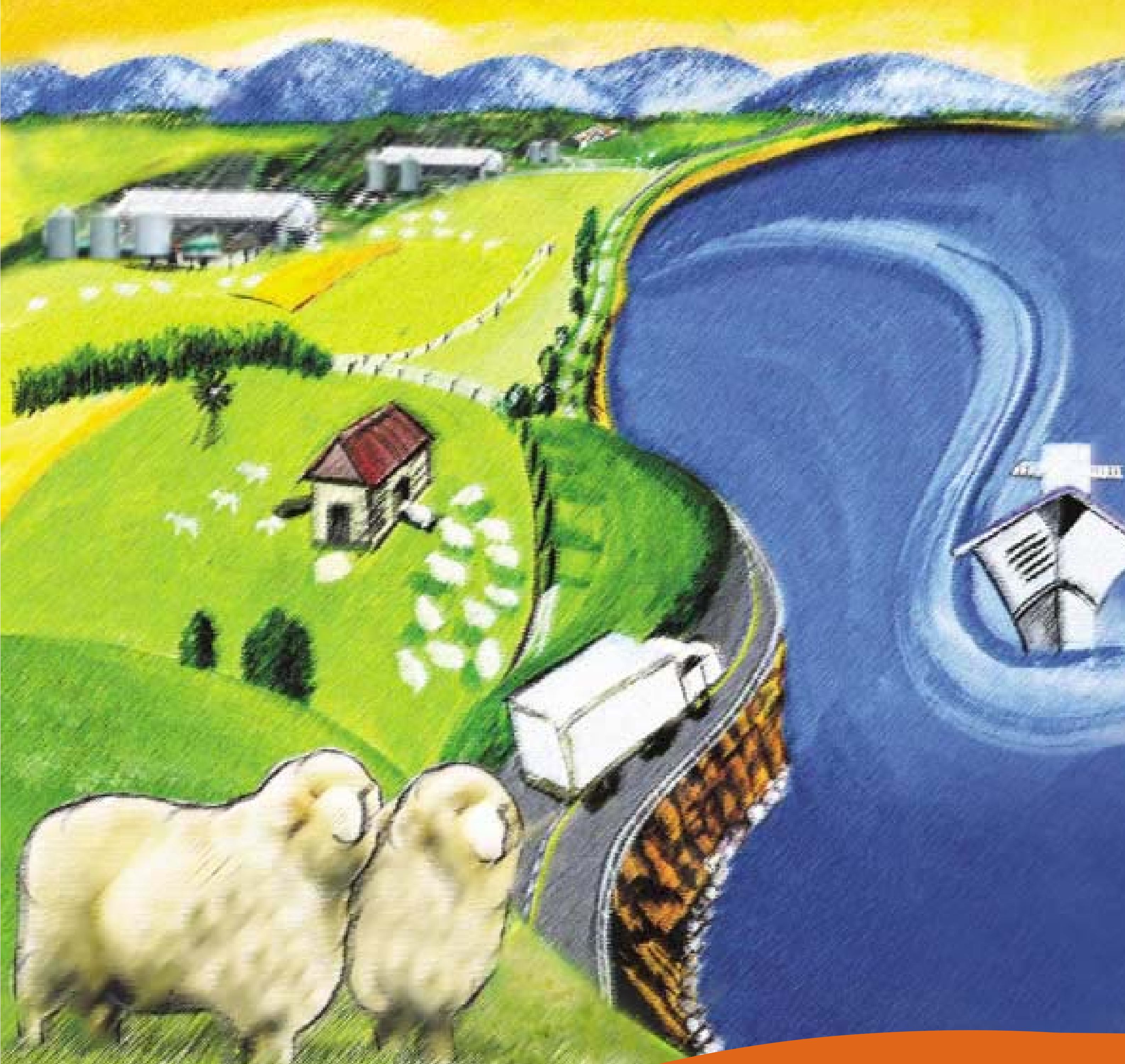
sheep's back to mill

statistics

Double Edition 2001/02 - 2002/03

and Executive Summary



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Sheep's Back to Mill 2001/02

Contents

EXECUTIVE SUMMARY

AWI Sheep's Back to Mill

2001/02 and 2002/03 Editions

Introduction:

The 'Sheep's back to Mill' industry analysis document was first introduced by the Australian Wool Corporation in the early 1970s'. It was designed to chart the costs of producing, harvesting and marketing wool from the farm gate to the early stage processor.

As such it is the most detailed time series of Australian industry costs for this part of the marketing chain available and has become a well respected and utilized reference document throughout the global wool industry.

The document has been in production on an annual basis since its introduction. This production has been undertaken by a variety of industry organizations since AWC was rationalised in the early 1990's. This includes Wool International, and the Australian Wool Exchange (AWEX). Australian Wool Innovation (AWI) decided to publish the reports once AWEX ceased publication after the 2000/01 series.

The 2001/02 and 2002/03 editions were produced by Independent Commodity Services (ICS) and Mac Stats Analysis (MSA) based on AWI project funding and retained the original methodology used by previous document providers.

A number of minor changes have been incorporated into these two editions eg. Inclusion of OFFM testing data costs and the adjustment of long term cost series for inflation, compared with the previous AWEX format. AWI expects to review these latest editions and determine if they can be enhanced in the future to provide an even more comprehensive analytical resource for the industry.

Overview of 2001/02 and 2002/03 editions

The 2001/02 and 2002/03 wool seasons have seen significant changes to the industry which include:

- Production had continued to decline to levels not seen since the 1940's and early 1950's. In the 1945/46 season shorn wool production was 369,400 tonnes and in the1950/51 season 466,900 tonnes. In 1989/90 production was 1,029,400 tonnes and in the 2002/03 season the shorn wool production levels were estimated at 490,000 tonnes. Because much of the costs are fixed, the cost of production has increased.

- The greasy stockpile overhang from the Reserve Price Scheme was finally liquidated.

Wool prices have continued the recovery evident since the historically low prices for the 1998/99 season. Average greasy prices obtained in 2002/03 are the highest since the 1989/90 season.

- Chinese trade activity has strengthened their position as the major purchaser of Australian Wool.

- Sheep numbers are estimated at less than 100 million as at June 2003 compared with over 180 million in 1989.

- Fine Wool production (less the 19.5 micron) continues to increase its percentage share of Australian production – 33% (707,878 farm bales sold) in the 2002/03 season compared with only 4% (194,801 farm bales sold) in the 1989/90 season.

- The worst drought in several decades in 2002/03 further impacted on the declining production and demographic base.

- The Australian/US dollar exchange began to trend upwards in the 2002/03 season ending a sustained period of exchange rates in the mid $US 50cent range. This rise in the exchange has fed directly into lower AUD wool prices.

In terms of the major variables charted in the SBTM series the highlights of the 2 seasons include:

- The total costs of harvesting, marketing and distributing the Australia clip declined relative to revenue to 26% in 2002/03. This is the lowest percentage figure since the record prices achieved in the late 1980s'. The equivalent total for 2001/02 was 31%. The 2002/03 figure is the 4th consecutive year of declining net % costs. It is also well below the average of around 40% evident for most of the 1990s'. This is because of declining sheep numbers.

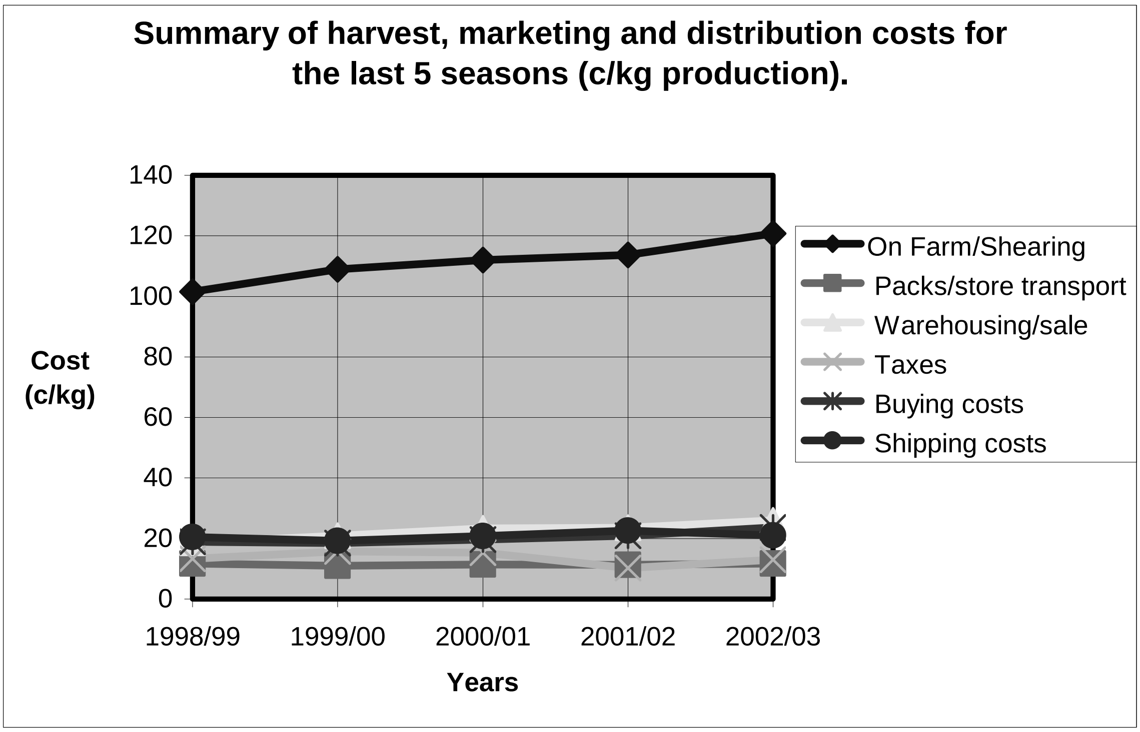
- The declining cost % compared with industry gross revenue evident over these 2 seasons is consistent with previous industry price cycles. Costs remain relatively static from year to year (see Table 1) but market prices can very significantly over shorter periods of time.

- The grower proportion of total costs (deflated) rose slightly in 2002/03 to an average of $1.71kg/greasy. Costs (deflated) borne by the buyers also remained relatively stable over both these seasons.

Table 1. Summary of Harvest, marketing and distribution costs for the last 5 seasons (c/kg production)

Activity	1998/99	1999/00	2000/01	2001/02	2002/03	5 year avg	02/3-98/9% change
On Farm/Shearing	101.5	108.9	112.0	113.7	120.8	*111.4*	*19.0*
Packs/store transport	11.7	11.0	11.4	11.3	11.7	*11.4*	*0.3*
Warehousing/sale	18.6	20.9	23.3	23.6	26.0	*22.5*	*39.5*
Taxes	13.3	15.7	15.3	10.2	13.0	*13.5*	*-2.6*
Buying costs	18.9	18.5	19.7	20.9	23.7	*20.3*	*25.9*
Shipping costs	20.5	19.2	20.8	22.6	21.0	*20.8*	*2.1*
Total cost	***184.5***	***194.3***	***202.5***	***202.3***	***216.1***	*199.9*	*17.2*
Avrg Greasy Wool Value	***333.7***	***393.4***	***511.6***	***512.4***	***650.3***	*480.3*	*94.9*

Graph 1
1989/99 to 2002/03 cost analysis



Note: Data for graph 1 drawn from Table 1.

- During the past five seasons warehousing/selling costs and buying costs rose as a proportion of total costs, reflecting the pressure on the market caused by the significant drop in the volume of the Australian clip and reduction in greasy wool stocks. Transport and taxes fell as a proportion of costs during this period.

- Total deflated costs have remained relatively static at around \$2.02 - \$2.37/kg greasy for the majority of the last 10 seasons. This figure is well below the average cost relative to revenue (harvest, marketing and distribution) for producers evident in the rising wool market of the late 1980s'.

It is also worth considering some of the individual cost components in terms of their movements over the two seasons under review. Some of the highlights include:

- Direct on farm costs (Harvest, Marketing & distribution) continued to decline in 20002/03 with all costs items falling for the 2nd consecutive year. These cost reductions predominately reflect the reduced clip size over the review period.

- Insurance costs recorded cost increases in both 2001/02 – 2002/03 for both broker and grower related items.

Table 2. Summary of insurance costs for the last 5 seasons (c/kg greasy)

Activity	1998/99	1999/00	2000/01	2001/02	2002/03	02/3-98/9% change
sheep's back to store	0.30	0.39	0.55	0.56	0.77	157.7
store fire	0.47	0.55	0.77	0.80	1.16	149.2
marine and port to mill	0.25	0.29	0.38	0.38	0.47	88.7

- Interlotting costs rose in both years which reflects the declining average lot size of the smaller clip.

- Buyers cost items have fallen in both seasons with the biggest declines evident for shipping preparation and sea freight costs. These declines reflect restructuring in the port handling sector and global sea freight demand/supply conditions.

- Wool tax totals increased in 2002/03 on the basis of rising wool prices.

Summary

The trends evident in the 2002/03 and 2001/02 Sheep's Back to Mill analysis are consistent with previous wool market recovery periods. The overall costs of harvesting, marketing and distribution (as a proportion of industry gross proceeds) have declined to levels last evident in the late 1980s'. The cost to the grower and buyer segments remained similar over both seasons in terms of total cost and relative distribution.

Many of the changes evident in the year on year figures reflect the continued decline in wool production in Australia. The major significant changes for individual cost items occurred for insurance, shipment preparation, sea freight and transport to mill costs.

Sheep’s Back to Mill 2001/02

Introduction

In this edition of Sheep’s Back to Mill costs for the wool selling season 1 July 2001 to 30 June 2002 are detailed. This analysis estimates the cost of harvesting, marketing and distribution of raw wool from the sheep's back in Australia to overseas mills. The Australian Wool Corporation (AWC) produced this publication from 1970 to the 1992/93 season whilst Wool International (WI) produced the 1993/94 to 1996/97 editions. Following a change in legislation which saw the Market Reporting and Statistics functions transferred from Wool International, the Australian Wool Exchange (AWEX) produced the Sheep’s Back to Mill publication for the 1997/98 to 2000/01 editions.

Australian Wool Innovation (AWI) obtained the IP rights for the document from AWEX once the latter ceased publication after the 2000/01 series.

The main purpose of this paper is to compare industry cost items for a distinct part of the marketing chain over time.

Production

As estimated by the AWI Australian Wool Production and Forecasting Committee in September 2002, **shorn wool production in 2001/02** was **555,000 tonnes greasy, a decrease of 7.8%** from the previous season’s revised figure of 602,000 tonnes. The estimated number of sheep and lambs shorn fell from 139.6 million in 2000/01 to **127.0 million** in 2001/02, **a decrease of 9.0%.** The average cut per head rose from 4.31 kg to 4.38 kg, an increase of 1.6%. In 2001/02, the average bale weight decreased from 177.49 kg in 2000/01 to 176.41 kg and the estimated **total number of bales produced** decreased from 3,391,740 in the 2000/01 season to **3,146,080** in 2001/02 **a decrease of 7.2%.**

Auction Prices and Taxes

The average greasy price of wool rose from 437.43 cents per kilogram in the 2000/01 season to **512.46 cents per kilogram** in 2001/02, an increase of **17.2%.**

The total levy paid by woolgrowers for financing Research and Development and Promotion decreased from 3.0% in the 2000/01 season to 2% in 2001/02.

Exports

For the 2001/02 season wool exports (expressed in greasy equivalents) totalled **624,190 tonnes,** a decrease of 17.1% from the 2000/01 season. The sales from the growers’ reserves (on farm and in brokers stores) during the 2000/01 season, contributed to the additional exports which exceeded the annual production level by about 13%.

Summary

The total cost of harvesting, marketing and distributing Australian wool **expressed in cents per kilogram greasy of production** rose by **1.4% to 202.33 cents/kg** in 2001/02. The direct **cost to the woolgrowers (158,88 cents/kg)** fell **by 0.2%.** This was due to the reduction of tax levies (-21.9%), lower prices paid by growers for wool packs (-2.7%) offsetting small increases in shearing activities (+1.3%). The cost of transporting wool from farm to store rose only marginally (+0.3%)..

The **costs to overseas mills** increased by 5.4% due to a rise in buying costs and much dearer ocean freight rates. The costs that are set as a percentage of gross price, such as insurance (sheep's back to store, insurance store fire), broker commission and marine insurance, rose in line with wool price increases.

Calculation of Costs

As in the previous editions of this report, the post-sale cost items were estimated on the basis of greasy wool only. It was assumed that, on a greasy equivalent basis, processed wool costs are the same as greasy wool for these items.

Assessment of costs was based on average charges during the 2001/02 season or on charges applicable at 30 June 2002. The previous season's figures have been revised where applicable and in many instances differ from those reported in the 2000/01 Sheep's Back to Mill report.

Table 1 shows estimated costs in millions of dollars. These estimates were based on the dollars per bale or cents per kilogram figures derived from the relevant list of items. The estimates were then scaled by production and, where appropriate, the volume of exports. They are provided only to indicate the estimated aggregate national industry level of expenditure. These industry costs are further disaggregated into six major subcategories and the costs of each subcategory are expressed as a percentage of total costs..

In **Table 2**, the total costs shown in Table 1 have been brought to a common base of cents per kilogram of production or the volume of exports for comparative purposes. This reduces the effect of the change in total production. The table also presents the same six major subcategories of industry costs as aggregated in Table 1, but expressed in cents per greasy kilogram of production.

The charges incurred for each activity accessed, are shown in **Table 3**, and are compared with charges over the previous two years.

The report also includes three time series charts covering the period of January 1982 to June 2002.

Chart 1 presents the harvesting, marketing and distribution cost for Australian wool (in cents per greasy kilogram of production) compared with the average greasy price, adjusted for inflation using the consumer price index by the Reserve Bank of Australia.

Table 4 presents the nominal, CPI and inflation adjusted data used in Charts 1 and 3 in tabular form

Chart 2 depicts grower cost of harvesting, marketing and distribution as a percentage of average greasy wool price.

Chart 3 shows the harvesting, marketing and distribution cost for Australian wool for growers, buyers and the overall total adjusted for inflation.

To estimate wool production in terms of costs and profitability farm financial benchmark results from south-cost Australia are included in the appendix. Note, the costs detailed in this appendix may not match the average costs used in the Sheep's Back to Mill report.

Sources

The cost figures presented are based on data obtained from a wide collection of sources throughout the industry.

The costs associated with crutching were based on information and estimates from State Departments of Agriculture/Primary Industry; the shearing shed activities were based on data provided by Farmers Grazcos Shearing Co-operative Limited (NSW) and on rates listed in the Federal Pastoral Industry Award.

Data on average brokers' charges (warehousing, insurance, commission, interlotting, rehandling, buyers' service charge and transport to dump) was provided by Mr Phil Fyfe, care of the National Council of Wool Selling Brokers of Australia (NCWSBA).

Charges were averaged over NCWSBA broker members in all Australian centres, weighted by volume, by the NCWSBA.

The data related to the woolpacks were provided by the woolpacks importing company Alexander Colquhoun & Sons and by AWEX.

Core test data, both pre-sale and post-sale, staple length and strength certificates were provided by the Australian Wool Testing Authority (AWTA). The costs of shipment preparation and sea freight were provided by Australian Council of Wool Exporters (ACWE) and industry sources.

On farm measurement costs were calculated on data supplied by the Australian Wool Innovation (AWI).

The Reserve Bank of Australia Consumer Price Index was used to adjust data for inflation.

Holmes, Sackett and Associates supplied the farm financial benchmarking results.

Caution

It must be stressed that the figures shown are estimates only and should be treated with caution. They should not be taken out of tables and used without reference to the text material or explanatory notes. The major purpose of the analysis is to provide cost comparisons over time using a common basis and not to calculate actual industry expenditures.

Acknowledgments

The assistance received from officers in State Departments of Agriculture, other State Authorities, the Australian Bureau of Statistics, the National Council of Wool Selling Brokers of Australia, the Australian Council of Wool Exporters, AWTA Limited, AWEX, industry, and AWI colleagues is gratefully acknowledged.

TABLE 1

HARVESTING, MARKETING & DISTRIBUTION COSTS FOR AUSTRALIAN WOOL - SHEEP'S BACK TO MILL, 2001/02

	ACTIVITY	**2000/01 (R) $ million**		**2001/02 $ million**		**% CHANGE**
1	On Farm Fibre Measurement	N/A		13.00 *		-
2	Crutching	93.170		87.266		-6.3
3	Shearing	356.239		332.927		-6.5
4	Classing	59.373		55.707		-6.2
5	Shedhands	108.893		102.058		-6.3
6	Pressing	56.636		53.037		-6.4
	SUBTOTAL: On Farm/Shearing Shed	674.311		630.996		-6.4
	Subtotal as % of total cost		55.1%		55.9%	
	* Not included in the total					
7	Woolpacks	33.917		30.426		-10.3
8	Transport to store	31.367		29.007		-7.5
9	Insurance: sheep's back to store	2.844		3.100		9.0
	SUBTOTAL: Packs/store transport	68.128		62.533		-8.2
	Subtotal as % of total cost		5.6%		5.5%	
10	Warehousing	58.591		57.934		-1.1
11	Broker's commission (net of wool tax)	26.412		29.099		10.2
12	Insurance: store fire	3.976		4.437		11.6
13	Core test certificate: pre-sale	20.537		18.891		-8.0
14	Staple strength & length cert.: pre-sale	13.690		9.770		-28.6
15	Interlotting	0.512		0.549		7.2
16	Rehandling ("Bulkclassing")	7.260		7.323		0.9
	SUBTOTAL: Warehousing/sale	130.978		128.004		-2.3
	Subtotal as % of total cost		10.7%		11.3%	
17	Wool-tax levy	79.000		56.883		-28.0
	SUBTOTAL: Taxes	79.000		56.883		-28.0
	Subtotal as % of total cost		6.5%		5.0%	
	DIRECT COST TO WOOLGROWER	**952.417**		**878.415**		**-7.8**
	Subtotal as % of total cost		77.8%		77.9%	
18	Buying costs (incl post sale AM cert)	75.109		68.953		-8.2
19	Post service charge	34.189		34.355		0.5
20	Transport to dump - main centre	5.902		5.506		-6.7
	SUBTOTAL: Buying costs	115.200		108.814		-5.5
	Subtotal as % of total cost		9.4%		9.6%	
21	Shipment preparation	55.472		45.879		-17.3
22	Sea freight	62.412		59.818		-4.2
23	Insurance: marine & port to mill	2.443		2.363		-3.3
24	Transport to mill	35.637		32.857		-7.8
	SUBTOTAL: Shipping costs	155.963		140.917		-9.6
	Subtotal as % of total cost		12.7%		12.5%	
	DIRECT COSTS TO MILL	**271.162**		**249.730**		**-7.9**
	Subtotal as % of total cost		22.2%		22.1%	
	TOTAL COSTS: %		100%		100%	
	TOTAL COSTS: $ million	**1223.579**		**1128.146**		**-7.8**
	TOTAL GREASY WOOL VALUE	**2633.329**		**2844.153**		**8.0**
	DIRECT COST TO WOOLGROWERS AS PROPORTION OF TOTAL GREASY WOOL VALUE		**36.2%**		**30.9%**	

(R) Revised

TABLE 2

HARVESTING, MARKETING & DISTRIBUTION COSTS FOR AUSTRALIAN WOOL - SHEEP'S BACK TO MILL, 2001/02 (cents per greasy kg)

	ACTIVITY	2000/01 (R)		2001/02		% CHANGE
1	On Farm Fibre Measurement	N/A		2.34 *		-
2	Crutching	15.48		15.72		1.6
3	Shearing	59.18		59.99		1.4
4	Classing	9.86		10.04		1.8
5	Shedhands	18.09		18.39		1.7
6	Pressing	9.41		9.56		1.6
	SUBTOTAL: On Farm/Shearing Shed (+)	112.01		113.69		1.5
	Subtotal as % of total cost		56.1%		56.2%	
	* Not included in the total					
7	Woolpacks	5.63		5.48		-2.7
8	Transport to store	5.21		5.23		0.3
9	Insurance: sheep's back to store	0.47		0.56		18.2
	SUBTOTAL: Packs/store transport (+)	11.32		11.27		-0.4
	Subtotal as % of total cost		5.7%		5.6%	
10	Warehousing	9.73		10.44		7.3
11	Broker's commission (net of wool tax)	4.39		5.24		19.5
12	Insurance: store fire	0.66		0.80		21.0
13	Core test certificate: pre-sale	3.32		3.27		-1.3
14	Staple strength & length cert.: pre-sale	3.36		2.49		-25.7
15	Interlotting	0.09		0.10		16.3
16	Rehandling ("Bulkclassing")	1.21		1.32		9.4
	SUBTOTAL: Warehousing/sale (+)	22.74		23.67		4.1
	Subtotal as % of total cost		11.4%		11.7%	
17	Wool-tax levy	13.12		10.25		-21.9
	SUBTOTAL: Taxes (+)	13.12		10.25		-21.9
	Subtotal as % of total cost		6.6%		5.1%	
	DIRECT COST TO WOOLGROWER	**159.20**		**158.88**		**-0.2**
	Subtotal as % of total cost		79.8%		78.5%	
18	Buying costs (incl post sale AM cert)	13.02		13.70		5.2
19	Post service charge *	5.68		6.19		9.0
20	Transport to dump - main centre *	0.98		0.99		1.2
	SUBTOTAL: Buying costs (+)	19.68		20.88		6.1
	Subtotal as % of total cost		9.9%		10.3%	
21	Shipment preparation	7.37		7.35		-0.2
22	Sea freight	8.29		9.58		15.6
23	Insurance: marine & port to mill	0.32		0.38		16.7
24	Transport to mill	4.73		5.26		11.2
	SUBTOTAL: Shipping costs (*)	20.72		22.58		9.0
	Subtotal as % of total cost		10.4%		11.2%	
	SUBTOTAL: COSTS TO MILLS	**40.40**		**43.46**		**7.6**
	Subtotal as % of total cost		20.2%		21.5%	
	TOTAL COSTS: c/kg	**199.60**		**202.33**		**1.4**
	TOTAL COSTS EXCLUDING TAXES: c/kg	186.47		192.08		3.0
	TOTAL COSTS: %		100%		100%	
	AVERAGE GREASY WOOL VALUE: c/kg	**437.43**		**512.38**		**17.2**
	COST TO GROWERS AS % OF GREASY WOOL VALUE		36.4%		31.0%	
	TOTAL COST AS % OF GREASY WOOL VALUE		45.6%		39.5%	

NOTE: (+) - divided through by production; (*) - divided through by exports (R) Revised

Percentage changes and subtotals have been calculated on un-rounded values.

TABLE 3

THREE YEAR COMPARISON OF CHARGES BY ACTIVITY

	ACTIVITY	basis of charge	JUNE 2000	JUNE 2001	% CHANGE 01-00	JUNE 2002	% CHANGE 02-01
1	On Farm Fibre Measurement	$ per test	n/a	n/a		2.00	-
2	Crutching - contract	$ per 100	144.45	149.00	3.1	152.00	2.0
	- non-contract	$ per 100	64.33	67.03	4.2	67.95	1.4
3	Shearing	$ per 100	168.59	174.54	3.5	178.18	2.1
4	Classing	$ per week	698.50	710.50	1.7	728.50	2.5
5	Shedhands	$ per week	628.00	643.00	2.4	658.60	2.4
6	Pressing	$ per week	658.00	673.00	2.3	688.00	2.2
7	Woolpacks : HDPE phased out in 2000/01	$ per pack	9.00	0.00	0.00	0.00	-
	Nylon	$ per pack	10.46	10.00	-4.4	9.67	-3.3
8	Transport to store	$ per bale	8.76	9.25	5.6	9.22	-0.3
9	Insurance: sheep's back to store	% value	0.10%	0.108%	8.0	0.109%	0.9
10	Warehousing : sale by sample	$ per bale	17.04	17.27	1.3	18.41	6.6
	traditional sale	$ per bale	20.21	21.14	4.6	22.45	6.2
11	Broker's commission (net of wool tax)	% value	1.07%	1.03%	-3.4	1.04%	1.0
12	Insurance: store fire	% value	0.140%	0.151%	7.9	0.156%	3.3
13	Core test certificate: pre-sale	$ per lot	32.10	35.31	10.0	34.65	-1.9
14	Staple strength & length cert. pre-sale	$ per lot	32.50	35.75	10.0	26.40	-26.2
15	Interlotting	$ per bale	6.49	6.89	6.2	7.23	4.9
16	Rehandling ("Bulkclassing")	$ per bale	30.45	29.15	-4.3	30.64	5.1
17	Wool-tax levy	% value	4.00%	3.00%	-25.0	2.00%	-33.3
	Staple strength & length cert.: post-sale	$ per lot	39.50	43.45	10.0	34.10	-21.5
18	Buying costs	$ per bale	21.66	23.11	6.7	$24.16	4.5
19	Post service charge (+)	$ per bale	9.69	10.08	4.0	10.92	8.3
20	Transport to dump - main centre	$ per bale	1.71	1.74	1.8	1.75	0.6
21	Shipment preparation	c per kg	7.04	7.37	4.6	7.35	-0.2
22	Sea freight	c per kg	8.11	8.29	2.2	9.58	15.6
23	Insurance: marine & port to mill	% value	0.07%	0.07%	0.0	0.07%	0.0
24	Transport to mill	c per kg	3.75	4.73	26.3	5.26	11.2
	Consumer Price Index (ABS, Catalogue No 6401.0)		+3.2		+6.0		+2.8

(+) Consists of $10.55 service charge and AWEX charge of 37 cents.

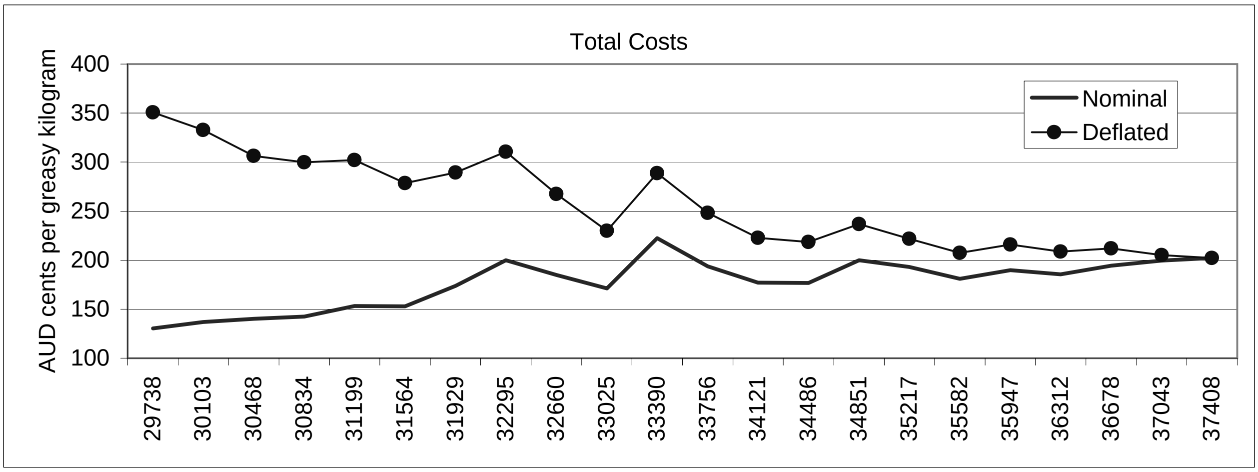
STATISTICS USED		**2001/02**		**2000/01**		**% Changes from previous season**
- Shorn wool production *		**555,000**	**tonnes**	**602,000**	**tonnes**	**-7.8%**
		3,146,080	**bales**	**3,391,740**	**bales**	**-7.2%**
- Total sales **		**2,853,596**	**bales**	**3,249,121**	**bales**	**-12.2%**
*Source: *Australian Wool Production Forecasting Committee (AWPFC), ** AWEX Logistics Report*						
- Average bale weight		176.41	kg	177.49	kg	-0.6%
- Average auction price :	**Greasy**	**512.38**	**cents/kg**	**437.43**	**cents/kg**	**17.2%**
	Clean	**780.00**	**cents/kg**	**664.79**	**cents/kg**	**17.3%**
Source: AWEX						
- Number of sheep & lambs shorn (millions)		127.0		139.6		-9.0%
Source: AWPFC						
- Average fleece weight		4.38	kg	4.31	kg	1.6%
Source: AWPFC						
- Total exports (greasy equivalents)		**624,190**	**tonnes**	**752,849**	**tonnes**	**-17.1%**
- Exports: % of total wool production		**112.5%**		**125.1%**		
Source: ABS						
- Proportions	* Bulkclassed	7.60%		7.34%		
	* Interlotted	2.41%		2.19%		
	* Traditional	0.1%		0.1%		
	* Sale by sample	99.9%		99.9%		
Source: AWEX						

Note: 2000/01 figures have been revised.

TABLE 4

HARVESTING, MARKETING AND DISTRIBUTION COSTS FOR AUSTRALIAM WOOL
NOMINAL AND DEFLATED COSTS AND WOOL PRICES - cents/kg greasy
BASE YEAR: 2001-02

	Nominal				Deflated		
Season	Growers cost	Buyers cost	Total cost	CPI	Growers cost	Buyers cost	Total cost
Jun-81	98	32	130	51.1	**264**	**87**	**351**
Jun-82	101	36	137	56.6	**246**	**87**	**333**
Jun-83	105	35	140	62.9	**230**	**76**	**306**
Jun-84	112	30	142	65.4	**236**	**64**	**300**
Jun-85	120	34	153	69.7	**236**	**66**	**302**
Jun-86	122	31	153	75.6	**223**	**56**	**278**
Jun-87	134	39	174	82.6	**224**	**66**	**289**
Jun-88	160	40	200	88.5	**249**	**61**	**311**
Jun-89	148	37	185	95.2	**214**	**53**	**267**
Jun-90	139	32	171	102.5	**187**	**43**	**230**
Jun-91	191	31	222	106.0	**248**	**40**	**289**
Jun-92	152	42	194	107.3	**194**	**54**	**248**
Jun-93	135	42	177	109.3	**170**	**53**	**223**
Jun-94	136	41	177	111.2	**168**	**50**	**218**
Jun-95	157	43	200	116.2	**186**	**51**	**237**
Jun-96	151	43	193	119.8	**173**	**49**	**222**
Jun-97	140	41	181	120.2	**160**	**47**	**207**
Jun-98	150	40	190	121.0	**170**	**46**	**216**
Jun-99	146	39	186	122.3	**164**	**44**	**209**
Jun-00	157	38	194	126.2	**171**	**41**	**212**
Jun-01	159	40	200	133.8	**164**	**42**	**205**
Jun-02	159	43	202	137.6	**159**	**43**	**202**



Note:
Deflated data used in Charts 1 and 3

CHART 1 - HARVESTING, MARKETING AND DISTRIBUTION COST FOR AUSTRALIAN WOOL (deflated cents/greasy kg of production) AND GREASY WOOL VALUE - TIME SERIES

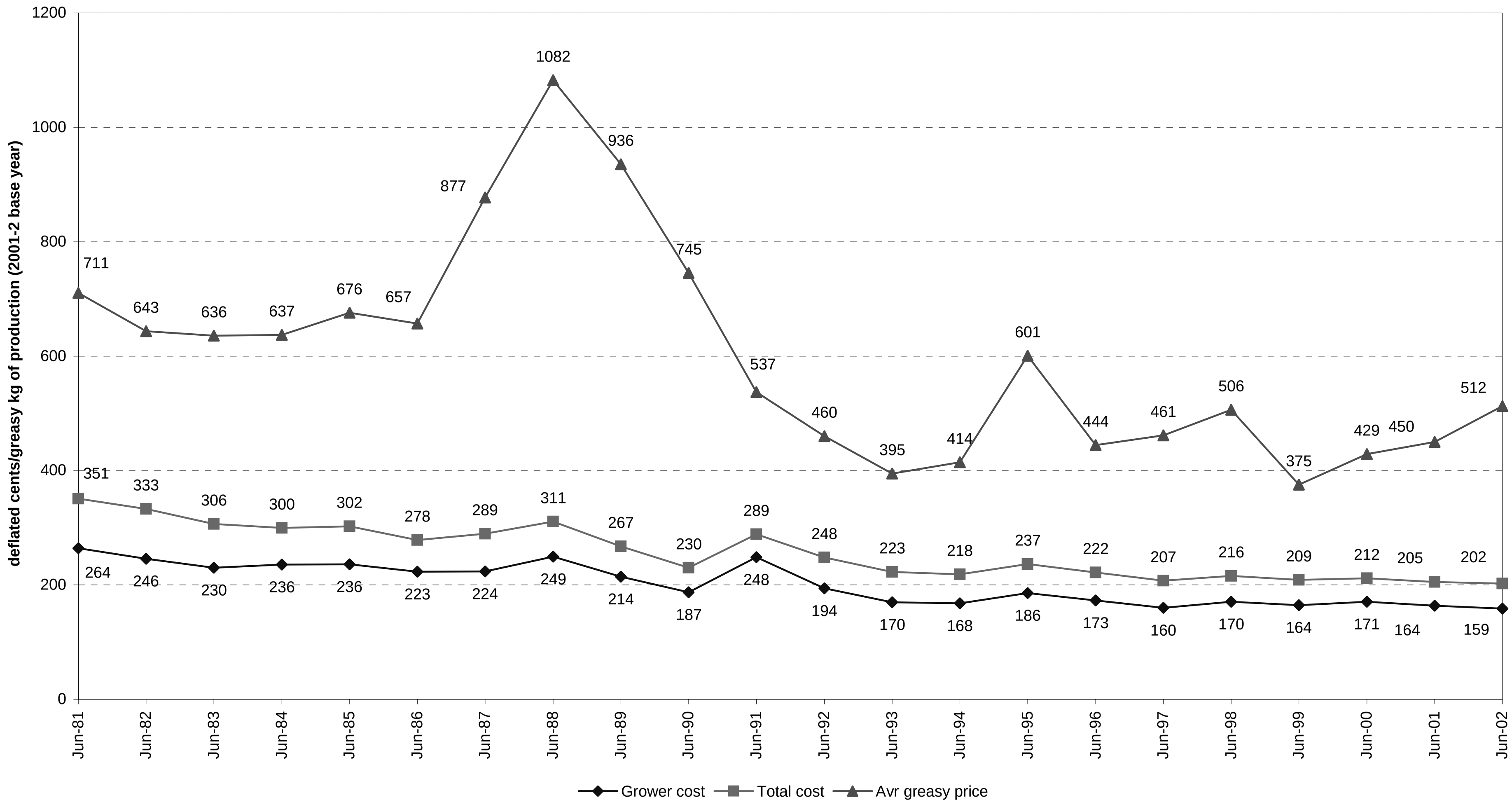


CHART 2 - HARVESTING, MARKETING & DISTRIBUTION COST FOR AUSTRALIAN WOOL: GROWER COST AS % OF GREASY WOOL VALUE - TIME SERIES

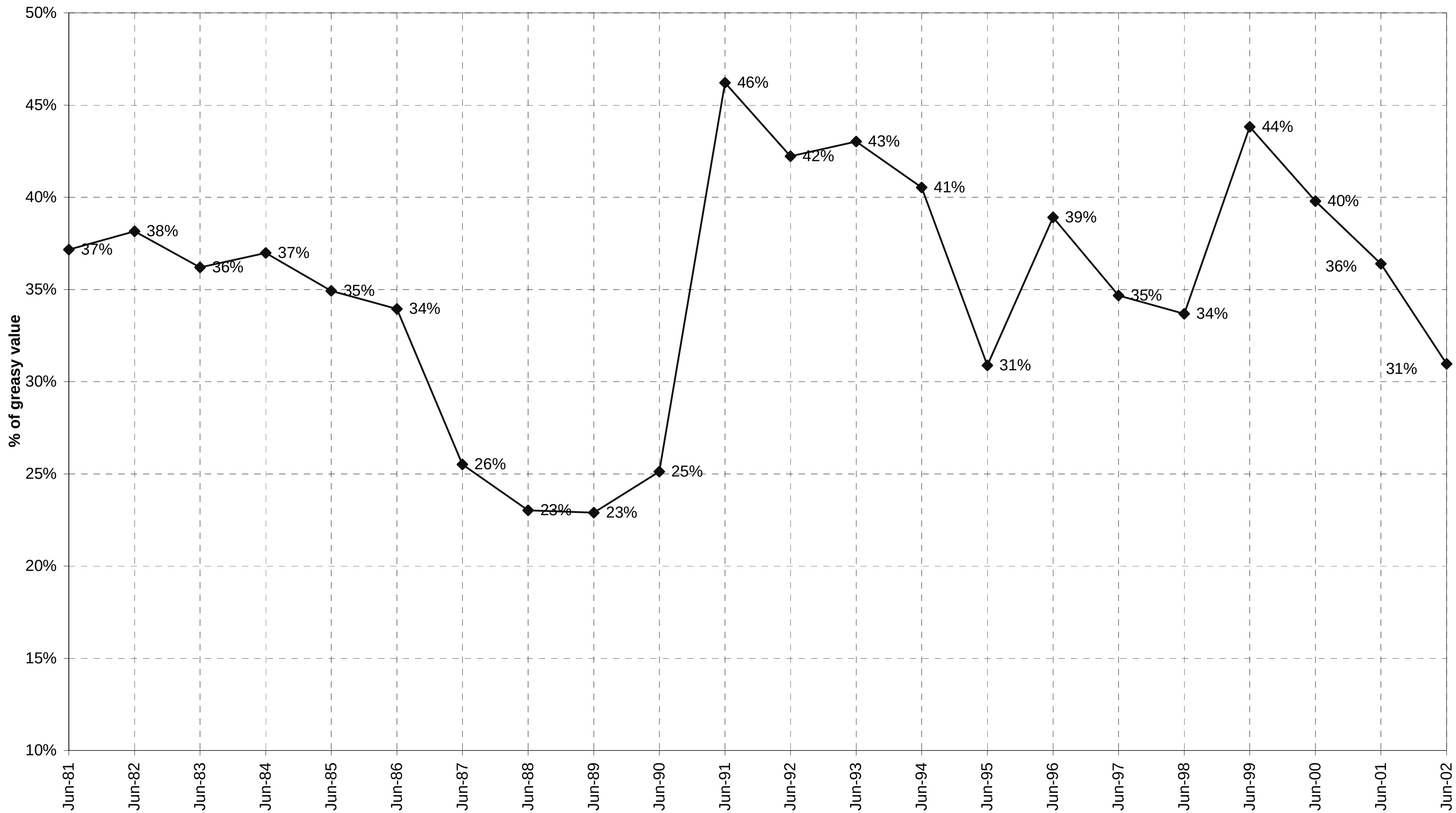
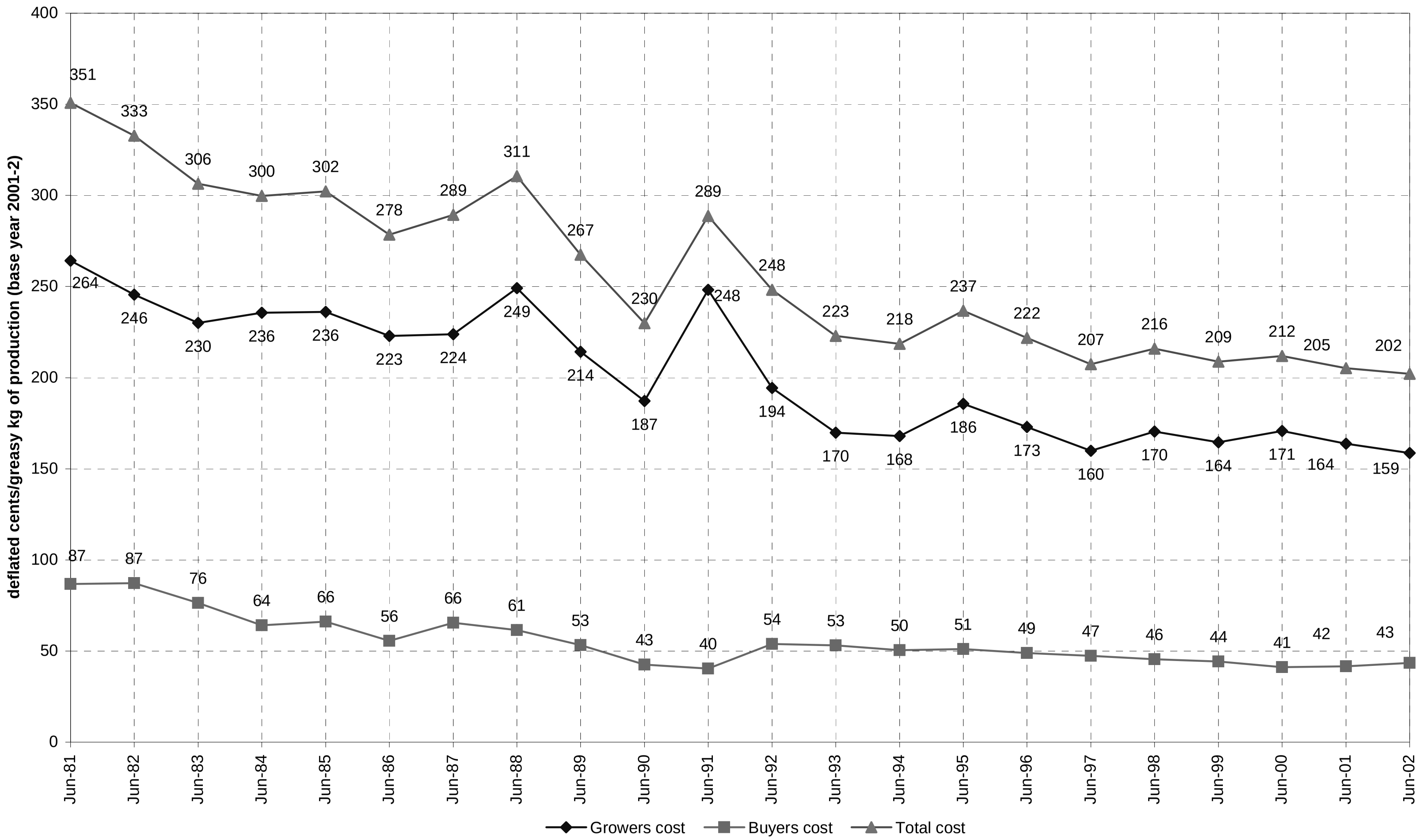


CHART 3 - HARVESTING, MARKETING & DISTRIBUTION COST FOR AUSTRALIAN WOOL; GROWERS, BUYERS & TOTAL COST (deflated cents/greasy kg of production) - TIME SERIES



Items

Entries in parenthesis show changes from the previous year.

(1) On Farm Fibre Measurement

The cost of on farm fibre measurement is estimated at $2.00 per test. It is also estimated that in the 2001/02 season there were 6.5 million tests carried out.

Total cost Australia	=	$13.000 m
Average cost per kg production	=	2.34 cents/kg

Source: Australian Wool Innovation Limited (AWI)

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(2) Crutching

Non-contract rate:	Cents per sheep
Award rate, full crutch and wig	57.02
Workers compensation @12.65%	7.21
Superannuation @ 9%	5.13
Total	69.36

Contract rate:

Shearers, shedhands, worker's compensation, payroll tax, travel, contractors margin, etc.	152.00

Note:

It is estimated that 20% of sheep crutched in 2001/02 were crutched at contract rates, and 80% at non-contract rates. It is also estimated that 80% of total sheep numbers in Australia were crutched in 2001/02.

Weighted average cost	=	85.89 cents/sheep	
Total cost Australia	=	$87.266 m	
Cost per kg production	=	15.72 cents/kg	(+1.6%)

Source: National Grazing Services P/L Dubbo NSW and Federal Pastoral Industries Award

---

(3, 4, 5, 6) Shearing Shed

Assumptions for shearing shed activities are as follows:

4# 60% of clip shorn on contract rate and 40% on non-contract rate,

4# four stand shed,

4# working five days a week for two week period,

4# average 125 sheep shorn per shearer day,

4# the team comprising four shearers, one presser, two shedhands,

4# one classer/overseer and one cook.

***Contract Shearing** (Cents per Sheep):*

Item	Shearers	Classer	Shedhands	Presser	Total
Labour	178.18	29.14	52.69	27.54	287.55
Work Comp (12.65%)	22.54	3.69	6.67	3.48	36.38
Handpiece Hire	5.51				5.51
Mess & Cook	14.69	3.67	7.35	3.67	29.39
Travel Allowance	7.20	1.80	3.60	1.80	14.40
Other costs (a)	56.71	9.27	16.77	8.77	91.51
Total cost/sheep	**284.83**	**47.57**	**87.07**	**45.27**	**464.74**

(a) Other Costs

Bank Charges	7.91
Cheque forms +FID	0.66
Payroll Tax	10.06
Superannuation (9%)	25.88
Levy for Shearing	45.00
Sundry costs	2.00
Total	91.51

***Non-contract Shearing** (Cents per Sheep):*

Item	Shearers	Classer	Shedhands	Presser	Total
Labour	178.18	29.14	52.69	27.54	287.55
Work Comp (12.65%)	22.54	3.69	6.67	3.48	36.38
Handpiece Hire	5.51				5.51
Mess & Cook	14.69	3.67	7.35	3.67	29.39
Travel Allowance	7.20	1.80	3.60	1.80	14.40
Total cost/sheep	228.12	38.30	70.30	36.50	373.23

Note: Values in tables may not add due to computer rounding.

(3) Shearing

Total weighted cost per sheep	=	262.15 cents/sheep	(+2.7%)
Total cost Australia	=	$332.927 m	(-6.5%)
Average cost per bale	=	$105.82/bale	(+0.8%)
Average cost per kg production (+1.4%)	=	59.99 cents/kg	

Source: National Grazing Services P/L Dubbo NSW and Federal Pastoral Industries Award

(4) Classing

Total weighted cost per sheep	=	43.86 cents/sheep	(+3.1%)
Total cost Australia	=	$55.707 m	(-6.2 %)
Average cost per bale	=	$17.71/bale	(+1.2%)
Average cost per kg production	=	10.04 cents/kg	(+1.8%)

Source: National Grazing Services P/L Dubbo NSW and Federal Pastoral Industries Award

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(5) Shedhands

Total weighted cost per sheep	=	80.36 cents/sheep	(+2.9%)
Total cost Australia	=	$102.058 m	(-6.3%)
Average cost per bale	=	$32.44/bale	(+1.0%)
Average cost per kg production	=	18.39 cents/kg	(+6.7%)

Source: National Grazing Services P/L Dubbo NSW and Federal Pastoral Industries Award

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(6) Pressing

Total weighted cost per sheep	=	41.76 cents/sheep	(+2.9%)
Total cost Australia	=	$53.037 m	(-6.4%)
Average cost per bale	=	$16.86/bale	(+1.0%)
Average cost per kg production	=	9.56 cents/kg	(+1.6%)

Source: National Grazing Services P/L Dubbo NSW and Federal Pastoral Industries Award

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(7) Woolpacks

The average retail price of nylon wool pack is estimated at $9.67 in the 2001/02 season ($10.00 previous season). This estimate is based on the average price of new packs of $10.00 (93% of market share) and the average price of $5.50 per second hand pack (7% of market share)..

Total cost Australia	=	$30.426 m	
Average cost per kg production	=	5.48 cents/kg	(-2.7%)

Source: Woolpacks importing company Alexander Colquhoun & Sons and AWEX.

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(8) Transport to Store

State	Production share (%)	Average cost per bale		
Queensland	6.5	=	$13.54	(+0.9%)
New South Wales	38.3	=	$10.59	(-0.4%)
Victoria	20.2	=	$6.98	(+0.4%)
South Australia	12.8	=	$7.63	(-1.4%)
Western Australia	19.3	=	$8.19	(-0.6%)
Tasmania	2.9	=	$10.87	(+1.0%)
Weighted average Australia		=	$9.22/bale	(-0.3%)
Total cost Australia		=	$29.007 m	
Cost per kg production		=	5.23 cents/kg	(+0.3%)

Source: Production share – AWI, Australian Wool Production Forecast Report
Transport changes – ABS Catalogue No 6401.0 'CPI – Group Indexes'; Transportation

---

(9) Insurance - Sheep's Back to Store

Average 0.109% of gross value	=	0.56 cents/kg	(+18.2%)

This was based on brokers' receivals and it was assumed that a similar figure applies to other wool.

Total cost Australia	=	$3.100 m

Source: Mr Phil Fyfe, care of the National Council of Wool Selling Brokers of Australia (NCWSBA)

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(10) Warehousing

99.9%	Sold by sample at auction	$18.41 per bale
0.1%	Sold "traditionally" at auction	$22.45 per bale

Average cost = $18.41per bale (assuming non-auction wool costs are similar to auction wool costs).

Total cost Australia	=	$57.934 m	
Cost per kg production	=	10.44cents/kg	(+7.3%)

Source: Mr Phil Fyfe, care of NCWSBA

---

(11) Broker's Commission (Net of Wool-tax)

Calculated to average 1.044% of gross proceeds less wool-tax,

ie. 1.044% of 98.0% of 512.46 cents/kg = 5.24 cents/kg.

Total cost Australia	=	$29.099 m	
Cost per kg production	=	5.24 cents/kg	(+19.5%)

Non-auction wool was assumed to incur a similar commission to wool sold at auction.

Source: Mr Phil Fyfe, care of NCWSBA

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(12) Insurance - Store Fire

Calculated to average a rate of 0.156% of value of wool sold at auction; this rate was applied for all wool.

Total cost Australia	=	$4.437 m	
Cost per kg production	=	0.80 cents/kg	(+21.0%)

Source: Mr Phil Fyfe, care of NCWSBA

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(13) Core Test Certificate: Pre-Sale

In 2001/02 the AWTA pre-sale tested 545,194 lots (3,239,457 bales). Certification fee, including supervision and sampling, varies with lot size. In 2001/02 the average lot size was estimated at 6 bales, same as in previous season. The average pre-sale certification fee for 6 bales lots decreased in 2001/02 season by $0.66 to $35.31.

Total cost of pre-sale testing	=	$18.891 m	
Cost per kg production	=	3.27 cents/kg	(-1.3%)

Source: Mr Alex Artomonow, Australian Wool Testing Authority (AWTA) and Raw Wool Testing Fees

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(14) Staple Length and Strength Certificate : Pre-Sale

In 2001/01 the AWTA issued 370,071 lots with pre-sale Staple Length and Strength Certificates (382,940 lots in 2000/01). The cost of the certificate for lots of 6 bales and over decreased to $26.40 ($35.75 previous season).

Total cost Australia	=	$9.770 m	
Cost per kg production	=	2.49 cents/kg	(-25.9%)

Source: Mr Alex Artomonow, AWTA and AWTA Raw Wool Testing Fees

---

(15) Interlotting

It was estimated that 2.41% of auction wool was interlotted in 2001/02 (2.19% in 2000/01 season) at an average rate of $7.23 per bale. Assuming a similar cost applies to non-auction wool, then:

Total cost Australia	=	$0.548 m	
Cost per kg production	=	0.10 cents/kg	(+16.3%)

Source: Interlotting share – AWEX Data Base, Interlotting rate – AWTA Raw Wool Testing Fees

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(16) Rehandling or 'Bulkclassing'

It was estimated that in 2001/02 season 7.60% of auction wool was sold after being rehandled (7.34% in 2000/01) at the average cost of $30.64 per bale ($29.15 previous season). Assuming that similar costs apply to non-auction wool, then:

Total cost Australia	=	$7.323 m	
Cost per kg production	=	1.32 cents/kg	(+9.4%)

Source: Rehandling share – AWEX Data Base, Rehandling rate – AWTA Raw Wool Testing Fees

---

(17) Wool-tax Levy

In 2001/02 season the wool tax levy was reduced from 3% to 2%. The levy did not stipulate the split between Promotion and Research / Development.

Total cost Australia	=	$56.883 m	
Cost per kg production	=	10.25 cents/kg	(-21.9%)

Source: The Wool Mark Company Pty Limited (TWC)

---

(18) Buying Costs

It was estimated that in the 2001/02 season the average buying cost under the auction system amounted to $24.16 per bale an increase of 4.5% from the previous season ($23.11 per bale). The main factor behind cost increase per bale can be attributed to the reduced throughput of sales (by almost 300,000 bales) during the season. This means that the total cost of running the companies was spread over smaller number of bales. Assuming the same cost of buying for private treaty merchants then:

Total cost Australia	=	$68.953 m	
Cost per kg production	=	13.70 cents/kg	(+5.2%)

Source: Cost per bale based on the model developed by former Australian Wool Corporation

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(19) Post Service Charge

The average post service charge in 2001/02 was $10.92 per bale for auction wool ($10.08 in the previous season). Assuming the same applies to non-auction wool, then:

Total cost Australia	=	$34.355 m	
Cost per kg production	=	6.19 cents/kg	(+8.7%)

Source: Mr Phil Fyfe, care of NCWSBA

---

(20) Transport to Dump - Main Centre

In 2001/02 wool buyers paid on average $1.75 per bale for transporting wool from brokers' stores to main centre dumps.

Total cost Australia	=	$5.506 m	
Cost per kg production	=	0.99 cents/kg	(+0.9%)

Source: Mr Phil Fyfe, care of NCWSBA

---

(21) Shipment Preparation

Shipment preparation includes countermarking, dumping and packing, as well as the cost of positioning the empty container and delivery of the full container to the ship. This cost in 2001/02 was estimated at $1,343 per TEU - twenty foot container equivalent unit. ($1,347/TEU in 2000/01).

Total cost Australia	=	$45.879 m	
Cost per kg of exported wool	=	7.35 cents/kg	(-0.2%)

Source: Mr Phil Fyfe, care of Australian Council of Wool Exporters (ACWE)
Calculation performed by models created by AWC

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(22) Sea Freight

The total average freight cost has been calculated by weighting the following elements:

- Each trade's percentage of total exports (ie. Europe, China, Japan, South Korea, India and USA);
- Percentage of conference and non-conference shipments.

The average freight rate for Australian wool was estimated at $1,782 per TEU - a substantial rise from the previous season's rate of $1,543per TEU. This increase was basically due to the significant freight rates rises in the European trade (on average 30%), and Chinese and North American trades.

Total cost Australia	=	$59.818 m	
Cost per kg of exported wool	=	9.58 cents/kg	(+15.6%)

Source: Mr Phil Fyfe, care of ACWE
Industry Sources
Calculation performed by models created by AWC
Wool export flows to calculate averages – Australian Bureau of Statistics (ABS)

---

(23) Insurance: Marine and Port to Mill

Insurance (% value) = 0.07% * (greasy price + buyer's service charge + all-up freight)

All-up freight = shipment preparation + sea freight + delivery to mill (see Item 25)
7.35 + 9.58 + 5.26 = 22.20 cents/kg

Insurance (cost) : 0.07% * (512.46 + 5.68 + 22.20) = 0.38 cents/kg of exported wool.

The rise of insurance costs was based on increase of wool prices.

Total cost Australia	=	$2.363 m	
Cost per kg of exported wool	=	0.38 cents/kg	(+16.7%)

Source: Mr Phil Fyfe, care of ACWE
Industry sources
Calculation performed by models created by AWC

---

(24) Transport: Port to Mill

Underlying the following method of weighting costs was the assumption that transport costs of greasy wool from port of discharge to mill for other countries of destination were similar to the weighted average.

Country	**% Flow**		**A cents/kg**
China	56.1	=	5.56
India	7.3	=	7.35
Italy	22.0	=	3.97
France	6.0	=	2.46
Germany	5.1	=	2.97
U.K.	0.7	=	4.86
Japan	2.8	=	14.35
Total	**100.0**	Wt Average	**5.26**

Total cost Australia = $32.857 m
Cost per kg of exported wool = 5.26 cents/kg
(+11.2%)

Source: Mr Phil Fyfe, care of ACWE
Industry sources
Calculation performed by models created by AWC
Wool export flows - ABS
Average annual exchange rates were used to convert overseas costs to Australian dollars

APPENDIX

Wool Flock Performance 2001-02 Season

Profitability of wool flocks 2001/02

INCOME	**Average**
Sheep trading	$5.48
Wool	$27.96
Value of Hedged Position	-$0.02
Total Income/DSE	***$33.42***
EXPENSES	
Enterprise Expenses	
A/Health & Breeding	$1.82
Contract Services	$0.28
Freight	$0.31
Insurance	$0.04
Materials	$0.18
Selling costs: Wool	$1.40
Selling Costs: Stock	$0.69
Shear & Crutching	$4.13
Supplementary feed	$0.92
Total Enterprise Expenses	***$9.77***
Gross Margin	***$23.65***
Administration	$1.01
Chemicals	$0.38
Contract Services	$0.16
Depreciation	$0.93
Electricity & Gas	$0.24
Fertiliser	$2.22
Fuel & Lubricants	$0.56
Insurance	$0.33
Irrigation	$0.01
Landcare	$0.09
Lime	$0.25
Materials	$0.15
M/Vehicle Expenses	$0.54
Rates & Rents	$0.75
R & M General	$1.24
Seed	$0.26
Wages	$2.44
Wages (Owner)	$2.70
Total Overhead Expenses	***$14.26***
Total Expenses/DSE	***$24.03***
Net Profit/DSE	***$9.39***

Key performance indicators for wool flocks 2001/02

	Average
Cost Production/Kg Clean Wol	$6.33
Price Received/Kg Clean Wol	$9.04
Price as % of Micron Indicator	95%
Kg Clean per Adult Shorn	3.9
average Adult Fibre Diameter (Micron)	19.9
% Income from Wool	83%
Kg Clean Wool/Ha	34
Kg Clean Wool/Ha/100mm Rain	5.5
% DSE's as Wethers	37%
Mid winter Stocking Rate (DSE/Ha)	10.2
Mid winter Stocking Rate/100mmm Rain	1.7
DSE Per Labour Unit	5,193
Enterprise Size (Annual Average DSE's)	10,014

Sheep flock profitability by fibre diameter 2001/02

Micron range	**Average Profit ($/DSE)**
<18.0	$30.83
18.0-18.9	$28.97
19.0-19.9	$28.08
20.0-20.9	$27.67
21.0-21.9	$29.08
22.0-22.9	$24.39

Source:
"AgInsights 2002" - Holmes Sackett & Associates Pty Ltd

Note:
The data shown on this page refers to farms benchmarked in south-eastern Australia.
It does not refer to industry averages.

Sheep's Back to Mill 2002/03

Introduction

In this edition of Sheep's Back to Mill costs for the wool selling season 1 July 2001 to 30 June 2003 are detailed. This analysis estimates the cost of harvesting, marketing and distribution of raw wool from the sheep's back in Australia to overseas mills. The Australian Wool Corporation (AWC) produced this publication from 1970 to the 1992/93 season whilst Wool International (WI) produced the 1993/94 to 1996/97 editions. Following a change in legislation which saw the Market Reporting and Statistics functions transferred from Wool International, the Australian Wool Exchange (AWEX) produced the Sheep's Back to Mill publication for the 1997/98 to 2000/01 editions.

Australian Wool Innovation (AWI) obtained the IP rights for the document from AWEX once the latter ceased publication after the 2000/01 series.

The main purpose of this paper is to compare industry cost items for a distinct part of the marketing chain over time

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Production

As estimated by the Australian Wool Production and Forecasting Committee in September 2003, **shorn wool production in 2002/03** was **490,000 tonnes greasy, a decrease of 11.7%** from the previous season (555,000 tonnes). The estimated number of sheep and lambs shorn fell from 127 million in 2001/02 to **116.0 million** in 2002/03, **a decrease of 8.7%.** The average cut per head fell from 4.38 kg to 4.21 kg, a decrease of 3.9%. In 2002/03, the average bale weight decreased from 176.41 kg in 2001/02 to 176.09 kg and the estimated **total number of bales produced** decreased from 3,146,080 in the 2001/02 season to **2,782,668** in 2002/03 **a significant decrease of 11.6%.**

Auction Prices and Taxes

The average greasy price of wool rose from 512.38 cents per kilogram in the 2001/02 season to **650.28 cents per kilogram** in 2002/03, an increase of **26.9%.**

The total levy paid by woolgrowers for financing Research and Development and Promotion remained unchanged at 2.0% in the 2002/03 season.

Exports

For the 2002/03 season wool exports (expressed in greasy equivalents) totalled **473,031 tonnes,** a sharp decrease of 24.2% from the 2001/02 season. The exports were almost on level with the annual wool production and accounted for 97% of the estimated total shorn wool.

Summary

The total cost of harvesting, marketing and distributing Australian wool **expressed in cents per kilogram greasy of production rose by 6.9%** in 2002/03. The direct **cost to the woolgrowers increased by 7.9%.** This was due to the strong rise of average greasy wool prices (27%) which has increased total costs of those activities which are set as a percentage of gross price (sheep's back to store, insurance store fire, broker commission, marine insurance, and wool levy).

The costs to overseas mills increased by only 2.9%. The solid rise of buying costs (13.7%) was partially offset by reduction of shipping costs (-7.1%).

Calculation of Costs

As in the previous editions of this report, the post-sale cost items were estimated on the basis of greasy wool only. It was assumed that, on a greasy equivalent basis, processed wool costs are the same as greasy wool for these items.

Assessment of costs was based on average charges during the 2002/03 season or on charges applicable at 30 June 2003. The previous season's figures have been revised where applicable and in many instances differ from those reported in the 2001/02 Sheep's Back to Mill report.

Table 1 shows estimated costs in millions of dollars. These estimates were based on the dollars per bale or cents per kilogram figures derived from the relevant list of items. The estimates were then scaled by production and, where appropriate, the volume of exports. They are provided only to indicate the estimated aggregate national industry level of expenditure. These industry costs are further disaggregated into six major subcategories and the costs of each subcategory are expressed as a percentage of total costs..

In **Table 2**, the total costs shown in Table 1 have been brought to a common base of cents per kilogram of production or the volume of exports for comparative purposes. This reduces the effect of the change in total production. The table also presents the same six major subcategories of industry costs as aggregated in Table 1, but expressed in cents per greasy kilogram of production.

The charges incurred for each activity accessed, are shown in **Table 3**, and are compared with charges over the previous two years.

The report also includes three time series charts covering the period of January 1982 to June 2003.

Chart 1 presents the harvesting, marketing and distribution cost for Australian wool (in cents per greasy kilogram of production) compared with the average greasy price, adjusted for inflation using the consumer price index by the Reserve Bank of Australia.

Table 4 presents the nominal, CPI and inflation adjusted data used in Charts 1 and 3 in tabular form

Chart 2 depicts grower cost of harvesting, marketing and distribution as a percentage of average greasy wool price.

Chart 3 shows the harvesting, marketing and distribution cost for Australian wool for growers, buyers and the overall total adjusted for inflation.

To estimate wool production in terms of costs and profitability farm financial benchmark results from south-cost Australia are included in the appendix. Note, the costs detailed in this appendix may not match the average costs used in the Sheep's Back to Mill report.

Sources

The cost figures presented are based on data obtained from a wide collection of sources throughout the industry.

The costs associated with crutching were based on information and estimates from State Departments of Agriculture/Primary Industry; the shearing shed activities were based on data provided by Farmers Grazcos Shearing Co-operative Limited (NSW) and on rates listed in the Federal Pastoral Industry Award.

Data on average brokers' charges (warehousing, insurance, commission, interlotting, rehandling, buyers' service charge and transport to dump) was provided by Mr Phil Fyfe, care of the National Council of Wool Selling Brokers of Australia (NCWSBA).

Charges were averaged over NCWSBA broker members in all Australian centres, weighted by volume, by the NCWSBA.

The data related to the woolpacks were provided by the woolpacks importing company Alexander Colqhoun & Sons and by AWEX.

Core test data, both pre-sale and post-sale, staple length and strength certificates were provided by the Australian Wool Testing Authority (AWTA). The costs of shipment preparation and sea freight were provided by Australian Council of Wool Exporters and industry sources..

On farm measurement costs were calculated on data supplied by the Australian Wool Innovation (AWI).

The Reserve Bank of Australia Consumer Price Index was used to adjust data for inflation.

Holmes, Sackett and Associates supplied the farm financial benchmarking results.

Caution

It must be stressed that the figures shown are estimates only and should be treated with caution. They should not be taken out of tables and used without reference to the text material or explanatory notes. The major purpose of the analysis is to provide cost comparisons over time using a common basis and not to calculate actual industry expenditures.

Acknowledgments

The assistance received from officers in State Departments of Agriculture, other State Authorities, the Australian Bureau of Statistics, the National Council of Wool Selling Brokers of Australia, the Australian Council of Wool Exporters, AWTA Limited, AWEX, industry, and AWI colleagues is gratefully acknowledged.

TABLE 1

HARVESTING, MARKETING & DISTRIBUTION COSTS FOR AUSTRALIAN WOOL - SHEEP'S BACK TO MILL, 2002/03

	ACTIVITY	2001/02 $ million		2002/03 $ million		% CHANGE
1	On Farm Fibre Measurement	13.00 *		6.00		-53.8
2	Crutching	87.266		82.811		-5.1
3	Shearing	332.927		310.001		-6.9
4	Classing	55.707		51.316		-7.9
5	Shedhands	102.058		97.110		-4.8
6	Pressing	53.037		50.609		-4.6
	SUBTOTAL: On Farm/Shearing Shed	630.996		591.848		-6.2
	Subtotal as % of total cost		55.9%		56.8%	
	* Not included in the total					
7	Woolpacks	30.426		28.168		-7.4
8	Transport to store	29.007		25.302		-12.8
9	Insurance: sheep's back to store	3.100		3.792		22.3
	SUBTOTAL: Packs/store transport	62.533		57.262		-8.4
	Subtotal as % of total cost		5.5%		5.5%	
10	Warehousing	57.934		51.578		-11.0
11	Broker's commission (net of wool tax)	29.099		32.444		11.5
12	Insurance: store fire	4.437		5.704		28.6
13	Core test certificate: pre-sale	18.891		18.674		-1.1
14	Staple strength & length cert.: pre-sale	9.770		9.436		-3.4
15	Interlotting	0.549		0.613		11.7
16	Rehandling ("Bulkclassing")	7.323		5.898		-19.5
	SUBTOTAL: Warehousing/sale	128.004		124.347		-2.9
	Subtotal as % of total cost		11.3%		11.9%	
17	Wool-tax levy	56.883		63.727		12.0
	SUBTOTAL: Taxes	56.883		63.727		12.0
	Subtotal as % of total cost		5.0%		6.1%	
	DIRECT COST TO WOOLGROWER	**878.415**		**837.184**		**-4.7**
	Subtotal as % of total cost		77.9%		80.3%	
18	Buying costs (incl post sale AM cert)	68.953		67.245		-2.6
19	Post service charge	34.355		33.420		-2.7
20	Transport to dump - main centre	5.506		5.120		-7.0
	SUBTOTAL: Buying costs	108.814		105.785		-2.8
	Subtotal as % of total cost		9.7%		10.2%	
21	Shipment preparation	45.879		34.595		-24.6
22	Sea freight	59.818		39.769		-33.5
23	Insurance: marine & port to mill	2.363		2.244		-5.0
24	Transport to mill	32.857		22.559		-31.3
	SUBTOTAL: Shipping costs	140.917		99.167		-29.6
	Subtotal as % of total cost		12.5%		9.5%	
	DIRECT COSTS TO MILL	**249.730**		**204.952**		**-18.0**
	Subtotal as % of total cost		22.1%		19.7%	
	TOTAL COSTS: %		100%		100%	
	TOTAL COSTS: $ million	**1128.146**		**1042.136**		**-7.6**
	TOTAL GREASY WOOL VALUE	**2844.153**		**3186.372**		**12.0**
	DIRECT COST TO WOOLGROWERS AS PROPORTION OF TOTAL GREASY WOOL VALUE		**30.9%**		**26.3%**	

TABLE 2

HARVESTING, MARKETING & DISTRIBUTION COSTS FOR AUSTRALIAN WOOL
- SHEEP'S BACK TO MILL, 2002/03
(cents per greasy kg)

	ACTIVITY	2001/02		2002/03		% CHANGE
1	On Farm Fibre Measurement	2.34 *		1.22		-47.7
2	Crutching	15.72		16.90		7.5
3	Shearing	59.99		63.27		5.5
4	Classing	10.04		10.47		4.3
5	Shedhands	18.39		19.82		7.8
6	Pressing	9.56		10.33		8.1
	SUBTOTAL: On Farm/Shearing Shed (+)	113.69		120.79		6.2
	Subtotal as % of total cost		56.2%		55.9%	
	* Not included in the total					
7	Woolpacks	5.48		5.75		4.9
8	Transport to store	5.23		5.16		-1.2
9	Insurance: sheep's back to store	0.56		0.77		38.6
	SUBTOTAL: Packs/store transport (+)	11.27		11.69		3.7
	Subtotal as % of total cost		5.6%		5.4%	
10	Warehousing	10.44		10.53		0.8
11	Broker's commission (net of wool tax)	5.24		6.62		26.3
12	Insurance: store fire	0.80		1.16		45.6
13	Core test certificate: pre-sale	3.27		3.73		12.8
14	Staple strength & length cert.: pre-sale	2.49		2.60		7.9
15	Interlotting	0.10		0.13		26.5
16	Rehandling ("Bulkclassing")	1.32		1.20		-8.8
	SUBTOTAL: Warehousing/sale (+)	23.67		25.96		10.0
	Subtotal as % of total cost		11.7%		12.0%	
17	Wool-tax levy	10.25		13.01		26.9
	SUBTOTAL: Taxes (+)	10.25		13.01		26.9
	Subtotal as % of total cost		5.1%		6.0%	
	DIRECT COST TO WOOLGROWER	**158.88**		**171.44**		**7.9**
	Subtotal as % of total cost		78.5%		79.3%	
18	Buying costs (incl post sale AM cert)	13.70		15.88		15.9
19	Post service charge	6.19		6.82		10.2
20	Transport to dump - main centre	0.99		1.04		5.3
	SUBTOTAL: Buying costs (+)	20.88		23.74		13.7
	Subtotal as % of total cost		10.3%		11.0%	
21	Shipment preparation	7.35		7.31		-0.5
22	Sea freight	9.58		8.41		-12.3
23	Insurance: marine & port to mill	0.38		0.47		25.3
24	Transport to mill	5.26		4.77		-9.4
	SUBTOTAL: Shipping costs (*)	22.58		20.96		-7.1
	Subtotal as % of total cost		11.2%		9.7%	
	SUBTOTAL: COSTS TO MILLS	**43.46**		**44.71**		**2.9**
	Subtotal as % of total cost		21.5%		20.7%	
	TOTAL COSTS: c/kg	**202.33**		**216.15**		**6.9**
	TOTAL COSTS EXCLUDING TAXES: c/kg	192.08		203.14		5.8
	TOTAL COSTS: %		100%		100%	
	AVERAGE GREASY WOOL VALUE: c/kg	**512.38**		**650.28**		**26.9**
	COST TO GROWERS AS % OF GREASY WOOL VALUE		31.0%		26.4%	
	TOTAL COST AS % OF GREASY WOOL VALUE		39.5%		33.2%	

NOTE: (+) - divided through by production; (*) - divided through by exports (R) Revised
Percentage changes and subtotals have been calculated on un-rounded values.

TABLE 3

THREE YEAR COMPARISON OF CHARGES BY ACTIVITY

	ACTIVITY	basis of charge	JUNE 2001	JUNE 2002	% CHANGE 02-01	JUNE 2003	% CHANGE 03-02
1	On Farm Fibre Measurement	$ per test	n/a	2.00		2.00	0.0
2	Crutching - contract	$ per 100	149.00	152.00	2.0	156.00	2.6
	- non-contract	$ per 100	67.03	69.36	3.5	72.55	4.6
3	Shearing	$ per 100	174.54	178.18	2.1	184.69	3.7
4	Classing	$ per week	710.50	728.50	2.5	728.50	0.0
5	Shedhands	$ per week	643.00	658.60	2.4	683.60	3.8
6	Pressing	$ per week	673.00	688.00	2.2	717.00	4.2
7	Woolpacks (Nylon):						
	Average new & second hand	$ per pack	10.00	9.67	-3.3	10.12	4.7
8	Transport to store	$ per bale	9.25	9.22	-0.3	9.09	-1.4
9	Insurance: sheep's back to store	% value	0.108%	0.109%	0.9	0.119%	9.2
10	Warehousing : sale by sample	$ per bale	17.27	18.41	6.6	18.53	0.7
	traditional sale	$ per bale	21.14	22.45	6.2	23.09	2.9
11	Broker's commission (net of wool tax)	% value	1.03%	1.044%	1.0	1.039%	-0.5
12	Insurance: store fire	% value	0.151%	0.156%	3.3	0.179%	14.7
13	Core test certificate: pre-sale	$ per lot	35.31	34.65	-1.9	38.50	11.1
14	Staple strength & length cert. pre-sale	$ per lot	35.75	26.40	-26.2	28.05	6.3
15	Interlotting	$ per bale	6.89	7.23	4.9	7.52	4.0
16	Rehandling ("Bulkclassing")	$ per bale	29.15	30.64	5.1	30.84	0.7
17	Wool-tax levy	% value	3.00%	2.00%	-33.3	2.00%	0.0
	Staple strength & length cert.: post-sale	$ per lot	43.45	34.10	-21.5	36.30	6.5
18	Buying costs	$ per bale	23.11	24.16	4.5	$27.95	15.7
19	Post service charge (+)	$ per bale	10.08	10.92	8.3	12.01	10.0
20	Transport to dump - main centre	$ per bale	1.74	1.75	0.6	1.84	5.1
21	Shipment preparation	c per kg	7.37	7.35	-0.2	7.31	-0.5
22	Sea freight	c per kg	8.29	9.58	15.6	8.41	-12.3
23	Insurance: marine & port to mill	% value	0.07%	0.07%	0.0	0.07%	0.0
24	Transport to mill	c per kg	4.73	5.26	11.2	4.77	-9.4
	Consumer Price Index (ABS, Catalogue No 6401.0)		+6.0		+2.8		+2.7

(+) Consists of $11.64 service charge and AWEX charge of 37 cents.

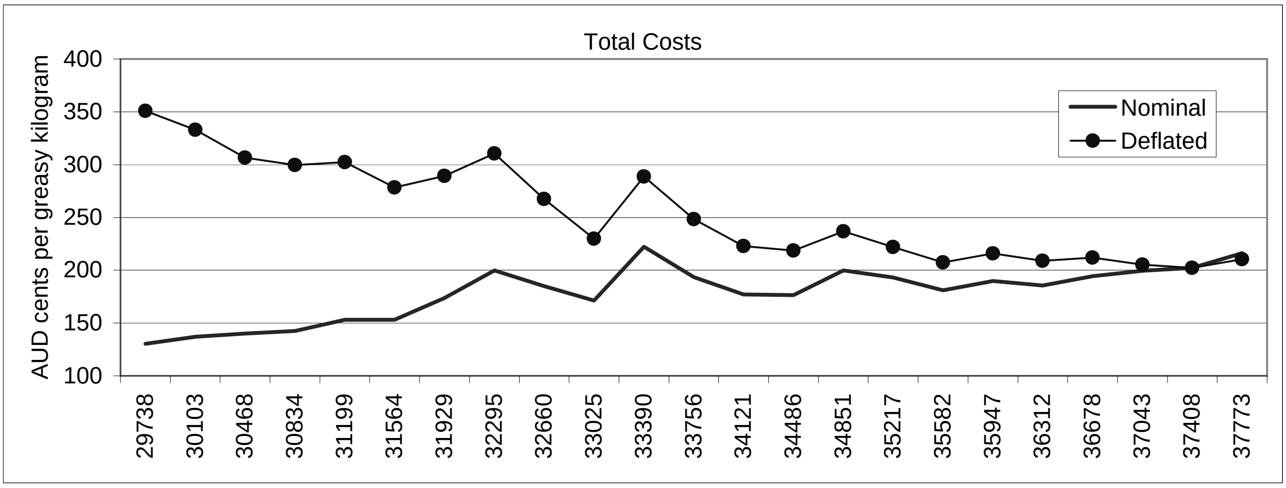
STATISTICS USED		**2002/03**		**2001/02**		**% Changes from previous season**
- Shorn wool production *		**490,000**	**tonnes**	**555,000**	**tonnes**	**-11.7%**
		2,782,668	**bales**	**3,146,080**	**bales**	**-11.6%**
- Total sales **		**2,405,437**	**bales**	**2,855,721**	**bales**	**-15.8%**
*Source: *Australian Wool Production Forecasting Committee (AWPFC), ** AWEX Logistics Report*						
- Average bale weight **		176.09	kg	176.41	kg	-0.2%
- Average auction price :	**Greasy**	**650.28**	**cents/kg**	**512.38**	**cents/kg**	**26.9%**
	Clean	**1012.90**	**cents/kg**	**779.88**	**cents/kg**	**29.9%**
Source: AWEX						
- Number of sheep & lambs shorn (millions)		116.0		127.0		-8.7%
Source: AWPFC						
- Average fleece weight		4.21	kg	4.38	kg	-3.9%
Source: AWPFC						
- Total exports (greasy equivalents)		**473,031**	**tonnes**	**624,190**	**tonnes**	**-24.2%**
- Exports: % of total wool production		**96.5%**		**112.5%**		
Source: ABS						
- Proportions	* Bulkclassed	6.87%		7.60%		
	* Interlotted	2.93%		2.41%		
	* Traditional	0.1%		0.1%		
	* Sale by sample	99.9%		99.9%		
Source: AWEX						

Note: 2001/02 figures have been revised.

TABLE 4

HARVESTING, MARKETING AND DISTRIBUTION COSTS FOR AUSTRALIAM WOOL
NOMINAL AND DEFLATED COSTS AND WOOL PRICES - cents/kg greasy
BASE YEAR: 2001-02

	Nominal				Deflated		
Season	Growers cost	Buyers cost	Total cost	CPI	Growers cost	Buyers cost	Total cost
Jun-81	98	32	130	51.1	**264**	**87**	**351**
Jun-82	101	36	137	56.6	**246**	**87**	**333**
Jun-83	105	35	140	62.9	**230**	**76**	**306**
Jun-84	112	30	142	65.4	**236**	**64**	**300**
Jun-85	120	34	153	69.7	**236**	**66**	**302**
Jun-86	122	31	153	75.6	**223**	**56**	**278**
Jun-87	134	39	174	82.6	**224**	**66**	**289**
Jun-88	160	40	200	88.5	**249**	**61**	**311**
Jun-89	148	37	185	95.2	**214**	**53**	**267**
Jun-90	139	32	171	102.5	**187**	**43**	**230**
Jun-91	191	31	222	106.0	**248**	**40**	**289**
Jun-92	152	42	194	107.3	**194**	**54**	**248**
Jun-93	135	42	177	109.3	**170**	**53**	**223**
Jun-94	136	41	177	111.2	**168**	**50**	**218**
Jun-95	157	43	200	116.2	**186**	**51**	**237**
Jun-96	151	43	193	119.8	**173**	**49**	**222**
Jun-97	140	41	181	120.2	**160**	**47**	**207**
Jun-98	150	40	190	121.0	**170**	**46**	**216**
Jun-99	146	39	186	122.3	**164**	**44**	**209**
Jun-00	157	38	194	126.2	**171**	**41**	**212**
Jun-01	159	40	200	133.8	**164**	**42**	**205**
Jun-02	159	43	202	137.6	**159**	**43**	**202**
Jun-03	171	45	216	141.3	**167**	**44**	**210**



Note:
Deflated data used in Charts 1 and 3

CHART 1 - HARVESTING, MARKETING AND DISTRIBUTION COST FOR AUSTRALIAN WOOL (deflated cents/greasy kg of production) AND GREASY WOOL VALUE - TIME SERIES

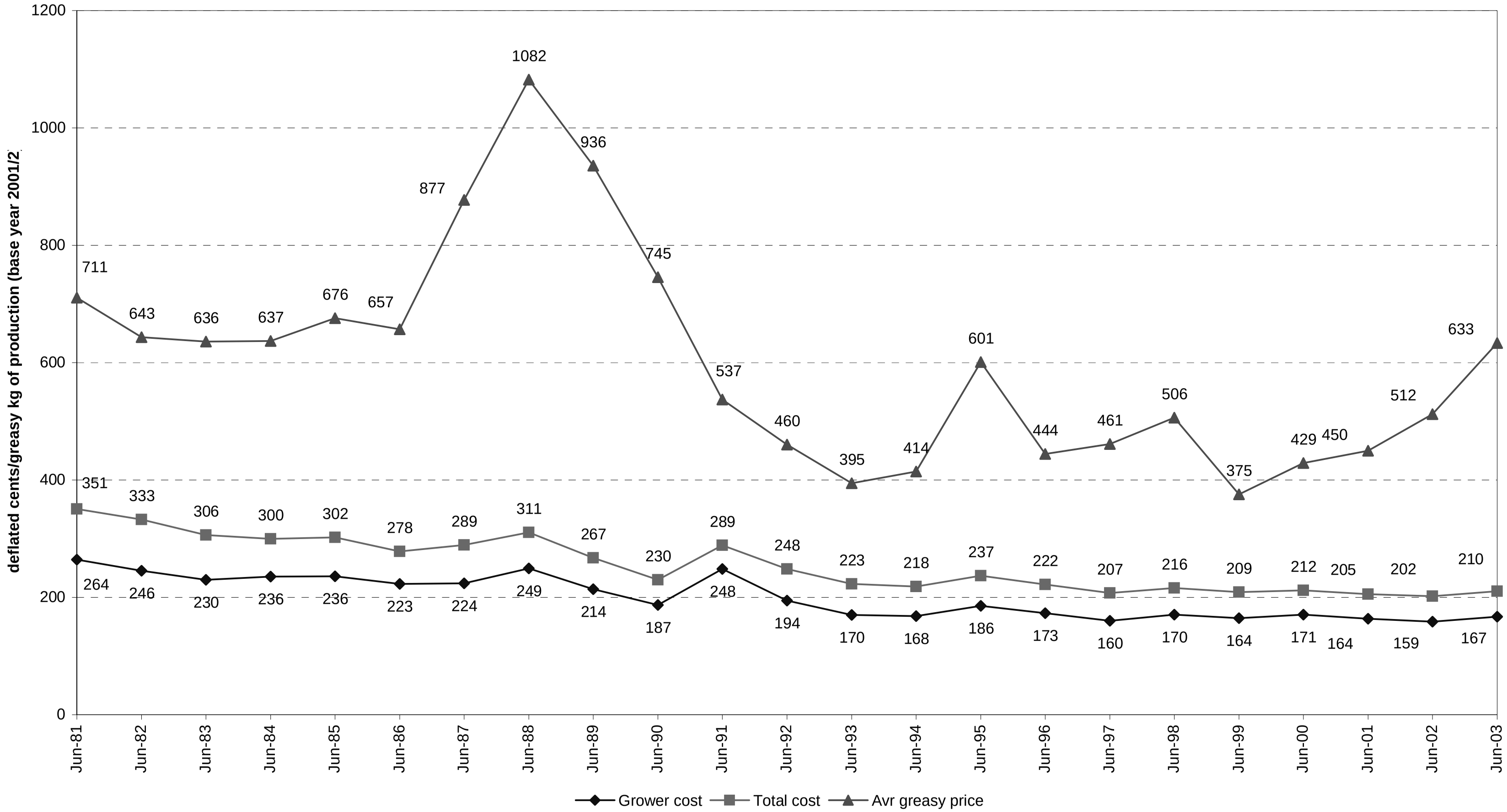


CHART 2 - HARVESTING, MARKETING & DISTRIBUTION COST FOR AUSTRALIAN WOOL: GROWER COST AS % OF GREASY WOOL VALUE - TIME SERIES

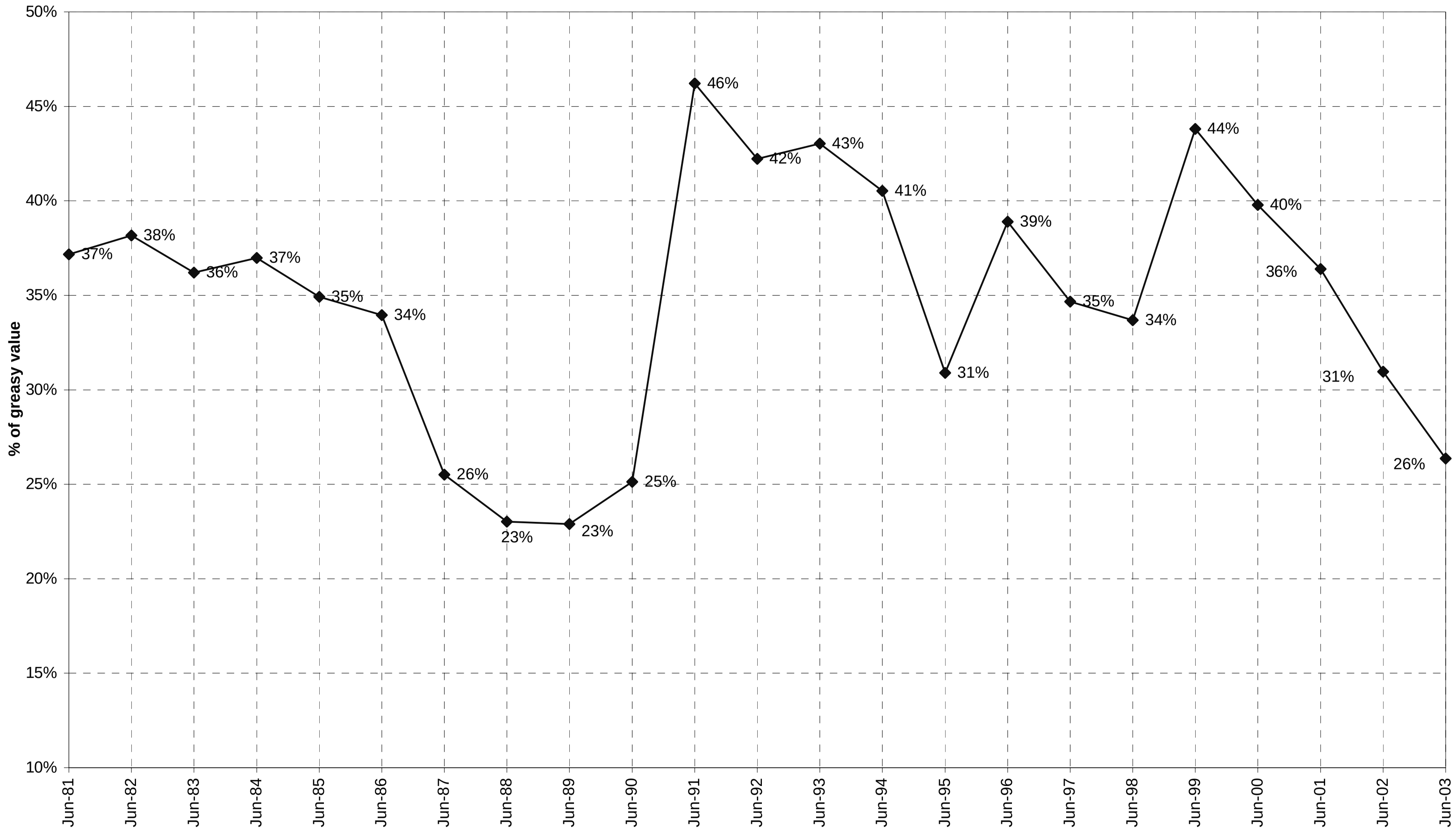
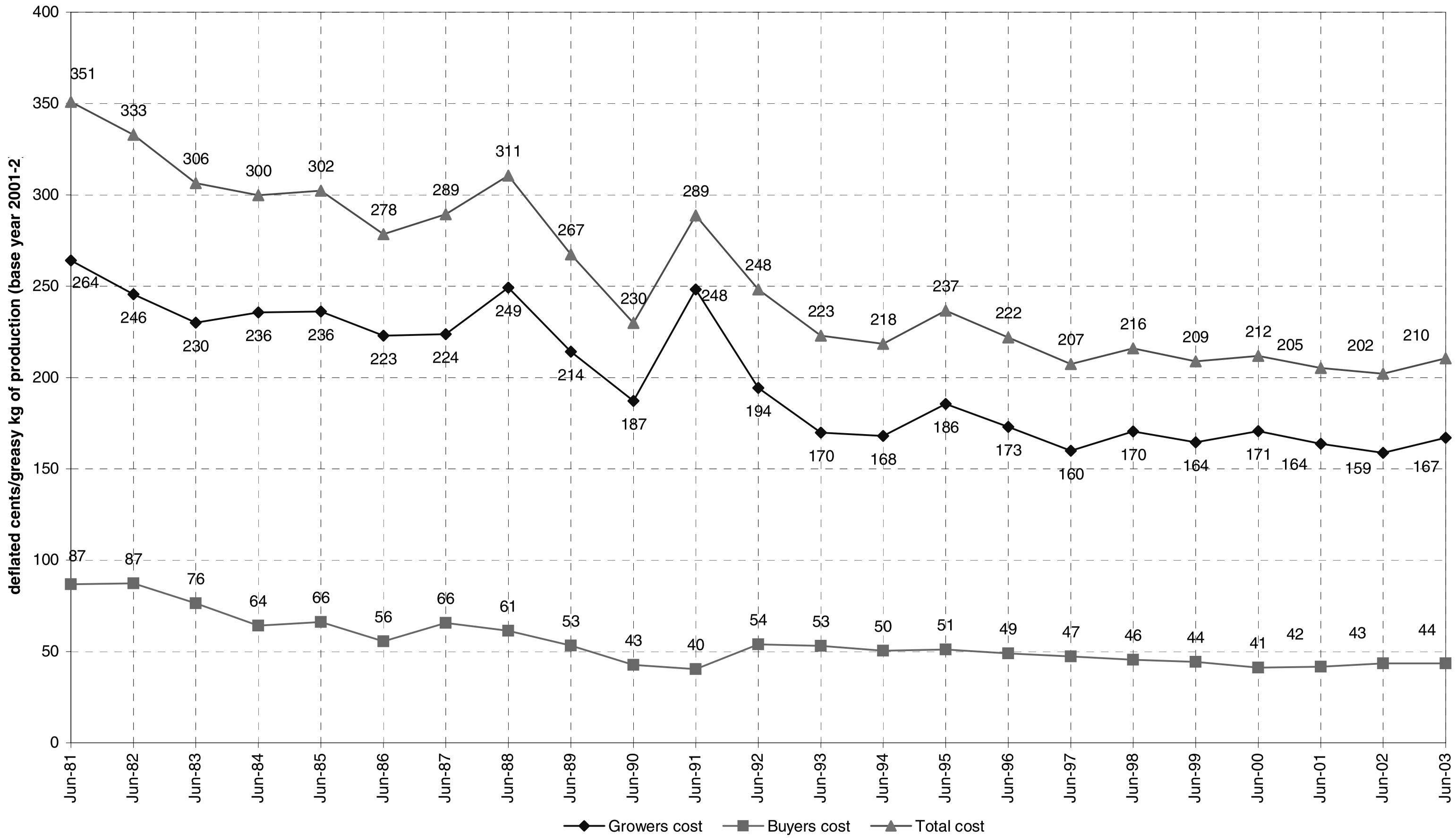


CHART 3 - HARVESTING, MARKETING & DISTRIBUTION COST FOR AUSTRALIAN WOOL; GROWERS, BUYERS & TOTAL COST (deflated cents/greasy kg of production) - TIME SERIES



Items

Entries in parenthesis show changes from the previous year.

(1) On Farm Fibre Measurement

The cost of on farm fibre measurement is estimated at $2.00 per test. It is also estimated that in the 2002/03 season there were 3 million tests carried out.

Total cost Australia	=	$6.000 m	
Average cost per kg production	=	1.22 cents/kg	(-47.7%)

Source: Australian Wool Innovation Limited (AWI)

(2) Crutching

Non-contract rate:		Cents per sheep
Award rate, full crutch and wig		59.10
Workers compensation @12.65%		8.13
Superannuation @ 9%		5.32
	Total	72.55
Contract rate:		
Shearers, shedhands, worker's compensation, payroll tax, travel, contractors margin, etc.		156.00

Note:

It is estimated that 20% of sheep crutched in 2002/03 were crutched at contract rates, and 80% at non-contract rates. It is also estimated that 80% of total sheep numbers in Australia were crutched in 2002/03

.

Weighted average cost	=	89.24 cents/sheep	
Total cost Australia	=	$82.811 m	
Cost per kg production	=	16.90 cents/kg	(+7.5%)

Source: National Grazing Services P/L Dubbo NSW and Federal Pastoral Industries Award

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(3, 4, 5, 6) Shearing Shed

Assumptions for shearing shed activities are as follows:

- 60% of clip shorn on contract rate and 40% on non-contract rate,
- four stand shed,
- working five days a week for two week period,
- average 125 sheep shorn per shearer day,
- the team comprising four shearers, one presser, two shedhands,
- one classer/overseer and one cook.

Contract Shearing *(Cents per Sheep):*

Item	Shearers	Classer	Shedhands	Presser	Total
Labour	184.69	29.14	54.69	28.68	297.20
Work Comp (12.65%)	25.39	4.01	7.52	3.94	40.86
Handpiece Hire	N/A				N/A
Mess & Cook	15.28	3.82	7.64	3.82	30.56
Travel Allowance	7.20	1.80	3.60	1.80	14.40
Other costs (a)	57.80	9.12	17.11	8.98	93.01
Total cost/sheep	**290.36**	**47.89**	**90.56**	**47.22**	**476.03**

(a) Other Costs

Bank Charges	8.17
Cheque forms + FID	0.68
Payroll Tax	10.40
Superannuation (9%)	26.75
Levy for Shearing	45.00
Sundry costs	2.00
Total	**93.01**

Non-contract Shearing *(Cents per Sheep):*

Item	Shearers	Classer	Shedhands	Presser	Total
Labour	184.69	29.14	54.69	28.68	297.20
Work Comp (12.65%)	25.39	4.01	7.52	3.94	40.86
Handpiece Hire	N/A				N/A
Mess & Cook	15.28	3.82	7.64	3.82	30.56
Travel Allowance	7.20	1.80	3.60	1.80	14.40
Total cost/sheep	**232.56**	**38.77**	**73.45**	**38.24**	**383.02**

Note: Values in tables may not add due to computer rounding.

(3) Shearing

Total weighted cost per sheep	=	267.24 cents/sheep	(+1.9%)
Total cost Australia	=	$310.001 m	(-6.9%)
Average cost per bale	=	$111.40/bale	(+5.3%)
Average cost per kg production (+5.5%)	=	63.27 cents/kg	

Source: National Grazing Services P/L Dubbo NSW and Federal Pastoral Industries Award

(4) Classing

Total weighted cost per sheep	=	44.24 cents/sheep	(+0.9%)
Total cost Australia	=	$51.316 m	(-7.9 %)
Average cost per bale	=	$18.44/bale	(+4.1%)
Average cost per kg production	=	10.47 cents/kg	

(+4.3%)

Source: National Grazing Services P/L Dubbo NSW and Federal Pastoral Industries Award

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(5) Shedhands

Total weighted cost per sheep	=	83.72 cents/sheep	(+4.2%)
Total cost Australia	=	$97.110 m	(-4.8%)
Average cost per bale	=	$34.90/bale	(+7.6%)
Average cost per kg production	=	19.82 cents/kg	(+7.8%)

Source: National Grazing Services P/L Dubbo NSW and Federal Pastoral Industries Award

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(6) Pressing

Total weighted cost per sheep	=	43.63 cents/sheep	(+4.5%)
Total cost Australia	=	$50.609 m	(-4.6%)
Average cost per bale	=	$18.19/bale	(+7.9%)
Average cost per kg production	=	10.33 cents/kg	(+8.1%)

Source: National Grazing Services P/L Dubbo NSW and Federal Pastoral Industries Award

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(7) Woolpacks

The average retail price of nylon wool pack is estimated at $10.12 in the 2002/03 season ($9.67 previous season). This estimate is based on the average price of new packs of $10.50 (92% of market share) and the average price of $5.50 per second hand pack (8% of market share)..

Total cost Australia	=	$28.168 m	
Average cost per kg production	=	5.75 cents/kg	(+4.9%)

Source: Woolpacks importing company Alexander Colquhoun & Sons and AWEX

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(8) Transport to Store

State	Production share (%)		Average cost per bale	
Queensland	4.7	=	$13.41	(-0.9%)
New South Wales	36.6	=	$10.66	(+0.6%)
Victoria	20.6	=	$6.99	(+0.1%)
South Australia	12.2	=	$7.58	(-0.7%)
Western Australia	23.0	=	$8.21	(+0.1%)
Tasmania	2.9	=	$10.74	(-1.2%)
Weighted average Australia		=	$9.09/bale	(-1.4%)
Total cost Australia		=	$25.302 m	
Cost per kg production		=	5.16 cents/kg	(-1.2%)

Source: Production share – AWI, Australian Wool Production Forecast Report
Transport changes – ABS Catalogue No 6401.0 'CPI – Group Indexes'; Transportation

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(9) Insurance - Sheep's Back to Store

Average 0.109% of gross value = 0.77 cents/kg (+38.6%)

This was based on brokers' receivals and it was assumed that a similar figure applies to other wool.

Total cost Australia = $3.792 m

Source: Mr Phil Fyfe, care of the National Council of Wool Selling Brokers of Australia (NCWSBA)

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(10) Warehousing

99.9%	Sold by sample at auction	$18.53 per bale
0.1%	Sold "traditionally" at auction	$23.09 per bale

Average cost = $18.54per bale (assuming non-auction wool costs are similar to auction wool costs).

Total cost Australia = $51.578 m
Cost per kg production = 10.53cents/kg (+0.8%)

Source: Mr Phil Fyfe, care of NCWSBA

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(11) Broker's Commission (Net of Wool-tax)

Calculated to average 1.044% of gross proceeds less wool-tax,

ie. 1.039% of 98.0% of 650.28 cents/kg = 6.62 cents/kg.

Total cost Australia	=	$32.444 m	
Cost per kg production	=	6.62 cents/kg	(+26.3%)

Non-auction wool was assumed to incur a similar commission to wool sold at auction.

Source: Mr Phil Fyfe, care of NCWSBA

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(12) Insurance - Store Fire

Calculated to average a rate of 0.179% of value of wool sold at auction; this rate was applied for all wool.

Total cost Australia	=	$5.704 m	
Cost per kg production	=	1.16 cents/kg	(+45.6%)

Source: Mr Phil Fyfe, care of NCWSBA

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(13) Core Test Certificate: Pre-Sale

In 2002/03 the AWTA pre-sale tested 485,040 lots (2,844,703 bales). Certification fee, including supervision and sampling, varies with lot size. In 2002/03 the average lot size was estimated at 6 bales, same as in previous season. The average pre-sale certification fee for 6 bales lots increased in 2002/03 season by $3.85 to $38.50

Total cost of pre-sale testing	=	$18.674 m	
Cost per kg production	=	3.73 cents/kg	(+12.8%)

Source: Mr Alex Artomonow, Australian Wool Testing Authority (AWTA) and Raw Wool Testing Fees

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(14) Staple Length and Strength Certificate : Pre-Sale

In 2002/03 the AWTA issued 336,414 lots with pre-sale Staple Length and Strength Certificates (370,071 lots in 2001/02). The cost of the certificate for lots of 6 bales and over increased to $28.05 ($26.40 previous season).

Total cost Australia	=	$9.436 m	
Cost per kg production	=	2.60 cents/kg	(+7.9%)

Source: Mr Alex Artomonow, AWTA and AWTA Raw Wool Testing Fees

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(15) Interlotting

It was estimated that 2.93% of auction wool was interlotted in 2002/03 (2.41% in 2001/02 season) at an average rate of $7.52 per bale. Assuming a similar cost applies to non-auction wool, then:

Total cost Australia	=	$0.613 m	
Cost per kg production	=	0.13 cents/kg	(+26.5%)

Source: Interlotting share – AWEX Data Base, Interlotting rate – AWTA Raw Wool Testing Fees

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(16) Rehandling or "Bulkclassing"

It was estimated that in 2002/03 season 6.87% of auction wool was sold after being rehandled (7.60% in 2001/02) at the average cost of $30.84 per bale ($30.64 previous season). Assuming that similar costs apply to non-auction wool, then:

Total cost Australia	=	$5.898 m	
Cost per kg production	=	1.20 cents/kg	(-8.8%)

Source: Rehandling share – AWEX Data Base, Rehandling rate – AWTA Raw Wool Testing Fees

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(17) Wool-tax Levy

In 2002/03 season the wool tax levy remained unchanged at 2%. The levy has been collected by

Australian Wool Innovation since 30 April 2002. It does not stipulate the split between Promotion and Research / Development.

Total cost Australia	=	$63.727 m	
Cost per kg production	=	13.01 cents/kg	(26.9%)

Source: The Wool Mark Company Pty Limited (TWC)

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(18) Buying Costs

It was estimated that in the 2002/03 season the average buying cost under the auction system amounted to $27.95 per bale an increase of 15.7% from the previous season ($24.16 per bale). The main factor behind cost increase per bale can be attributed to the further reduced throughput of sales (by over 450,000 bales) during the season. This means that the total cost of running the companies was spread over smaller number of bales. Assuming the same cost of buying for private treaty merchants then:

Total cost Australia	=	$67.245 m	
Cost per kg production	=	15.88 cents/kg	(+15.9%)

Source: Cost per bale based on the model developed by former Australian Wool Corporation (AWC).

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(19) Post Service Charge

The average post service charge in 2002/03 was $12.01per bale for auction wool ($10.92 in the previous season). Assuming the same applies to non-auction wool, then:

Total cost Australia	=	$33.420 m	
Cost per kg production	=	6.82 cents/kg	(+10.2%)

Source: Mr Phil Fyfe, care of NCWSBA

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(20) Transport to Dump - Main Centre

In 2002/03 wool buyers paid on average $1.84 per bale for transporting wool from brokers' stores to main centre dumps.

Total cost Australia	=	$5.120 m	
Cost per kg production	=	1.04 cents/kg	(+5.3%)

Source: Mr Phil Fyfe, care of NCWSBA

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(21) Shipment Preparation

Shipment preparation includes countermarking, dumping and packing, as well as the cost of positioning the empty container and delivery of the full container to the ship. This cost in 2002/03 was estimated at $1,336 per TEU - twenty foot container equivalent unit. ($1,343/TEU in 2001/02).

Total cost Australia	=	$34.595m	
Cost per kg of exported wool	=	7.31 cents/kg	(-0.5%)

Source: Mr Phil Fyfe, care of Australian Council of Wool Exporters (ACWE)
Calculation performed by models created by AWC

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(22) Sea Freight

The total average freight cost has been calculated by weighting the following elements:

- Each trade's percentage of total exports (ie. Europe, China, Japan, South Korea, India and USA);
- Percentage of conference and non-conference shipments.

The average freight rate for Australian wool was estimated at $1,569 per TEU - a decrease from the previous season's rate of $1,782 per TEU. This fall was basically due to the freight rates reductions in all but North American trades. .

Total cost Australia	=	$39.769 m	
Cost per kg of exported wool	=	8.41 cents/kg	(-12.3%)

Source: Mr Phil Fyfe, care of ACWE
Industry Sources
Calculation performed by models created by AWC
Wool export flows to calculate averages – Australian Bureau of Statistics (ABS)

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(23) Insurance: Marine and Port to Mill

Insurance (% value) = 0.07% * (greasy price + buyer's service charge + all-up freight)

All-up freight = shipment preparation + sea freight + delivery to mill (see Item 25)
7.31 + 8.41 + 4.77 = 20.49 cents/kg

Insurance (cost) : 0.07% * (650.28 + 6.82 + 20.49) = 0.47 cents/kg of exported wool.

The rise of insurance costs was based on increase of wool prices.

Total cost Australia	=	$2.244 m	
Cost per kg of exported wool	=	0.47 cents/kg	(+25.3%)

Source: Mr Phil Fyfe, care of ACWE
Industry sources
Calculation performed by models created by AWC

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(24) Transport : Port to Mill

Underlying the following method of weighting costs was the assumption that transport costs of greasy wool from port of discharge to mill for other countries of destination were similar to the weighted average.

Country	% Flow		A cents/kg
China	55.2	=	4.76
India	7.7	=	6.67
Italy	21.8	=	4.17
France	6.8	=	2.57
Germany	5.3	=	3.15
U.K.	0.7	=	4.80
Japan	2.5	=	13.57
Total	**100.0**	Wt Average	4.77

Total cost Australia	=	$22.559 m	
Cost per kg of exported wool	=	4.77 cents/kg	(-9.4%)

Source: Mr Phil Fyfe, care of ACWE
Industry sources
Calculation performed by models created by AWC
Wool export flows - ABS
Average annual exchange rates were used to convert overseas costs to Australian dollars.

APPENDIX

Wool Flock Performance 2002-03 Season

Profitability of wool flocks 2002/03	
INCOME	**Average**
Sheep Trading	$5.14
Wool	$27.63
Hedged Position	-$0.12
Total Income/DSE	***$32.65***
EXPENSES	
Enterprise Expenses	
A/Health & Breeding	$1.56
Contract Services	$0.27
Freight	$0.38
Insurance	$0.05
Materials	$0.15
Selling Costs: Wool	$1.57
Selling Costs: Stock	$0.67
Shear & Crutching	$4.09
Supplementary Feed	$5.46
Total Enterprise Expenses/DSE	***$14.19***
Gross Margin/DSE	***$18.46***
Administration	$1.00
Chemicals	$0.24
Contract Services	$0.16
Depreciation	$0.95
Electricity & Gas	$0.26
Fertiliser	$2.23
Fuel & Lubricants	$0.58
Insurance	$0.42
Irrigation	$0.02
Landcare	$0.10
Lime/Gypsum	$0.24
Materials	$0.28
M/Vehicle Expenses	$0.50
Rates & Rents	$0.74
R & M General	$1.27
Seed	$0.22
Wages	$2.55
Wages (Owner)	$3.19
Total Overhead Expenses/DSE	***$14.96***
Total Expenses/DSE	***$29.15***
Net Profit/DSE	***$3.51***

Key performance indicators for wool flocks 2002/03	
	Average
Cost Production/Kg Clean Wool	$9.24
Price Received/Kg Clean Wool	$10.30
Price as % of Micron Indicator	82%
Kg Clean/Adult Shorn	3.4
Average Adult Fibre Diameter (micron)	19.1
% Income from Wool	85%
Kg Clean Wool/Ha	35.2
Kg Clean Wool/Ha/100mm rain	7.0
% DSE's as Wethers	28%
Mid Winter Stocking Rate (DSE/Ha)	11.7
% of Potential Stocking Rate	0.6
DSE/Labour Unit	4,800
Enterprise Size (Annual Ave DSE's)	8,815

Sheep flock profitability by fibre diameter 2002/03	
Micron range	**Average Profit ($/DSE)**
<18.6	$10.04
18.6-19.5	$10.09
19.6-20.5	$8.81
20.6-21.5	$10.98
21.6-22.5	$3.47

Note:
1 Preliminary data for South East Australia
2 Data drawn from a drought year
3 The data is biased, it is not industry average.

Source:
Holmes Sackett & Associates Pty Ltd

Level 5, 16-20 Barrack Street, Sydney NSW 2000 ▪ GPO Box 4177, Sydney NSW 2001 ▪ tel 1800 070 099 • fax 61 2 9299 9880 • www.wool.com.au • ABN 12 095 165 558 • ISSN 1449-1532

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