



2019  
**STATE OF  
THE INDUSTRY  
REPORT**

**The Australian red meat  
and livestock industry**

Meat & Livestock Australia acknowledges the contribution of EY in compiling this report.



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# THE OPERATING ENVIRONMENT



Australia has a small proportion of the world's cattle and sheep inventory

Around 2% of the global cattle herd in 2017

*(ABS, FAO).*

Around 6% of the global sheep flock in 2017

*(ABS, FAO).*



Australia is a key exporter in global red meat markets

Australia was the third largest beef exporter in 2018, behind Brazil and India

*(DA, IHS Markit, Global Trade Atlas).*

Australia was the largest sheepmeat exporter in 2018

*(DA, IHS Markit, Global Trade Atlas, Comtrade).*

Australia was the largest goatmeat exporter in 2016

*(DA, FAO).*

Australia exported over 1.1 million live cattle and 1.1 million live sheep in 2018

*(DA).*



Total world meat consumption continues to increase

Over the last two decades, total global consumption has increased by 64% at an average rate of 2% per year for sheepmeat, 1% for beef, 4% for poultry and 2% for pork

*(OECD-FAO).*



Australia is one of the largest per capita consumers of beef and sheepmeat in the world<sup>1</sup>

Australian per capita beef consumption was around three times higher than the global average in 2018

*(ABS, DA, OECD-FAO).*

Australian per capita sheepmeat consumption was around five times higher than the global average in 2018

*(ABS, DA, OECD-FAO).*



<sup>1</sup>Domestic meat consumption is measured by removing the portion of exports (DA data) from total production (ABS data) and assuming the difference is consumed (or at least disappears) domestically. Imports are also added to domestic consumption when present. Per capita consumption is calculated by dividing domestic consumption by ABS population data. Please note that domestic per capita consumption is entirely a supply statistic and does not take account of waste or non-food uses of livestock meat products.

# THE INDUSTRY ENVIRONMENT

## PRODUCTION OF LIVESTOCK

### Global and Australian herd and flock size

- The global cattle herd was 1.49 billion head in 2017 (see Figure 1) (FAO).
- The global sheep flock was 1.2 billion head in 2017 (see Figure 1) (FAO).
- Australia accounts for a relatively small proportion of these totals, at around 2% of the global cattle herd and 6% of the global sheep flock (ABS, FAO).
- Australia's cattle herd was 26.4 million head<sup>2</sup> at June 2018 and the sheep flock was 70.6 million head (see Figures 2 and 3) (ABS).

### Production

- Global beef and veal production was 66.25 million tonnes cwe in 2017 (see Figure 4) (FAO).
- Global sheepmeat production was 9.49 million tonnes cwe in 2017 (see Figure 4) (FAO).
- Australia accounted for around 3% of global beef production and around 7% of global sheepmeat production in 2017 (ABS, FAO).
- Australia produced 736,557 tonnes cwt of lamb and mutton and 2.3 million tonnes cwt of beef and veal in 2018 (ABS).



Figure 1. Global cattle herd and sheep flock

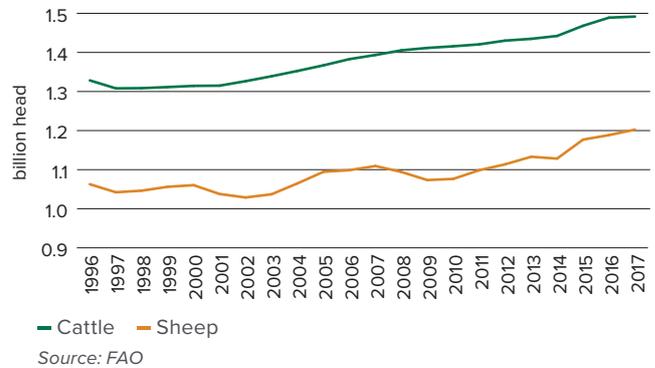


Figure 2. Australian cattle herd

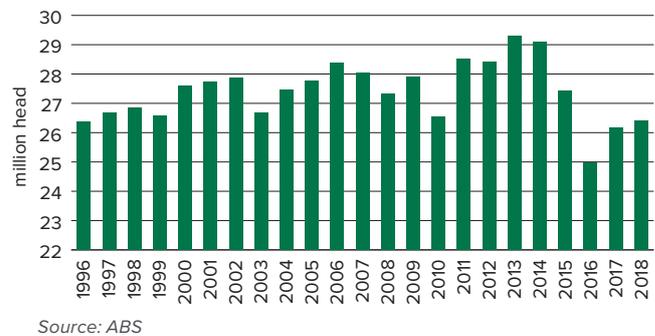


Figure 3. Australian sheep flock

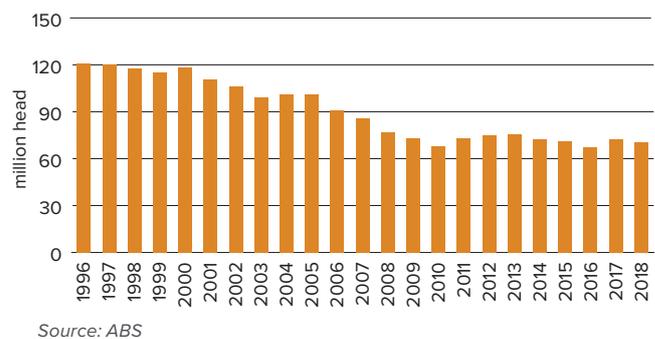
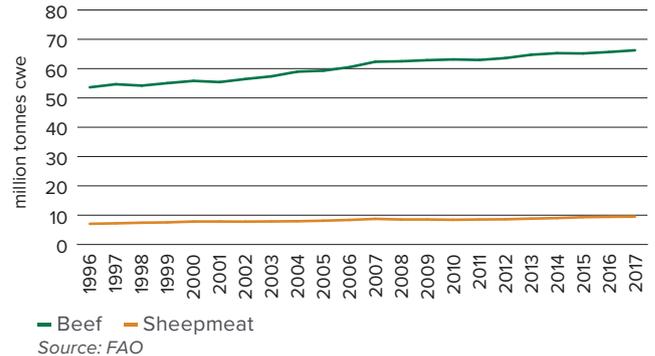


Figure 4. Global beef and sheepmeat production



<sup>2</sup> Please note, in 2015-16 the ABS survey structure changed which removed small farm businesses (estimated value of agricultural operations <\$40,000) from livestock populations. This change has meant some livestock previously included in the survey are now excluded. For the purpose of this report, official ABS data has been used. This figure differs from MLA's Cattle Industry Projections, which seeks to estimate herd numbers from all farm businesses.

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## ■ CONSUMPTION OF RED MEAT

### Global consumption

- Over the last two decades, total global consumption of meat has been gradually increasing (see Figure 5). Total global consumption increased at an average rate of 2% per year for sheepmeat, 1% for beef, 4% for poultry and 2% for pork (OECD-FAO).
- In 2018, sheepmeat accounted for 5% of total global meat consumption (excluding seafood), while beef and veal accounted for 22%. Chicken and pork each accounted for 37% (OECD-FAO).

### Domestic consumption

- The long-term protein consumption trend within Australia has been impacted by various demographic, social, commercial and other factors.
- Over the last 20 years there has been a gradual decline in Australia's per capita consumption of beef. Despite this, Australia remains one of the world's largest per capita consumers of beef with 27kg<sup>3</sup> consumed per capita in 2017 (see Figure 6) (ABS, DA, OECD-FAO).
- Despite increases in the retail price of lamb in recent years, Australia's per capita lamb consumption has remained stable at around 9kg, as Australia continues to be one of the largest per capita consumers of sheepmeat in the world (see Figure 6) (ABS, DA, OECD-FAO).
- The consumption of mutton domestically is now nearly non-existent as the national flock size has reduced, the production focus of producers has shifted, consumer attitudes have changed and export markets have increasingly developed for this meat.

Figure 5. Total global meat consumption

Year	Beef and veal (cwe)	Pork (cwe)	Poultry meat (rtc)	Sheepmeat (cwe)
1996	60	80	50	10
1997	62	82	52	12
1998	64	84	54	14
1999	66	86	56	16
2000	68	88	58	18
2001	70	90	60	20
2002	72	92	62	22
2003	74	94	64	24
2004	76	96	66	26
2005	78	98	68	28
2006	80	100	70	30
2007	82	102	72	32
2008	84	104	74	34
2009	86	106	76	36
2010	88	108	78	38
2011	90	110	80	40
2012	92	112	82	42
2013	94	114	84	44
2014	96	116	86	46
2015	98	118	88	48
2016	100	120	90	50
2017	102	122	92	52
2018	104	124	94	54

Source: OECD-FAO

Figure 6. Australian per capita meat consumption - fresh and processed

Year	Beef	Lamb	Chicken	Pork
2000	38	9	30	25
2001	37	9	31	25
2002	36	9	32	25
2003	35	9	33	25
2004	34	9	34	25
2005	33	9	35	25
2006	32	9	36	25
2007	31	9	37	25
2008	30	9	38	25
2009	29	9	39	25
2010	28	9	40	25
2011	27	9	41	25
2012	26	9	42	25
2013	25	9	43	25
2014	24	9	44	25
2015	23	9	45	25
2016	22	9	46	25
2017	21	9	47	25

Source: ABS, DA, MLA calculations

<sup>3</sup> Domestic meat consumption is measured by removing the portion of exports (DA data) from total production (ABS data) and assuming the difference is consumed (or at least disappears) domestically. Imports are also added to domestic consumption when present. Per capita consumption is calculated by dividing domestic consumption by ABS population data. Please note that domestic per capita consumption is entirely a supply statistic and does not take account of waste or non-food uses of livestock meat products.

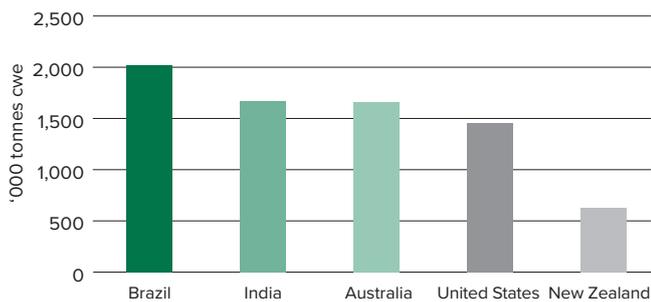
## THE INDUSTRY ENVIRONMENT

## KEY EXPORT AND IMPORT PLAYERS

### Exports

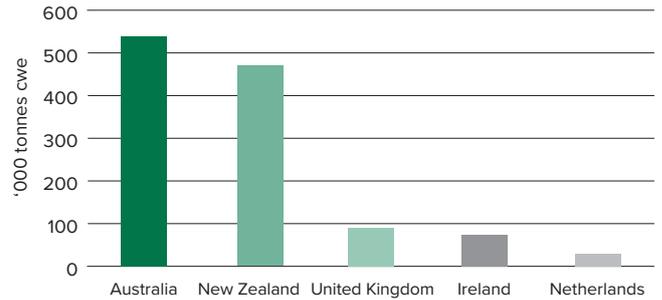
- In 2018, Australia was the third largest beef and veal exporter, after India and Brazil (see Figure 7) (DA, IHS Markit, Global Trade Atlas).
- Australia was the world's largest sheepmeat exporter in 2018, followed by New Zealand (see Figure 8) (DA, IHS Markit, Global Trade Atlas, Comtrade).
- Australia was the world's largest goatmeat exporter in 2016 (see Figure 9) (DA, FAO).

Figure 7. Top five beef and veal exporting countries (2018)



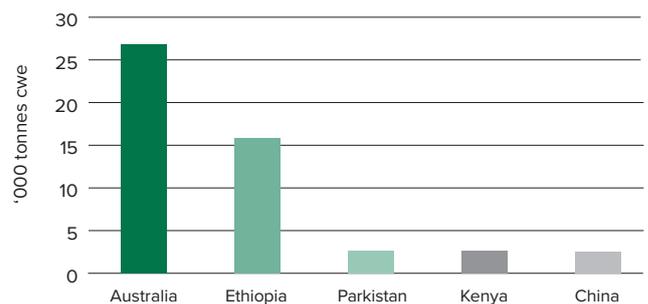
Source: DA, IHS Markit, Global Trade Atlas

Figure 8. Top five sheepmeat exporting countries (2018)



Source: DA, IHS Markit, Global Trade Atlas, Comtrade

Figure 9. Top five goatmeat exporting countries (2016)

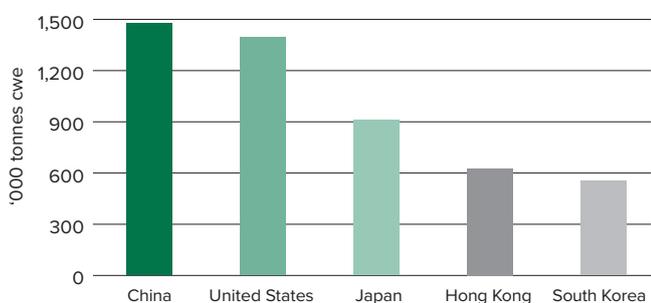


Source: DA, FAO

### Imports

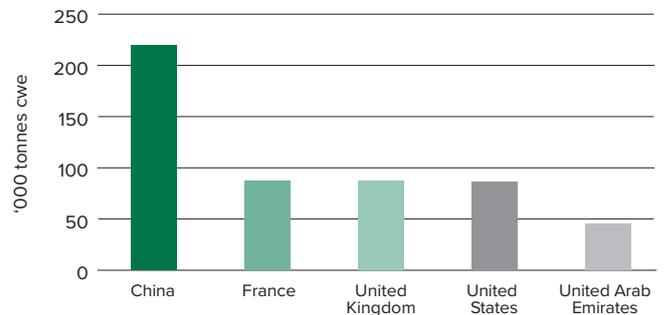
- In 2018, the largest importer of beef and veal (in volume terms) was China, overtaking the US, with Japan third largest (see Figure 10) (IHS Markit, Global Trade Atlas).
- The top importing countries of sheepmeat in 2016 were China, France, the UK and the US (see Figure 11) (FAO).
- In 2016, the key importers of goatmeat were the US, the United Arab Emirates and Saudi Arabia (see Figure 12) (FAO).

Figure 10. Top five beef and veal importing countries (2018)



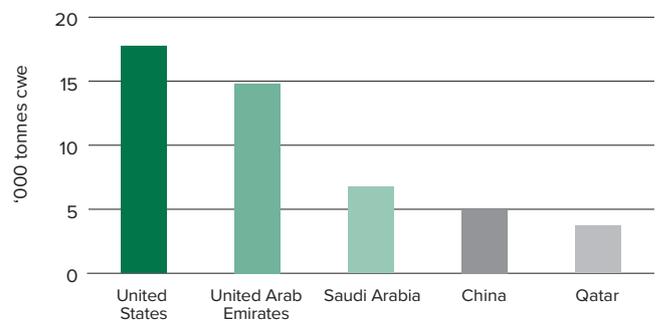
Source: IHS Markit, Global Trade Atlas  
Note: China includes direct imports only

Figure 11. Top five sheepmeat importing countries (2016)



Source: FAO  
Note: China includes direct imports only

Figure 12. Top five goatmeat importing countries (2016)



Source: FAO

# THE ECONOMIC IMPORTANCE OF THE AUSTRALIAN RED MEAT AND LIVESTOCK INDUSTRY

## INDUSTRY TURNOVER<sup>4</sup>

Industry turnover is defined as income generated by businesses within the industry from the sales of goods and services.

Australia's red meat and livestock industry turnover was **\$65.7 billion in 2017-18**, up 1% on revised 2016-17 figures and up **38% since 2012-13** (ABARES, IBIS World).

### Trends over time

- Red meat and livestock industry turnover increased by 38% from 2012-13 to 2017-18, driven by a 59% increase in turnover in the on-farm (beef cattle, sheep and mixed farming) and feedlot sectors of the industry (see Figure 13).
- Turnover in the processing sector also increased considerably since 2012-13, up 30%.
- Turnover in domestic wholesaling and retailing over this period increased 6%.

### Composition by sub-sector

- Red meat and livestock production (beef cattle, sheep and mixed farming and feedlots) accounted for 54%, or \$35.3 billion, of overall industry turnover in 2017-18, followed by processing (27%, or \$17.5 billion) and sales (wholesaling and retail) (20%, or \$12.9 billion) (see Figure 14).

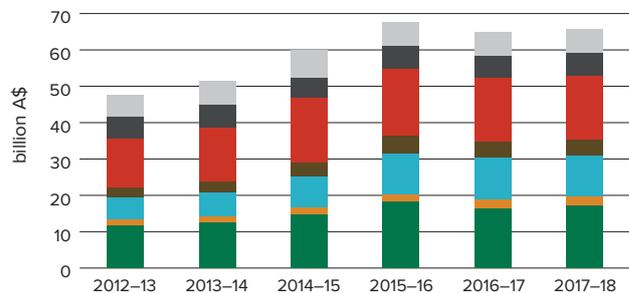
### By state

- The three mainland eastern states accounted for 74% of red meat and livestock industry turnover in 2017-18, followed by Western Australia (13%) and South Australia (9%) (see Figure 15).

### Comparison to other industries

- The red meat and livestock industry's turnover reached \$65.7 billion in 2017-18, accounting for approximately 2% of Australia's total key industry turnover.
- To put turnover in the red meat and livestock industry into perspective, it is only 22% lower than the entire 'Information, media and telecommunications' industry, and greater than the 'Education and training (private)' and 'Arts and recreation' industries (see Figure 16).
- The largest industry by turnover, 'Wholesaling', was nearly eight times larger than red meat and livestock.

Figure 13. Industry turnover by sub-sector\*

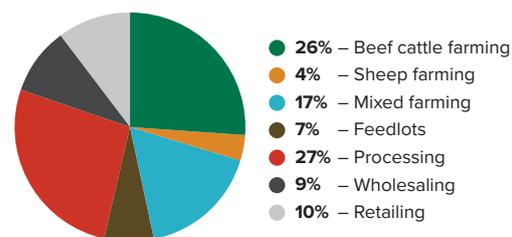


■ Beef cattle farming ■ Sheep farming ■ Mixed farming  
■ Feedlots ■ Processing ■ Wholesaling ■ Retailing

Source: EY, IBISWorld

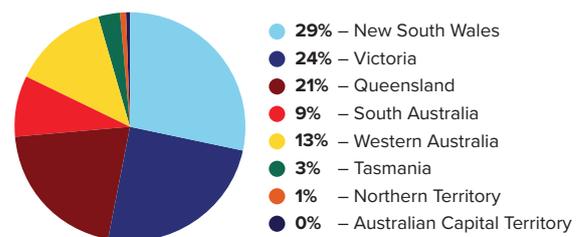
\*The contribution of live exports to industry turnover is represented in beef, sheep and mixed farming.

Figure 14. Industry turnover by sub-sector (2017-18)



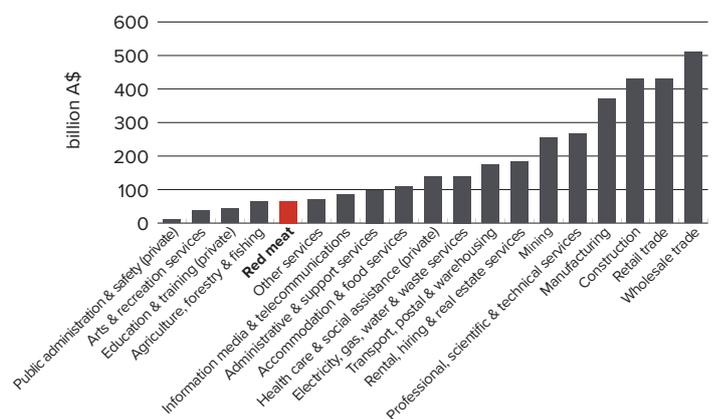
Source: EY, IBISWorld, ABS

Figure 15. Industry turnover by state (2017-18)



Source: EY, IBISWorld, ABS

Figure 16. Industry turnover compared with other industries (2017-18)



Source: EY, IBISWorld, ABS

Note: This only includes direct industry turnover for the defined industries

<sup>4</sup> All statistics referenced within this section are sourced from IBIS World, ABARES

Table 1: Industry turnover by sub-sector (\$m, 2012-13 to 2017-18)

Sub-sector	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Beef cattle farming	11,646	12,580	14,658	18,281	16,380	17,259
Sheep farming	1,614	1,514	2,027	1,992	2,281	2,437
Mixed farming (beef/sheep)	6,135	6,797	8,427	11,240	11,543	11,085
Feedlots	2,742	2,965	3,762	4,778	4,660	4,531
Processing	13,280	14,807	17,896	18,590	17,316	17,512
Wholesaling	6,064	6,293	5,488	6,049	6,164	6,290
Retailing	6,163	6,312	7,678	6,714	6,568	6,615
<b>Total</b>	<b>47,644</b>	<b>51,268</b>	<b>59,938</b>	<b>67,644</b>	<b>64,912</b>	<b>65,729</b>

Source: EY, IBISWorld

## INDUSTRY VALUE ADD<sup>5</sup>

**Industry value add is the overall value of goods and services produced by businesses in an industry (also known as contribution to gross domestic product (GDP))**

(ABARES, IBIS World).

**Australia's red meat and livestock industry value add was \$18.5 billion in 2017-18, down 2.5% on revised 2016-17 figures, but up 74% since 2012-13.**

### Trends over time

- Australia's red meat and livestock industry value add increased by 74% between 2012-13 and 2017-18.
- Over this period, industry value add for the production sector (beef cattle farming, sheep farming, mixed farming and feedlots) doubled, while industry value add for the processing sector increased by 28%.
- Industry value add in domestic wholesaling and retailing increased 3% year-on-year and 14% between 2012-13 and 2017-18.

### Composition by sub-sector

- The production sector (beef cattle, sheep and mixed farming and feedlots) accounted for 77%, or \$14.2 billion, of overall industry value add in 2017-18, followed by processing (15%, or \$2.7 billion) and sales (wholesaling and retail) (8.5%, or \$1.6 billion) (see Figure 17).

### By state

- In 2017-18, the three mainland eastern states accounted for 72% of red meat and livestock industry value add, followed by Western Australia (14%) and South Australia (10%) (see Figure 18).

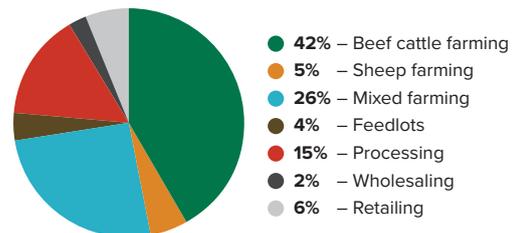
### Comparison to other industries

- In 2017-18, red meat and livestock industry value add was \$18.5 billion, which was greater than the 'Arts and recreation services' industry (\$14.6 billion) and 'Public administration and safety' (\$6.2 billion) (see Figure 19).
- The red meat and livestock industry accounted for approximately 1.5% of Australia's key industry total industry value add in 2017-18.
- Mining recorded the highest industry value add in 2017-18 (\$149 billion), which was more than eight times larger than that recorded for the red meat and livestock industry.

<sup>5</sup> All statistics referenced within this section are sourced from IBIS World, ABARES

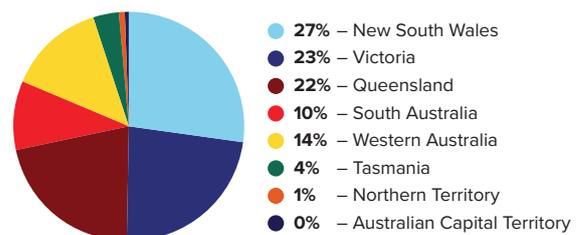
- Within agriculture production, red meat and livestock production (beef cattle, sheep and mixed farming and feedlots) contributed 44% to Australia's total agriculture production value add in 2017-18 (see Figure 20).
- Within the manufacturing industry, red meat and livestock processing contributed 3% to Australia's overall manufacturing industry value add in 2017-18 (see Figure 21).
- Within the sales industry, red meat and livestock retail and wholesaling contributed 1% to Australia's overall sales industry value add in 2017-18 (see Figure 22).

Figure 17. Industry value add by sub-sector (2017-18)



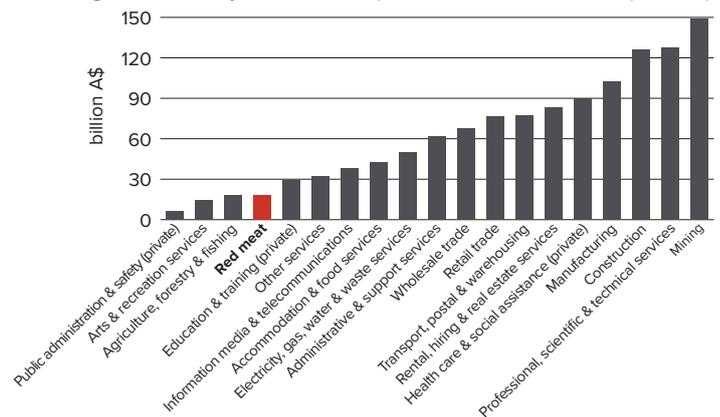
Source: EY, IBISWorld

Figure 18. Industry value add by state (2017-18)



Source: EY, IBISWorld, ABS

Figure 19. Industry value add compared with other industries (2017-18)



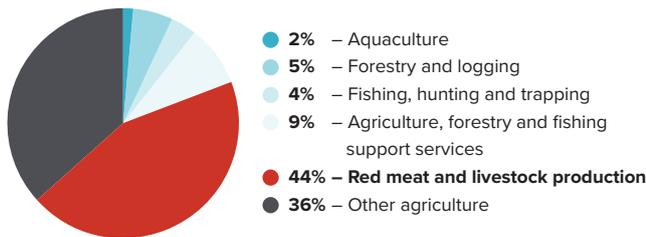
Source: EY, IBISWorld, ABS

Table 2: Industry value add by sub-sector (\$m, 2012-13 to 2017-18)

Sub-sector	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Beef cattle farming	4,169	2,063	3,826	8,263	7,125	7,732
Sheep farming	517	418	710	663	865	945
Mixed farming (beef/sheep)	2,014	2,079	2,565	4,370	4,597	4,757
Feedlots	340	499	608	694	741	718
Processing	2,643	3,390	4,043	3,783	3,358	2,744
Wholesaling	558	571	467	475	483	496
Retailing	1,185	1,189	1,445	1,249	1,243	1,079
<b>Total</b>	<b>11,426</b>	<b>10,209</b>	<b>13,662</b>	<b>19,497</b>	<b>18,411</b>	<b>18,475</b>

Source: EY, IBISWorld

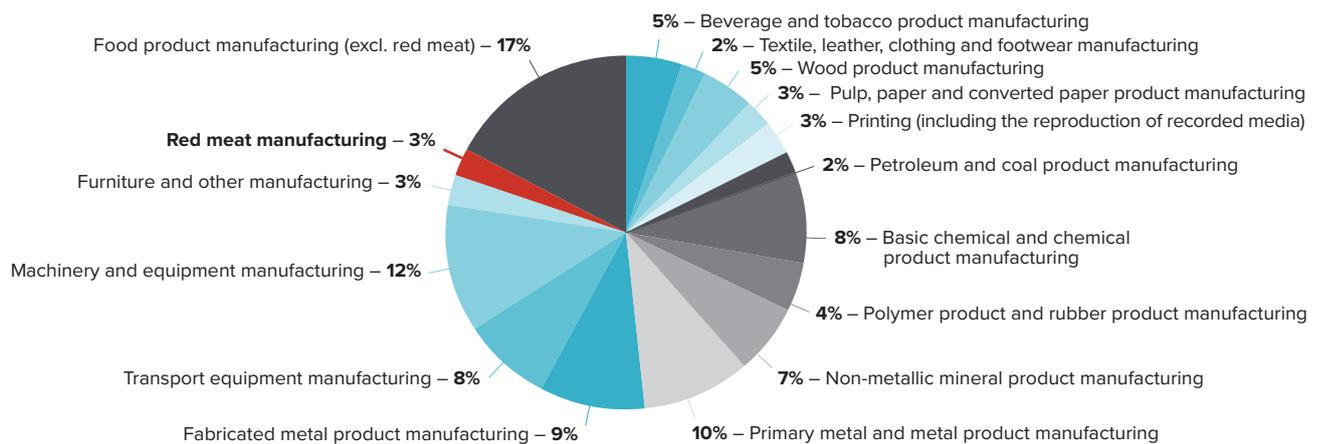
Figure 20. Agriculture production industry value add (2017-18)



Source: ABS and IBIS world

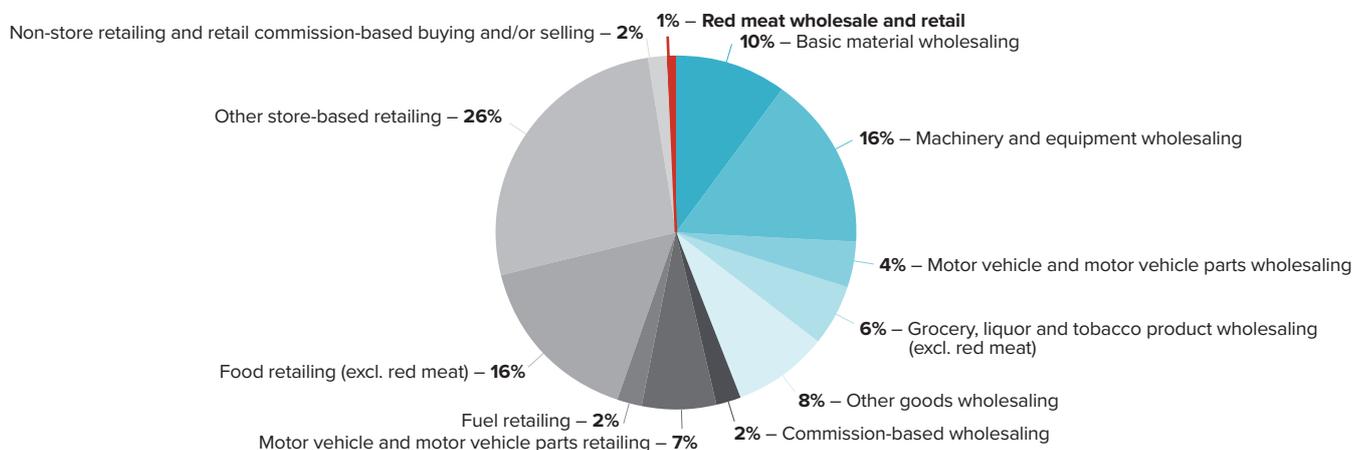


Figure 21. Manufacturing industry value add (2017-18)



Source: ABS and IBISWorld

Figure 22. Sales industry value add (2017-18)



Source: ABS and IBISWorld

In 2017-18, the Australian red meat and livestock industry created employment for around 404,800 people. Of these, just over 172,400 people were directly employed in the industry. The industry was also responsible for the employment of a further 232,400 people in businesses servicing the red meat and livestock industry.

**Generation of direct and indirect employment**

- In 2017-18, the Australian red meat and livestock industry directly employed just over 172,400 people, a decline of 9% on revised 2016-17 figures, and about the same as 2012-13.
- The industry was also responsible for generating indirect employment for almost 232,400 people in businesses servicing the red meat and livestock industry in 2017-18. These additional jobs included those involved in transporting meat and livestock, activities related to livestock sales (such as livestock agents), employment in providing animal health services and supply of farm inputs.

**Composition by sub-sector**

- In terms of direct employment in 2017-18, the production sector (beef cattle, sheep and mixed farming and feedlots) accounted for just over 128,400 jobs, the processing sector almost 30,400 jobs, with the remainder in retailing and wholesaling (see Figure 23).
- The processing sector generated 2.4 additional indirect jobs for every person directly employed in 2017-18. For the production sector, 1.2 additional indirect jobs were generated.

**Direct employment by state**

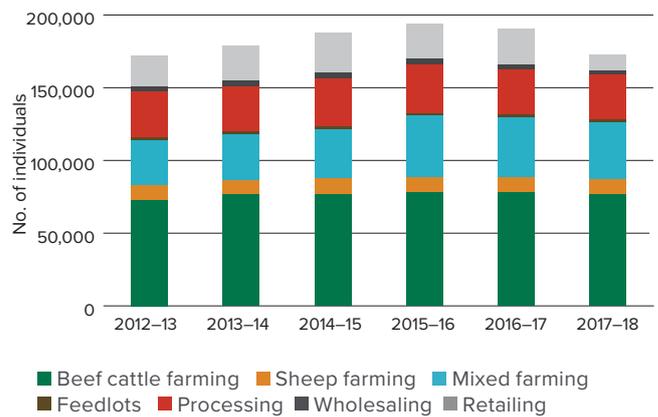
- In 2017-18, New South Wales had the highest levels of direct employment in the red meat and livestock industry (28.4%), closely followed by Victoria (24.1%) and Queensland (21.4%) (see Figure 24).

**Employment compared with other industries and total workforce**

- In 2017-18, direct employment in the red meat and livestock industry represented approximately 1.5% of Australia's key industry total employment (see Figure 25).
- If both direct and indirect employment is taken into account, employment in the red meat and livestock industry represented approximately 3.6% of Australia's key industry total employment in 2017-18.
- Within agriculture production, red meat and livestock production (beef cattle, sheep and mixed farming and feedlots) accounted for 27% of Australia's total direct employment in agriculture production in 2017-18 (see Figure 26).

- Within the manufacturing industry, the red meat and livestock processing sector contributed 4% to Australia's overall manufacturing employment in 2017-18 (see Figure 27).
- Within the sales industry, the red meat and livestock retail and wholesale sector contributed 1% to Australia's overall sales industry employment in 2017-18 (see Figure 28).

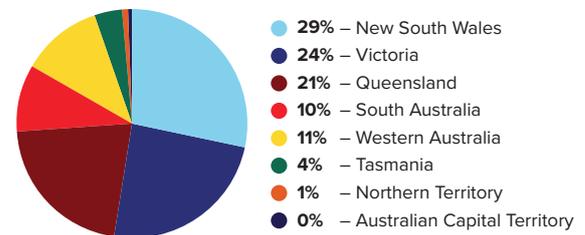
Figure 23. Direct employment by sub-sector\*



Source: EY, IBISWorld

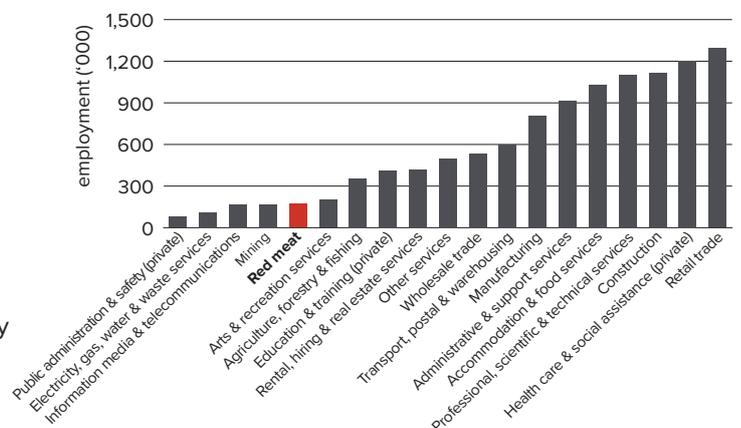
\*The contribution of live exports to employment is represented in beef, sheep and mixed farming

Figure 24. Direct employment by state (2017-18)



Source: EY, IBISWorld

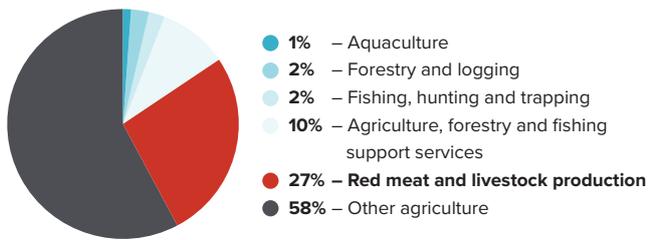
Figure 25. Direct employment compared with other industries (2017-18)



Source: EY, IBISWorld

<sup>6</sup> All statistics referenced within this section are sourced from IBIS World, ABS

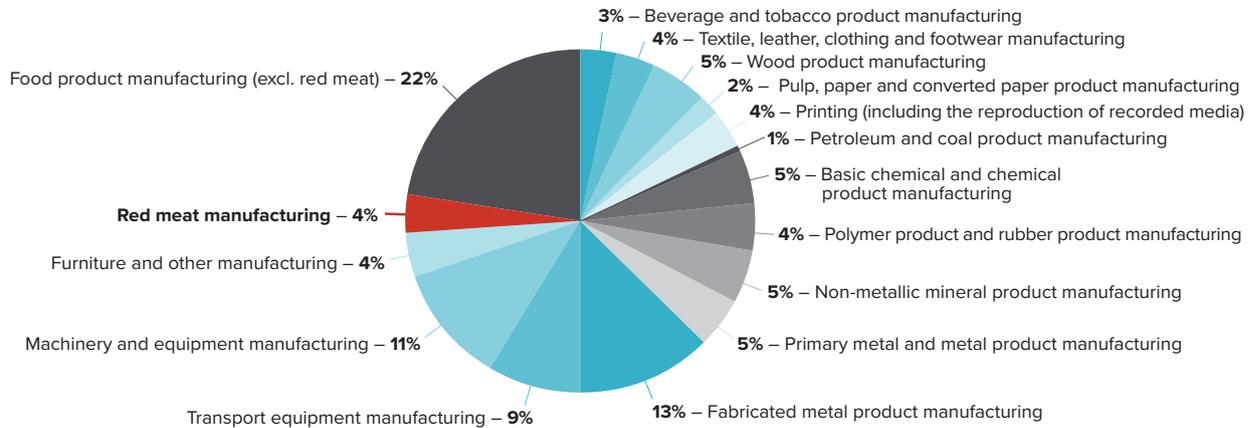
Figure 26. Agriculture production employment (persons) (2017–18)



Source: ABS and IBISWorld

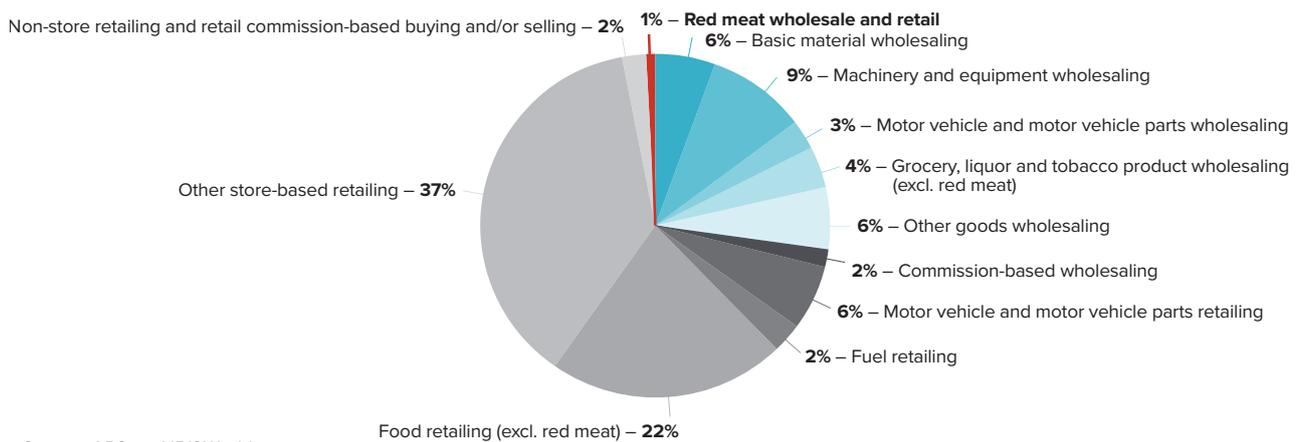


Figure 27. Manufacturing employment (persons) (2017–18)



Source: ABS and IBISWorld

Figure 28. Sales employment (persons) (2017–18)



Source: ABS and IBISWorld

Table 3: Major players in Australia's red meat processing sector

Company	No. of employees
1. Industry Park Ltd (JBS Australia and Australian Consolidated Food Investment)	10,838
2. Teys Australia	4,625
3. NH Foods Australia	1,701
4. Thomas Foods International	1,659
5. Australian Country Choice	1,400
6. Kilcoy Pastoral	920
7. Yolarno Pty Ltd (previously Bindaree Beef Group and Sanger)	807
8. Northern Co-operative Meat Company (NCMC)	775
9. Fletcher International Exports	657
10. Australian Agricultural Company Limited (AACo)	549
11. Craig Mostyn Group	500
12. Midfield Meat International	405
13. Nolan Meats	401
14. Western Australian Meat Marketing International Co-operative (WAMMCO)	348
15. Top Cut Foods	328
16. M C Herd	264
17. OSI International Foods	205
18. G & K O'Connor	168

Source: EY, IBISWorld

### Industry employment is focused on rural and regional areas

- The vast majority (90%) of meat and livestock industry employees live in rural and regional areas, assisting decentralisation and not contributing to the growing problem of overcrowding in capital cities (2016).
- Almost 80% of meat processing employment and nearly all beef cattle and sheep production employment is located outside capital cities (2016).

### Age profile of the workforce

- Compared to the Australian workforce generally, the meat processing industry offers more employment opportunities to younger Australians, with a median age of 25 to 29 years (see Figure 29) (2016).
- Older Australians tend to dominate in the sheep and beef cattle production sectors (like the rest of agriculture) (2016).

### Education profile of the workforce

- Both the livestock production and meat processing sectors of the red meat and livestock industry offer most employment opportunities to those with practical and technical skills, rather than higher levels of formal education (2016).
- The highest level of education achieved by more than 50% of red meat and livestock employees is secondary education; 10% of red meat and livestock employees have a bachelor degree or higher (see Figure 30) (2016).

### Indigenous employment

- Specialist sheep farms and mixed farms employ few Indigenous Australians.
- Of those directly employed in specialist beef farms, 1.8% identify as Indigenous (see Figure 31) (2016).
- For specialist beef farms in the Northern Territory, Indigenous employment accounts for 10.7% of the total employment, while in north-west Western Australia it is 15% (see Figure 31) (2016).
- Indigenous Australians also comprise a higher proportion (2.8%) of the meat processing workforce than for Australian industries generally (1.7%) (see Figure 31) (2016).

Figure 29. Age profile of industry and Australian workforces (2016)

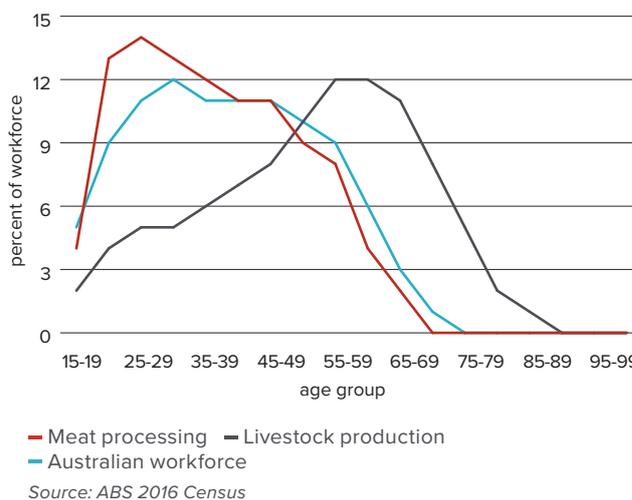


Figure 30. Education profile of industry and Australian workforces (2016)

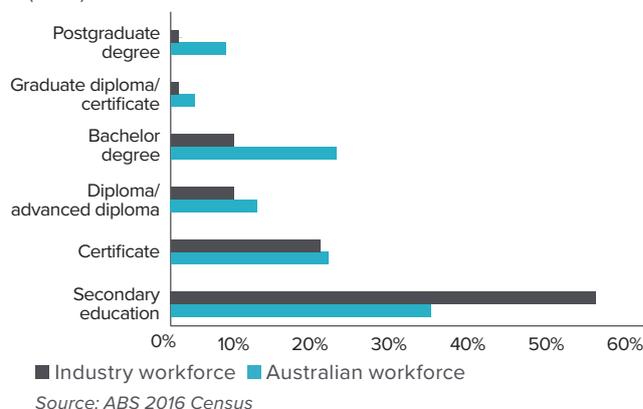
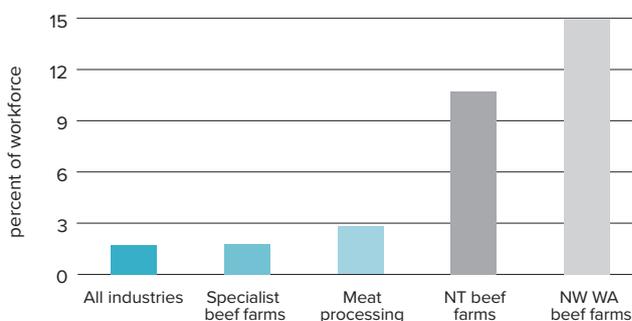


Figure 31. Indigenous employment in the beef/processing industry (2016)



## NUMBER OF BUSINESSES<sup>7</sup>

In 2017-18, Australia had slightly less than 80,300 red meat and livestock businesses, a decrease of 2% on 2016-17 levels, but up 4.6% on the number of businesses in 2012-13.

### Trends over time

- The number of businesses within the red meat and livestock industry has remained relatively constant over recent years, with a growth of 4.6% between 2012-13 and 2017-18 (see Figure 32).
- The relatively small increase in number of businesses since 2012-13 contrasts with larger increases in turnover (31%) and industry value add (67%).

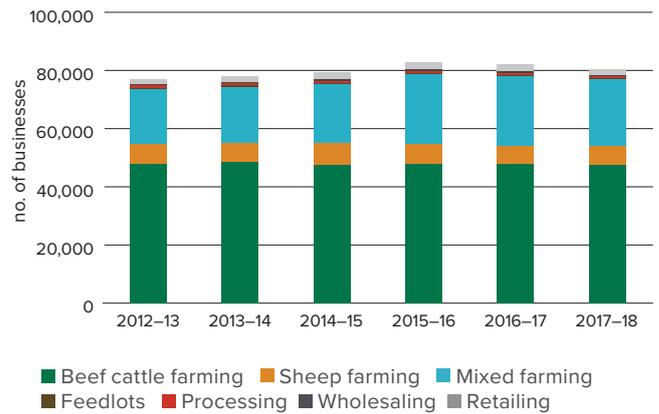
### Composition by sub-sector

- In 2017-18, production (being beef cattle, sheep and mixed farming and feedlots) accounted for 96.2% of all businesses within the red meat and livestock industry. Sales (retailing and wholesaling) accounted for 3%, while processing accounted for 0.8% (see Figure 33).

### By state

- In 2017-18, New South Wales had 21,422 red meat and livestock businesses, accounting for 26.7% of all red meat and livestock businesses in Australia. This was closely followed by Queensland (17,721 businesses) and Victoria (17,474 businesses) (see Figure 34).

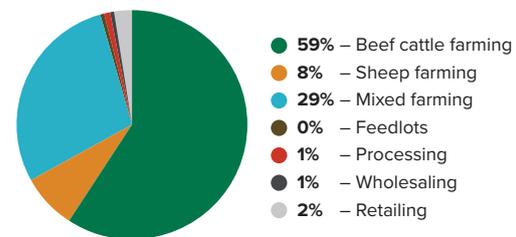
Figure 32. Red meat and livestock businesses across the supply chain\*



Source: EY, IBISWorld

\*The contribution of live exports to businesses is represented in beef, sheep and mixed farming.

Figure 33. Business numbers by sub-sector (2017-18)



Source: EY, IBISWorld

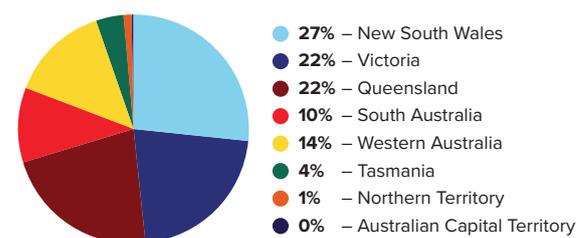
Table 4: Business numbers by sub-sector (2012-13 to 2017-18)

Sub-sector	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Beef cattle farming	47,682	48,359	47,612	47,871	47,677	47,605
Sheep farming	7,997	6,842	7,480	6,652	6,723	6,201
Mixed farming (beef/sheep)	18,983	19,120	20,042	24,000	23,433	23,059
Feedlots	412	403	398	395	395	383
Processing	714	815	758	789	705	644
Wholesaling	689	699	558	545	550	496
Retailing	2,276	2,255	3,150	3,060	3,009	1,938
<b>Total</b>	<b>78,753</b>	<b>78,494</b>	<b>79,999</b>	<b>83,311</b>	<b>82,492</b>	<b>80,328</b>

Source: EY, IBISWorld



Figure 34. Red meat and livestock business numbers by state (2017-18)



Source: EY, IBISWorld, ABS

<sup>7</sup> All statistics referenced within this section are sourced from IBIS world, ABS

## EXPORTS

**Red meat and livestock exports totalled approximately \$15 billion in 2017-18, down 13% year-on-year, but approximately 59% above 2012-13 levels.**

### Trends over time

- Red meat and livestock exports (including co-products) increased from \$9.4 billion in 2012-13 to \$15.7 billion in 2014-15, before dropping to \$15 billion in 2017-18, 59% above 2012-13 levels (IHS Markit, Global Trade Atlas) (see Figure 35).

### Composition by sub-sector

- Australia's red meat and livestock exports occur in two primary forms: exports of meat and meat co-products, and exports of livestock.
- In 2017-18, exports accounted for 90% (\$13.5 billion) of total meat and livestock exports, while exports of live sheep and cattle accounted for 10% (\$1.5 billion) (IHS Markit, Global Trade Atlas).

### By state of production

- In 2017-18, Queensland had the highest level of red meat exports, accounting for approximately 39% of export volumes (see Figure 36) (DA).
- The three mainland eastern states accounted for 85% of red meat exports, followed by Western Australia (6%), South Australia (7%) and Tasmania (3%) (DA).

### Comparison to other industries

- Red meat and livestock exports accounted for approximately 4.4% of Australia's key industry exports in 2017-18 (see Figure 37) (IHS Markit, Global Trade Atlas, EY, IBISWorld, ABS).
- In 2017-18, red meat and livestock exports were valued \$13.7 billion (IHS Markit, Global Trade Atlas).

Figure 35. Export value by category

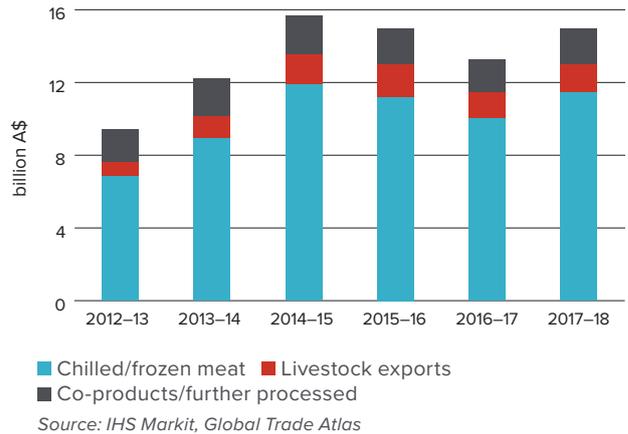


Figure 36. Red meat export volume by state of production (2017-18)

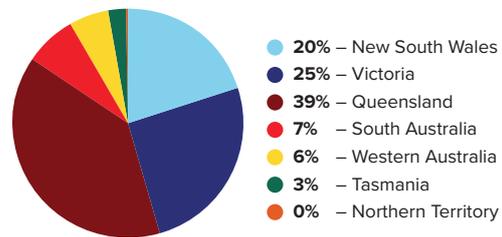
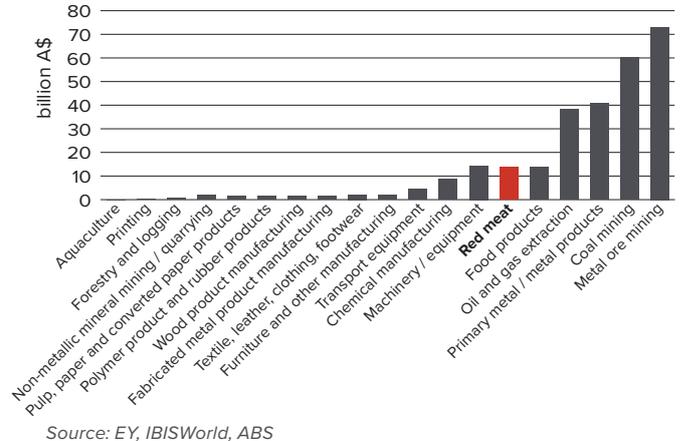


Figure 37. Exports compared with other industries (2017-18)



# SPECIES STATISTICS AND PERFORMANCE

## ■ BEEF CATTLE

### Herd size

- The Australian cattle herd was 26.4 million head<sup>8</sup> at 30 June 2018, up 0.8% year-on-year (see Figure 38) (ABS 2017-18 Agricultural Commodities).
- 90% of the herd comprised beef cattle, while 10% were dairy cattle in 2017-18 (ABS 2017-18 Agricultural Commodities).
- Queensland cattle accounted for 46% of the national herd, NSW accounted for 18% and Victoria made up 14% in 2017-18. WA and NT each accounted for 8%, while SA and Tasmania made up the remaining 4% and 2%, respectively (see Figure 39) (ABS 2017-18 Agricultural Commodities).
- 51% of the beef herd were cows and heifers (aged one year and over) in 2017-18 (see Figure 40) (ABS 2017-18 Agricultural Commodities).

Figure 38. Australian cattle herd

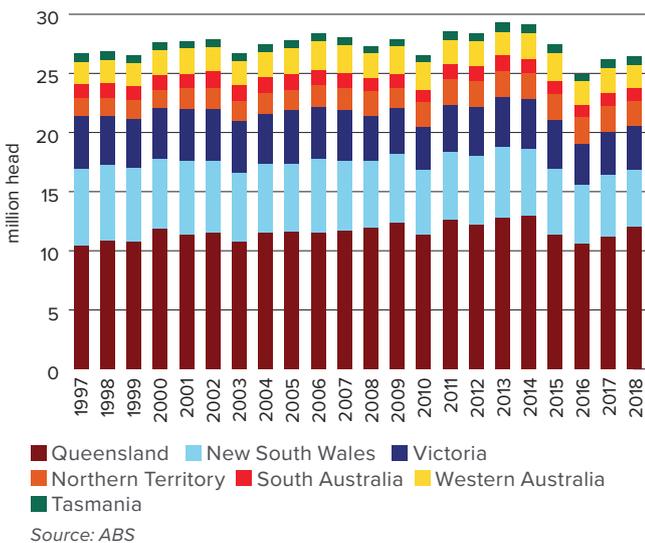
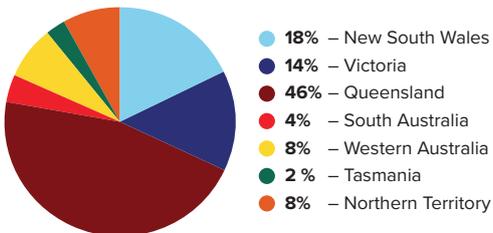


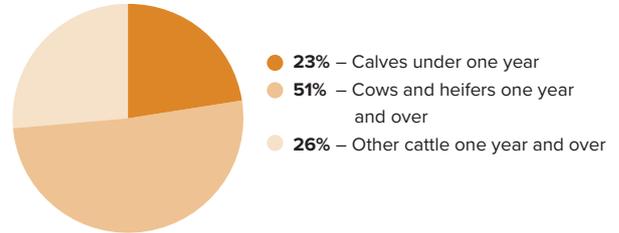
Figure 39. Australian cattle herd by state (2018)



Source: ABS, Data as at June 2018

<sup>8</sup> Please note, in 2015-16 the ABS survey structure changed which removed small farm businesses (estimated value of agricultural operations <\$40,000) from livestock populations. This change has meant some livestock previously included in the survey are now excluded. For the purpose of this report, official ABS data has been used. This figure differs from MLA's *Cattle Industry Projections*, which seeks to estimate herd numbers from all farm businesses.

Figure 40. Australian beef cattle herd composition (2018)

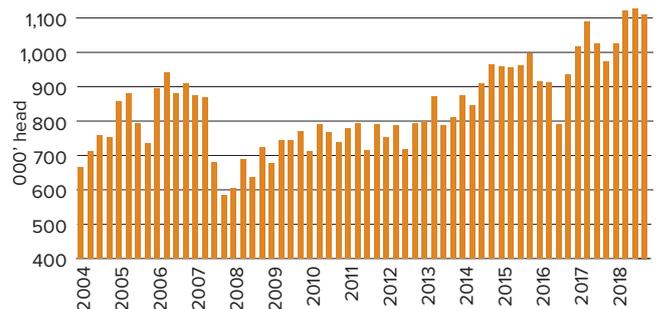


Source: ABS, Data as at June 2018

### Feedlots

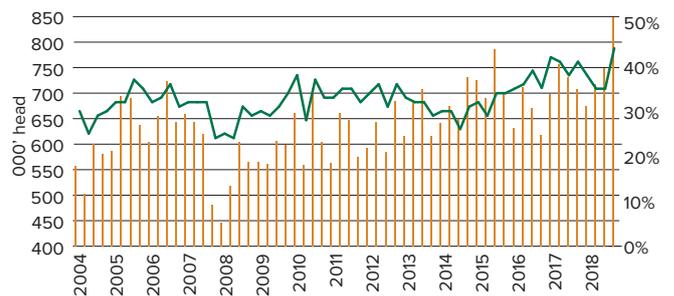
- There was a record number of cattle on feed in Australia in 2018, driven by dry conditions, low grain prices at the start of the year and robust demand for grainfed beef in key export markets.
- The national quarterly average of cattle on feed was 1.1 million head in 2018, 7% higher than the previous year (see Figure 41) (MLA/ALFA Feedlot Survey).
- Australia's average feedlot utilisation was 84% in 2018 (AUS-MEAT, MLA/ALFA Feedlot Survey).
- There were 3 million grainfed cattle turned off in 2018, up 3% from 2017 (see Figure 42) (MLA/ALFA Feedlot Survey).
- The grainfed cattle turnoff proportion of total adult cattle slaughter was 38% in 2018 (see Figure 42) (MLA/ALFA Feedlot Survey, ABS).

Figure 41. Australian cattle on feed



Source: MLA/ALFA feedlot survey

Figure 42. Australian grainfed cattle turnoff

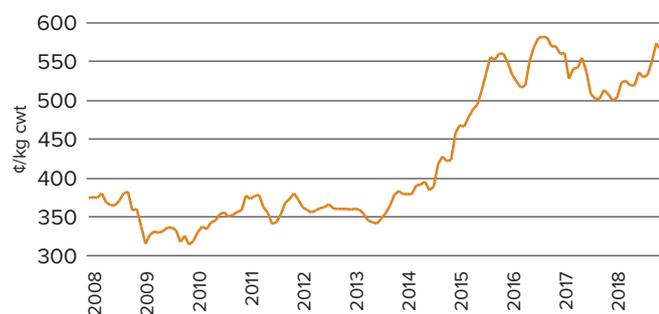


Source: ABS, MLA/ALFA feedlot survey

### Over-the-hooks cattle indicators

- The average 100-day grainfed steer (300-320kg) over-the-hooks indicator in Queensland averaged 531¢/kg cwt in 2018, the same as 2017 (see Figure 43) (MLA)

Figure 43. Queensland 100-day grainfed steer over-the-hooks indicator

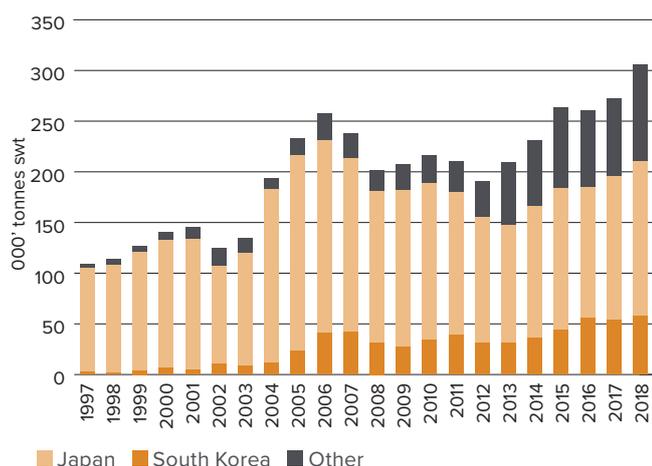


Source: MLA

### Grainfed beef exports

- 27% of Australia's total beef exports was grainfed beef in 2018, compared with the five year-average of 21% (DA).
- Australia's grainfed beef exports totalled 305,422 tonnes swt in 2018, up 12% year-on-year (see Figure 44) (DA).
- Japan was Australia's largest export destination (in volume terms) for grainfed beef exports in 2018 (DA).
- Grainfed beef exports to Japan accounted for 50% of Australia's total grainfed beef exports, followed by Korea (19%) and China (16%) in 2018 (DA).
- Compared with the five-year average, grainfed beef exports in 2018 were higher to Japan (up 11%), Korea (35% higher), China (up 60%) and the EU (5% higher) (DA).

Figure 44. Australian grainfed beef exports

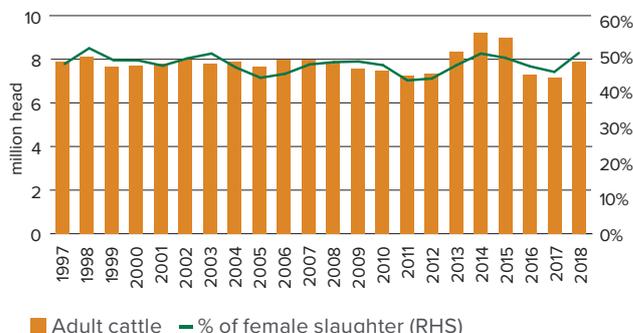


Source: DA

### Slaughter

- Adult cattle slaughter totalled 7.87 million head in 2018, up 10% on the previous year (see Figure 45) (ABS).
- The proportion of female (cow and heifer) slaughter of the total kill was 51% in 2018 (see Figure 45) (ABS).
- Female slaughter totalled 4 million head in 2018, 23% higher year-on-year, while male slaughter eased 1% to 3.87 million head (ABS).

Figure 45. Australian adult cattle slaughter

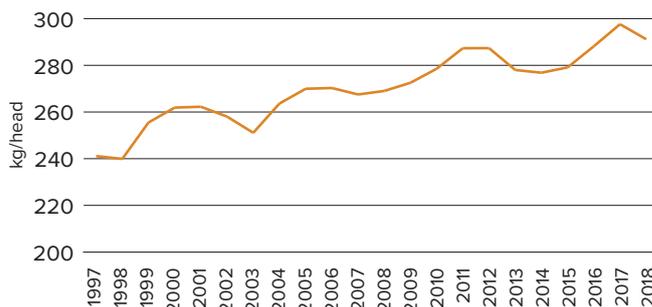


Source: ABS

### Carcase weight

- The national average adult carcase weight was 291.2kg in 2018, 2% lower than the previous year (see Figure 46) (ABS).

Figure 46. Australian average adult cattle carcase weight

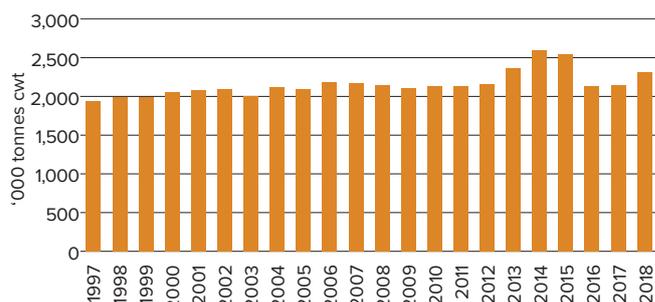


Source: ABS

### Production

- Australian beef and veal production totalled 2.3 million tonnes cwt in 2018, up 7% year-on-year (see Figure 47) (ABS).
- Compared to the five-year average, the volume of beef and veal produced in 2018 was down 2% (ABS).
- Beef production in Queensland accounted for 48% of the national total in 2018, followed by NSW (23%), Victoria (19%), SA (3%), WA (5%) and Tasmania (3%) (ABS).

Figure 47. Australian beef and veal production



Source: ABS

## Beef exports

- Australian beef exports totalled 1.26 million tonnes swt in 2018, up 11% from the year before (see Figure 48) (DA).
- Japan was Australia's largest beef export market (in volume terms) in 2018, taking 315,891 tonnes swt, an increase of 8% year-on-year (see Figure 49) (DA).
- Japan's market share of Australian beef exports in 2018 was 28%, followed by the US (21%) and Korea (15%) (DA).
- The value of Australian beef exports in 2018 was \$8.66 billion, up 16% from the previous year (see Figure 48) (IHS Markit, Global Trade Atlas).

Figure 48. Australian beef and veal export volume and value

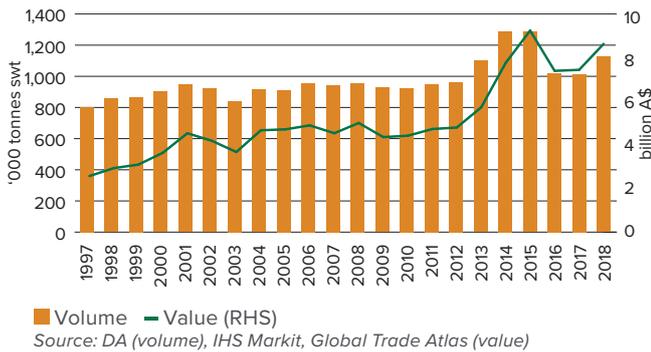
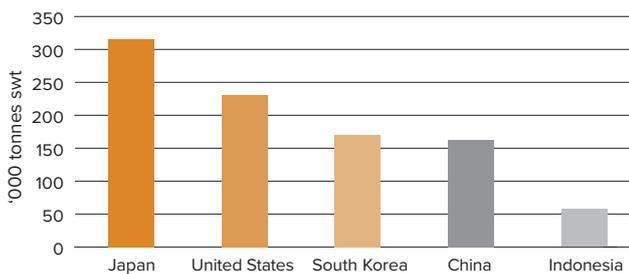


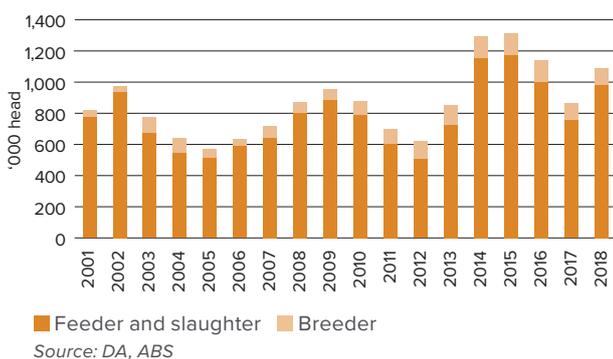
Figure 49. Australia's top five beef export markets (2018)



## Live cattle exports

- Australian live cattle exports totalled 1.1 million head in 2018, 26% higher year-on-year (see Figure 50) (DA).
- Feeder cattle accounted for 68% of Australia's live cattle exports, followed by slaughter cattle (22%) and breeders (10%) in 2018 (DA, ABS).
- Australia's largest market for live cattle exports in 2018 was Indonesia (54% of total), followed by Vietnam (19%) and China (10%) (DA, ABS).

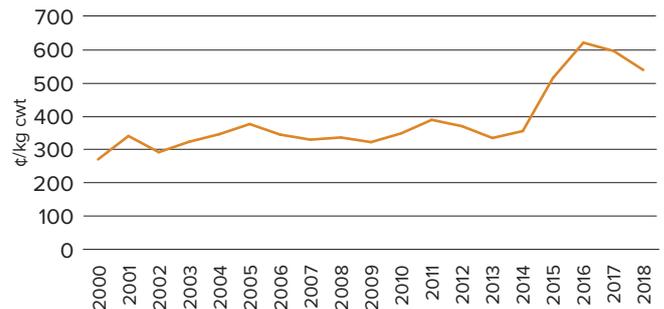
Figure 50. Australian live cattle exports



## Saleyard prices

- The national trade steer (330-400kg) saleyard indicator declined 10% year-on-year in 2018, to average 536¢/kg cwt (see Figure 51). However, this was 11% higher than the five-year average (MLA).
- The national heavy steer (500-600kg) saleyard indicator averaged 504¢/kg cwt in 2018, 4% lower year-on-year but 12% higher than the five-year average (MLA).
- The national medium cow (400-520kg) saleyard indicator averaged 403¢/kg cwt in 2018, 10% lower year-on-year though 8% higher than the five-year average (MLA).

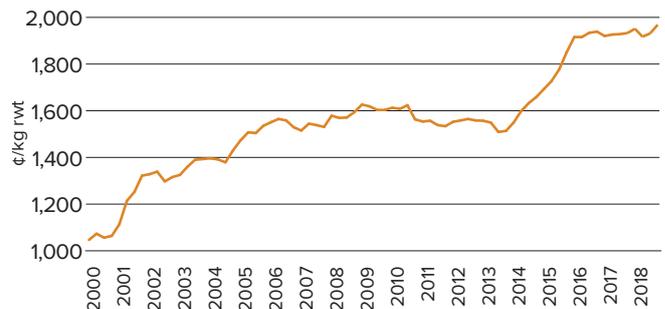
Figure 51. National trade steer saleyard indicator



## Retail prices

- The national beef retail price indicator averaged 1,942¢/kg rwt<sup>9</sup> in 2018 (see Figure 52), up 1% from the previous year (ABS, MLA calculations).
- The producer share of the retail dollar was estimated at 45% in 2018, down two percentage points from 47% in 2017. (ABS, MLA calculations).

Figure 52. National beef retail price indicator

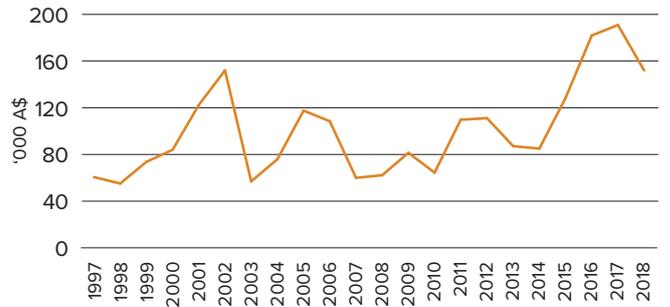


<sup>9</sup> Retail price indicators are estimated by indexing forward from actual average prices of beef, lamb and pork during the December quarter 1973, based on meat sub-category indexes of the consumer price index. These indexes are based on average retail prices of selected cuts (weighted by expenditure) in state capitals.

**Farm financial performance**

- The average farm cash income of Australian beef producers<sup>10</sup> totalled \$152,000 in 2017-18, 20% lower year-on-year (in real terms) (see Figure 53) (ABARES Australian Agricultural and Grazing Industries Survey).
- The average rate of return (excluding capital appreciation) of Australian beef cattle farms decreased from 2.7% in 2016-17 to 1.7% in 2017-18 (ABARES).

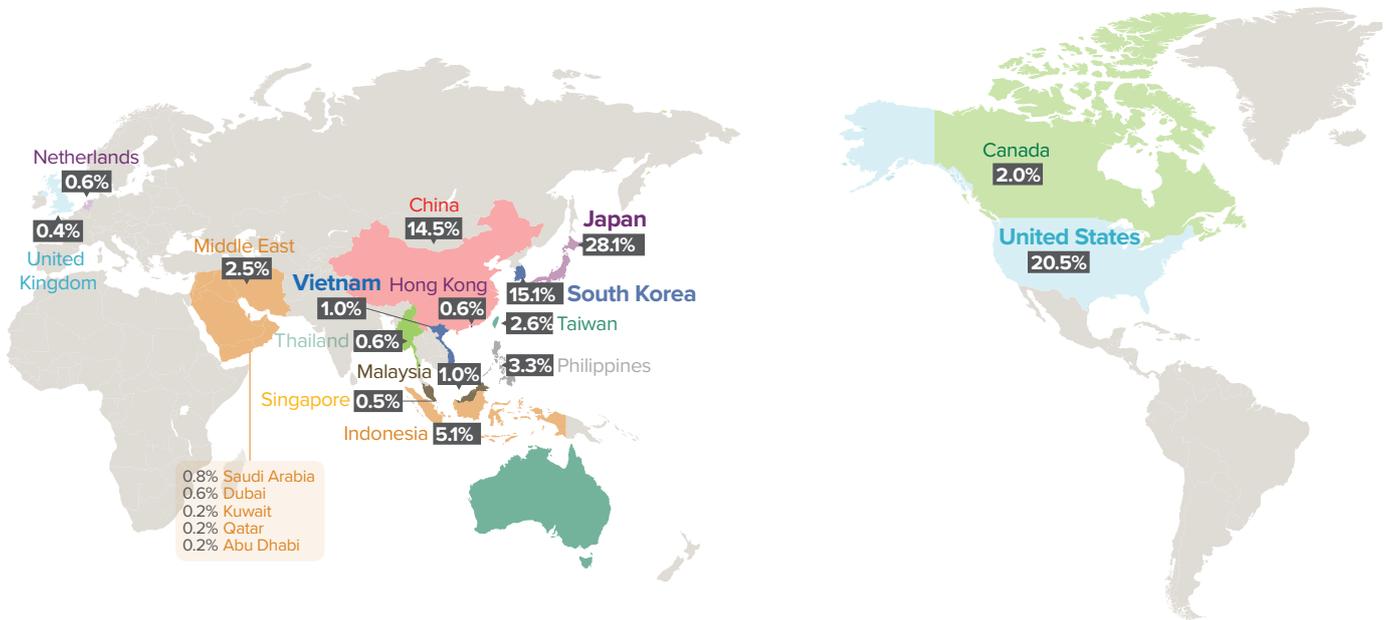
Figure 53. National average beef farm cash income



Source: ABARES  
 Note: This data is in real terms.

Figure 54. Australian beef exports by volume (2018)

**In 2018, Australia's top three beef export destinations (in volume terms) were Japan (351,891 tonnes swt, or 28.1% of total exports), the US (230,362 tonnes swt, or 20.5% of total exports) and Korea (170,373 tonnes swt, or 15.1% of total exports).**



Source: DA



<sup>10</sup> The ABARES Australian Agricultural and Grazing Industries Survey includes beef producers with at least 100 head of beef cattle on hand at 30 June.

## SHEEP

### National sheep flock

- The Australian sheep flock was 70.6 million head<sup>11</sup> at 30 June 2018, down 2.1% year-on-year (see Figure 55) (ABS).
- The majority of Australia's sheep population were located in NSW (36%), Victoria (21%), WA (20%) and SA (17%) at 30 June 2018. Tasmania and Queensland each accounted for 3% of the national sheep flock at 30 June 2018 (see Figure 56) (ABS).
- In 2017-18, breeding ewes (aged one year and over) accounted for 57% of Australia's sheep flock, while lambs (under one year) made up 31% at 20 June 2018 (see Figure 57) (ABS).

Figure 55. Australian sheep flock size by state

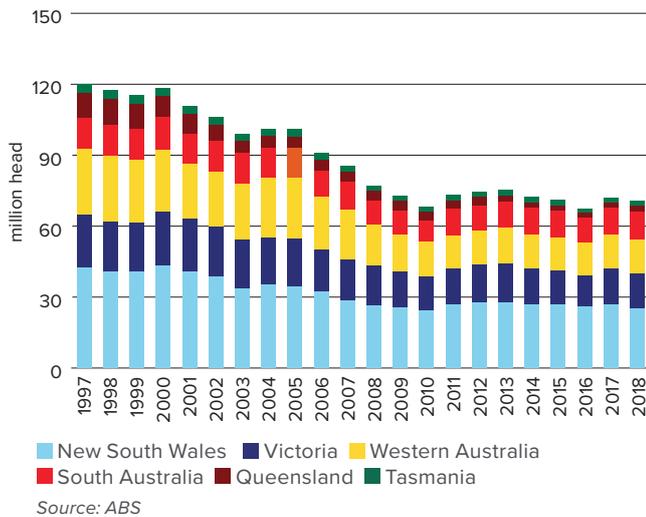


Figure 56. Australian sheep flock by state (2018)

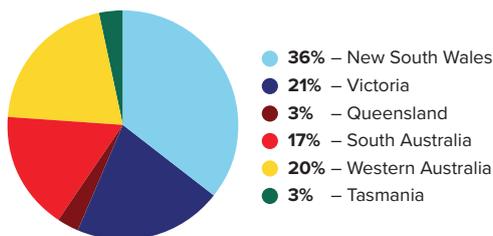
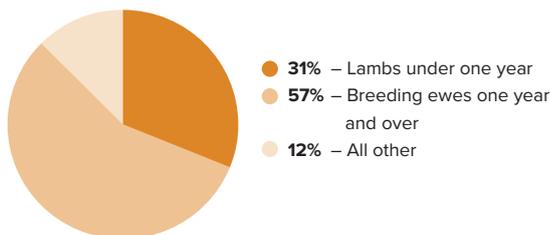


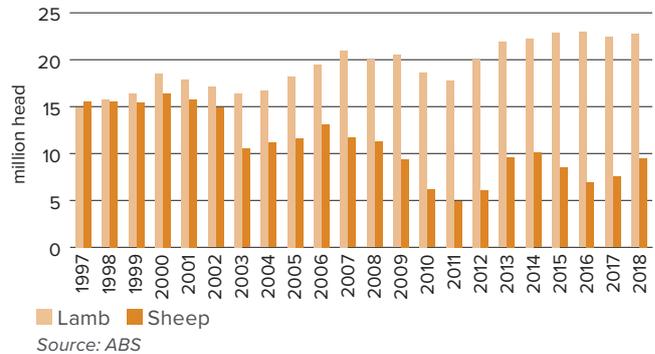
Figure 57. Australian sheep flock composition (2018)



### Slaughter

- National lamb slaughter totalled 22.73 million head in 2018 (see Figure 58), an increase of 1.3% year-on-year (ABS).
- Sheep slaughter totalled 9.5 million head in 2018, 26% higher year-on-year and 12% above the five-year average (see Figure 58) (ABS).

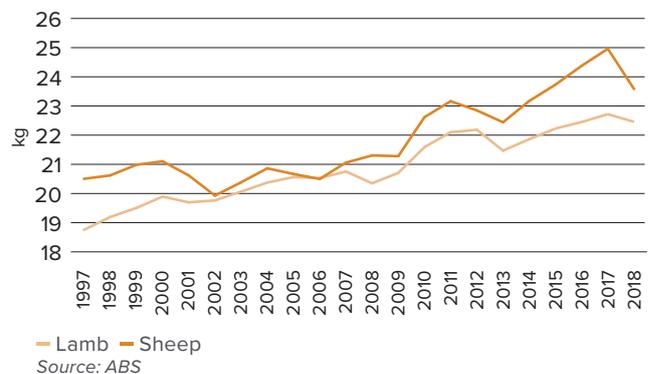
Figure 58. Australian sheep and lamb slaughter



### Carcase weights

- The national lamb carcase weight averaged 22.5kg/head in 2018 (see Figure 59), down 1% from the previous year, although 1% higher than the five-year average (ABS).
- Sheep carcase weights averaged 23.6kg/head in 2018 (see Figure 59), a decrease of 6% year-on-year and 1% lower than the five-year average (ABS).

Figure 59. Australian average sheep and lamb carcase weights

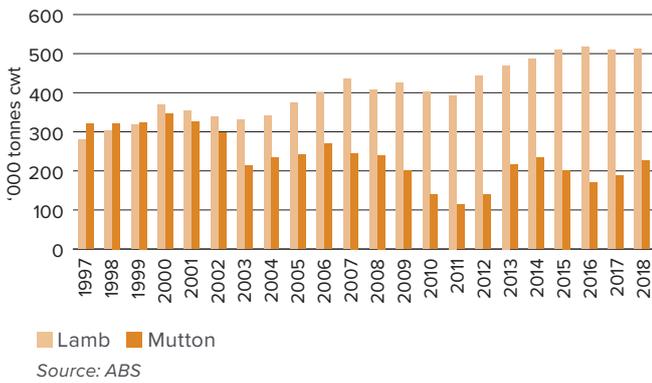


### Production

- Australian lamb production totalled 511,346 tonnes cwt in 2018 (see Figure 60), on par with 2017, but 4% higher than the five-year average (ABS).
- Mutton production totalled 225,212 tonnes cwt in 2018, 20% higher than the previous year and up 10% from the five-year average (see Figure 60) (ABS).
- Total sheepmeat production (lamb and mutton) was 736,557 tonnes cwt in 2018, an increase of 6% year-on-year and 5% above the five-year average (ABS).

<sup>11</sup>Please note, in 2015-16 the ABS survey structure changed which removed small farm businesses (estimated value of agricultural operations <\$40,000) from livestock populations. This change has meant some livestock previously included in the survey are now excluded. For the purpose of this report, official ABS data has been used.

Figure 60. Australian sheepmeat production



**Sheepmeat exports**

- Australian lamb exports totalled 267,254 tonnes swt in 2018, 7% higher year-on-year and up 13% on the five-year average (see Figure 61) (DA).
- The US was the largest destination for Australian lamb exports (in volume terms) in 2018, at 56,830 tonnes swt (up 1% year-on-year), followed closely by China, at 52,919 tonnes swt (up 10% year-on-year) (see Figure 62) (DA).
- The Middle East is a major export region for Australian lamb. In 2018, exports to the region increased 17% from the year prior, to 74,737 tonnes swt (DA).
- Australian mutton exports were 179,998 tonnes swt in 2018, 23% higher than the previous year and 14% higher than the five-year average (see Figure 61) (DA).
- China was Australia’s largest export destination for mutton (in volume terms) in 2018, at 54,937 tonnes swt, up 57% year-on-year (see Figure 63) (DA).
- Other key export destinations in 2018 for Australian mutton were the US (17,862 tonnes swt), Malaysia (17,109 tonnes swt) and Saudi Arabia (12,070 tonnes swt) (DA).
- The value of Australian sheepmeat (lamb and mutton) exports in 2018 was \$3.57 billion – up 18% year-on-year (see Figure 61) (IHS Markit, Global Trade Atlas).

Figure 61. Australian sheepmeat export volume and value

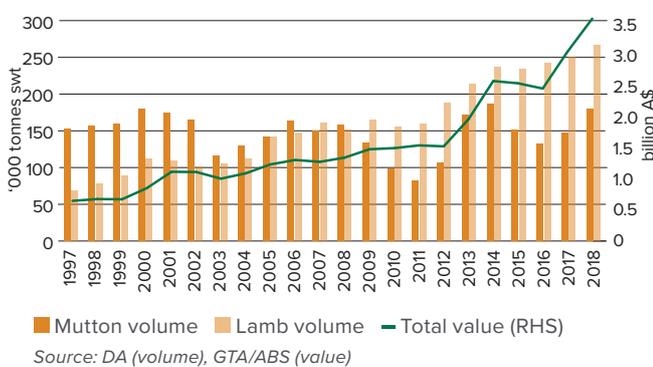


Figure 62. Australia’s top five lamb export markets (2018)

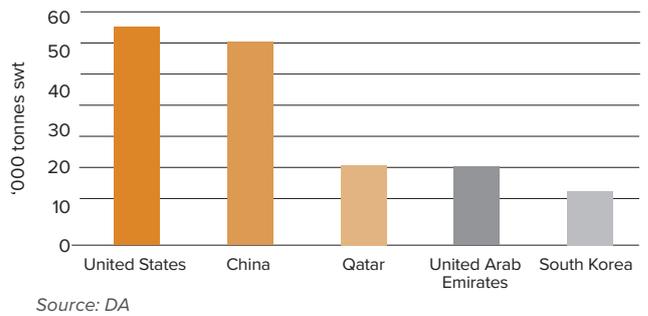
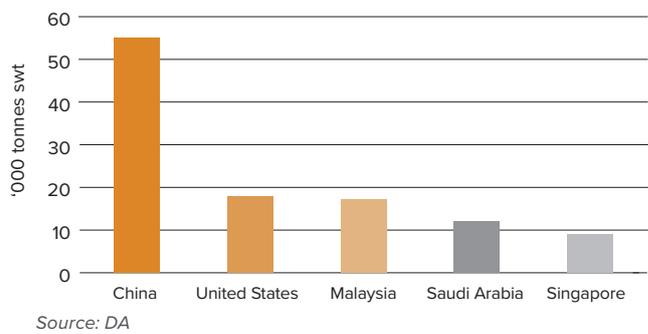


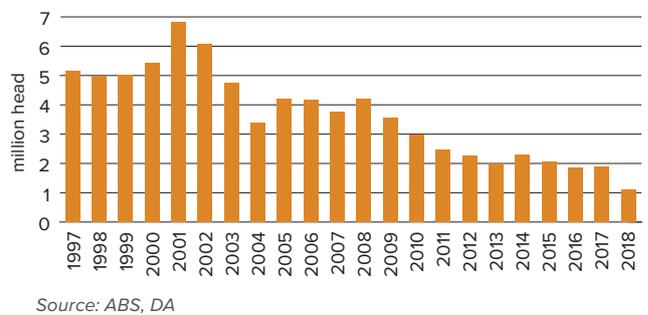
Figure 63. Australia’s top five mutton export markets (2018)



**Live sheep exports**

- Australian live sheep exports totalled 1.1 million head in 2018 (see Figure 64) (DA).
- Australia’s largest markets for live sheep exports in 2018 were Qatar (27% of total), Kuwait (22% of total) and Turkey (19% of total) (DA).

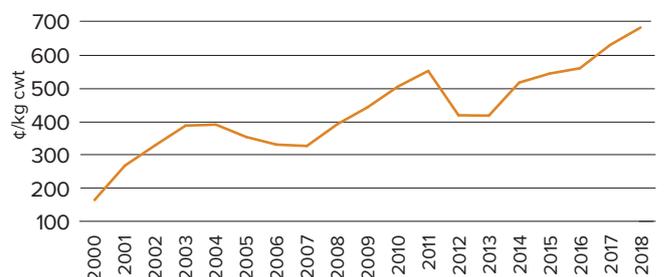
Figure 64. Australian live sheep exports



**Saleyard prices**

- The national trade lamb saleyard indicator averaged 681¢/kg cwt in 2018 (see Figure 65), 8% higher than the previous year and 27% higher than the five-year average (MLA).
- The national mutton saleyard indicator averaged 441¢/kg cwt in 2018, 1% lower year-on-year but 33% higher than the five-year average (MLA).

Figure 65. National trade lamb saleyard indicator



**Retail prices**

- The average lamb retail price indicator was estimated at 1,567¢/kg rwt<sup>12</sup> in 2018, 5% higher than 2017 levels (see Figure 66) (ABS, MLA calculations).
- The lamb producer share of the retail dollar was estimated at 60% in 2018, a five percentage point increase from 55% in 2017 (ABS, MLA calculations).

Figure 66. National lamb retail price indicator

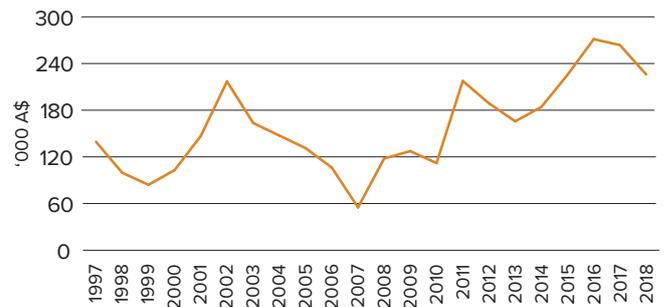


Source: ABS, MLA calculations

**Farm financial performance**

- The average farm cash income of Australian slaughter lamb producers<sup>13</sup> averaged \$226,000 in 2017-18, 14% lower year-on-year (in real terms) (see Figure 67) (ABARES Australian Agricultural and Grazing Industries Survey).
- Farm business profit averaged \$93,400 in 2017-18, nearly half (48%) the level in 2016-17 (ABARES).
- The average rate of return (excluding capital appreciation) of Australian lamb producing farms decreased from 4.4% in 2016-17 to 1% in 2017-18 (ABARES).

Figure 67. National average lamb farm cash income

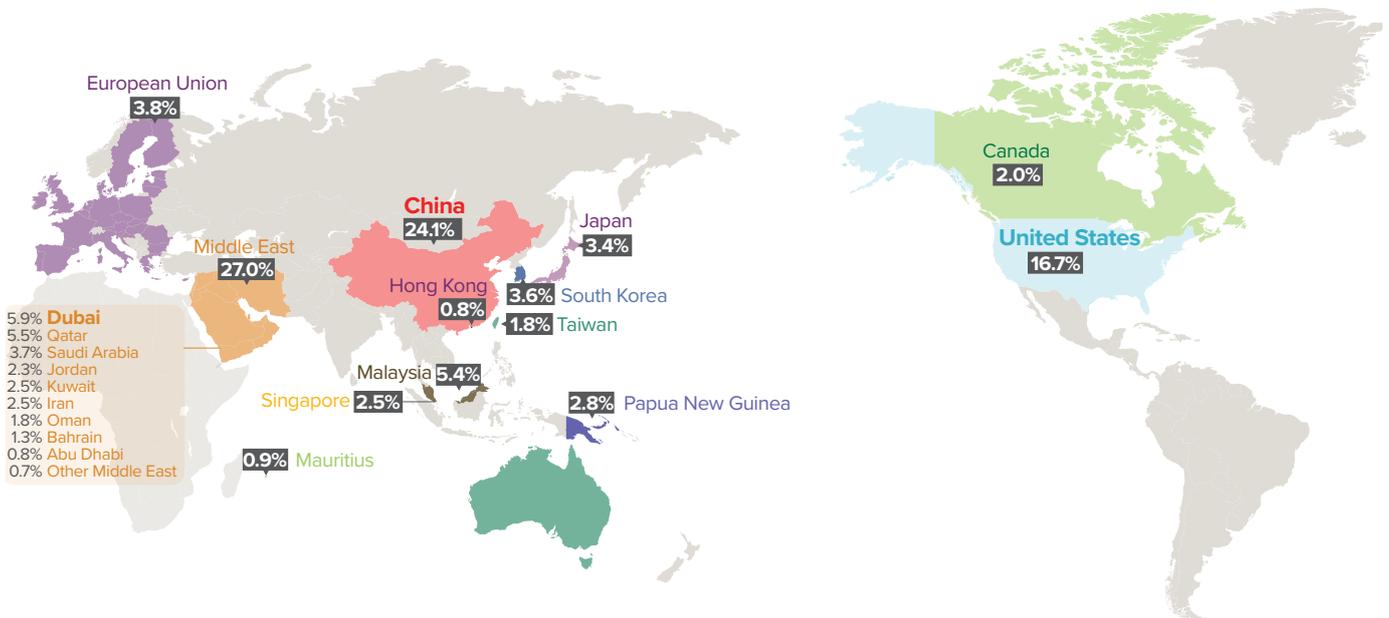


Source: ABARES

Note: This data is in real terms.

Figure 68. Australian sheepmeat exports by volume (2018)

**In 2018, Australia's top three sheepmeat (lamb and mutton) export destinations (in volume terms) were China (107,856 tonnes swt, or 24.1% of total exports), the US 74,692 tonnes swt, or 16.7% of total exports) and Dubai (26,420 tonnes swt, or 5.9% of total exports).**



Source: DA

<sup>12</sup> Retail price indicators are estimated by indexing forward from actual average prices of beef, lamb and pork during the December quarter 1973, based on meat sub-category indexes of the consumer price index. These indexes are based on average retail prices of selected cuts (weighted by expenditure) in state capitals.

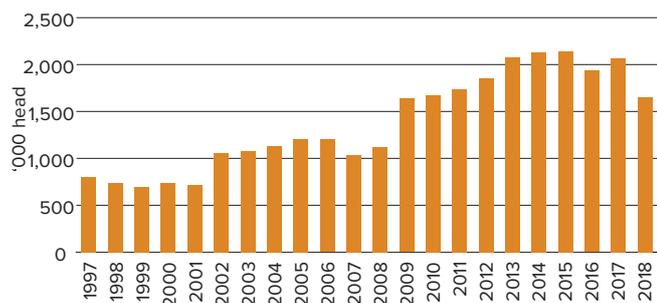
<sup>13</sup> The ABARES Australian Agricultural and Grazing Industries Survey includes producers that sold at least 200 lambs for slaughter.

## GOAT

### Slaughter

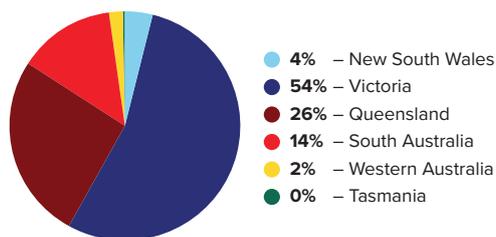
- The number of goats processed in 2018 totalled 1.65 million head (see Figure 69), down 20% from the previous year and the five-year average (ABS).
- In 2018, goat processing in Victoria declined 16% to 891,110 head, Queensland slaughter (428,522 head) eased 4%, NSW (67,860 head) decreased 45%, SA (226,089 head) was back 43% and WA (34,983 head) declined 24% year-on-year (see Figure 70) (ABS).

Figure 69. Australian goat slaughter



Source: ABS

Figure 70. Australian goat slaughter by state (2018)



Source: ABS

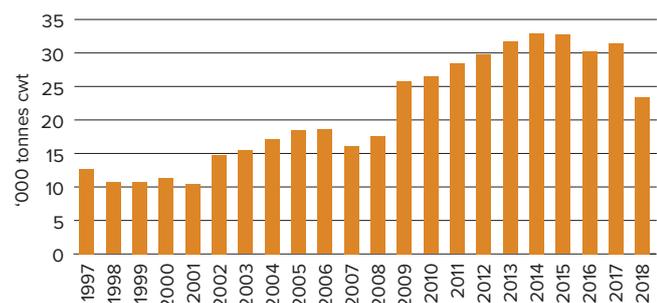
### Carcase weights

- Nationally, adult goat carcase weights averaged 14.1kg in 2018, down 4% from the previous year (ABS).

### Production

- Australian goatmeat production totalled 23,388 tonnes cwt in 2018 (see Figure 71), back 26% year-on-year and from the five-year average (ABS).

Figure 71. Australian goatmeat production

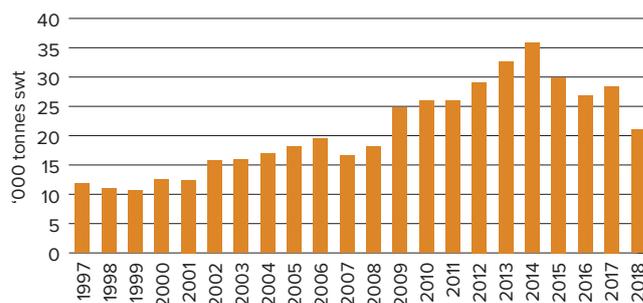


Source: ABS

### Goatmeat exports

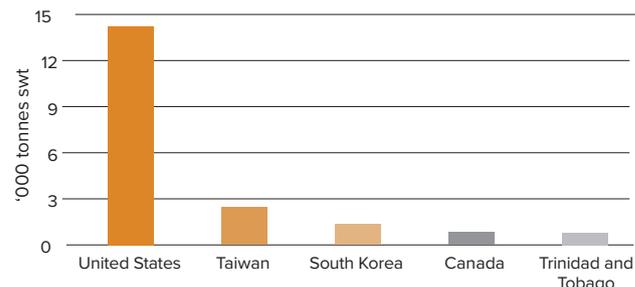
- Australian goatmeat exports totalled 21,026 tonnes swt in 2018 (see Figure 72), down 26% year-on-year (DA).
- The US is Australia's largest export destination for goatmeat, accounting for 73% of total goatmeat exports in 2018, at 14,218 tonnes swt (see Figure 73) (DA).
- Other key markets in 2018 were Taiwan (12% of total), Korea (7%), Canada (4%), and Trinidad & Tobago (4%) (DA).

Figure 72. Australian goatmeat export volumes



Source: DA

Figure 73. Australia's top five goatmeat export markets (2018)



Source: DA

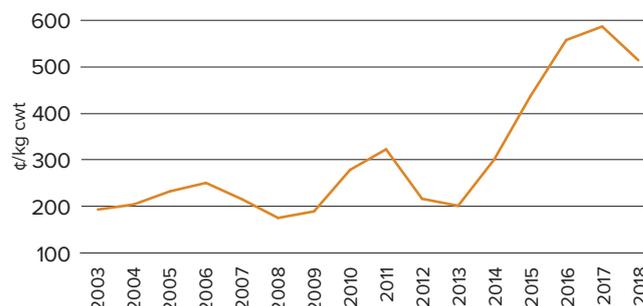
### Live goat exports

- Australian live goat exports totalled 21,580 head in 2018, up 76% year-on-year (DA, ABS).
- The key export destinations in 2018 were Malaysia, China and the United Arab Emirates (DA, ABS)

### Over-the-hooks indicators

- In 2018, the over-the-hooks goat indicator (12-16kg) averaged 513¢/kg cwt, 12% lower year-on-year (see Figure 74) (MLA).

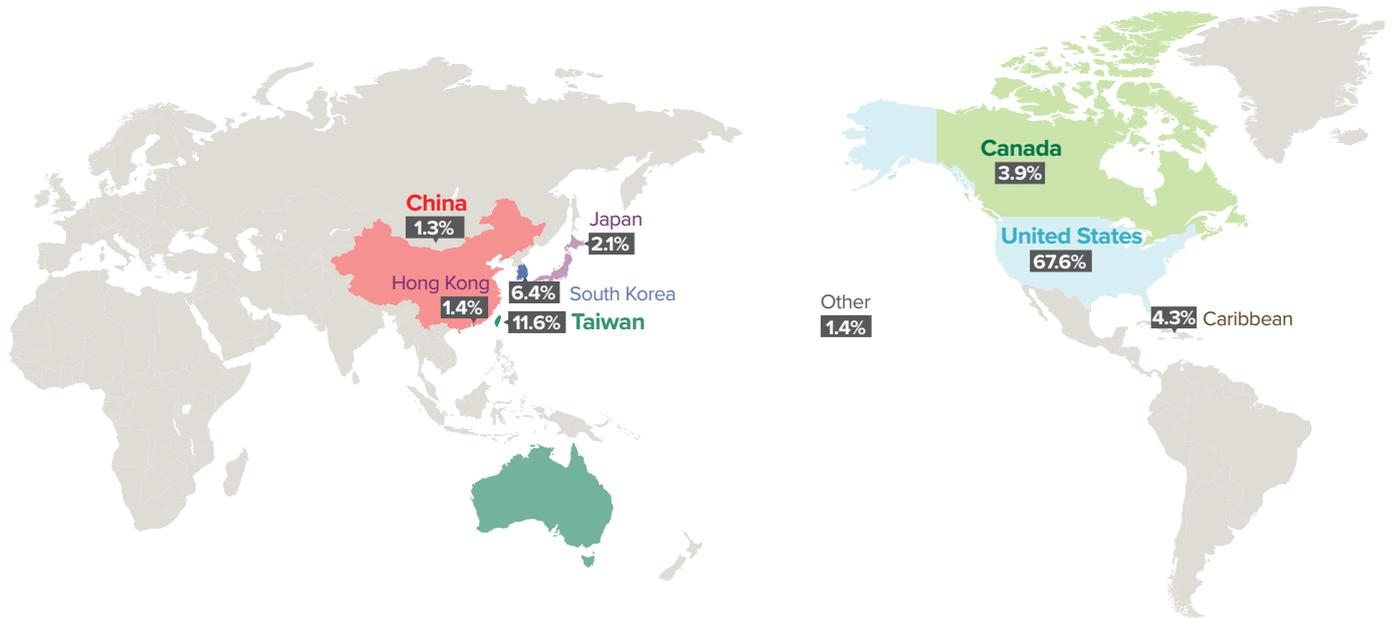
Figure 74. Eastern states over-the-hooks goat indicator (12-16kg)



Source: MLA

Figure 75. Australian goatmeat exports by volume (2018)

In 2018, Australia's top three goatmeat export destinations (in volume terms) were the US (14,218 tonnes swt, or 67.6% of total exports), Taiwan (2,435 tonnes swt, or 11.6% of total exports), and South Korea (1,345 tonnes swt, or 6.4% of total exports).



Source: DA



# KEY ISSUES SNAPSHOTS

## ■ NATURAL DISASTERS

### Key points

- One of the worst periods of drought on record has severely impacted the ability of many producers to breed and grow stock, leading to widespread destocking of cattle, lambs and sheep across Australia.
- Flooding in far north Queensland in February 2019 caused major stock losses and damage to production infrastructure.
- The impact of both events will continue to be felt for a number of years as producers look to rebuild their herds and flocks.

The 2017 and 2018 drought has now extended into 2019 across most production regions across Australia, creating implications for livestock supplies and prices.

While almost the entire state of NSW received well-below average rainfall during 2018 and early 2019, northern Victoria, parts of southern and central Queensland, as well as some key production areas in South Australia and Western Australia are also dealing with serious rainfall deficiencies.

A lack of pasture has forced many producers to turn off stock in the last 12 months, leading to higher production in 2018. For lamb and sheep, the 2018 levels were higher than the five-year average, while for cattle they were below the five-year average.

In 2018:

- Adult cattle slaughter was up 10% year-on-year, but down 4% on the five-year average
- Lamb slaughter was up 1% year-on-year and up 1% on the five-year average
- Sheep slaughter was up 26% year-on-year and up 12% on the five-year average (ABS data)

In February 2019, unprecedented rain fell across far north Queensland, leaving some low-lying areas more than three metres underwater and reports of hundreds of thousands of cattle already weakened by drought conditions dying or perishing due to exposure, lack of feed or bogging.

The Southern Gulf and North Queensland Dry Tropics natural resource management regions were the most heavily affected by the flood, as well as parts of the Northern Gulf, the Desert Channels and Terrain regions. The potential number of cattle in these regions is between 3 and 3.5 million head, with losses estimated between 500,000 and 700,000 head.

While it is difficult to gauge the full impact of these natural disasters on the industry, they have certainly affected prices and supply.

Lamb and sheep livestock prices reached historical highs in 2018-19 due to drought instigated supply shortages. Meanwhile, cattle prices recorded their lowest in more than five years, with the Eastern Young Cattle Indicator (EYCI) falling below 400¢/kg in March – driven by a lack of demand from restocker buyers.

Natural disasters have also contributed to falling national herd and flock sizes. Both the herd and flock are at depleted levels, with cattle projected to fall to the lowest point since 1995 and sheep to the lowest point in more than 100 years. The projected year-on-year changes to the national herd and flock sizes are as follows:

- The national beef herd to decline 7.7%, to 25.2 million head in 2018-19
- The national sheep flock to decline 6.8%, to 65.8 million head in 2018-19.

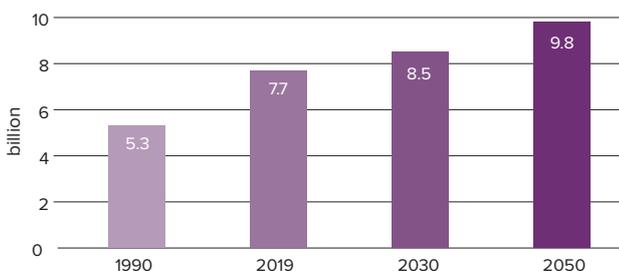


Key points

- The demand for protein is growing significantly and traditional production will need to be supplemented by non-animal based sources.
- The composition of global protein supply is changing, with growth rates in meat supply slowing, offset by plant-based proteins.
- Alternative proteins are not immune from consumer concerns: they contrast strongly with general consumer trends toward natural, unadulterated and fresh foods in the developed world, and increasing meat consumption in developing nations in line with increasing wealth.

The world’s population is projected to reach nearly 10 billion by 2050 (see Figure 76). The demand for protein is growing significantly and traditional production will need to be supplemented by non-animal based sources. This is coupled with trends among consumers seeking foods and food experiences that match their values, expectations and needs, including a focus on the environment, sustainability, transparency, health and taste.

Figure 76. World population



Source: Fitch Solutions, 2019

Global protein demand for consumption has increased by 40% since 2000; 50% of this demand is from Asia. In 2018, global per capita consumption of protein was 26kg, projected to be 33kg (+27%) by 2025.

Currently, meat-based proteins supply 66% of global consumption needs and by 2025, 40% is projected to come from meat proteins. This indicates the composition of global protein supply will change with growth rates in meat supply slowing, offset by plant-based proteins (FIAL Protein Market: Size of the prize analysis for Australia, March 2019. The Global Protein Landscape Today and in 2025).

A response to this demand gap has been the expansion of new protein source development, innovations and investments around plant-based and lab-based protein, coupled with five drivers: population growth, consuming middle class expansion, urban population growth, older population (>65yrs) growth and changing diet preferences.

US consumers are increasingly exploring a range meat alternatives in their search for dietary protein. In the US, 98% of meat alternative buyers in also purchase meat products and 21% of US meat buyers also purchase meat alternatives. Market research also reveals that plant-based proteins are significantly more appealing than insect or animal cell cultured based protein (Nielsen Homescan survey (US), Dec 2018).

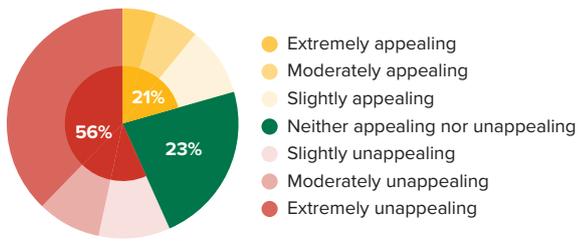
In Australia, plant-based protein alternatives have not reached scale. According to Nielsen Homescan plant-based protein consumption has only reached 0.3% of fresh meat volume sales and 0.4% of value sales (Nielsen Homescan Q2 2019).

While Australian consumer attitudes towards plant-based protein suggest there is an openness to try (46%), driven by environmental reasons, only 25% indicated they would buy it instead of animal meat, and even less (22% and 21% respectively) believe plant-based protein would be as good as the ‘real thing’ or taste good.

At the other end of the scale is a type of meat that is currently scarce, however some believe is the future of meat: meat grown from culture in a laboratory. Also known as cellular, *in vitro* and clean meat, cultured meat was first produced in 2013, and since then has attracted interest and investment from many high-profile individuals and organisations, including American food giants and traditional meat producers: Cargill and Tyson.

It is not hard to see the appeal of lab-grown meat for certain consumers: it taps into consumer mega-trends around animal welfare and sustainability. However, MLA’s consumer research has shown that most Australians are not aware of scientifically-produced meats, and of those who are aware of it, only one in five find it appealing, with the main concerns being around its unknown healthfulness and safety. Consumer data from Australia suggests that 93% of consumers know little to nothing about lab meats with 56% claiming to find the idea unappealing. Key consumer concerns are around its artificial nature, taste and long term safety (for self and in general) (MLA/Pollinate Survey 2018; MLA Global Consumer Tracker 2018).

Figure 77. Appeal of scientifically produced meat (%)



Source: MLA/Pollinate Pulse survey March 2018

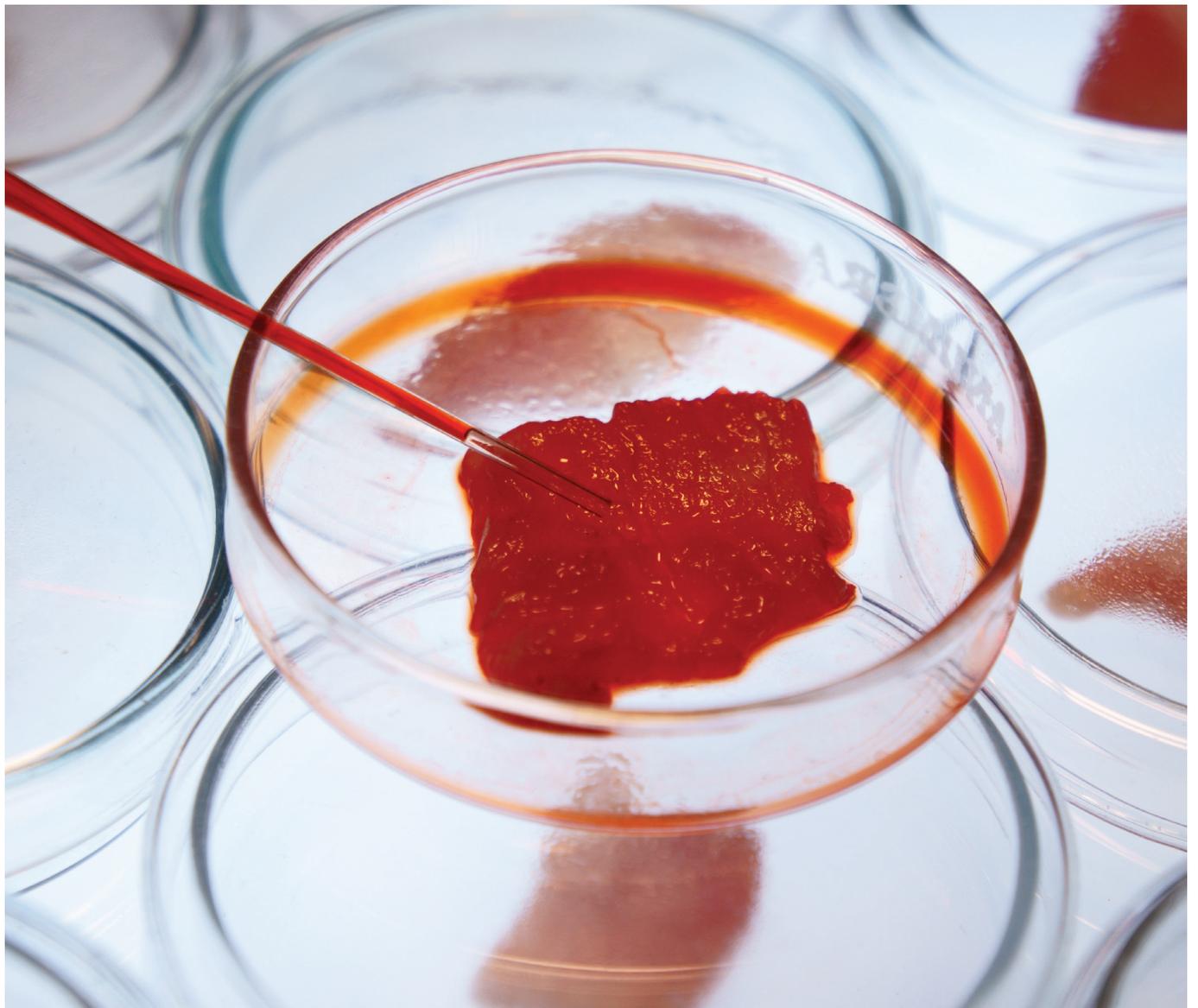
MLA monitors consumer sentiment globally and initial data shows Australia’s low consumer awareness is consistent in other developed markets (US 14%, Japan 8%, Korea 12%, UK 12%) coupled with a modest intention to trial these products. Ultimately, its success will depend on consumers’ willingness to accept this source of protein, and the way the product is named and marketed will play a large role in that success (MLA Global Consumer Tracker 2018).

Names are also an important component of the larger, more pressing threat posed by plant-based alternative

proteins. Many of these meat substitutes, such as tofu and Quorn, have been around for a long time; what’s new is the accelerating level of innovation that makes meat alternatives increasingly meat-like in their appearance, taste and even smell.

Allied Market Research predicts the global meat substitute market will reach a value of \$5.2 billion by 2020. However, these products are not immune from consumer concerns: they contrast strongly with general consumer trends toward natural, unadulterated and fresh foods in the developed world, and increasing meat consumption in developing nations in line with increasing wealth.

Much discussion of cell-based and plant-based protein is around production systems, sustainability and animal welfare but is limited around taste (a key consumer driver for consideration and trial). Attitudes and perceptions differ markedly by consumers across the two protein alternatives, with consumers more open to trialling plant-based proteins. With the demands for protein to increase, all protein options and their role will become increasingly considered.



### Key points

- Australian livestock exports play an important role in providing nutrition in markets where inadequate cold chains, prohibitive costs or cultural preferences limit adoption of chilled boxed and carcase trades.
- Access to live export channels underpins the viability of many WA sheep producers and northern cattle pastoralists.
- Australia is the only exporting nation to impose in-market animal traceability and animal welfare standards.

In 2018, Australia exported cattle to 21 countries, mostly in South-East Asia, and sheep to 16 countries, mostly across the Middle East. In these markets, Australian livestock play a central role in providing high quality nutrition where inadequate infrastructure or consumer reluctance, tied to religious and food safety concerns, impede growth of fresh meat imports. If Australian sheep and cattle exports to these markets ceased, livestock from other origins (with lower welfare standards) or cheap frozen meat would largely fill the void.

Sheep exports accounted for just 3% of national sheep and lamb turnoff in 2018, with the trade heavily impacted by its temporary cessation due to animal welfare considerations (the trade accounted for 6% of national sheep and lamb turnoff in 2017).

Sheep exports accounted for 18% of turnoff<sup>14</sup> in WA (30% in 2017), underpinning the viability of many sheep-wheat producers in a state where infrastructure and processing capacity is currently unable to accommodate the entire flock.

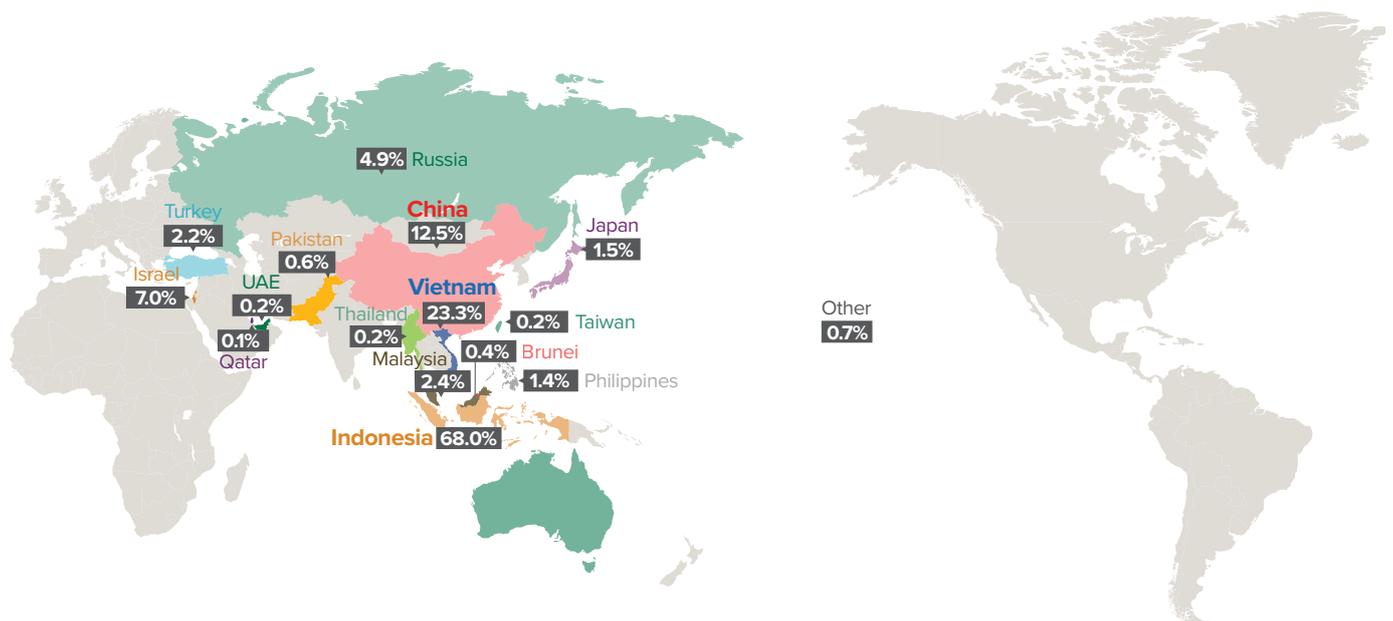
Distance and the high cost of processing cattle in Australia's remote north leaves producers with few alternatives to livestock exports when marketing cattle.

Poor seasonal rainfall and pasture growth also make finishing cattle in many pastoral areas unfeasible; while nearby markets in South-East Asia have crop by-products to feed cattle to slaughter weights and a fast growing consumer base.

Livestock exports were a central market avenue for many regions across northern Australia in 2017-18<sup>15</sup>, such as the WA Kimberley (where livestock exports accounted for 86% of cattle sales), NT Victoria River District (87%) and Queensland Gulf and Cape York (27%).

Australia has a long history of exporting livestock to international markets. To improve the traceability of Australian livestock in foreign markets and underpin their welfare, the Australian Government implemented the Exporter Supply Chain Assurance System (ESCAS) in 2011. In addition, the Australian Standards for the Export of Livestock (ASEL) specify animal health and welfare requirements, covering farm to the point of discharge in the destination country. Australian livestock export regulations are unmatched by other major cattle and sheep exporting countries and have underpinned a considerable number of animal welfare improvements in destination markets.

Figure 78. Australian live cattle exports (2018)

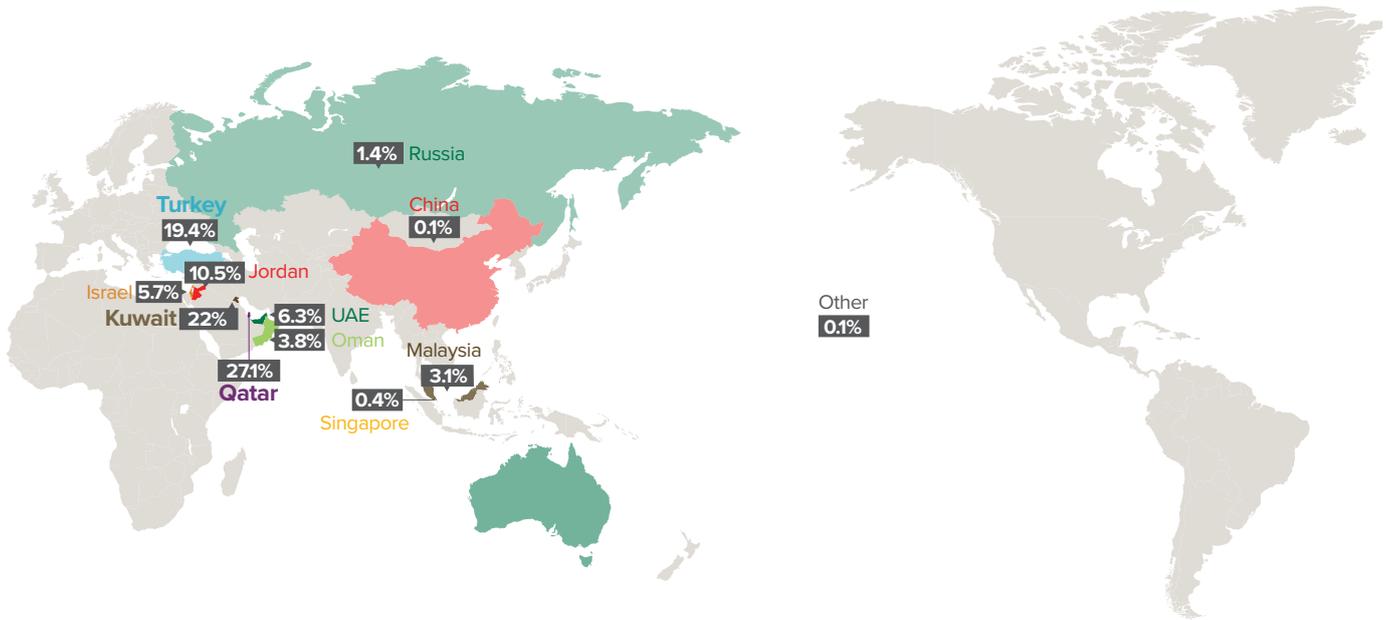


Source: DA

<sup>14</sup> Turnoff calculated as the % of sheep exports (DA) out of combined sheep exports and sheep and lamb slaughter (ABS)

<sup>15</sup> ABARES Farm Survey 2017-18

Figure 79. Australian live sheep exports (2018)



Source: DA



Key points

- Australia consistently exports more than 65% of red meat production to overseas market.
- Continued diversification of export destinations allows Australia to maximise returns and help mitigate risks.
- Improving trade access into emerging and currently restricted markets is critical for the ongoing competitiveness and prosperity of the Australian red meat and livestock industry.

Australia is a relatively small producer of red meat, but plays a big role in global export markets. Australia exported 65% of beef, 73% of sheepmeat and 90% of goatmeat production in 2018, valued at around \$13.5 billion. This makes Australia the world’s largest red meat exporter by value. Australia is also a major player in the livestock trade, exporting 1.1 million cattle and 1.1 million sheep, worth a combined \$1.5 billion in 2018 (DA, IHS Markit, Global Trade Atlas).

The high proportion of exports of total production also signifies that Australia is more exposed to the health of the world economy than many major competitors. Global trade and political uncertainties, changes in government policies and other restrictive measures can all have a major impact on Australian exports.

In recent years, Australian beef has grown and diversified its trade, shifting from a heavy reliance on a handful of key destinations to a more varied customer base. This diversification promotes competition among export markets, allowing Australian exporters to better negotiate the best price for their products. Relative to major competitors, the high price of Australian cattle, compounded by costs along the supply chain, reinforces the need for Australia to focus on differentiating itself from competitors and providing a compelling value proposition to consumers.

Australian sheepmeat has consistently been exported to a large spread of overseas markets for many years. While China has grown to become Australia’s largest sheepmeat export destination in recent years, Australia continues to maintain a diversity of markets and respond to demand unique to market environments, including the growing interest in lamb from the US and in the chilled lamb carcase trade with Qatar.

Figure 80. Australian red meat exports (volume) - beef

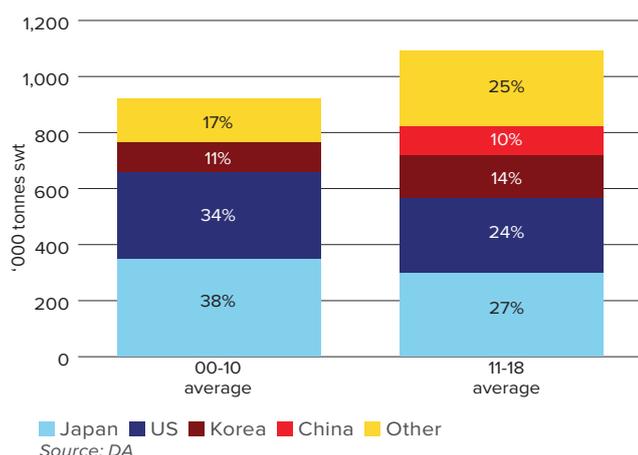
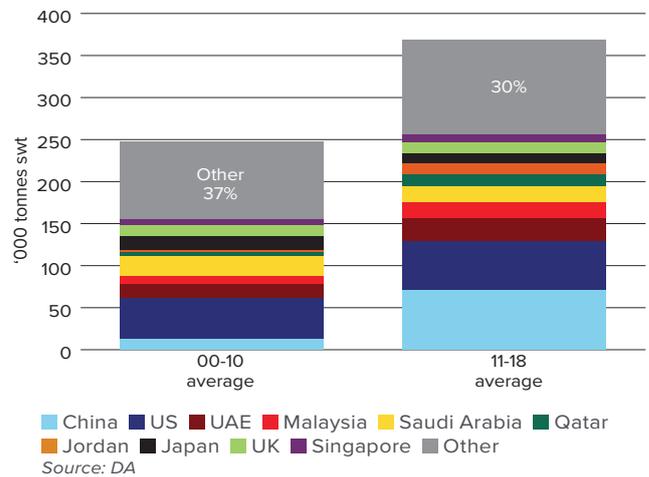


Figure 81. Australian red meat exports (volume) - sheepmeat



In conjunction with the market diversification at commercial level, the Australian red meat and livestock industry has successfully collaborated with the Australian Government to improve its access into numerous markets. Recent access breakthroughs include the:

- **Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP):** a free trade agreement between Australia and 10 other member countries that entered into force in December 2018. The outcome includes further tariff reductions on beef entering the Japanese market, and ultimately liberalised access to Canada, Mexico and Peru for both beef and sheepmeat.
- **Indonesia-Australia Comprehensive Economic Partnership Agreement (IA-CEPA):** the bi-lateral agreement with the top destination for Australian live cattle exports, and the fifth market for boxed beef, which although signed in March 2019 is yet to enter into force. The key benefit of IA-CEPA is improved trade certainty with an expanding quota for live cattle, a relaxation of the live cattle import permit system and liberalisation of tariffs for boxed beef and sheepmeat.

Looking forward, there are still a number of economic and technical barriers in global markets that prevent the Australian industry from fully realising its export potential. In partnership with the Australian Government, the Australian red meat and livestock industry will continue to pursue priority trade barriers in order to remove costs from the supply chain and also respond unimpeded to global consumer demand.

**Key points**

- Australia’s ability to respond to ongoing demand in the European Union (EU) is constrained by historic, highly restrictive low volume quotas.
- Australia and the EU have begun the process for securing a closer bilateral trade relationship by negotiating an Australia-European Union Free Trade Agreement (A-EU FTA).
- The United Kingdom (UK) is an integral market within the EU and prospective changes via Brexit are being closely monitored by the Australian industry.

The EU is home to a large number of discerning consumers who have an unsated demand for high quality food products. However, the Australian red meat industry’s ability to respond to this demand is restrained by disproportionately low volume import quotas and restrictive out-of-quota tariffs.

For beef, Australia currently has access to a country specific quota of 7,150 tonnes, as well as shared access to a 45,000 tonne global grainfed beef quota. Combined, these represent 0.2% of total EU beef consumption.

For sheepmeat (and goatmeat), Australia’s country specific quota is currently 19,186 tonnes, or less than 2% of total EU sheepmeat consumption.

The launch of A-EU FTA negotiations in June 2018 provides a significant opportunity to revisit Australia’s red meat access to the European market for the first time in more than forty years. The European Commission has forecast an ongoing requirement for high quality imported beef and sheepmeat due to deficits in domestic production. The Australian red meat industry is seeking to improve its position to help service this deficit using its dedicated EU approved supply chains.

The A-EU FTA negotiations provide an opportunity to modernise the existing trading regime by securing an ambitious and high quality outcome that incorporates significant improvements in agricultural market access.

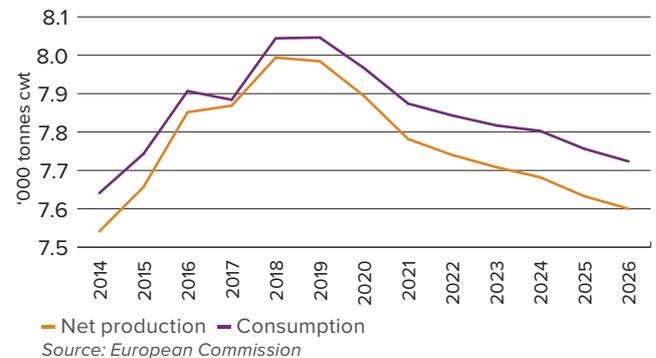
In parallel to the A-EU FTA discussions are the ongoing United Kingdom ‘Brexit’ negotiations involving the extrication of the UK from the EU. With the UK being an

important (albeit relatively small volume) destination for Australian red meat, any associated change in both the UK and EU import regimes as a result of Brexit has the prospect of disrupting and potentially diminishing Australia’s existing access arrangements.

The proposed apportionment of country specific quotas between the EU and UK for example would not only dilute existing access arrangements, but it would also severely reduce the flexibility of responding to changes in consumer demand.

Australia and the UK have established a Joint Trade Working Group to scope out the parameters of a future, comprehensive FTA. Both governments have committed to ensure an expeditious transition to FTA negotiations when the UK has left the EU – with the Australian red meat industry poised to be an active contributor to this process.

Figure 82. The European Commission has forecast an ongoing requirement for high quality imported beef (and sheepmeat) due to deficits in domestic production.



### Key points

- Of equal importance to reducing tariffs or removing quotas in order to enhance competitiveness is the need to alleviate non-tariff barriers (NTBs).
- NTBs impose additional unwanted costs on the red meat value chain – with NTBs having a pronounced impact in China, the Middle East and South East Asia.
- An ongoing coordinated industry effort, in partnership with the Australian Government, is integral to alleviate the impacts of priority NTBs.

Improving market access allows the red meat industry to maintain and improve its global competitiveness, cut costs from the supply chain, maximise the value of export product, diversify into new markets and reduce over-exposure to a small number of markets.

Of equal importance to reforming 'at the border' tariff and quota regimes is the need to alleviate 'behind the border' non-tariff barriers (NTBs). The effect of an NTB can include a stifling or reduction in trade volumes and/or reduced product returns due to higher supply costs or lower market prices.

The annual impact value of NTBs on the red meat supply chain was estimated at approximately \$3.4 billion per annum in 2017 – with around 245 NTBs having trade restrictive effects, representing a significant impact on product value.

NTBs can be categorised into groups that reflect the general nature of their effect on trade:

- market access: constraints that restrict or prevent trade
- costs of production: conditions that increase the cost of preparing a product
- costs of shipment: conditions that increase the cost of supplying a product
- compliance levels: conditions exceeding commonly accepted standards
- administration: deficiencies in the administration of import conditions.

In partnership with the Australian Government, industry continues to pursue a number of priority NTBs such as the accreditation of additional export establishments and access for chilled product into China, an improvement in shelf-life conditions in the Middle East and securing Australian red meat access to global halal supply chains, including Malaysia.

Although progress on alleviating a number of these barriers to trade has proven fruitful, the process remains slow. An ongoing focus is required in order to reduce the annual impact of NTBs.

An extension in shelf life for Australian vacuum packed beef and sheepmeat was granted by the UAE (to 120 days and 90 days respectively). The next step is seeking adoption of this standard across the Gulf Cooperation Council.



### Key points

- The Australian Beef Sustainability Framework proactively addresses community expectations and defines sustainable beef production and tracks performance over a series of indicators annually.
- A Sheep framework is under development.
- An Expert Working Group developed new indicators and the first national trends for balance of tree and grass cover across beef properties, showing an overall net increase in vegetation.

The Australian Beef Sustainability Framework was initiated by the Red Meat Advisory Council in 2017, in collaboration with industry stakeholders, to meet the changing expectations of consumers, customers, investors and other stakeholders. The Framework defines sustainable beef production and tracks performance over a series of indicators annually.

The sheep industry is in the early stages of developing a similar framework to provide customers and other stakeholders with evidence across priority areas in order to maintain customer and community support.

The Australian Beef Sustainability Framework released its second Annual Update in June 2019, highlighting the beef industry's progress in improving how it cares for natural resources, animals and people.

The 2019 Annual Update demonstrates the contribution that cattle producers make to sustainably manage almost half of the Australian landscape and the significant contribution the sector has made to the national emissions profile and health of regional and rural communities.

Highlights include:

- Reducing the carbon accounts of the beef sector by 56% between the baseline year of 2005 and 2015, demonstrating the ambition to be carbon neutral by 2030 is on track.

- Forest and woodlands on beef-producing land nationwide are increasing and removal of primary forests has declined by more than 90% since 1990.
- An increase in the use of pain relief to 15%, up from 4% in the previous year.
- \$152 million added to farm-gate returns from Meat Standards Australia for the beef sector.
- 86% poll gene prevalence across most breeds, removing the need for producers to dehorn cattle.

The report also demonstrates that improvements in productivity have driven efficiencies and profitability for the beef sector. For example, carcass weights and growth rates in young cattle have increased 10% and 19%, respectively, over the past five years, allowing producers to generate more beef per beast, which also contributes to carbon reduction.

Over the past year, the Framework's Sustainability Steering Group has worked with the first multi-disciplinary Expert Working Group and other key stakeholders to develop practical and evidence-based measures for the balance of tree and grass cover. These are the first national indicators and measures of changes in landscape for the Australian beef industry.

### Key points

- CN30 is an aspirational target for the Australian red meat industry to reach net zero greenhouse emissions (GHG) in 2030, as reported in Australia's National GHG Inventory.
- It sends a clear message to consumers that the red meat industry is proactively addressing GHG emissions, and positions industry as a critical contributor to Australia's aspirations to reduce GHG emissions.
- Actions to reducing emissions must be carried out using a science-based approach that is good for business, people and livestock, and the environment.

Following its announcement of the CN30 initiative in November 2017, MLA has been leading a suite of collaborative research, development and adoption activities involving technologies and practices that promote the role of carbon farming in building drought resilience, emissions reductions and a more profitable red meat industry.

CN30 is not only an emissions-based target. The Australian red meat industry is also aiming to unlock a \$300 million per annum opportunity for the Australian red meat industry by improving feedbase and animal productivity and creating new revenue streams for producers through low and zero carbon red meat products and production systems.

With producers being custodians of around 355 million hectares of Australia's land, an enormous opportunity exists to benefit from improving carbon storage in the landscape. No other sector of the economy is presented with this opportunity.

New data released in 2019 shows the industry has achieved significant progress towards CN30, with a 57.6% reduction in greenhouse gas (GHG) emissions across the beef, sheepmeat and goatmeat production sectors since the CN30 baseline year of 2005. The data was compiled by CSIRO from the Australian National Greenhouse Gas Inventory and shows the red meat industry reduced GHG emissions from 129.3 million tonnes of CO<sub>2</sub> equivalent (Mt CO<sub>2</sub>-e) in 2005 to 54.8 million Mt CO<sub>2</sub>-e in 2016.

The reduction represents a halving of the red meat industry's proportion of national GHG emissions, from 21.4% in 2005 to 10.4% in 2016. This represents the largest reduction in emissions from any sector of the Australian economy reported under the National Greenhouse Gas Inventory.

Further significant declines are expected as technologies that reduce enteric methane emissions become more prevalent and the reduction in emissions are captured in the National Greenhouse Gas Accounts. This is a key areas of focus for future R&D; driving development and adoption of methane inhibiting technology and establishing scientific methods that enable emissions reductions to be measured and reported in the National Greenhouse Gas Accounts.

The CN30 initiative builds on decades of legume, animal and economic research that has underpinned Australia's red meat production systems. Producers have several pathways available which can boost productivity, while reducing emissions. Several of these pathways are already well known, such as improved pastures and adding legumes to the system, improved animal genetics and land management, while others require continued investment.

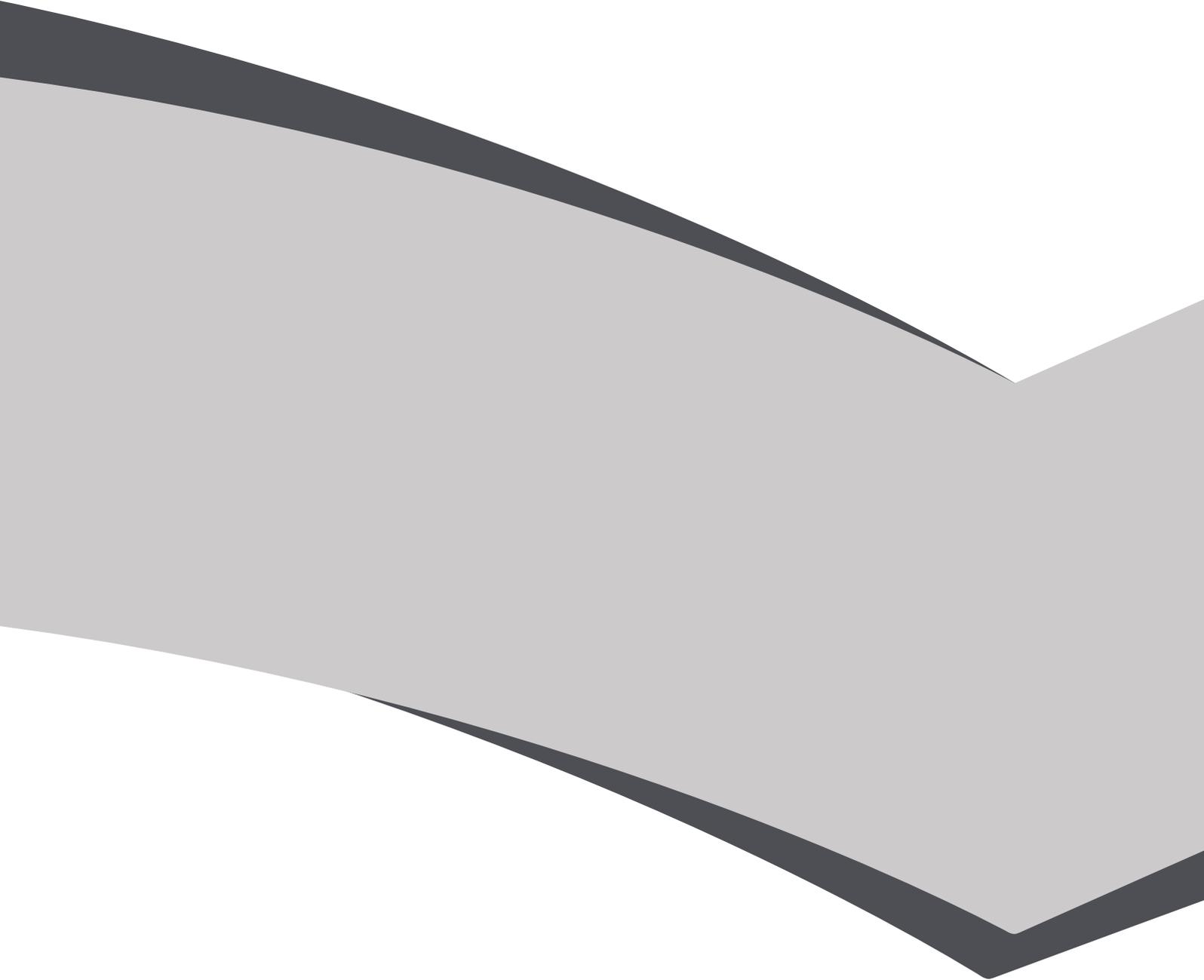
Significant investment in research and adoption and the right policy settings are required for the industry to realise the CN30 goal.

MLA is focused on working with partners, including the federal government to leverage resources and address research, development and adoption gaps, such as commercialisation pathways for promising technologies and practices and continued investment into suppressing methane in the rumen.

As the CN30 initiative evolves, MLA will continue to work with industry to implement new technologies and practices that are good for business, people and livestock, and the environment.

# GLOSSARY AND KEY TERMS

- ABS – Australian Bureau of Statistics
- ABARES – Australian Bureau of Agricultural and Resource Economics and Sciences
- ALFA – Australian Lot Feeders' Association
- b – billion
- cwt – carcase weight
- cwe – carcase weight equivalent
- DA – Department of Agriculture
- EU – European Union
- FAO – Food and Agriculture Organization
- Farm cash income – a measure of cash funds generated by the farm business for farm investment and consumption after paying all costs incurred in production
- FTA – Free Trade Agreement
- Industry turnover – the income generated by business within the industry from the sales of goods and services. It includes the income generated from rent, leasing and hiring income.
- Industry value add – the overall value of goods and services produced by businesses in an industry (also known as contribution to gross domestic product (GDP)).
- m – million
- MENA – Middle East and North Africa
- Mixed farming classification – This classification is made up of producers in the industry who are engaged in farming both sheep and beef cattle. The statistics are derived from IBIS Reports A0141 Sheep-Beef Cattle Farming in Australia and A0145 Grain-Sheep or Grain-Beef Farming in Australia with proportions relating to canola, wool, other grains and wheat removed.
- MSA – Meat Standards Australia
- MLA – Meat & Livestock Australia
- Mt – million tonnes
- OECD-FAO – Organisation for Economic Co-operation and Development
- Over-the-hooks – refers to the marketing of cattle/sheep/lambs directly from the farm to an abattoir where a producer is paid for the value of the carcase based on a sliding grid. The skin is also evaluated for length and quality and is purchased by the processor. The seller generally pays for the animal's transport from the farm to the abattoir. The producer generally receives payment within a seven to 14-day period.
- rtc – ready to cook
- rwt – retail weight
- swt – shipped weight
- tariff – a tax or duty to be paid on a particular class of imports or exports
- UK – United Kingdom
- US – United States



**Meat & Livestock Australia**

Level 1, 40 Mount Street, North Sydney NSW 2060  
Phone: 02 9463 9333 | Fax: 02 9463 9393

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