapid rise of China took this position in 2012 when competition by China and the US for Australian beef started to jump dramatically.

In 2014 volume only grew by 5% though value grew by 20% illustrating good underlying demand able to withstand current price pressure.

Grass-fed beef is the dominant segment representing 76% of export volume.

Exports in 2015 are anticipated to be lower due to reduced supply, higher prices and increased competition from other markets. (Thomas, 2015)

Internal supply

In 2014, Korean domestic beef (Hanwoo) was estimated to account for 48% of all beef in the market. (MLA Ltd, 2015d) Traditionally a market consisting of mainly small herd operations, the last 15 years has seen a dramatic shift in the composition of farms. In 2014 over a third of cattle numbers were from farms with greater than 100 head of cattle. (Uchida, 2014)

The forecasts for the next few years are more modest herd reductions, and corresponding production declines. (MLA Ltd, 2015d)

Market structure

Australian grass fed frozen beef is sold largely in the wholesale market, with about 50% of Australian exports to Korea supplying food service such as restaurant franchises, BBQ restaurants and fast food chains. (MLA Ltd, 2015d)

Internal demand

Korea is a traditional beef market, with a per capita consumption of 10.8 kg, one of the highest in Asia. (MLA Ltd, 2015d)

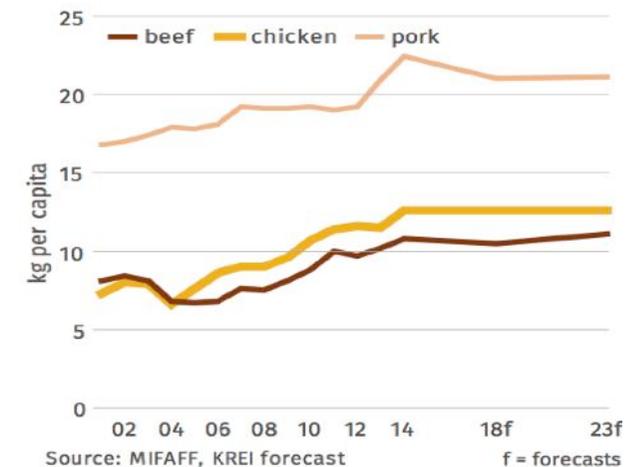
Consumers are conscious of food security and consumption declined 16% following the BSE

Figure 16 Korea beef production



Source: (Uchida, 2014)

Korean meat consumption



Source: (MLA Ltd, 2015d)

outbreak in key source countries of Canada and the US in 2014. Consumption levels did recover and by the end of the decade it was stronger than pre-BSE event levels. (MLA Ltd, 2015d)

GDP growth has remained flat and was at 3.8% in 2014. Domestic demand has been slower than expected to recover from the GFC. Growth in incomes is expected over the next 5 years to help drive demand. Increased trend to western diets will also assist. (Thomas, 2015) (Weeks, 2014)

Since the GFC, value for money has become the buying imperative for consumers. While, this is a positive for Australian beef, being at a price advantage to Hanwoo & US product, beef as a whole remains expensive versus pork and poultry. However, with the restricted supply of Hanwoo, there are increased opportunities in the premium beef segments for Australia.

Australia's share of the beef market in 2014 was approximately 28%, and this was approximately 75% of all chilled beef and 50% of all frozen product. Chuck roll and short ribs are key cuts Australia currently exports to Korea. The former is the number one product exported to this market and is 54% and 84% respectively of Australian product produced in 2014(MLA Ltd, 2015d).

External competition

The key competitors for Australian beef in Korea are domestic (Hanwoo), US and New Zealand beef. The US had approximately 19% share of the local market in 2014 and New Zealand 4% (MLA Ltd, 2015d).

Pricing

Higher demand for marbled product as found in Hanwoo and US beef reflect in their higher prices versus the Australian product. Reduced supply will also keep prices high in the short to medium term.

The commencement of Korean/ Australian FTAs in November 2014 will see tariffs on Australian beef, originally sitting at 40%, phased out over 15 years. This will assist in maintaining a price advantage, though current short supply will place an upward pressure

on prices and affordability. Australia is still anticipated to maintain at least a 50% share of imports (MLA Ltd, 2015d).

The opportunity

In the short to medium term, Australia generally remains in a position to capitalise on low US supply to Korea. If China's economic growth slows further, Australian supply would free up to meet Korean demand.

Across all beef segments Australia has the advantage in terms of its clean and safe product credentials. The success of marketing campaigns in this area is set to continue as consumers demand more information on food origin and production. Australia is in a good position to deliver on quality product and information requirements.

Growth in single person households is driving demand in the lunch box catering sector, which has growth potential for beef.

Strong premium segment opportunities exist for Australian Wagyu beef, particularly in retail, due to low stock and increased prices of Korean and US product.

1.4 China

China was the fourth largest export market for Australian beef in 2014, both in volume and value terms. Beef exports to the market registered 124,586 tonnes swt, valued at AU \$658 million FOB.

Australian beef exports to China declined 20% in 2014, due to a combination of factors ranging from macroeconomic policies to non-tariff market access barriers.

Chilled beef market access resumed for a number of establishments in mid-2014 and shipments are recovering, registering around one fourth of the volume sent in 2013, but well above 2012 levels. (MLA Ltd, 2015a)

Shipments to China remain historically high, indicating the resilient demand for premium beef that Australian red meat industry has successfully built over the years. Having been through multiple hurdles in 2014, China will continue to be the strategically important market for Australian beef and cattle industry in the years to come.

MLA estimates per capita consumption at 5.5kg.

Internal supply

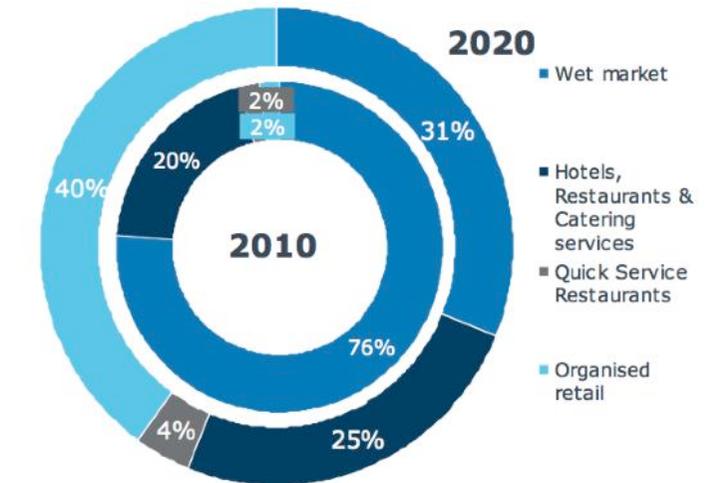
Beef is not a strategically important agricultural product in China. It struggles to compete in the key areas of genetics, breeding, productivity, farm management and grassland/feed resources (Rabobank, 2014). Domestic utilisation of local product is dominant. While imports only represented an estimated 24% of domestic utilisation in 2014, this is a large increase from 10% in 2011 (MLA Ltd, 2015a).

The Chinese herd, consisting of largely of small scale farms, has been in decline since 2004. This has been driven by the lack of government support, low productivity and high costs. As a result farming is being abandoned for urban employment.

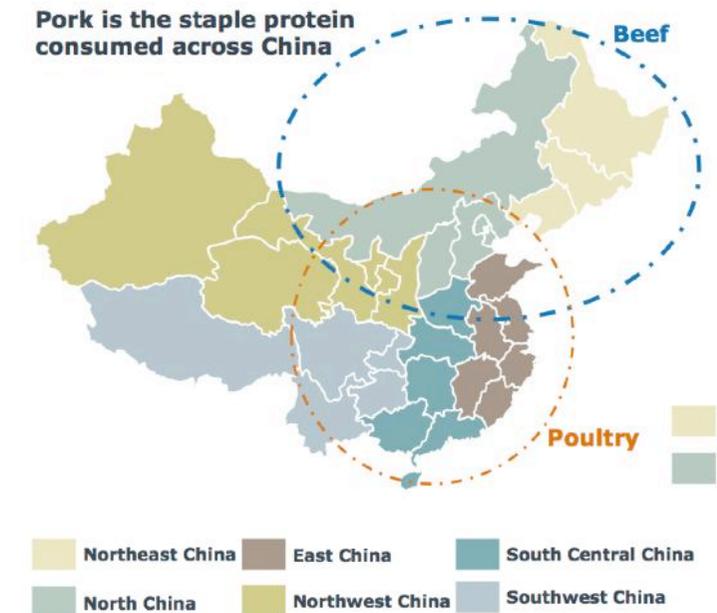
The long-term outlook will see consolidation and modernisation of the Chinese cattle industry, however it will not meet the growing demand of imported product.

Chinese investment in overseas production is increasing and Australian cattle stations are in

Change in consumer channels



Source ANZ



Source ANZ

demand. Chinese state-owned giant Xiangyu Group plans to buy \$300 million-\$500m of cattle stations, abattoirs and feedlots in Australia in the next five to eight years (The Weekly Times, 2015). The Chinese agricultural group Chongqing Hondo is looking to invest \$100 million in the next 12 months (Bleby, 2015). Many smaller scale investments are occurring as Chinese retailers and restaurateurs seek to secure product for their own supply chains.

Internal demand

China's economy is in transition from one of rapid growth to a maturing market with slower, more sustainable GDP growth. Manufacturing, construction and property are likely slow down, while the services sector is expected to drive growth. These trends have been reflected in the slowing of key relevant areas of demand.

While the recent stock market crash is likely to have some impact on demand, especially in luxury items, the fact that less than 15% (The Economist, 2015) of household financial assets are invested in the stock market indicates that food import demand, in general, and beef specifically, will remain strong.

Beef consumption is not widespread in the Chinese market due to it being priced beyond most consumers so cooking confidence with beef is still growing. Increased incomes and population are key drivers for beef demand. Behind these trends is the growing middle class, demand for western food, urban lifestyles, and growing food safety consciousness. The latter driver is a key area local supply struggle to satisfy.

Market structure

The food service channel is the major user of Australian beef. Lack of consumer cooking confidence and a higher rate of out of home dining amongst the middle class will continue to drive growth.

The key consumer channel for beef is the wet markets though market share is migrating to retail channels due to growing food safety concerns. By 2020 the latter channel is estimated to represent 40% of the consumer market (ANZ Global Agribusiness Research, 2014).

In recent years, growth in 'grey' or unsanctioned import channels has grown in response to

official bans on US and Brazil beef.

Internal competition

Pork and poultry are the most industrialised and fastest growing of all China's animal protein sectors. Nonetheless, these industries face mounting challenges with animal disease outbreaks / animal health regulations and stricter environmental controls through the past three years.

External competition

Official beef imports in 2014 were 298,000 tonnes swt. Australia's share was 45%, the remainder sourced from Uruguay, NZ, Argentina, Canada and Costa Rica. However due to the highly regulated nature of the Chinese market, grey market channels will continue to thrive. In 2014, other channels added an additional estimated at 930,000 tonnes swt to the import total (MLA Ltd, 2015a).

Australia faces strong competition from Uruguay, New Zealand and soon Brazil who have low cost advantages. China has been a focus market for Uruguay traders. New Zealand's price advantage will strengthen in January 2016 when zero tariffs are implemented under the FTA. Brazil's three-year ban was recently lifted.

Pricing

Beef prices have been rising significantly with a 500% growth since 2000. Supply shortage is the key price driver, and as supply is predicted to lag growing demand in the medium term, further price growth is expected (Rabobank, 2014). Other drivers of price are the growth in the middle class and food safety concerns related to local pork and poultry.

The opportunity

Although China has low per capita consumption versus more developed markets, a very large population means that even a small lift in per capita consumption would lead to substantial volume increases in imports. The consumption differential between regions also presents localised opportunities.

There is further opportunity to build on Australia's competitive position in the Chinese market in terms quality, variety and health and safety standards. The health and taste benefits of grass fed beef and to a lesser degree organic beef are attracting attention with the latter commanding substantial price premiums in the market.

Due to most Chinese consumers being unfamiliar with preparing beef, any innovation in product packaging and communication about the benefits of Australian product will be beneficial.

The China-Australia Free Trade Agreement (Ch-AFTA) aims to remove tariffs by 2024, strengthening Australia's market access and price competitiveness.

1.5 Indonesia

Indonesia is home to the world's fourth largest population, with about 67% under 39 years of age (Thomas, 2015).

Influenced by market access requirements and the tight Australian beef supply outlook, exports to Indonesia are forecast to decline significantly in 2015 (Thomas, 2015). Beef import access to Indonesia is a relatively recent occurrence and is only guaranteed on a quarterly basis via a quarterly permit system.

While Indonesia is Australia's largest export market for live cattle, Australian market share of Indonesian beef imports has consistently registered above 70% in recent years (Thomas, 2015).

Internal supply

The Indonesian cattle herd size was estimated between approximately 12 and 13 million head in 2013. However, small farmers, for whom cattle ownership is more about economic security than beef production, own the majority (Ainsworth, 2015).

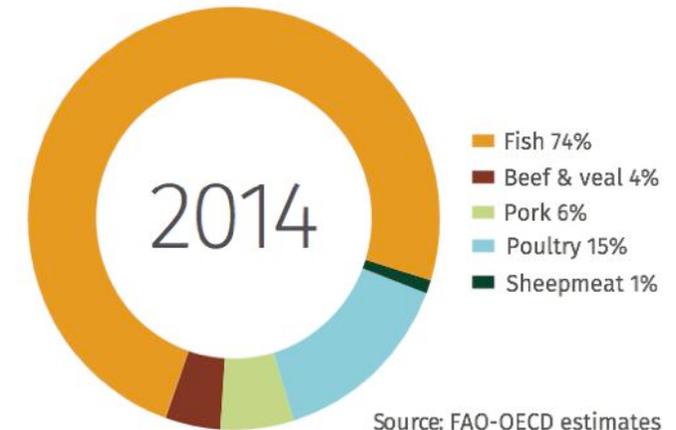
In efforts to ensure food security the Indonesian government set a goal to reach 90% self-sufficiency in beef by 2014. However, success of government policies designed to grow breeding stock and hence herd size have proven inappropriate for the complexity of cattle farming in Indonesia. Also current policies do not encourage sufficient corporate investment in the industry. However as beef prices continue to increase, corporates may have sufficient motivation to put pressure on government policy (Ainsworth, 2015).

To meet Indonesia's rising demand for beef, the government has encouraged the development of a domestic feedlot industry. Cattle (mainly Brahman-cross) are supplied almost exclusively from Australia. In 2013 it was obvious this wasn't to be achieved and quota restrictions were eased (Safi, 2014).

Internal demand

Indonesia has many diverse ethnicities, languages and cultures, reflecting in wide regional

Indonesia consumption of protein



Source (MLA Ltd 2015a)

variances. Beef consumption is highest in urban populations where there is greater middle class presence.

In Jakarta, per capita consumption was between 7-9kg in 2014, though elsewhere it is much lower. 2012 estimates were 2.2kg per capita (Syarief and Nampa, 2014). Nationally all meat consumption is only 4.3kg per capita (Thomas, 2015). Although growing, these figures are well below those of other SEASIAN nations such as Singapore, Malaysia and Vietnam.

Beef is a familiar food ingredient though wet cooking methods are favoured, using cheaper cuts and offal. The post Ramadan period of Lebaran is the peak consumption period for beef. A large proportion of the population have the rare chance to include beef in their celebration meals.

Increasingly high prices of premium import product put it out of reach of a large proportion of the population. However, a growing middle class and tourism industry are driving strong demand for imports, which is outstripping supply.

There is increasing receptiveness to western foods and changing lifestyle factors have led to a change in the diet of Indonesians. This is seen most prominently in the foodservice channel where western beef offerings such as burgers and more premium barbecue steaks are growing in popularity.

Market structure

Wet markets remain the dominant consumer channel, owing to fragmented logistics, cultural preferences and government regulation. Mini markets are growing strongly though they are small in number and there is a slow trend to western style supermarkets. Rapid uptake of mobile devices is facilitating the growth of Internet retailing in general.

Food service is expanding rapidly in Indonesia and beef based dishes are among the best sellers in Indonesian foodservice.

Internal competition

Fish is the dominant protein consumed in Indonesia. Of the 4.3 kg per capita of meat consumed in Indonesia, Poultry comprises over 50% followed by pork, beef and veal, while

sheepmeat is only 4% (MLA Ltd, 2015b).

External competition

Current key competitors to Australia in Indonesia are New Zealand and the US.

In 2014, Indonesia imported a total of 76,647 tonnes swt of beef from Australia, NZ and the US. Australia held the dominant share of imports and an estimated 15% share of total Indonesian beef consumption.

Indonesia also imported around 730,000 head of live cattle from Australia in 2014, up 61% on prior year. This represented approximately 35% of total beef consumption.

US beef pricing is above Australian pricing limiting its retail presence. US main current focus is the upper-end foodservice segment. New Zealand beef is largely sold to foodservice and manufacturing customers.

The US is currently banned from the live cattle trade though this, as well as its beef quota restrictions are being challenged via the WTO (Condon, 2015).

In the long term Australia faces competition and bio-security threats from Indonesian plans to import beef and live cattle from countries outside FMD-free zones such as Brazil and India.

Pricing

Like other nations beef pricing has been increasing due to shortage of global supply and growing middle class demand. However in the case of Indonesia the trends over the past five years have been exaggerated somewhat by tight control of imports leading to lags in supply driving up prices. In 2014 the Indonesian government lifted volume restrictions to address soaring pricing, however 2015 has seen the reestablishment of quotas.

Beef prices have been historically high versus income levels and this trend will continue. This opens the opportunity for switching to alternatives such as goat.

The opportunity

With its close proximity, high population, low per capita consumption and burgeoning middle class, Indonesia offers huge potential for Australian beef exporters. Some of this potential was witnessed in the strong 2014 performance with reduced quotas aimed at tackling escalating prices.

However, the key opportunity constraint for Australia in Indonesia is market access. In 2015 beef import restriction increased markedly. Boxed beef imports from Australia to Indonesia include only primal cuts and manufacturing beef within 65- 95CL range, and only tongues and tails in the offal category (Thomas, 2015).

The live cattle trade has suffered a recent blow with the dramatic reduction of cattle permits in Qtr. 3 2015 from a forecast 200, 000 head down to just 50 000 permits being issued. While Indonesia's aspiration to develop a self-sufficient beef industry are known, it is reported that the third quarter permit cut will leave the nation well short of required beef supply targets (Riordan, 2015). Other reports state that this is just a first stage quota to buy time to more accurately assess current Indonesian stock.

Appendix 2 | SHEEPMEAT: Export market snapshot

2.1 Middle East

In 2014, the Middle East was the largest export destination for both lamb and mutton, followed by China and the US. It is estimated that rising prices will curb demand and imports to the Middle East in the medium term, however high demand will continue in the richer Gulf States. In order to grow share, Australia has had to invest in production process changes to comply with halal certification. Better shipping and air freight has opened the fresh meat trade in the Middle East

Internal supply

With limited arable land, some countries in the Gulf rely on 90 % imports for their food (Locke, 2014). Therefore food security is a crucial issue for governments, however the feasibility of self-sufficiency is being considered.

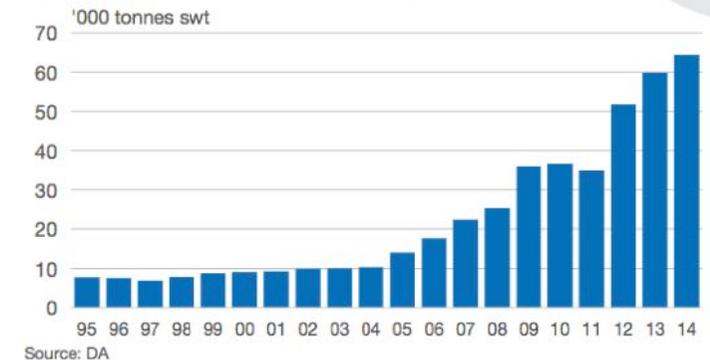
Internal demand

The Middle East's population is forecast to grow to 430 million people by 2020. Incomes are growing in key markets. The spread of wealth in the Middle East varies greatly. The oil countries' while only constituting approximately 16% of the Middle East's population have close to 60% of the income (Alvaredo et al., 2014). The IMF GDP forecast for the oil exporters is stable 2015 and grow again in 2016 due to the drop in oil demand from the US and hence prices. Conversely the oil importers in the region will benefit from the easing of oil prices (IMF Middle East and Central Asia Department, 2015).

Unlike the emerging Asian markets, red meat is preferred in the Middle East, non-consumption of pork being a key factor. Sheepmeat consumption is a traditional in the

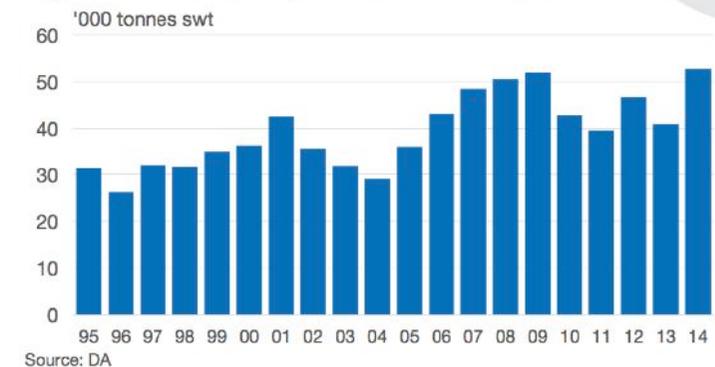
Oil Countries: Qatar, UAE, Kuwait, Saudi Arabia, Bahrain Oman

Figure 23 Lamb exports to the Middle East



Source MLA 2015

Figure 25 Mutton exports to the Middle East



Source MLA 2015

primarily Muslim Arab world and is the second highest consumed meat after poultry. It plays a part in religious events such as the Haj. Australian mutton export to the Middle East is a long established market, supported by strong supply chains and consumer demand. This market expects to remain strong as construction increases and with it the migrant labour force, which is a large consumer of mutton.

Market structure

Retail turnover is forecast to increase from US\$4.9B in 2010 to US\$6.9B in 2014, with hypermarkets and supermarkets maintaining strong growth, while the souk (local wet market) trade is estimated at 25% of volume and declining (Gosse, 2011).

There are still many technical barriers to trade, especially with issues relating to chilled lamb shelf life, which are working on being resolved. Technical barriers in the Middle East are estimated to cost Australia \$480 million per year (across all red meat) (Thomas, 2015).

External competition

The general global trend for mutton in the last few years has been a declining supply and an increasing demand. The competing demand for Australian mutton, especially China, is making it difficult for Australian suppliers to commit to and secure long term contracts in the Middle East.

Australia's mutton also competes with the generally cheaper live trade from with the Middle East, East Africa and India. At the cheaper end of the trade traders can be very price sensitive prompting source switching in both mutton and lamb.

Pricing

Pricing is anticipated to remain high in the face of strong demand and restricted supply.

The Opportunity

Opportunities for suppliers are in high-end diversification in emerging and established markets. Implications for longer-term opportunity would be a broadening of customer base.

2.2 USA

The US is a crucial market for Australia's sheep meat and is forecast to remain so into the future. Subject to developments in China, the US is set to be our largest customer both in volume and value in 2015. The cuts tend to be the higher value items such as legs, racks, shortloins, shanks and shoulders, though volumes will be lower in 2015, due to supply shortages. (Thomas and Matthews, 2015)

Internal demand

While US market is well established, significantly about one in three consumers either do not buy lamb or have never tried it. In retail it is the easy to cook cuts that are sold with other cuts being mainly sold via Foodservice or manufacturing. (Thomas and Matthews, 2015)

Christmas and Easter sees a peak in consumption. (Thomas and Matthews, 2015)

Internal competition

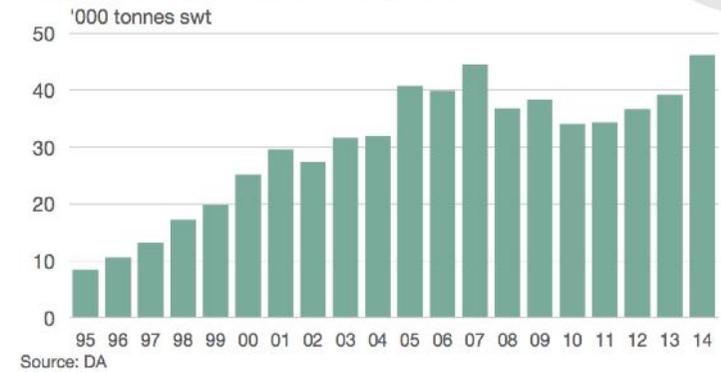
The US sheep industry has seen Australia and New Zealand as a threat to their viability in the past, so there is a need for lobbying and relationship management to ensure smooth passage of the lamb and mutton trade. (Thomas and Matthews, 2015)

Lamb tends to be much more expensive than the main competitive meats consumed in the US, including beef, pork, and poultry. (Thomas and Matthews, 2015)

The opportunity

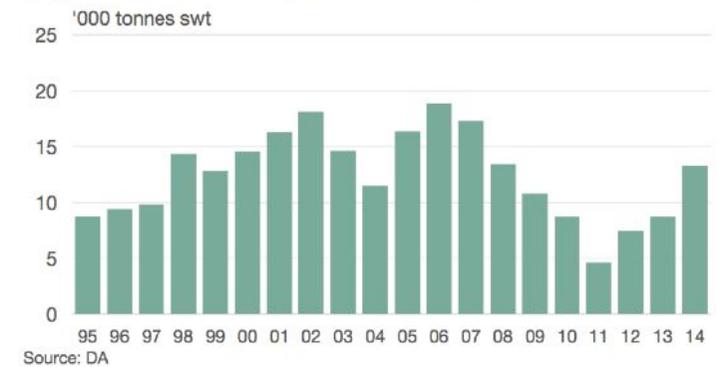
The US is a developed market for red meat. The relatively low penetration of lamb presents a strong opportunity for development of the consumer lamb market.

Figure 27 Lamb exports to the US



Source MLA2015

Figure 29 Mutton exports to the US



Source MLA 2015

2.3 China

Internal supply

The Chinese Sheep industry is large and increasing in size in terms of number of head; however, it is dominated by small-scale farming. This feature in addition to the fact that most sheep breeds have a low meat yield results in relatively low productivity.

The dominant breeds have high fat content, which have low consumer preference versus Australian sheep.

Internal demand

Distinct from other markets, the Chinese do not differentiate between mutton or lamb. As with growing beef consumption, increased incomes and population, along with demand for western food is driving sheep meat consumption. Usage of mutton breast and flap at foodservice is similar to that of lamb breast and flap, for the popular hot pot. Likewise in the higher value cuts such as the rack, mutton rack has increased significantly in exports to China. (Thomas and Matthews, 2015)

Internal competition

In terms of per capita consumption Sheepmeat consumption is the lowest meat protein, measuring 2.88kg. (Thomas and Matthews, 2015)

The key competitor to Australian Mutton remains local mutton. (Thomas and Matthews, 2015)

2.4 European Union

Australian exports to the EU are subject to a quota system. In 2014 Australia saw strong growth at 12%, driven by lamb, (mutton declined) and the quota was met prior to year-end. Supply constraint in NZ assisted this.

2015 exports are expected to remain stable at the quota level. Tight Australian supply will constrain growth in the medium term. (Thomas and Matthews, 2015)

Internal supply

EU sheepmeat production is expected to remain stable. Interestingly, live and meat exports are increasing, especially to Libya for live animals and Hong Kong for meat (EU Commission).

Internal demand

The UK is Australians largest market. Growth here is forecast to continue, with GDP growth forecast at 2.7% in 2015 (Thomas and Matthews, 2015).

External competition

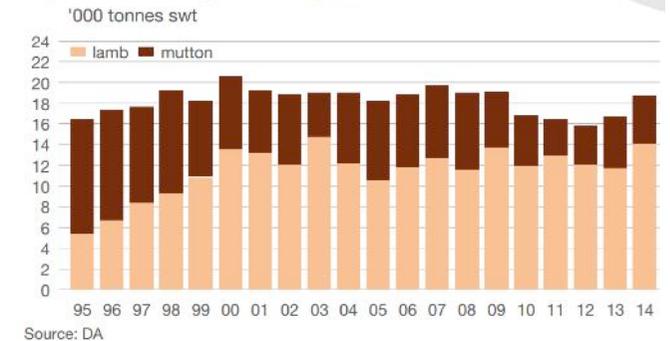
New Zealand is Australia's key competitor in the EU. It has 80% (Thomas and Matthews, 2015) of the Tariff Rate Quota (TRQ) which is 228,254 tonnes cwt for sheep and goat meat (NZ MEATBOARD, 2015).

Current New Zealand supply is tight with lamb slaughter forecast in 2014/15 to fall year on year by 2.6% to 357 000 cwt, and Mutton is expected to fall by 20.2% to 84 000cwt (Beef and Lamb NZ, 2014).

Pricing

In 2014 the favourable movements in the A\$ versus the British pound and the Euro improved the price competitiveness of Australian Sheep meats.

Figure 36 Sheepmeat exports to EU



Source MLA 2015

2.5 South East Asia

Singapore and Malaysia are the key markets for Australian Sheepmeat in South East Asia (SEA). Both markets saw strong growth in 2014. Mutton is the major product sold and it has had the strongest growth in both markets both for the 12 and 5 year period.

Despite good GDP performance and upward shifts in demographics, Australian export growth in the medium term to these markets will be constrained due to tight Australian supplies high world prices.

Malaysia: The population is expected to grow by 10% by 2020, while GDP is forecast to grow by 69% to US \$557 billion (Thomas and Matthews, 2015), The rising incomes and expanding middle class are expected to keep demand strong.

The demand for Australian sheep meat is dominated by frozen product. For lamb it is mainly shoulder, carcass and leg, while for mutton 50% was frozen carcass followed by manufacturing and then shoulder (Thomas and Matthews, 2015).

Singapore: The population is expected to grow by 2% by 2020, while GDP is forecast to grow by 8% (Thomas and Matthews, 2015).

For Lamb, leg shipments are in highest demand followed by whole carcass. Mutton demand is dominated by frozen carcass, with frozen leg and manufacturing also sizable. (Thomas and Matthews, 2015)

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