Sheep notes – issue 8

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# Summary

* The value of production from the Western Australian (WA) sheep industry reached $1.5 billion (b) in 2018/19, a 4% decrease from $1.6b in 2017/18. Wool was worth $976 million (m) and sheepmeat worth $547m.
* As of July 2019, the WA sheep flock contained 14.3m sheep and lambs, including 7.8m breeding ewes.
* In 2018/19, total turn-off was 5.1m head, which consisted of 2.7m lambs and 1.4m adult sheep processed, 895 000 sheep exported live and 146 000 sheep sent interstate.
* For the 2019/20 financial year (July to April), 1.05m sheep and lambs were transferred interstate by road.
* In 2019, WA wool receivals totalled 71.5m kilograms (kg), down 9% from 78.5m kg in 2018.
* WA sheepmeat exports reached 84.1m kg (carcase equivalent quantity (ceq)) in 2019, worth $596.6m - the highest on record.
	+ Mutton exports totalled 44.2m kg, a year on year (YOY) increase of 27%, and were worth $259.2m, up 52% YOY and the highest on record.
	+ Lamb exports reached 39.9m kg in 2019, down 2% from 2018. The value of lamb exports increased 10% YOY from $307m in 2018 to $337.4m.
	+ The largest sheepmeat markets in 2019 were China, Qatar and the USA.
* Live sheep exports reached 1.0m head in 2019, up 6% YOY and were valued at $136.2m, a yearly increase of 8%.
* The largest market by both quantity and value for live sheep exports in 2019 was Kuwait followed by Qatar, and Jordan.
* WA wool exports reached 49.2m kg in 2019, down 6% YOY and were worth $608.6m - down 13% on 2018.
* China dominated WA’s wool exports in 2019 accounting for 87% of the volume and 88% of the value of WA wool exports. India was the second largest market taking 6% of wool exports, followed by Czechia with 2%.

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# The contribution of the sheep flock to the WA economy

The WA sheep industry is an important contributor to the state economy. In 2018/19, the industry accounted for over half the value of all livestock industries in WA. The combined sheepmeat and wool industries contributed a gross value of production of $1.5b to the WA economy, down slightly from $1.6b the previous year. Of the total contribution from the sheep industry, wool made up $976m or 32% of the value of all livestock industries, while the sheepmeat sector was worth $547m or 18% of the value of the livestock sector (Figure 1).

Figure Gross value of the WA livestock sector in 2018/19 (Based on Australian Bureau of Statistics (ABS) data, Department of Primary Industries and Regional Development (DPIRD) analysis)

# The WA sheep flock

As of July 2019, the WA sheep flock consisted of 14.3m sheep and lambs, including 7.8m breeding ewes, which comprised 55% of the flock. As illustrated in Figure 2, in recent years the flock has been relatively stable, ranging between 13.7m and 15.2m head. The size of the flock is projected to decrease in 2019/20 to between 12.9m and 13.4m head due to high numbers of sheep processed, as well as high numbers of sheep moving interstate, many of which are thought to have been breeding ewes. However, the effect of increased processing and interstate transfers on flock size may have been tempered to some degree by reduced numbers of sheep exported live.

The total combined sheep turn-off, which consists of slaughter, live export and interstate transfers, was 5.1 m head in 2018/19, a decline of 12% YOY and the lowest since 2011/12. This was largely due to the reduction in live sheep exports caused by regulatory changes, including the introduction of a mid-year trade pause for the northern hemisphere summer and reduced pen densities on board ships to reduce heat stress. Previously, turn-off had been around 5.8m to 5.9m annually.

Figure WA flock size and sheep turn-off (Based on ABS data, DPIRD analysis)

# Sheep turn-off

As illustrated below, the largest component of WA sheep turn-off was lamb processing, which in 2018/19 made up 52% of the total sheep turn-off or 2.7m head. Lamb processing has increased in importance to the sheep industry in recent years, increasing as a proportion of turn-off from 30% in 2010/11 to 52% last year. Adult sheep processing accounted for 27% of turn-off in 2018/19, with 1.4m head. This figure has already been eclipsed in 2019/20, despite only having ten months of processing to consider, with the total reaching 1.6m head at the end of April.

Live sheep export declined from 27% of turn-off in 2017/18, when the total exported was 1.6m sheep, to just 17% in 2018/19 with 895 000 sheep. Interstate transfers accounted for just 3% of turn-off in 2018/19 or 146 000 sheep, however 2019/20 is looking remarkably different with over 1.0m sheep already sent east so far this financial year (July – April) accounting for 18% of the turn-off. If this rate continues, interstate transfers may surpass the record-breaking number of 1.3m set in 2010/11.

Figure WA sheep turn-off. 2019/20\* is a partial year only (July to April) (Based on ABS and Primary Industries and Regions South Australia (PIRSA) data, DPIRD analysis)

# Interstate transfers

The trucking of WA sheep to the east has increased in recent months due largely to restocking activity in the Eastern States following a prolonged and severe drought. Between July and April 2019/20 there have been 1.05m sheep and lambs transferred east, most of which left in the early part of 2020. This compares to 146 000 for 2018/19 year (Figure 4).

Of the sheep transferred interstate this year, 56% were lambs and 44% were adult sheep. Whilst not recorded, most of the sheep are thought to have been ewes for restocking purposes. This could reduce the number of ewes available for breeding replacement stock in WA in coming years and could subsequently reduce lamb supply for local processors and exporters.

Figure The cumulative number of WA sheep transferred interstate by month (Based on PIRSA data, DPIRD analysis)

# Sheepmeat exports

In 2019, WA exported a total of 84.1m kg (ceq) of sheepmeat, the highest on record and a 12% increase YOY. The main driver of the increase in sheepmeat exports was the increase in the export of mutton from 29m kg in 2009 to 44.2m kg in 2019 (Figure 5), an increase of 52% and the second highest on record. The highest figure on record was 44.3m kg exported in 2000 which just eclipsed 2019. Year on year, mutton exports increased 27%. So far, 2020 (Jan- April) is shaping up to be another strong year, having already exported 15.4m kg compared to 13.2m kg at the same time last year.

WA lamb exports reached 39.9m kg in 2019, down slightly from the 40.6m kg seen in 2018, but up 74% compared to 2009. Year to date, WA has exported 13.5m kg of lamb.

Figure WA sheepmeat exports by quantity (Based on ABS data, DPIRD analysis)

The value of both lamb and mutton exports increased steadily over the last decade, as seen below in Figure 6, reaching a combined total of $596.6m in 2019, the highest on record, up 25% on the second highest value reached in 2018.

Since 2009, the value of WA mutton exports increased 210%, from $83.7m to $259.2m in 2019, easily the highest on record. Year on year mutton exports have increased 52% from $170.4m, which was previously the highest on record. This was due to increases in the quantity exported and price, and is reflected in increased adult sheep processing, seen in Figure 3 above. So far in 2020, mutton exports are valued at $96.1m, 49% higher than the same time in 2019.

The value of WA lamb exports has also followed a positive trajectory, increasing from $118.4m in 2009 to $337.4m in 2019, an increase of 185% and the highest on record. Year on year, there was a 10% increase in value from $307m in 2018. In the first four months of 2020, lamb exports have been valued at $123.2m, 8% higher than the same time last year, pointing to another strong year.

Figure WA sheepmeat exports by value (Based on ABS data, DPIRD analysis)

Over the last decade the growth of the Chinese market for WA (and Australian) sheepmeat in both value and quantity terms has been tremendous, as illustrated in Figure 7 and Figure 8. China has been WA’s largest market for sheepmeat since 2012. In 2019, China accounted for 37.6m kg (ceq) of sheepmeat, or 45% of the quantity of sheepmeat exported. This equates to a value of $237.8m or 40% of the total value of sheepmeat exports. There was also huge YOY growth in the Chinese market, especially since 2016. Between 2016 and 2019 the volume of sheepmeat exported to China increased from 12.8m kg to 37.6m kg, while the value increased from $39.6m to $237.8m, increases of 193% and 500% respectively.

To put this in perspective, Qatar, our second largest market, accounted for $76.2m and the United States, the third largest market, accounted for $63.6m worth of exports in 2019. This huge increase has been partly driven by the outbreak of African swine fever (ASF) in China. Traditionally, China consumes large volumes of pork, with per capita consumption at around 30kg a year, and China has the world’s largest pig population. Due to the ASF outbreak, it is believed 40–60% of the Chinese pig population has been destroyed, creating a significant protein deficit in the country. This has driven Chinese imports of pork as well as other proteins, including sheepmeat and beef, in order to fill the gap. It has also been driven by the growing class of wealthy consumers in China demanding higher value meats.

Figure WA sheepmeat markets by quantity (Based on ABS data, DPIRD analysis)

Figure WA sheepmeat exports by value (Based on ABS data, DPIRD analysis)

# Live sheep exports

The majority of sheep exported from Australia originate in WA and the proportion of WA sheep has been increasing in recent years. In 2009, WA accounted for 72% of live sheep exports, however this increased to 97% in 2019. Despite the increase in the proportion of WA sheep making up Australia’s live exports, the number of sheep exported live has been on a declining trend over the last decade, as evident in Figure 9. Sheep exported live declined from 2.6m in 2009 to 1m in 2019, a decline of 59%.

The sharp decline between 2017, and 2018 and 2019 was largely due to the mid-year trade suspension and reduced stocking rates on ships imposed following the Awassi Express incident of 2017. To date in 2020 (Jan – April), 416 000 sheep have been exported live, down 10% on this time last year.

Figure The number of sheep exported live from Australia and WA (Based on ABS data, DPIRD analysis)

While not quite as consistent a decline as seen in the quantity of sheep exported live, there has been a likewise decrease in the value of live sheep exports, both nationally and from WA over the last decade (Figure 10). In 2019, WA live sheep exports were worth $136.2m, down from $239.3m in 2009, a decline of 43%. The drop in value has been less than that in quantity due to the buffering effect of increasing prices.

Figure The value of live sheep exports from WA and Australia (Based on ABS data, DPIRD analysis)

As seen in Figure 11 and Figure 12, the largest market by both quantity and value for live sheep exports was Kuwait. Other than in 2018, Kuwait has been the largest market for over a decade. In 2019, WA exported 365 000 sheep worth $50.7m to Kuwait. This accounted for 35% of the quantity and 37% of the value of sheep exports. Kuwait was followed by Qatar, and Jordan was the third largest market. These three markets together accounted for 78% of WA live sheep in quantity terms and 76% of the value.

A decade ago, Saudi Arabia and Bahrain were also large markets for live sheep from WA however, since then, both have exited the market. Oman was also much larger than it is today. It is clear that the Middle East maintains market dominance.

Figure WA live sheep markets by quantity (Based on ABS data, DPIRD analysis)

Figure WA live sheep markets by value (Based on ABS data, DPIRD analysis)

# Wool production and exports

## Wool production

In 2019, the ABS reported that brokers and dealers received 71.5m kg of wool in WA (Figure 13). This was down from 78.5m kg in 2018, 20% less than the high point of 89.1m kg seen in 2017. The year 2017 saw the highest volume of wool received since 2007 and was largely driven by strong prices and a good season. The volume received in 2019 was the lowest on record due to volatile wool prices, reduced demand and reduced yield per head due to a finer fibre diameter and shorter staple length.

Similarly, 2017 was also a very strong year for wool at a national level, with 380.3m kg of wool received. Since then however, a steady decline in wool receivals has occurred, with 306m kg received in 2019, a reduction of 20%. This was largely due to lower sheep numbers caused by eastern drought conditions and uncertainty surrounding wool prices.

Figure Taxable wool received by brokers and dealers in WA (right hand side) and Australia (left hand side) (Based on ABS data, DPIRD analysis)

## Wool exports

In a similar fashion to wool receivals, since 2017 there has been a two year decline in wool exports from both Australia and WA (Figure 14). In 2017, WA wool exports totalled 63.9m kg (greasy) but this fell to 49.2m kg in 2019, a fall of 23%. National wool exports also fell by 23% over this time, from 358m kg in 2017 to 276.1m kg in 2019.

This decline in exports was due to a drop in demand as well as the previously noted decline in wool receivals. The world’s largest consumers of woollen products are China, the USA and Europe. In China, domestic consumption of woollen products accounts for around half of their wool imports. During 2018 and 2019, China’s retail sales of apparel declined due to reduced income growth, negatively affecting the demand for wool. Weaker consumer confidence and income growth in Europe also resulted in reduced spending on woollen apparel. Exports of woollen textiles and apparel from China have also declined, in part due to the trade dispute between the USA and China. The USA is the largest importer of woollen textiles and apparel, however United State imports declined 4% YOY in 2019 and imports from China even more so, especially after additional tariffs were applied to woollen imports from China. Reduced domestic consumption and exports in China have resulted in a stockpile of wool being created during 2019, reducing Chinese demand for wool ([Department of Agriculture, Water and the Environment (DAWE): Natural Fibres- March Quarter 2020](https://www.agriculture.gov.au/abares/research-topics/agricultural-commodities/mar-2020/natural-fibres)).

Figure WA and Australian wool exports by volume (Based on ABS data, DPIRD analysis)

The value of wool exports has not quite followed the same downward trajectory seen in wool receivals and wool exports by volume, as seen in Figure 15. In value terms, wool exports have been on a strong upwards trend for the last decade, peaking in 2018 at $3.9b nationally and $699.6m in WA. This was largely due to strengthening prices and improving wool quality with an increase of finer wool being produced by more specialised wool producers. The value of exports in 2018 was the highest seen since at least the mid-90’s.

In 2019, there was a decline in the value of wool exports due in part to a reduction in prices, but also a large decline in the volume exported due to tough seasons in the east and in parts of WA. Despite the decline, WA wool exports reached $608.6m, which was in the 83rd percentile (since 1996) meaning it was higher than 83% of the export values reached in this time.

Figure WA and Australian wool exports by value (Based on ABS data, DPIRD analysis)

As evident in Figure 16 and Figure 17, China dominates WA’s wool exports and has done for well over a decade. In 2019, China accounted for 87% of the volume (43m kg greasy) and 88% of the value ($537.4m) of WA wool exports. Nationally, China accounted for around 77% of wool exports, making it the dominant player for the whole of Australia.

India was the second largest market for WA wool, taking 6% of wool exports, followed by Czechia with 2%.

Figure WA wool markets by volume (Based on ABS data, DPIRD analysis)

Figure WA wool markets by value (Based on ABS data, DPIRD analysis)

# Current issues

## Covid-19

The current Covid-19 crisis may create some headwinds for the sheep industry going forward. The WA sheep industry is very export-dominant so is exposed to the impact of the virus on our overseas markets. Global demand for sheepmeat and wool is expected to decline due to reduced retail spending and consumer confidence in markets as well as very limited food service and tourism industry. This is partly due to rising unemployment as well as social distancing measures encouraging people to stay home.

Demand for sheepmeat has slowed globally as the food service and tourism industries have closed due to lock down measures. Sheepmeat, especially lamb, is a high value luxury product in many overseas markets so reduced spending and the closure of restaurants and hotels could lead to a significant drop in sales. Furthermore, many top red meat markets are forecast to enter recession in 2020, which could impede red meat sales in the future.

There have also been some disruptions to supply logistics, including air freight, due to flight cancellations, refrigerated containers being held at port, labour shortages and slow customs clearance rates ([MLA](https://www.mla.com.au/news-and-events/industry-news/covid-19-impacts-on-markets6/)).

Currently, prices are being supported by eastern Australian restocking activities, however if the domestic market becomes oversaturated due to reduced export demand, this may put downward pressure on prices.

In the wool industry a large proportion of the wool has been passed in at auction due to reduced demand from processors in Italy and China. This may lead to stockpiles in Australia, impacting future prices. The Chinese mills have re-opened, but significantly reduced demand in end markets will impact the need for Australian wool. Negative economic growth in end consumer markets is likely to drive down demand. This is due to lockdown, limited spending and low consumer confidence.

## African swine fever (ASF)

ASF is a highly contagious viral disease which affects both wild and domestic pigs and has been responsible for large production and economic losses in recent times. The disease is easily spread and is carried by live or dead pigs as well as pork products. It is also spread by contaminated feed products, ticks and infected clothes, shoes, vehicles and equipment. Over the last decade or so, outbreaks have been reported in many countries in Africa, Asia and Europe in domestic and wild pig populations [(World Organisation for Animal Health).](https://www.oie.int/en/animal-health-in-the-world/animal-diseases/african-swine-fever/)



Figure Reported outbreaks of ASF in 2019 (Source: DAWE)

There is no vaccine for ASF and it kills about 80% of the pigs it infects (it does not affect human health). Australia does not have ASF but it is a significant biosecurity threat which could threaten pig production, trade and the economy ([DAWE](https://www.agriculture.gov.au/pests-diseases-weeds/animal/asf)).

Pork plays a prominent role in the diets in Asian countries and, for some countries, is the most consumed protein. Due to the widespread culling of pigs due to ASF in Asia, especially China, there has been a supply shortage resulting in increases in chicken, beef and sheepmeat consumption in the region ([MLA](https://www.mla.com.au/prices-markets/market-news/african-swine-fever-continues-to-spread/)).

China has reportedly destroyed 1.17m pigs due to ASF, resulting in large supply shortages of 10–20m tonnes of pig meat, which international supply will be unable to fill. This has resulted in imports of all meat categories to increase and caused China to open up their market to other countries, increasing imports from the USA, Brazil and Argentina (MLA).

# Appendix- WA sheep industry breakdown 2019

