

November 2018

Australian Wool Production Forecast Report

Australian Wool Production Forecasting Committee

Summary

- The Australian Wool Production Forecasting Committee predicts that Australian shorn wool production in 2018/19 will be 305 mkg greasy, down by 10.8% on the Committee's estimate for the 2017/18 season. Continuing dry conditions have prevailed across most of New South Wales, Queensland, northern Victoria, east Gippsland and the northern parts of South Australia since August. While this has been tempered somewhat by better seasonal conditions in the south east of South Australia, the midlands of Tasmania, western Victoria and parts of Western Australia, the Committee expects both the number of sheep shorn nationally and the average annual wool cut per head to decrease.
- AWTAs volumes of greasy wool tested to the end of October 2018 were 9.7% lower than at the same period in 2017/18 with volumes tested in each state declining on a year-on-year basis. The largest decline occurred in New South Wales (down 15.1%), followed by Western Australia (down 11.6%) and South Australia (down 7.5%). Smaller decreases occurred in Tasmania (down 3.5%), Queensland (down 2.3%) and Victoria (down 0.7%).
- AWTAs test data showed a large increase in the weight of wool tested in all micron ranges 18.5 microns and below and a large decline in the weight of 20 to 23 micron wool and 28.6 microns and broader wool. Volumes generally fell for other micron ranges. The average mean fibre diameter for the season to the end of October 2018 was 20.1 microns, down by 0.5 microns compared to the same period last season. The average staple length across Australia has fallen by 3.2 mm to 85.8 mm, with all States recording shorter staple length for the season to date compared with the same period in 2017/18.
- AWEX first-hand bales offered were 13.3% lower during July to October 2018 compared with the same time period in 2017/18. New South Wales first-hand offered bales fell by 18.9%, Western Australia by 16.2%, Tasmania by 13.9% and South Australia by 8.3%. Smaller decreases occurred in Queensland and Victoria (3.3 and 3.1% respectively).
- ABS broker wool receivals data for the September 2018 quarter were down by 11.5%.

FURTHER INFORMATION

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- ABS sheep turn off data for July to September 2018 showed sheep slaughter up by 36% and lamb slaughter down by 10% compared with the same time in 2017.
- The BOM outlook for November 2018 to January 2019 was for below average rainfall across much of Australia with above average maximum temperatures.
- Table 1 summarises the estimates and forecasts for Australia and Table 2 shows the estimates and forecasts for each state.

Table 1: Summary of wool production estimates and forecasts for Australia

Parameter	2016/17 Final Estimate	2017/18 Final Estimate	Change y-o-y (%)	2018/19 Third Forecast	Change y-o-y (%)
Sheep Numbers Shorn (million)	74.3	76.8	+3.3%	71.7	-6.6%
Average Cut Per Head (kg)	4.58	4.45	-2.9%	4.25	-4.4%
Shorn Wool Production (mkg greasy)	340	341	+0.3%	305	-10.8%

Table 2: Summary of wool production estimates and forecasts for individual states

Shorn wool production (mkg greasy)	NSW	VIC	WA	SA	TAS	QLD	National
2016/17 Final Estimate	126.0	67.4	71.1	57.9	9.2	8.5	340
2017/18 Final Estimate	125.7	73.5	65.1	59.5	9.3	8.3	341
Change y-o-y (%)	-0.3%	8.9%	-8.5%	2.7%	1.5%	-2.9%	0.3%
2018/19 Third Forecast	100.0	70.7	62.7	54.7	9.3	7.1	305
Change y-o-y (%)	-20.4%	-3.7%	-3.6%	-8.0%	-0.3%	-14.1%	-10.8%

- More detailed information on the shorn wool production forecast by state in 2018/19 can be found in Table A1 in the Appendix to this report.
- The Appendix also provides historical data for Australia, including sheep numbers shorn, average cut per head and shorn wool production (Table A2) as well as the micron profile (Table A3) since 1991/92.

Detail on the 2018/19 Forecast

Major data inputs

The AWPFC forecasts are based on detailed consideration by the state and national committees of data from various sources including:

- AWTA wool test data for the 2018/19 season to the end October 2018;
- AWEX auction statistics for the 2018/19 season to the end of week 17 (26 October 2018);
- ABS wool receivals data for the 2018/19 season to the end of September 2018;
- ABS sheep numbers as at 30th June 2018 and ABS sheep and lamb turn-off for 2018/19 to the end of September 2018;
- Information on current and expected seasonal conditions from the Bureau of Meteorology; and
- Information gathered on sheep producer production intentions from AWI and MLA surveys.

AWTA wool test data

Each month AWTA releases data on the volumes of greasy wool tested within the various diameter categories for the month and the season to date. Data for the 2018/19 season to the end of October compared with the same time period (July to October) in previous seasons are presented in this report.

The month-by-month comparison of wool tested over the past five seasons (Figure 1) shows the current season tracking below 2017/18 for each month with a five-year low occurring in September 2018.

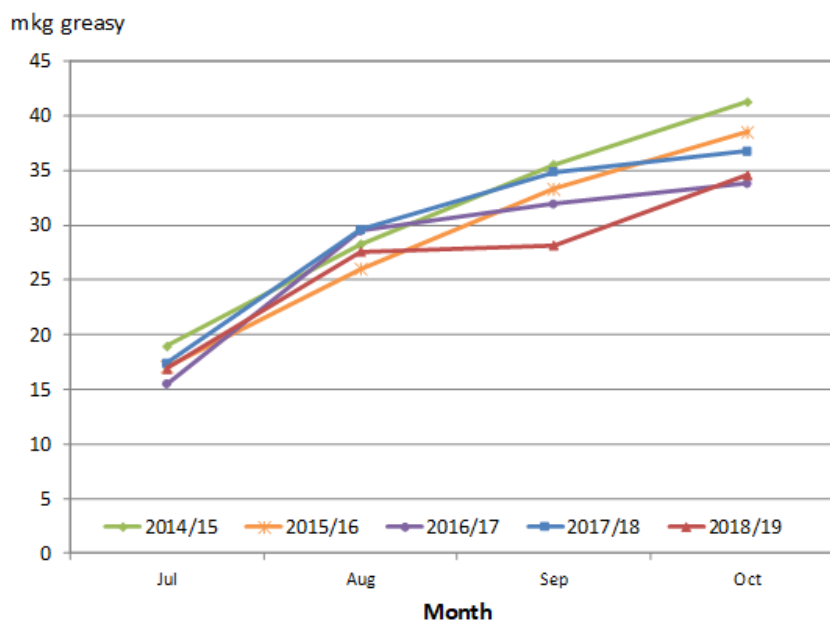


Figure 1: Comparison of monthly AWTA key test data volumes for the 2018/19 season July to end October

AWTA national wool test volumes data for the 2018/19 season to the end of October (Table 3) show:

- Volumes of wool tested for the season to date were 9.7% lower than at the same time in 2017/18 and are also 9.7% less than the five-year average for the season to date from 2013/14 to 2017/18.
- The total volume of wool tested for the season to date is the lowest in the past five seasons.
- For the 2018/19 season to the end of October, there has been significant increases in the weight of wool tested at 16.5 microns and finer (up 73.4%), at 17 microns (up 21.1%) and at 18 microns (up 13.2%). The 25 - 26 microns category (up 11.4%) was the only other to record an increase in weight tested. All other categories recorded falls, the largest being 21 microns (down 42.6%), 29 - 30 microns (down 42.5%), 22 microns (down 39.8%), 23 microns (down 31.6%) and 20 microns (down 22.5%).

Table 3: AWTA key test data volumes for the 2018/19 season July to end October by micron range 2012/13 – 2018/19 (mkg greasy)

Parameter	Year	<16.6um	17um	18um	19um	20um	21um	22um	23um	24um	25-26um	26-28um	29-30um	>30.5um	TOTAL
AWTA FY Total mkg greasy	2013/14	6.25	11.25	17.50	22.70	21.49	15.01	8.52	4.05	2.19	4.95	6.43	3.08	1.55	124.96
	2014/15	5.12	10.92	17.74	22.26	20.65	15.38	8.95	4.42	1.96	4.31	6.48	3.90	1.91	124.00
	2015/16	5.45	10.01	16.43	21.90	20.61	13.80	6.95	2.77	1.63	4.00	6.11	3.52	1.70	114.87
	2016/17	5.47	9.04	14.60	20.85	20.71	14.94	7.72	2.94	1.52	3.51	5.07	2.84	1.54	110.74
	2017/18	4.32	9.93	16.80	21.85	21.78	15.69	7.94	3.37	1.60	3.73	5.82	3.68	2.12	118.63
2018/19	7.49	12.03	19.01	21.35	16.88	9.00	4.78	2.31	1.48	4.16	4.91	2.12	1.67	107.18	
Y-O-Y change%	2018/19	73.4%	21.1%	13.2%	-2.3%	-22.5%	-42.6%	-39.8%	-31.6%	-7.6%	11.4%	-15.7%	-42.5%	-21.1%	-9.7%
Micron Split (%)	2017/18	3.6%	8.4%	14.2%	18.4%	18.4%	13.2%	6.7%	2.8%	1.3%	3.1%	4.9%	3.1%	1.8%	
	2018/19	7.0%	11.2%	17.7%	19.9%	15.8%	8.4%	4.5%	2.2%	1.4%	3.9%	4.6%	2.0%	1.6%	
5 year av. 2012/13 to 2016/17	Tonnes	5.32	10.23	16.61	21.91	21.05	14.96	8.02	3.51	1.78	4.10	5.98	3.40	1.76	118.64
	% change 17/18 vs 5 yr av	40.8%	17.6%	14.5%	-2.6%	-19.8%	-39.8%	-40.4%	-34.3%	-16.9%	1.4%	-18.0%	-37.8%	-5.4%	-9.7%
	Micron split %	4.5%	8.6%	14.0%	18.5%	17.7%	12.6%	6.8%	3.0%	1.5%	3.5%	5.0%	2.9%	1.5%	

Note: The micron categories refer to a range of -0.4 and +0.5um around each number. For example, 18um is between 17.6 and 18.5 micron

- The micron profile of Australian wool clip's shows two distinct peaks: one centred at 19 micron wool (finer than 16.6 microns up to 23 microns); and a second centred on 27 - 28 microns (from 24 microns to 30.5 microns and broader) (Figure 2). A historical comparison of the Australian micron profile percentage share and average micron can be found in Appendix Table A3 (at the end of this report).

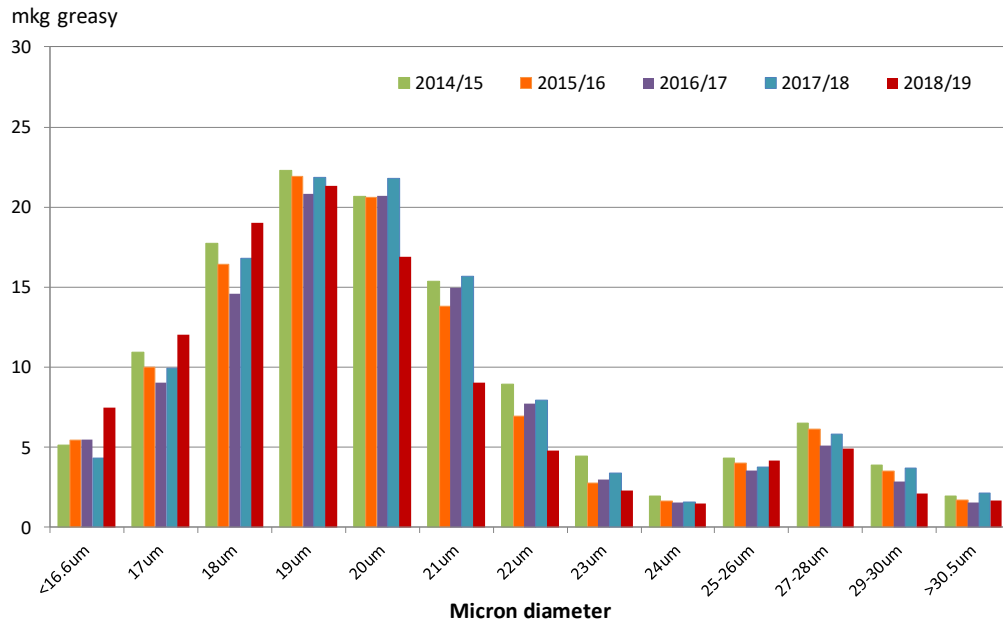


Figure 2: Australian diameter profile – 2018/19 season to end October compared with the same time period from the 2014/15 to 2017/18 seasons

- Based on data by Wool Statistical area, the volumes of tested in each state for the 2018/19 season to the end of October have declined on a year-on-year basis (Figure 3).

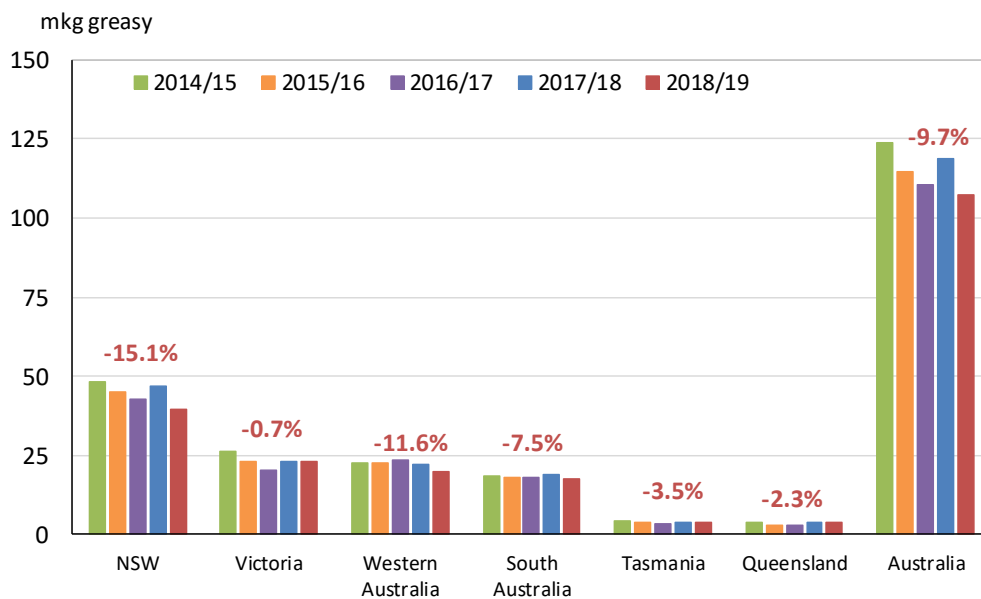


Figure 3: Volume of wool tested in the 2018/19 season to end October (AWTA key test data). The percentage change is the 2018/19 season to end October compared with the same period in the 2017/18 season.

- New South Wales had the largest decline in volume of wool tested from July to end of October (down 15.1%), followed by Western Australia (down 11.6%) and South Australia (down 7.5%) (Table 4). Smaller decreases occurred in Tasmania (down 3.5%), Queensland (down 2.3%) and Victoria (down 0.7%).

Table 4: AWTA test data volumes by state (based on Wool Statistical Area) for the 2018/19 season to end October (mkg greasy)

Year	NSW	Vic	WA	SA	Tas	Qld	Australia
2013/14	48.3	26.2	23.8	17.1	4.1	5.6	125.0
2014/15	48.4	26.3	22.7	18.4	4.4	3.8	124.0
2015/16	44.9	23.0	22.4	17.9	3.7	3.0	114.9
2016/17	42.7	20.2	23.3	17.9	3.5	3.0	110.7
2017/18	46.8	23.0	22.3	18.8	4.0	3.8	118.6
2018/18	39.7	22.9	19.7	17.4	3.8	3.7	107.2
% change y-o-y	-15.1%	-0.7%	-11.6%	-7.5%	-3.5%	-2.3%	-9.7%

- The Key Test data for 2018/19 to end of October show the impact of the continuing dry season on wool quality around Australia (Table 5).
- On a national basis, compared with the same time period in 2017/18, yields are down by 1.5% to 63.6% and vegetable matter down by 0.3% to 2.4%. Fibre diameter is down by 0.5 µm to 20.1 µm and staple length has decreased by 3.2 mm to 85.8 mm.

Table 5: AWTA key test data statistics for the financial year - 2017/18 and 2018/19 July to end October

July to October		NSW	VIC	WA	SA	TAS	QLD	AUST
WSA	WEIGHT (mkg)	35.81	39.40	22.67	13.92	3.69	3.28	118.77
2017/18 Key Test Data	YIELD (%)	65.9	65.4	64.2	63.1	70.1	62.0	65.1
	VM (%)	3.2	2.6	1.3	3.5	1.2	4.7	2.7
	MFD (µm)	20.5	21.3	19.7	21.0	20.9	20.0	20.6
	SS (Nkt)	36.2	34.1	33.2	33.2	37.3	39.0	34.6
	SL (mm)	87.2	90.1	87.6	92.9	89.2	87.4	89.0
	MID-BREAK (%)	54.7	52.0	49.5	50.1	41.2	51.9	51.7

WSA	WEIGHT (mkg)	30.41	37.91	19.93	12.65	3.08	3.24	107.22
2018/19 Key Test Data	YIELD (%)	63.7	64.4	62.3	61.7	70.4	62.30	63.6
	VM (%)	2.8	2.4	1.7	2.7	0.7	3.10	2.4
	MFD (µm)	19.9	20.7	19.1	20.3	20.8	19.60	20.1
	SS (Nkt)	36.2	34.5	31.0	32.8	38.4	36.40	34.2
	SL (mm)	83.3	87.0	85.0	88.8	89.0	83.60	85.8
	MID-BREAK (%)	41.9	43.6	46.1	43.8	48.0	51.90	44.0

WSA	WEIGHT (%)	-15.1%	-3.8%	-12.1%	-9.1%	-16.5%	-1.2%	-9.7%
DIFF. Key Test Data	YIELD (%)	-2.2	-1.0	-1.9	-1.4	0.3	0.3	-1.5
	VM (%)	-0.4	-0.2	0.4	-0.8	-0.5	-1.6	-0.3
	MFD (µm)	-0.6	-0.6	-0.6	-0.7	-0.1	-0.4	-0.5
	SS (Nkt)	0.0	0.4	-2.2	-0.4	1.1	-2.6	-0.4
	SL (mm)	-3.9	-3.1	-2.6	-4.1	-0.2	-3.8	-3.2
	MID-BREAK (%)	-12.8	-8.4	-3.4	-6.3	6.8	0.0	-7.7

AWEX auction statistics

The AWEX auction statistics for the 2018/19 season to the end of week 17 (Table 6) show a decrease in wool auction offering volumes compared with the same time period in 2017/18.

- First hand bales offered (i.e. excluding re-offers) for Australia were 13.3% lower during July to October 2018 compared with the same time period in the 2017/18 season.
- The most significant decreases were evident in New South Wales (down 18.9%), Western Australia (down 16.2%), Tasmania (down 13.9%) and South Australia (down 8.3%). Smaller decreases were evident in Queensland and Victoria (down 3.3 and 3.1% respectively).
- There was a 14.8% reduction in the volume of first-hand Merino wool offered across Australia and a 7.2% reduction in first-hand Crossbred wool offered. The share of Merino wool of all first-hand offered wool was 78.8% compared with 80.2% for the same time period in 2017/18.
- The percentage reductions in the volume of first-hand offered Merino and Crossbred wool were consistent with the total reduction in first-hand wool offered in each state, except in Queensland and Victoria. In these two states, there was a significantly higher reduction in the proportion of first hand offered crossbred wool with Queensland down by 28.4% and Victoria down by 7.4%.
- There was a 10% decrease in the volume of 'prem-shorn' Merino fleece wool between July and October 2018 (5.6 mkg) compared with the same time period in 2017/18 (6.2 mkg).
- As a percentage share of the total, 10% of Australian first-hand bales offered were prem shorn between July and October 2018. On a state-by-state basis this ranged from 14% in South Australia to 4% in Tasmania.

Table 6: AWEX Auction Statistics 2018/19 to the end of week 17

2018/19	NSW	VIC	WA	SA	TAS	QLD	AUST
First hand bales offered (% change on 2017/18)	-18.9%	-3.1%	-16.2%	-8.3%	-13.9%	-3.3%	-13.3%
Merino first hand offered (% change on 2017/18)	-18.7%	-1.7%	-16.3%	-8.5%	-13.5%	-2.6%	-14.8%
Crossbred first hand offered (% change on 2017/18)	-19.7%	-7.4%	-14.5%	-6.5%	-14.7%	-28.4%	-7.2%
Merino first hand offered (% share)	80.5%	76.2%	94.9%	89.6%	69.4%	98.0%	78.8%
Crossbred first hand offered (% share)	19.5%	23.8%	5.1%	10.4%	30.6%	2.0%	21.2%
Merino First Hand 'Prem' Shorn Fleece							
Weight (mkg)	2.0	0.7	1.1	1.6	0.1	0.2	5.6
% share of total	10%	8%	10%	14%	4%	7%	10%
% change on 2017/18	0%	5%	-21%	-11%	40%	13%	-10%

Note: Data on 'prem shorn' wool from AWEX is based on the assessed length of the wool being offered. It is defined as <65 – 75 m, depending on micron and excluding weaners and lambs wool.

Australian Bureau of Statistics (ABS) data

The ABS provide data on wool receivals and sheep and lamb turnoff.

Wool receivals

National wool receivals for the September 2018 quarter were lower compared with the same time period in 2017/18 (Table 7):

- Wool receivals for Australia fell by 11.5% in the September 2018 quarter which is in between the AWTA test data and AWEX first-hand offered data (note the latter are both to the end of October 2018).
- Wool receivals in the September 2018 quarter are the lowest for the past five seasons and 9.7% below the five-year average.
- Wool receivals decreased in all states. The largest falls occurred in Tasmania (-20.2%), New South Wales (-19.4%) and Queensland (16.6%). Receivals fell by 11.2% in Western Australia and 10.4% in South Australia. In Victoria, receivals fell by just 1.8%, but were 8.2% above the five-year average. Receivals in all other states were well below the five-year average.

Table 7: ABS Wool Receivals data

mkg	NSW	VIC	WA	SA	TAS	QLD	AUS
2013/14	31.695	19.754	18.278	13.805	2.513	2.494	88.540
2014/15	30.563	22.501	14.780	13.575	2.592	1.663	85.674
2015/16	28.101	19.241	16.002	15.971	2.238	1.561	83.112
2016/17	26.104	19.710	20.239	15.182	2.043	1.362	84.642
2017/18	27.863	22.951	18.243	14.983	2.009	1.622	87.671
2018/19	22.456	22.546	16.192	13.428	1.603	1.352	77.578
<i>% change 2018/19 vs 2017/18</i>	<i>-19.4%</i>	<i>-1.8%</i>	<i>-11.2%</i>	<i>-10.4%</i>	<i>-20.2%</i>	<i>-16.6%</i>	<i>-11.5%</i>
Five year average 13/14 to 17/18	28.865	20.831	17.508	14.703	2.279	1.740	85.928
<i>% change 2018/19 vs 5 year av</i>	<i>-22.2%</i>	<i>8.2%</i>	<i>-7.5%</i>	<i>-8.7%</i>	<i>-29.7%</i>	<i>-22.3%</i>	<i>-9.7%</i>

Sheep turn-off

Australian sheep and lamb turn-off statistics for the 2018/19 season to end September, sourced from the ABS covers sheep slaughter, lamb slaughter and live exports and is compared with the equivalent period in 2017/18 and the five-year average 2013/14 to 2017/18 July to September (Table 8):

- The ABS data shows a 36% increase in sheep slaughter and a 10% decrease in lamb slaughter during July to September 2018 compared with the same time period in 2017.
- The number of live sheep exported from Australia decreased by 92% during this time due to the stoppage of live sheep exports.
- Total turnoff of sheep in July to September 2018 was 4% lower compared with the same time period in 2017 and 5% below the five-year average for the same time period.

Table 8: ABS Sheep turn off data for July to September 2018

Parameter	Financial year			5-yr FY	
	July 2017 to Sept 2017	July 2018 to Sept 2018	% Δ	Avg	%Δ
Sheep slaughter (’000 hd)	1,880	2,559	36%	1,903	34%
Sheep weights (kg/hd cwt)	26	24	-7%	24	-3%
Mutton production (tonnes cwt)	47,947	60,846	27%	46,423	31%
Lamb slaughter (’000 hd)	5,501	4,925	-10%	5,454	-10%
Lamb weights (kg/hd cwt)	23	22	-4%	22	-1%
Lamb production (tonnes cwt)	124,259	106,729	-14%	119,183	-10%
Live exports (’000 hd)	468	37	-92%	532	-93%
Total Turnoff (’000 hd)	7,848	7,521	-4%	7,888	-5%

Bureau of Meteorology (BoM) seasonal rainfall seasonal outlook

Seasonal conditions continue to be dry across much of the main sheep growing regions of Australia in 2018/19 with rainfall between 1 April and 31 October 2018 being below average and very much below average across much of the country (Figure 4). The driest regions include the south coast region of Western Australia, most of Queensland and New South Wales, the northern regions of South Australia and the northern and east Gippsland regions of Victoria.

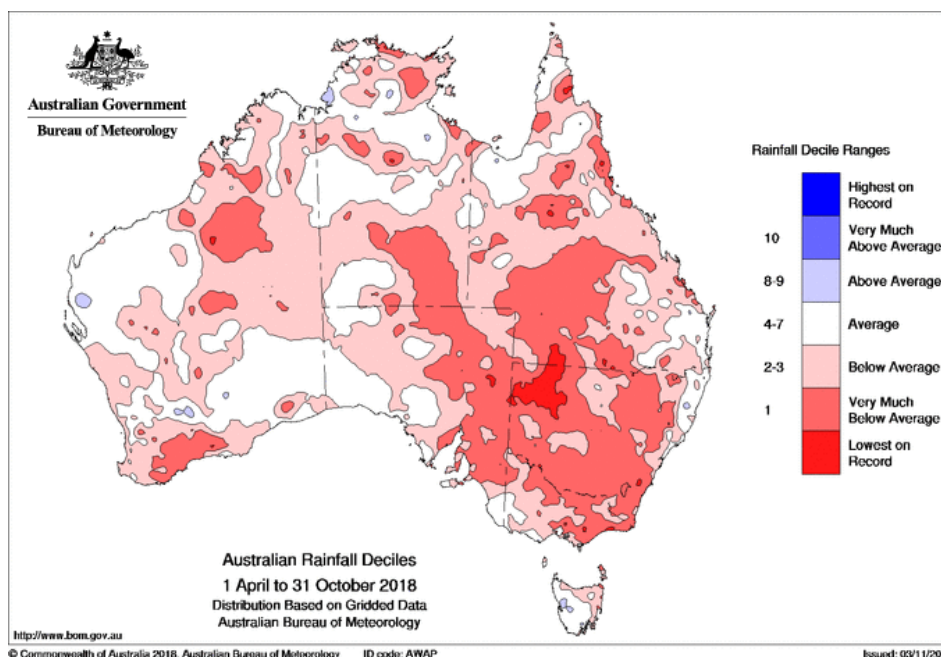


Figure 4: Australian rainfall deciles Southern Wet Season (1 April 2018 to 31 October 2018)

The rainfall deciles for the past 12 months (Figure 5) clearly show how dry it has been across the country in the past year, particularly in the eastern states.

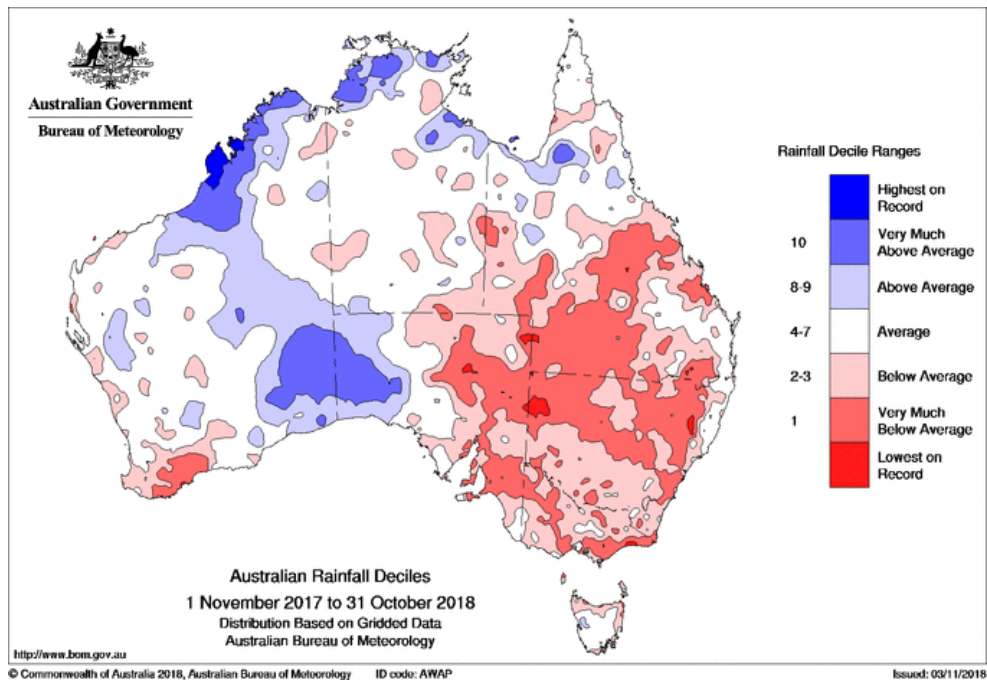


Figure 5: Australian yearly rainfall deciles (August 2017 to July 2018)

The Bureau of Meteorology’s outlook for the November 2018 to January 2019 period is that rainfall is likely to be below average across much of Australia (Figure 6) along with above average maximum temperatures (Figure 7).

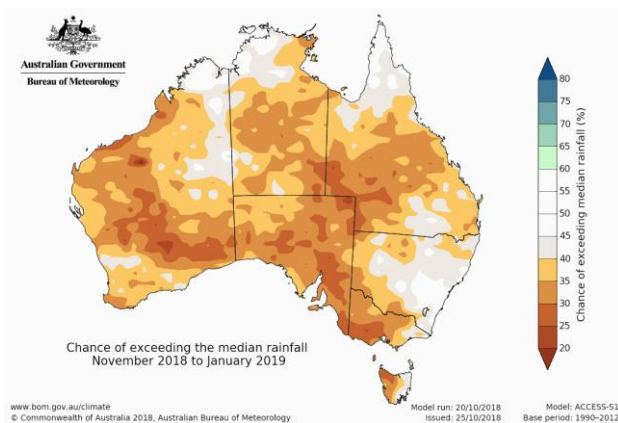


Figure 6: Chance of exceeding median rainfall (November 2018 to January 2019)

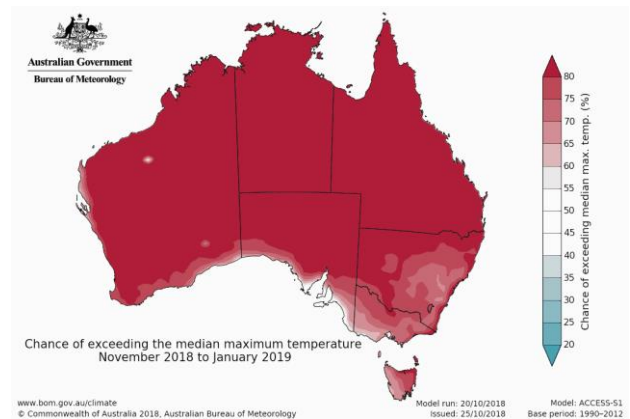


Figure 7: Chance of exceeding median maximum temperature (November 2018 to January 2019)

In its update on 23 October 2018, the Bureau noted that the El Niño–Southern Oscillation (ENSO) in the tropical Pacific Ocean was **alert** (at least 70% chance of event occurring). The surface of the tropical Pacific Ocean warmed during October with sub-surface waters also warmer than average. However, the atmospheric indicators (SOI, cloudiness and trade winds) have yet to couple and create the necessary positive feedback for El Niño to occur. There are signs that a positive Indian Ocean Dipole (IOD) is underway which will increase the likelihood of a warm and dry end to the year across most of the country. Six of eight climate models suggest that El Niño thresholds will be met or exceeded in November.

State Committee inputs

The following provides a summary of seasonal conditions and wool production in 2018/19 in each state as reported by the state committee's in November 2018.

The state committees reported that seasonal conditions in the major sheep producing areas across Australia continued to be dry since their last meeting in August. This includes large areas of New South Wales, Queensland, northern Victoria, east Gippsland and the northern parts of South Australia. Slightly better seasonal conditions have been experienced in southeast South Australia, the midlands of Tasmania, western Victoria and parts of Western Australia.

New South Wales

Some storm activity in north east New South Wales since August has produced some green pick but little bulk or ground cover. Lambs are currently on the ground and being fed to keep them going with older ewes being sold. Other areas of New South Wales (Cootamundra, Harden, Young through to Yass & Goulburn) had some good early rain which has kept crops and pastures ticking along. In these areas, sheep numbers are close to maintaining as producers are looking to hold stock and increase Merino ewe joinings to capitalise on post-drought flock rebuilding but are beginning to feel the pinch.

The season in the northwest of the state is the worst it has been in the past 6 years, with increased sale of older sheep and wether lambs as producers tire of feeding at current grain prices. In this region, sheep numbers are 30 - 50% lower than usual and will need at least 2 good lambings to turn around. Some of the central west and south west of New South Wales have had rain which has given producers a short break from feeding, but hot days will little follow up rain will see full rationing recommence. Some crops (canola and frosted wheat) have been cut for hay so fodder stocks have built slightly but sheep numbers continue to fall. Heavy stock reductions have occurred along the southern border regions of New South Wales, particularly moving west.

Shearing is typically ahead across most areas of NSW with 80% of producers feeding. There is a lack of grain and hay on hand and reduced production of both going forward. Yields are lower, vegetable matter is down due to lack of pasture and ground cover with a significant change in the micron profile of the NSW clip. Producer sentiment is becoming more pessimistic driven by the current uncertainty in the wool market, given this they are more likely to sell older stock rather than retain. Looking at 20 - 50% reduction of numbers in sheep flocks across the state. **Shorn wool production in 2018/19 expected to decline by 20.4% compared with 2017/18 to 100 mkg.**

Victoria

Large numbers of sheep were turned off from northern Victoria between September and mid-October with the majority sent to slaughter. In most areas north of the divide, surplus sheep are beginning to be sold, with flock reductions of 10% occurring by selling wethers and 6-year-old ewes both to possible slaughter prem shorn.

The remainder of the state has been good enough for producers to hang onto stock with shearing starting to kick in now. The season has held on with a good August and despite a less than average spring, there is no urgency to offload stock. Producers seem willing to buy

grain, despite the elevated cost, feed their stock and try and maintain their ewe base. Some recent rain has allowed producers to feed re-shot ryegrass pastures. Sheep numbers are expected to be maintained in western regions of Victoria. However, producers are preparing for a tighter 2nd half to the season due to extremely low soil moisture levels in western Victoria and are looking to conserve pastures and reduce numbers with a view to confinement feeding in January and February. Young ewes are being kept.

Merino ram sales have been strong throughout Victoria with producers intending to breed more Merinos and keen to carry their sheep through. The intention seems to be to increase Merino production. Wool cuts in the south (Ararat and Western Districts) are close to last year's levels, but those from the Autumn shearing are likely to be less. The Committee is expecting an increase in prem shearing in Autumn. **Shorn wool production in 2018/19 expected to decline by 3.7% compared with 2017/18 to 70.7 mkg.**

Western Australia

Large decreases in sheep numbers and wool production in the south coast of Western Australia due to continued poor seasonal conditions beginning in December 2017. However, conditions have improved in the past month and it is turning into a reasonable season. Mixed reports of lambing percentages from poor to positive, tending to be below average but not terrible.

It is difficult to determine sheep numbers in the upper Great Southern region due to the live export freeze and little shearing occurring to date but the Committee are expecting a slight 'artificial' boost in production in the next few months as the wethers that would have typically gone from the system are shorn. The lower wheatbelt had some heavy frosts which will reduce stubble availability. Upper wheatbelt expected to have basically the same numbers with wool cuts down ½ to 1 kg in some areas. Seasonal conditions are reasonable in many parts of WA, so the autumn clip should be reasonable. There is some concern with stock numbers due to the live export freeze and the resultant impact on feed budgets as flocks head into summer. Better feed conditions over past two and a half months is expected to slightly increase wool production. Good crops in areas north of Perth will increase availability of stubble.

Current projections indicate a 7% reduction in testing volumes in Western Australia to the end of the season. A large range in Merino lambing percentages (45 – 105%) across the state may see a reduction in lamb wool production this season with increased turn-off of 2018 drop Merino lambs to slaughter in recent weeks. 2016/17 was a great season across Western Australia and production has fallen since then. The Committee have reduced their August forecast which reflects their concern regarding how the season is progressing, **shorn wool production expected to decline by 3.6% compared with the 2017/18 season to 62.7 mkg.**

South Australia

Parts of the west coast, the bottom of the York and Eyre Peninsula's, Kangaroo Island, the upper south east are all good. In the south east, south of Keith to Mt Gambier, good winter rain has increased yields by 1-3% but fleece weights are down 0.5 kg and fibre diameter is down 0.5 µm following a tough autumn. Fewer bales are expected for the current spring shearing with similar levels in the autumn. A lot of shearing will occur between January and April. There is an abundance of green feed and late September rain gave growers another month without feeding. Plenty of second shear prem shearing is occurring now and will re-

occur pre-lambing (March - April). Increased stock numbers in the region, with arrivals from the Western Division of New South Wales and the mid north of South Australia.

In the Mallee region yield, micron and fleece weights are all down. Crop failures should see growers holding onto wool and waiting for higher prices to compensate for the lack of grain income. Shearing is largely completed; many producers will forgo a pre-lamb shear due to lack of staple length and may take their flocks through to July to September to full wool. A big drop in production is expected in this region. The rest of South Australia is poor. In the northern regions, north of Jamestown, 40% less bales are being produced per shearing with little to no replacement stock coming into this area next year. Any surplus stock has been sold, both young and older ewes, with growers trying to hold onto to core stock. Sheep numbers will be dramatically down for a few years. Some pastoral flocks have shut down as water supplies have run out.

Overall, sheep numbers and wool production are likely to be down as the Committee do not believe that the number of sheep moving out of the northern regions will be covered by the extra production in the south. Shearing is ahead in the north, a lot of flocks whose main shearing was in September shore earlier in August or July, and some contractors have finished their normal sheds. AWTA wool test volumes going forward will slip as a result. Recent receivals into broker stores have reduced significantly and November is usually a strong month. **Shorn wool production expected to decline by 8.0% compared with 2017/18 season to 54.7 mkg.**

Tasmania

While the season remains tight in Tasmania, the mild winter and spring across most of the state provided ideal lambing conditions for the high number of multiple births that occurred this year. This will set flocks up for a high marking rate which the committee estimates to be 94% or better for the current season. There is some pressure on Merino flocks in the north, as most crops have now gone in reducing available paddocks for grazing. There are also reports of some flocks moving to a first-cross operation and running their Merino ewes out.

The Midlands and Central Highlands regions are better than expected with good cuts and measurement specs. The east coast remains consistently dry with wool production below average. The state is tending to dry out with pasture senescence beginning relatively early. This will decrease the quantity and quality of pasture heading into summer, the amount of fodder conserved and is expected to increase the required duration and level of supplementary feeding. There has been an early fire season alert with some fires already occurring. The BOM outlook is reasonable for the major wool producing regions of Tasmania with the outlook tending toward median rainfall for the midlands and east coast and hotter than average maximum temperatures.

Most Merino ewes have now been shorn, some early to capture the higher wool prices earlier in the season. The ewe wool has been sold and moved through the system. Slightly more prem shorn wool has been evident to date this season, with some opportunistic prem shearing of older cull dry ewes prior to sale (these are normally sold in wool). Some producers are looking to hold a wether mob, with wether shearing expected to commence in the coming weeks, to capitalise on the current high prices for higher yielding wools with good additional measurements. **Shorn wool production expected to decrease by 0.3% compared with 2017/18 season to 9.31 mkg.**

Queensland

Continued large reduction in sheep numbers in the major sheep production areas of Queensland. The Quilpie and Cunnamulla regions are poor, few sheep remain and those remaining are continuing to be sold. The past two months saw a large sell-off around Longreach with mutton prices at \$4.80 to \$5/kg (\$140-150 for wethers and \$130 for ewes) although this has now halted somewhat. While there has been some transfer of ownership within the southern parts of some districts, the number of sheep moving out remains is greater than that moving in. Young sheep are all going out in these regions, these are the breeders and wool cutters for the next four to five years. Numbers are expected to be well below 20 - 25% of normal before the end of the year. Flocks that re-stocked to 5,000 - 6,000 head last year have now destocked as producers can't hold any further, despite the lower mutton prices.

Regions around St George and the south east corner of Queensland are having a good season and are close to purchasing stock in. Lambing percentages are not too bad, but a lot of 5 to 5½ year old ewes that would normally be retained are being sold, with 65mm fleeces. With the sell-off of older ewes, approximately 35% of the Queensland Merino ewe flock will be less than 4 years old. This will reduce lambing and marking percentages in the coming breeding seasons.

Despite the season, there are high levels of optimism and positivity around Merino sheep production. Ram clearance rates have been high with purchased rams held on stud, waiting for the rain to come to purchase ewes. The Queensland Government has made a further \$6m in funding available for pest control (\$1m) and exclusion fencing (\$5m) with applications closing at the end of November. **Shorn wool production expected to decline by 14.1% compared with the 2017/18 season to 7.12 mkg.**

Appendix

Table A1: Comparison of the estimate for 2017/18 and the third forecast for 2018/19 against the estimate for 2016/17

2016/17	NSW	VIC	WA	SA	TAS	QLD	National
Sheep Numbers Shorn (million)	27.40	15.98	15.07	11.21	2.48	2.13	74.28
Average Cut Per Head (kg)	4.60	4.22	4.72	5.16	3.72	4.02	4.58
Shorn Wool Production (mkg greasy)	126.04	67.43	71.11	57.87	9.21	8.54	340
2017/18	NSW	VIC	WA	SA	TAS	QLD	National
Sheep Numbers Shorn (million)	28.31	17.16	14.76	11.89	2.43	2.21	76.76
Average Cut Per Head (kg)	4.44	4.28	4.41	5.00	3.85	3.75	4.45
Shorn Wool Production (mkg greasy)	125.70	73.45	65.09	59.45	9.34	8.29	341
Change (%)	NSW	VIC	WA	SA	TAS	QLD	National
Sheep Numbers Shorn	3.3%	7.4%	-2.1%	6.0%	-2.1%	3.9%	3.3%
Average Cut Per Head	-3.5%	1.5%	-6.5%	-3.1%	3.6%	-6.6%	-2.8%
Shorn Wool Production	-0.3%	8.9%	-8.5%	2.7%	1.5%	-2.9%	0.3%
2018/19 Third Forecast	NSW	VIC	WA	SA	TAS	QLD	National
Sheep Numbers Shorn (million)	25.00	16.80	14.52	11.05	2.45	1.86	71.68
Average Cut Per Head (kg)	4.00	4.21	4.32	0.00	3.80	3.83	4.25
Shorn Wool Production (mkg greasy)	100.00	70.73	62.73	54.70	9.31	7.12	305
Change %	NSW	VIC	WA	SA	TAS	QLD	National
Sheep Numbers Shorn	-11.7%	-2.1%	-1.6%	-7.1%	1.0%	-15.8%	-6.6%
Average Cut Per Head	-9.9%	-1.6%	-2.0%	-100.0%	-1.3%	2.1%	-4.5%
Shorn Wool Production	-20.4%	-3.7%	-3.6%	-8.0%	-0.3%	-14.1%	-10.8%

Note: Totals may not add due to rounding

Historical Australian Production Figures

The tables below provide historical sheep shorn numbers, wool production, fleece weight and micron share statistics since 1991/92 for background information.

Table A2: Australian wool production statistics since 1991/92

Year	Sheep Numbers Shorn (million)	Average Cut Per Head (kg)	Shorn Wool Production (mkg greasy)
1991-92	180.9	4.43	801
1992-93	178.8	4.56	815
1993-94	172.8	4.49	775
1994-95	156.2	4.37	682
1995-96	145.6	4.50	655
1996-97	152.0	4.35	661
1997-98	150.0	4.22	633
1998-99	153.6	4.33	665
1999-00	144.2	4.30	619
2000-01	139.5	4.31	602
2001-02	118.6	4.68	555
2002-03	116.6	4.28	499
2003-04	104.7	4.53	475
2004-05	106.0	4.49	475
2005-06	106.5	4.33	461
2006-07	101.4	4.24	430
2007-08	90.2	4.43	400
2008-09	79.3	4.52	362
2009-10	76.2	4.50	343
2010-11	76.2	4.53	345
2011-12	76.4	4.48	342
2012-13	78.8	4.47	352
2013-14	78.0	4.37	341
2014-15	76.9	4.50	346
2015-16	73.4	4.43	325
2016-17	74.3	4.58	340
2017-18	76.8	4.45	341
2018-19f	71.7	4.25	305

Table A3: Australian micron profile of AWTA wool test volume statistics since 1991/92 (% share and average micron)

Year	<16.5	17	18	19	20	21	22	23	24	25/26	27/28	29/30	>30.5	Average Fibre Diameter (um)
1991/92	0.1%	0.7%	3.2%	7.9%	15.2%	21.5%	20.0%	13.4%	7.1%	5.5%	2.9%	1.6%	1.0%	22.0
1992/93	0.0%	0.3%	1.9%	5.4%	12.0%	19.9%	20.6%	15.6%	10.0%	7.9%	3.0%	1.9%	1.6%	22.4
1993/94	0.1%	0.5%	2.4%	5.9%	12.1%	18.8%	20.8%	15.7%	10.0%	7.4%	2.8%	1.9%	1.7%	22.4
1994/95	0.1%	0.6%	3.5%	8.6%	15.2%	20.9%	19.9%	13.0%	7.0%	4.7%	2.8%	2.0%	1.7%	22.0
1995/96	0.0%	0.6%	3.3%	8.2%	15.3%	20.8%	18.5%	13.2%	8.1%	6.0%	2.7%	1.8%	1.6%	22.1
1996/97	0.2%	0.8%	3.9%	9.7%	15.3%	20.1%	18.3%	13.1%	7.4%	5.3%	2.3%	1.9%	1.8%	22.0
1997/98	0.2%	1.2%	4.5%	9.8%	14.8%	19.4%	18.3%	12.8%	7.7%	5.4%	2.6%	1.8%	1.5%	21.9
1998/99	0.2%	1.1%	4.2%	8.8%	14.6%	19.6%	18.6%	14.0%	7.6%	5.1%	2.7%	2.0%	1.5%	22.0
1999/00	0.1%	1.0%	4.2%	9.3%	14.4%	19.1%	18.2%	13.6%	7.7%	5.2%	2.9%	2.4%	1.9%	22.1
2000/01	0.2%	1.3%	5.2%	11.1%	15.7%	18.5%	16.4%	11.4%	6.8%	5.1%	3.6%	2.8%	1.9%	22.0
2001/02	0.3%	2.0%	7.2%	14.4%	19.9%	18.9%	12.9%	7.7%	4.1%	3.7%	3.8%	3.1%	1.9%	21.6
2002/03	1.0%	3.9%	9.8%	15.7%	18.9%	17.6%	12.0%	6.6%	2.9%	3.4%	3.7%	2.9%	1.7%	21.2
2003/04	0.7%	3.6%	9.9%	15.8%	18.3%	16.6%	11.9%	7.5%	3.6%	3.5%	3.8%	2.9%	1.8%	21.3
2004/05	1.2%	4.2%	10.5%	16.5%	18.7%	15.9%	10.7%	6.2%	3.2%	3.6%	4.1%	3.1%	2.0%	21.2
2005/06	1.4%	4.7%	9.7%	15.1%	18.7%	17.1%	11.5%	5.9%	2.9%	3.9%	4.5%	2.9%	1.6%	21.2
2006/07	2.0%	5.9%	11.8%	15.9%	16.9%	14.0%	9.9%	6.2%	3.4%	4.3%	4.4%	3.2%	2.1%	21.2
2007/08	1.9%	5.3%	10.9%	16.8%	18.4%	14.3%	9.2%	5.5%	3.0%	4.1%	4.8%	3.6%	2.2%	21.2
2008/09	2.0%	5.7%	11.4%	16.6%	18.5%	15.0%	9.1%	4.4%	2.3%	3.8%	5.1%	3.8%	2.2%	21.2
2009/10	2.3%	6.2%	12.6%	17.1%	17.5%	13.2%	8.4%	4.6%	2.5%	4.1%	5.4%	3.9%	2.3%	21.2
2010/11	1.5%	4.8%	11.0%	16.8%	18.0%	13.5%	8.4%	5.4%	3.0%	3.9%	5.5%	5.0%	3.1%	21.5
2011/12	1.8%	5.6%	12.0%	17.1%	16.6%	12.3%	8.3%	5.3%	2.9%	4.2%	5.8%	4.7%	3.3%	21.5
2012/13	2.5%	7.0%	13.3%	17.5%	16.8%	12.0%	7.3%	4.1%	2.3%	4.6%	6.2%	4.0%	2.5%	21.2
2013/14	3.8%	8.4%	14.6%	17.8%	16.0%	10.9%	6.2%	3.4%	2.2%	5.2%	6.4%	3.1%	2.1%	20.9
2014/15	3.2%	7.9%	14.8%	18.5%	15.8%	10.5%	6.5%	3.5%	1.9%	4.4%	6.5%	3.9%	2.6%	21.0
2015/16	3.9%	8.5%	14.6%	17.8%	16.2%	10.8%	6.0%	2.9%	1.9%	4.6%	6.5%	3.6%	2.7%	21.0
2016/17	3.6%	7.5%	13.4%	17.4%	17.2%	12.1%	6.9%	3.4%	2.0%	4.4%	5.8%	3.4%	2.7%	21.0
2017/18	3.2%	8.6%	15.4%	18.6%	16.1%	10.2%	5.7%	2.9%	1.8%	4.1%	6.0%	4.0%	3.2%	21.0
2018/19*	7.0%	11.2%	17.7%	19.9%	15.8%	8.4%	4.5%	2.2%	1.4%	3.9%	4.6%	2.0%	1.6%	20.1

* The 2018/19 data is for the period July to the end of October 2018

Explanation of revised AWPFC data series

At the December 2005 meeting, the national Committee made the decision to collate and review the key variables (shorn wool production, cut per head, number of sheep shorn) used in the committee from the available industry sources and to create a consistent historical data series at both a state and national level. This was required as some differences existed between industry accepted figures and the AWPFC data series and to ensure a consistent methodology over time. This process resulted in changes to the parameters 'average cut per head' and the 'number of sheep shorn' for some seasons at both a state and national level.

Modus operandi for the Australian Wool Production Forecasting Committee

The Australian Wool Production Forecasting Committee draws together a range of objective data and qualitative information to produce consensus-based, authoritative forecasts four times a year for Australian wool production.

The Committee has a two-level structure, with a National Committee considering information and advice from state sub-committees. It is funded by Australian Wool Innovation Limited, which also provides an independent representative in the role of the Chairman of the National Committee.

The National and state sub-committees comprise wool producers, sheep pregnancy scanners, wool brokers, exporters, processors, private treaty merchants, AWEX, AWTA, ABARES, ABS, MLA, state departments of Agriculture and AWI.

The Committee releases its forecasts in the forms of a press release and a report providing the detailed forecasts, historical data and commentary on the key drivers of the forecasts.