

# Australian Wool Production Forecast Report

December 2010

Australian Wool Production Forecasting Committee

## Summary

- Australian shorn wool production is forecast at 335 mkg greasy in 2010/11, 1.3% lower than the Committee's second estimate for the 2010/11, in August 2010.
- The reduction is primarily due to the impact of conditions in WA and QLD, largely offsetting the positive seasonal impacts occurring in other sheep production areas in Australia. Table 1 summarises the estimates and forecasts.

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

Parameter	2009/10 estimate	2010/11 2 <sup>nd</sup> forecast	Change YOY	2010/11 3 <sup>rd</sup> forecast	Change YOY
<b>Sheep numbers shorn</b> (million head)	76.2	73.3	-3.8%	72.5	-4.9%
<b>Average cut per head</b> (kg/head)	4.50	4.64	3.1%	4.63	2.9%
<b>Shorn wool production</b> (mkg greasy)	343	340	-0.8%	335	-2.3%

Note: Totals may not add due to rounding.

- Significant issues impacting on the Committee deliberations include:
  - Strong year-on-year decline in sheep slaughter and live export in all States except WA, reflecting grower intent to increase sheep numbers and consequential increased retention of older ewes and ewe lambs for breeding purposes. The impact of such retention on wool production is likely to be felt mainly in 2011/12.
  - Substantial interstate transfer of breeding ewes from WA, primarily to SA, VIC, and NSW – approaching 1 m sheep have been transferred this calendar year. Since the majority of these have been transferred "off shears", the potential impacts on wool production will most likely be felt in 2011/12.
  - Clear evidence of substantially reduced production of Super- and Ultra-fine wool categories, and increased production of the coarsest Merino and Non-Merino categories - with the average fibre diameter of the Australian clip forecast to increase by 0.2 microns to 21.4 microns this season.
- Overall, the changes in forecast production are consistent with a trend toward stabilisation of wool production in Australia.

## FURTHER INFORMATION

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## Wool Production Estimates and Forecasts

### Forecast for 2010/11

The Committee's third forecast for the 2010/11 season is for shorn wool production to total 335 mkg greasy, 1.3% lower than the preceding second forecast made in August 2010. The comparative estimates and forecasts are shown in Table 2 below.

**Table 2: Comparison of 2009/10 production estimate against 2010/11 forecasts.**

Parameter	2009/10 estimate	April forecast	August forecast	December forecast	Change YOY %
<b>Opening sheep number</b> (ABS, million)	72.7	71.1	70.0	67.7	-6.9%
<b>Sheep numbers shorn</b> (million)	76.2	75.2	73.3	72.5	-4.9%
<b>Average cut per head</b> (kg/head)	4.50	4.68	4.64	4.63	2.9%
<b>Shorn wool production</b> (mkg greasy)	343	350	340	335	-2.3%

Note: Opening sheep numbers as at 1<sup>st</sup> July of each year. For 2009/10 it is the ABS final estimate. For 2010/11 it is the ABS preliminary estimate.

The corresponding State production forecasts are shown in Table 3, comparing August 2010 and December forecasts.

**Table 3: Changes to State Committee forecasts for 2010/11 wool production, comparing August (2<sup>nd</sup>) and December (3<sup>rd</sup>) forecasts.**

2 <sup>nd</sup> forecast (Aug-10)	QLD	NSW	VIC	TAS	SA	WA	National
<b>Opening sheep number</b> (ABS, million)	4.3	24.2	14.0	2.1	10.2	15.1	70.0
<b>Sheep to be shorn</b> (million)	3.4	25.0	16.7	2.5	9.4	16.3	73.3
<b>Average GFW</b> (kg)	4.25	4.85	4.37	3.94	5.32	4.38	4.64
<b>Wool production</b> (mkg greasy)	14.4	121.0	73.1	9.9	50.1	71.4	340

3 <sup>rd</sup> forecast (Dec-10)	QLD	NSW	VIC	TAS	SA	WA	National
<b>Opening sheep number</b> (ABS, million)	3.6	23.9	14.4	2.0	9.1	14.7	67.7
<b>Sheep to be shorn</b> (million)	3.5	25.0	17.0	2.5	9.4	15.2	72.5
<b>Average GFW</b> (kg)	3.91	4.85	4.50	3.94	5.32	4.24	4.63
<b>Wool production</b> (mkg greasy)	13.7	121.0	76.4	9.7	50.1	64.5	335

change (%)	QLD	NSW	VIC	TAS	SA	WA	National
<b>Opening sheep number</b>	-16.3%	-1.2%	2.9%	-4.8%	-10.8%	-2.6%	-3.3%
<b>Sheep to be shorn</b>	2.9%	0.0%	1.5%	-2.0%	0.0%	-6.7%	-1.1%
<b>Average GFW</b>	-7.9%	0.0%	3.0%	0.0%	0.0%	-3.2%	-0.2%
<b>Wool production</b>	-4.9%	0.0%	4.5%	-2.0%	0.0%	-9.7%	-1.5%

The data in Table 3 shows significant differences between individual States revising forecasts, most notably seen in the changes to the forecasts in WA and VIC:

- WA production forecasts reflect the worsening seasonal conditions, resulting in fewer sheep shorn (6.7% reduction), and reduced greasy fleece weight (3.2%). There has also been substantial transportation of live sheep to Eastern States. These combine to result in a further 9.7% reduction in greasy wool production to 64.45 m kgs.
- By comparison, and due to outstanding seasonal conditions, VIC data shows forecast further increases to fleece weights (3%) and numbers of sheep to be shorn (1.5%).

The combined effect of the changes is the modest further reduction in wool production between August and December forecasts. Table 4 shows the result of the 3<sup>rd</sup> forecast on the comparison with 2009/10 production estimate.

**Table 4: Comparison of the 2009/10 estimate against the 3<sup>rd</sup> 2010/11 production forecast (December 2010).**

<b>2009/10 final estimate</b>	<b>QLD</b>	<b>NSW</b>	<b>VIC</b>	<b>TAS</b>	<b>SA</b>	<b>WA</b>	<b>National</b>
<b>Opening sheep number</b> (ABS, million)	4.3	25.6	15.1	2.1	10.0	15.7	72.7
<b>Sheep to be shorn</b> (million)	3.7	26.2	17.6	2.5	9.0	16.9	76.2
<b>Average GFW</b> (kg)	4.30	4.62	4.20	3.82	5.22	4.4	4.50
<b>Total wool production</b> (mkg greasy)	16.1	121.0	74.0	9.6	47.0	74.0	343
<b>3<sup>rd</sup> forecast (Dec-10)</b>	<b>QLD</b>	<b>NSW</b>	<b>VIC</b>	<b>TAS</b>	<b>SA</b>	<b>WA</b>	<b>National</b>
<b>Opening sheep number</b> (million)	3.6	23.9	14.4	2.0	9.1	14.7	67.7
<b>Sheep to be shorn</b> (million)	3.5	25.0	17.0	2.5	9.4	15.2	72.5
<b>Average GFW</b> (kg)	3.9	4.9	4.5	3.9	5.3	4.2	4.63
<b>Total wool production</b> (mkg greasy)	13.7	121.0	76.4	9.7	50.1	64.4	335
<b>change %</b>	<b>QLD</b>	<b>NSW</b>	<b>VIC</b>	<b>TAS</b>	<b>SA</b>	<b>WA</b>	<b>National</b>
<b>Opening sheep number</b>	-16.3%	-6.6%	-4.6%	-4.8%	-9.0%	-6.4%	-6.9%
<b>Sheep to be shorn</b>	-6.5%	-4.7%	-3.7%	-2.5%	4.4%	-10.0%	-4.9%
<b>Average GFW</b>	-9.0%	5.0%	7.2%	3.1%	1.9%	-3.2%	2.9%
<b>Total wool production</b>	-14.9%	0.0%	3.2%	0.6%	6.6%	-12.9%	-2.3%

Overall, production is forecast to decline compared to 2009/10 by 2.2% to 335 m kgs, with declines in Western Australia (-12.9%) and Queensland (-14.9%) partly offset by increases in Victoria (3.2%) and South Australia (6.6%).

## Major data inputs

These forecasts are based on detailed consideration by the state and national committees of current seasonal conditions, information gathered on sheep producer and wool grower intentions, including the MLA/AWI Lamb Survey results, sheep and ABS lamb turn-off for 2009/10 and other key inputs.

### ABS data

Table 5 summarises ABS flock statistics, including the November-released provisional forecast for 2010. In this most recent release, ABS revised downwards their forecast of the 2010/11

sheep flock from 70.0 m to 67.7 m (2.3 m or 3.3%).

**Table 5: ABS National flock numbers.**

Parameter	2006	2007	2008	2009	2010p	Change YOY (%)
<b>Flock size</b> (million, at June)	91.0	85.7	76.9	72.7	67.7	-7%
<b>Breeding ewes</b> (million)	48.6	46.4	45.4	40.9	42.0	+3%
<b>Lambs marked</b> (million)	35.1	34.1	NA	32.5	30.3	-7%
<b>Ewes mated</b> (million)	42.7	41.5	NA	37.7		
<b>Marking rate</b> (%)	82%	82%	NA	85%		

National ABS sheep turn-off statistics from Australian farms are shown in Table 6.

**Table 6: ABS Sheep turn-off data for 2010 (calendar year to-date)**

Parameter	Calendar year-to-date		5 year CY average		
	CY to Sept 2009	CY to Sept 2010	Change	Sep-10	Change
<b>Sheep slaughter</b> ('000 hd)	7,029	4,480	-36%	8,261	-46%
<b>Sheep weights</b> (kg/hd cwt)	20.73	22.14	7%	20.62	7%
<b>Mutton production</b> (tonnes cwt)	145,713	99,200	-32%	170,351	-42%
<b>Lamb slaughter</b> ('000 hd)	15,299	13,670	-11%	14,581	-6%
<b>Lamb weights</b> (kg/hd cwt)	20.69	21.66	5%	20.63	5%
<b>Lamb production</b> (tonnes cwt)	316,511	296,119	-6%	300,792	-2%
<b>Live exports</b> (hd)	2,535,867	2,087,272	-18%	2,701,010	-23%

The ABS data suggests year-on-calendar year decline in sheep turn-off – with reduced slaughter of adult sheep (-36%) and lambs (-11%), mutton production (-32%), and live exports (-18%); all of which are consistent with the anecdotal reports of increased retention of ewe lambs and older ewes for breeding purposes. Western Australia is the only State where a trend toward reduced sheep turn-off appears not to have occurred – this is due to the worsening seasonal conditions, which has seen close to 1 m sheep exported to other States.

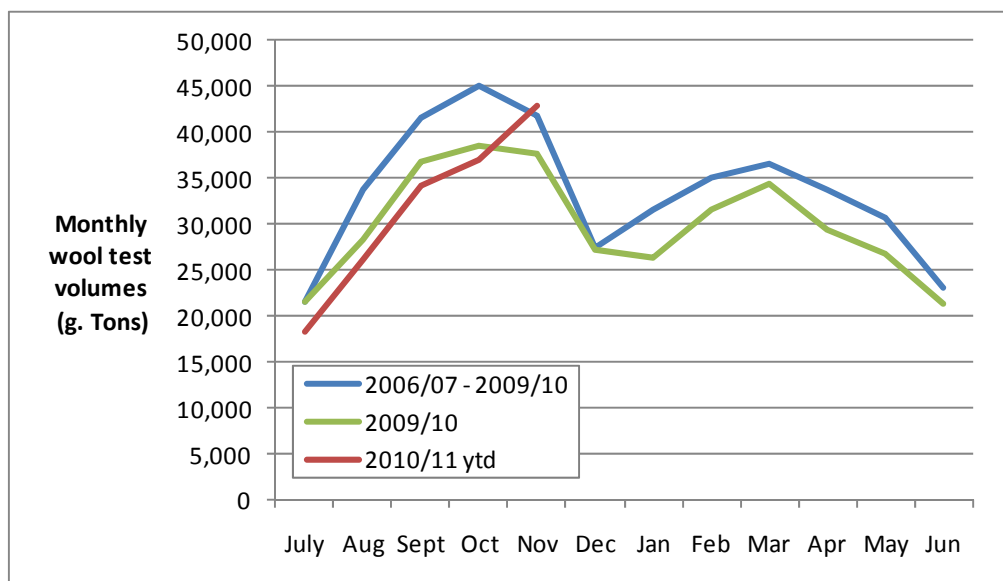
## AWTA wool test data

Following the August 2010 National Committee meeting, AWTA developed a specific Key Test Data report for wool production forecasting purposes. This report aggregates data on a Wool Statistical Area basis, and generates monthly greasy test volumes within diameter categories. Comparative year-to-date results are shown in Table 7 and Figure 1, based on this new report.

**Table 7: Comparison of 2009/10 and 2010/11 year-to-date AWTA test volumes.**

Year	0.0 -16.5	16.6- 17.5	17.6- 18.5	18.6- 19.5	19.6- 20.5	20.6- 21.5	21.6- 22.5	22.6- 23.5	23.6- 24.5	24.6- 26.5	26.6- 28.5	28.6- 30.5	30.6 +	TOTAL
<b>2008/09</b>	4,322	11,090	20,272	26,904	28,669	22,830	15,068	7,923	3,739	5,557	7,717	5,756	2,794	162,641
<b>2009/10</b>	2,759	8,538	17,855	26,664	29,059	22,777	14,977	8,801	3,964	4,901	7,433	7,253	3,668	158,649
<b>YOY</b>	-36.2%	-23.0%	-11.9%	-0.9%	1.4%	-0.2%	-0.6%	11.1%	6.0%	-11.8%	-3.7%	26.0%	31.3%	-2.5%

**Figure 1: Across-years comparison of monthly wool test volumes – 2010/11 year-to-date compared with 2009/10, and the average of the 4 seasons 2006/07 – 2009/10.**



#### AWI Production Forecasting Model

In addition, AWI has developed a statistical forecasting methodology which utilises the new AWTA data report. The key aspects of this model are that:

- It assumes that wool production follows a predictable trajectory across years, which may be statistically described by fitting non-linear regression models to cumulative wool production data, allowing prediction of production in each diameter category;
- These trajectory-based forecasts are adjusted for cumulative year-to-date changes in wool test volumes for the forecast season. Hindcast evaluation has shown the model accords closely with 2008/09 and 2009/10 AWPFC final estimates.

The combination of the two new inputs is shown in Table 8.

**Table 8: Australian wool production estimates and forecasts derived from the AWI forecasting model and AWTA WSA-based Key Test data.**

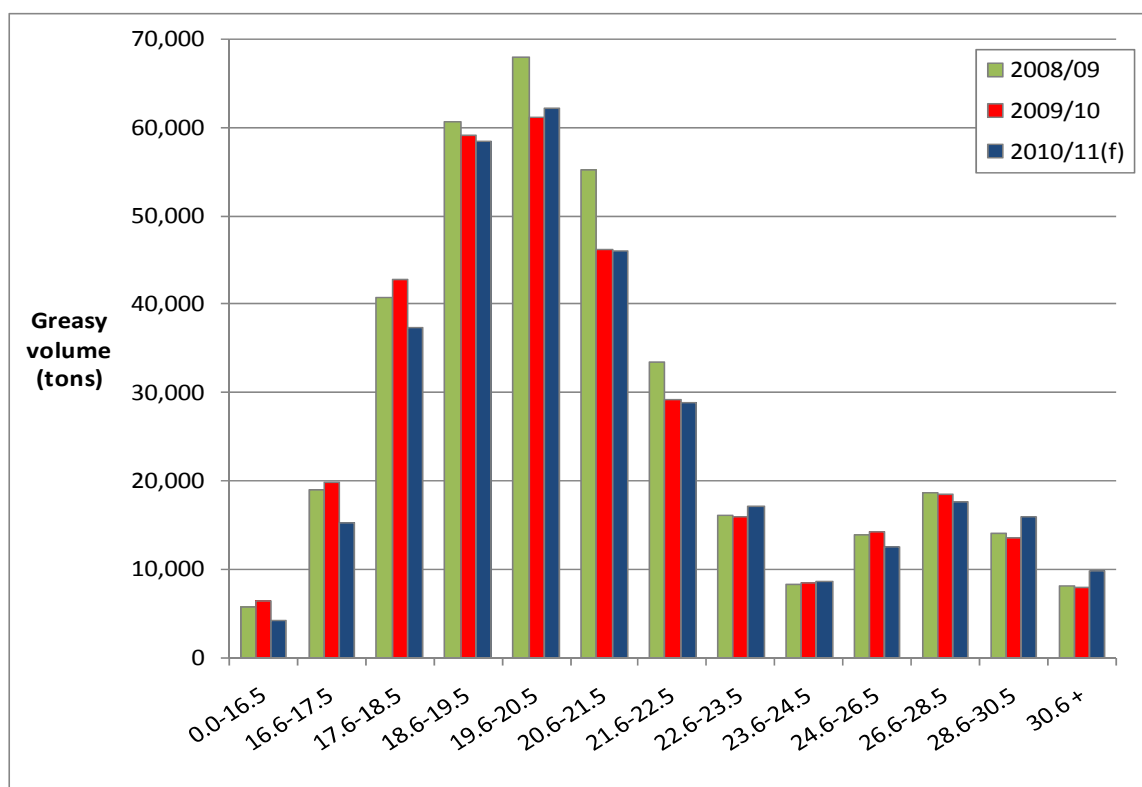
Year	0.0 -16.5	16.6- 17.5	17.6- 18.5	18.6- 19.5	19.6- 20.5	20.6- 21.5	21.6- 22.5	22.6- 23.5	23.6- 24.5	24.6- 26.5	26.6- 28.5	28.6- 30.5	30.6 +	TOTAL
2008/09e	5,694	19,009	40,692	60,661	67,988	55,282	33,402	16,083	8,271	13,880	18,644	14,047	8,071	361,722
2009/10e	6,348	19,843	42,832	59,153	61,092	46,141	29,231	15,968	8,514	14,198	18,566	13,467	8,009	343,360
2010/11f	4,117	15,273	37,334	58,457	62,176	46,002	28,866	17,114	8,584	12,593	17,587	15,996	9,794	333,893
YOY	-35.1%	-23.0%	-12.8%	-1.2%	1.8%	-0.3%	-1.2%	7.2%	0.8%	-11.3%	-5.3%	18.8%	22.3%	-2.8%

The key points to note are that:

- For 2010/11, a 2.8% reduction in overall greasy wool production is suggested, to 334 m kgs. This represents a 1.8% reduction on the August 2010 national forecast (340 m kgs), and is close to that independently forecast by the State Committees.
- Substantial changes are forecast for the production of wool within specific diameter categories, with substantial year-on-year decrease in the production of the finest categories (<18.6 um), and significant gains in production of the coarsest categories (> 28.5 um). These changes are shown in Figure 2.

The forecast overall impact of these changes is to increase clip average fibre diameter by 0.2 microns to 21.4 microns.

**Figure 2: Year-on-year changes to the diameter profile of the Australian clip.**

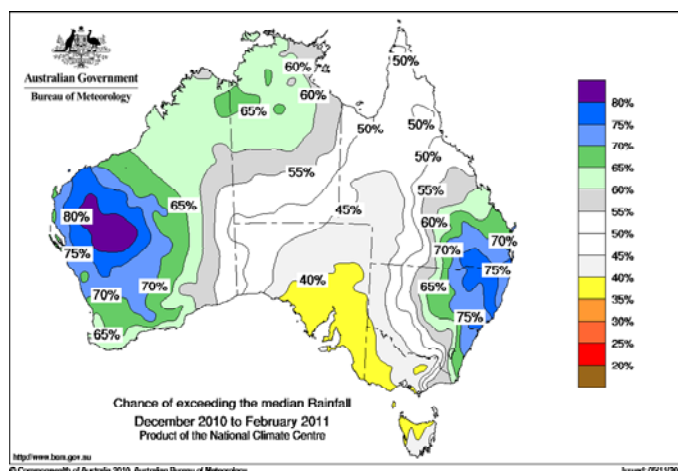
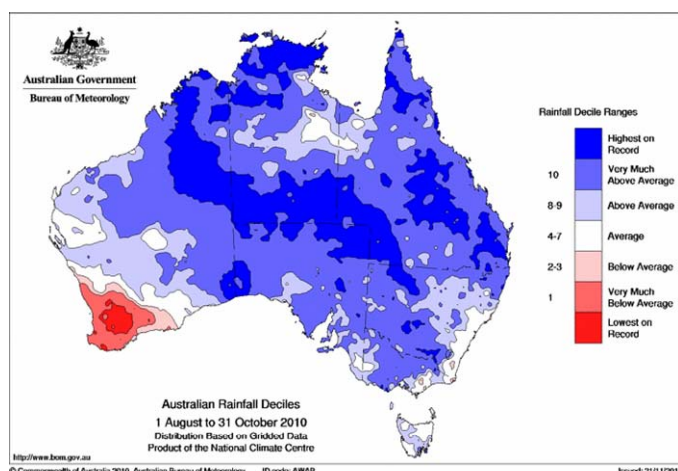


### Bureau of Meteorology (BOM) Seasonal Outlook

A summation of BOM seasonal summaries and the December 2010 – February 2011 outlook are shown in Figure 3 and 4.

**Figure 3: BOM seasonal summary: August to October 2010**

**Figure 4: BOM seasonal outlook: December to February 2011**



With the exception of drought-affected South-West WA, Spring 2010/11 rainfall was well above average. The seasonal outlook is for above average rainfall for Central Western WA and North-Eastern NSW, but otherwise rainfall should approximate to normal values.

### State Committee inputs

The following provides a summary of conditions in each state as reported by State Committees in early December 2010.



## New South Wales

Forecast wool production in NSW in 2010/11 is unchanged from the 2<sup>nd</sup> forecast, made in August 2010.

While the State Committee did not change the previous forecast for greasy fleece weight, it noted that there was evidence of increased clean wool yield occurring due to seasonal conditions, and so the possibility of increased clean fleece weight and thus clean wool production. Further, gains due to improved lambing percentages and increased retention of older ewes may have been offset by increased losses of ewes and lambs in some areas due to inclement weather at lambing, and due to external parasite challenges (fleece rot and flies).

The Committee noted the impact of wet weather on grain crops throughout NSW, leading to downgrading of much grain to stock quality – this was felt to make it more likely that graziers would feed sheep if required, and so maintain sheep numbers.

## Western Australia

Forecast production in WA in 2010/11 was further reduced from the August 2010 values, due to worsening seasonal conditions. In large areas of the State, stock water shortages are now at critical levels, and in many cases 30-50% of flocks have been turned off.

The State Committee downgraded forecast greasy fleece weight (-3.2%) and sheep numbers to be shorn (-6.7%), consistent with ABS yardings data and reflecting the sale of older ewes and younger ewes, wethers, and prime lambs. The Committee noted the live transport of substantial numbers of sheep to Eastern States, particularly SA, VIC, and NSW – estimated to be approaching 1 million sheep year-to-date.

## Victoria

The Victorian Committee has further increased 2010/11 greasy wool production compared to 2009/10, with production expected to rise by 3.2% year on year. This reflects increased greasy fleece weight (+7.2%) more than offsetting forecast decline in numbers of sheep to be shorn (-3.7%). The Committee also noted the potential for increased clean wool yield due to seasonal conditions, but felt that any gains in this area may be offset by increased fleece rot and flystrike.

The Committee noted the positive impact of interstate transfers from WA may be having on sheep numbers, but that most of the sheep received will have been shorn prior to shipment and so possible impact on greasy wool production in 2010/11 will be minimal.

## South Australia

The SA State Committee elected not to adjust August 2010 forecast values for SA sheep numbers and wool production, noting that the significant transfer of live sheep from WA thus far in 2010 have largely been clean shorn and so impacts on wool production would not be felt until 2011/12. Further, interstate transfers from WA are likely to cease after 1 January 2011, due to changes in OJD control regulations.

## Queensland

The Queensland Committee's further reduction in greasy wool production forecast for that State reflected concerns about the changing Queensland flock structure and flock numbers – exodus of wethers from Queensland reducing sheep to be shorn numbers, and the increased proportions of lambs in the number of sheep to be shorn reducing greasy fleece weight.

While the Committee noted that seasonal outlook is presently very good, continual rain will have a negative impact on wool quality, in addition to perennial problems of flies, lice, and wild dogs.

## Tasmania

While the Tasmanian Committee adjusted the August 2010 forecast for 2010/11 greasy wool production forecast slightly downwards to reflect reductions in sheep shorn numbers and increased prime lamb production, forecast seasonal production remains 0.6% greater than 2009/10.

The forecast reduction in stock numbers reflects the good stock prices. While older ewes with

sound mouths are increasingly being retained for breeding, this has been more than offset by turn-off of remaining wethers and older ewes with broken mouths.

### **Historical Australian Production Figures**

Table 10 provides historical sheep numbers, wool production and fleece weight statistics since 1997/98 for background information.

**Table 10: Australian Wool Production Statistics**

	<b>Opening Sheep Numbers</b> (million)	<b>Sheep Shorn</b> (million)	<b>Average Cut Per Head</b> (kg/head)	<b>Shorn Wool Production</b> (mkg greasy)
<b>1997/98</b>	120.1	150	4.22	633
<b>1998/99</b>	117.4	153.6	4.33	665
<b>1999/00</b>	115.4	144.2	4.30	619
<b>2000/01</b>	118.5	139.5	4.31	602
<b>2001/02</b>	110.8	118.6	4.68	555
<b>2002/03</b>	106.1	116.6	4.28	499
<b>2003/04</b>	99.2	104.7	4.53	475
<b>2004/05</b>	101.2	106.0	4.49	475
<b>2005/06</b>	101.1	106.5	4.33	461
<b>2006/07</b>	91.0	101.4	4.24	430
<b>2007/08</b>	85.7	90.2	4.43	400
<b>2008/09</b>	76.9	81.6	4.43	362
<b>2009/10e</b>	72.7	76.3	4.48	343
<b>2010/11f</b>	67.7	72.5	4.63	335

Note: Totals may not add due to rounding.

Source: AWPFC (incl March 2006 revised series)

### **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 AWI Production Forecasting Committee**

The AWI 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.

The National and state sub-committees comprise wool producers, wool brokers, exporters, processors, private treaty merchants, AWEX, AWTA, ABARE, ABS, MLA, Dept of Ag WA and The Woolmark Company.

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