

Australian Wool Innovation Limited

Sheep's Back to Mill

2003-04



SHEEP'S BACK TO MILL

2003-2004

AUSTRALIAN WOOL INNOVATION

Provided by

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Sheep's Back to Mill 2003/04

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EXECUTIVE SUMMARY

Sheep's Back to Mill

2003/04 Edition

The combination of sharply reduced production and declining prices during season 2003/04 has resulted in an increase in the proportion of wool industry revenue devoted to covering harvesting, marketing and distribution costs.

In season 2003/04 this is estimated to account for 1 in 3 dollars generated from gross wool sales at the farm gate. This compares with only 1 in 4 dollars in the previous season. However the estimated 33% spent by the industry on harvesting, marketing and distribution in 2003/04 is still marginally below the long term average for these industry costs (approximately 35%).

Total industry costs for harvesting, marketing and distribution in 2003/04 are estimated at almost 42% of gross receipts (in nominal terms). This compares with 33% in the previous season and represents a return to the longer term average for these aggregate industry costs.

This increase in harvesting, marketing and distribution aggregate costs in 2003/04 represented the reversal of a four year downwards trend for these costs in proportional terms. The high point of 44% of gross industry return in season 1998/99 (due to low prices predominantly) had progressively declined to a 13 year low of only 26% of industry revenue in season 2002/03. This reflected the surge in wool auction prices which started in season 2001/02 and continued into the following season.

Total industry harvesting, marketing and distribution costs in season 2003/04 are estimated to have declined by 6.5% in actual terms to \$986 AUD million. Expressed in greasy wool terms this equates to 210 cents/kg greasy in 2003/04 compared with 215 cents/kg in 2002/03 in nominal terms. However, this decline in overall aggregate costs was more than offset by the 25% decline in industry gross revenue as prices steadily declined for most of the 2003/04 season.

Nearly all individual component costs in the SBTM series rose in 2003/04 with only 6 out of the 24 items recording price declines. All shearing related costs rose due to award increases while insurance costs were also significantly higher.

Despite the general increase in individual cost items in 2003/04, aggregate industry costs were generally lower due to the significant reduction in production. The largest declines (of more than 15%) were recorded for on farm fibre measurement tests, insurance (transport farm to store, broker storage, marine), woolpacks, brokers commission and wool tax. Many of these variables are directly linked to the level of prices paid and reflect the 25% decline in gross industry revenue during 2003/04.

Significant declines were also recorded in aggregate items for shearing costs (approximately 5% despite the higher award wage costs) and sea freight (14%). Both of these variables are independent of prices received by growers.

The combination of directly grower levied costs was estimated to have declined by 7.2% in 2003/04 while the equivalent decline for mill costs was only 3.7%. In nominal terms the average cost to woolgrowers for their basket of harvesting, marketing and distribution fees was estimated to total 165 cents/kg greasy in 2003/04, which was 3% below the previous year's total. Mill or buyer costs rose to their highest total for the SBTM series (since 1980/81) by reaching 45 cents per kg/greasy.

In real terms (using season 2000/01 as the base year) the parameters achieved in season 2003/04 represent a continuation of recent seasonal trends. The trend for wool prices has been a steady decline since the historical peak of season 1988/89, with three distinct smaller peaks in real prices since then. Season 2002/03 represented the last peak in this series (616 cents/kg greasy in 2000/01 terms) with the 2003/04 real value (479 cents/kg greasy in 2000/01 values) returning to slightly above the long term trend line.

In contrast, the estimated real wool costs for harvesting, marketing and distribution have been progressively declining since 2000/01 when using that season as the base. This decline has generally been marginal on an annual basis during this period but still represents a positive trend for wool producers' terms of trade. In real terms the total aggregate costs for the SBTM variables in season 2003/04 are estimated at around two thirds (65%) of the equivalent basket at the end of the 1980's.

Sheep's Back to Mill 2003/04

Introduction

In this edition of Sheep's Back to Mill costs for the wool selling season 1 July 2003 to 30 June 2004 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 current edition is the third one published by AWI.

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

Production

As estimated by the Australian Wool Innovation Production Forecasting Committee in September 2004, **shorn wool production in 2003/04 was 480,000 tonnes greasy, a decrease of 3.8%** from the previous season (499,000 tonnes). The estimated number of sheep and lambs shorn fell from 117.5 million in 2002/03 to **106.1 million** in 2003/04, **a decrease of 9.7%**. The average cut per head rose from 4.30 kg to 4.50 kg, an increase of 4.7%. In 2003/04, the average bale weight increased from 176.09 kg in 2002/03 to 177.00 kg and the estimated **total number of bales produced** decreased from 2,833,778 in the 2002/03 season to **2,711,864** in 2003/04 **a decrease of 4.3%**.

Auction Prices and Taxes

The average greasy price of wool fell from 650.20 cents per kilogram in the 2002/03 season to **504.76 cents per kilogram** in 2003/04, a substantial fall of **22.4%**.

The total levy paid by woolgrowers for financing Research and Development remained unchanged at 2.0% in the 2003/04 season.

Exports

For the 2003/04 season wool exports (expressed in greasy equivalents) totalled **449,295 tonnes**, a decrease of 5.3% from the 2002/03 season. These exports accounted for 97% of the estimated total shorn wool production.

Summary

The total cost of harvesting, marketing and distributing Australian wool **expressed in nominal cents per kilogram greasy of production fell by 2.4%** in 2003/04. The direct cost to the woolgrowers decreased by 3.5%. This was due to the significant reduction of average greasy wool prices (22%) which has decreased total costs of those activities which are set as a percentage of gross price (insurance sheep's back to store, insurance store fire, broker commission, marine insurance, and wool levy).

The costs to overseas mills increased by only 1.7%. The rises in the land transport costs in Australia (+4%) and overseas (+11%) were partially offset by reduction of shipping costs (-10%).

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 2003/04 season or on charges applicable at 30 June 2004. The previous season's figures have been revised where applicable and in many instances differ from those reported in the 2002/03 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.

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

The report also includes four time series charts. The first three cover the period of January 1982 to June 2004 and the last one the period between June 1990 and June 2004.

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.

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.

Chart 4 shows the main cost components of woolgrowers in cents per kg of production in real terms over last 14 seasons

To estimate wool production in terms of costs and profitability farm financial benchmark results from south-coast 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 National Grazing Services Pty Ltd (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 Elders Wool Group..

On farm measurement costs were calculated on data supplied by AWTA.

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, Elders Wool Group, Holmes Sackett & Associates and AWI colleagues is gratefully acknowledged.

TABLE 1
HARVESTING, MARKETING & DISTRIBUTION COSTS FOR AUSTRALIAN WOOL
- SHEEP'S BACK TO MILL, 2003/04

ACTIVITY	2002/03 \$ million	2003/04 \$ million	% CHANGE
1 On Farm Fibre Measurement	6.00	4.86	-19.0
2 Crutching	83.882	80.066	-4.5
3 Shearing	314.010	299.514	-4.6
4 Classing	51.980	51.382	-1.1
5 Shedhands	98.366	94.322	-4.1
6 Pressing	51.263	49.233	-4.0
SUBTOTAL: On Farm/Shearing Shed	599.501	574.517	-4.2
Subtotal as % of total cost	56.8%	58.3%	
7 Woolpacks	28.657	23.300	-18.7
8 Transport to store	25.767	25.437	-1.3
9 Insurance: sheep's back to store	3.861	3.077	-20.3
SUBTOTAL: Packs/store transport	58.285	51.815	-11.1
Subtotal as % of total cost	5.5%	5.3%	
10 Warehousing	52.525	50.833	-3.2
11 Broker's commission (net of wool tax)	33.036	24.599	-25.5
12 Insurance: store fire	5.808	4.821	-17.0
13 Core test certificate: pre-sale	18.674	17.223	-7.8
14 Staple strength & length cert.: pre-sale	9.436	8.645	-8.4
15 Interlotting	0.625	0.661	5.8
16 Rehandling ("Bulkclassing")	6.006	5.985	-0.3
SUBTOTAL: Warehousing/sale	126.110	112.767	-10.6
Subtotal as % of total cost	12.0%	11.4%	
17 Wool-tax levy	64.890	48.457	-25.3
SUBTOTAL: Taxes	64.890	48.457	-25.3
Subtotal as % of total cost	6.2%	4.9%	
DIRECT COST TO WOOLGROWER	848.786	787.556	-7.2
Subtotal as % of total cost	80.5%	79.9%	
18 Buying costs (incl post sale AM cert)	67.263	63.242	-6.0
19 Post service charge	34.034	37.098	9.0
20 Transport to dump - main centre	5.214	5.234	0.4
SUBTOTAL: Buying costs	106.511	105.574	-0.9
Subtotal as % of total cost	10.1%	10.7%	
21 Shipment preparation	34.711	33.159	-4.5
22 Sea freight	39.903	34.149	-14.4
23 Insurance: marine & port to mill	2.251	1.676	-25.6
24 Transport to mill	22.634	23.860	5.4
SUBTOTAL: Shipping costs	99.499	92.843	-6.7
Subtotal as % of total cost	9.4%	9.4%	
DIRECT COSTS TO MILL	206.010	198.418	-3.7
Subtotal as % of total cost	19.5%	20.1%	
TOTAL COSTS: %	100%	100%	
TOTAL COSTS: \$ million	1054.796	985.974	-6.5
TOTAL GREASY WOOL VALUE	3244.498	2422.848	-25.3
DIRECT COST TO WOOLGROWERS AS PROPORTION OF TOTAL GREASY WOOL VALUE	26.2%	32.5%	

(R) Revised

TABLE 2
HARVESTING, MARKETING & DISTRIBUTION COSTS FOR AUSTRALIAN WOOL
- SHEEP'S BACK TO MILL, 2003/04
(cents per greasy kg)

ACTIVITY	2002/03	2003/04	% CHANGE
1 On Farm Fibre Measurement	1.20	1.01	-15.8
2 Crutching	16.81	16.68	-0.8
3 Shearing	62.93	62.40	-0.8
4 Classing	10.42	10.70	2.8
5 Shedhands	19.71	19.65	-0.3
6 Pressing	10.27	10.26	-0.2
SUBTOTAL: On Farm/Shearing Shed (+)	120.14	119.69	-0.4
Subtotal as % of total cost	55.8%	56.9%	
* Not included in the total			
7 Woolpacks	5.74	4.85	-15.5
8 Transport to store	5.16	5.30	2.6
9 Insurance: sheep's back to store	0.77	0.64	-17.1
SUBTOTAL: Packs/store transport (+)	11.68	10.79	-7.6
Subtotal as % of total cost	5.4%	5.1%	
10 Warehousing	10.53	10.59	0.6
11 Broker's commission (net of wool tax)	6.62	5.12	-22.6
12 Insurance: store fire	1.16	1.00	-13.7
13 Core test certificate: pre-sale	3.73	3.59	-3.8
14 Staple strength & length cert.: pre-sale	2.60	2.47	-4.8
15 Interlotting	0.13	0.14	10.0
16 Rehandling ("Bulkclassing")	1.20	1.25	3.6
SUBTOTAL: Warehousing/sale (+)	25.96	24.16	-6.9
Subtotal as % of total cost	12.0%	11.5%	
17 Wool-tax levy	13.00	10.10	-22.4
SUBTOTAL: Taxes (+)	13.00	10.10	-22.4
Subtotal as % of total cost	6.0%	4.8%	
DIRECT COST TO WOOLGROWER	170.79	164.74	-3.5
Subtotal as % of total cost	79.3%	78.4%	
18 Buying costs (incl post sale AM cert)	15.87	15.99	0.7
19 Post service charge	6.82	7.73	13.3
20 Transport to dump - main centre	1.04	1.09	4.4
SUBTOTAL: Buying costs (+)	23.74	24.81	4.5
Subtotal as % of total cost	11.0%	11.8%	
21 Shipment preparation	7.31	7.38	0.9
22 Sea freight	8.41	7.60	-9.6
23 Insurance: marine & port to mill	0.47	0.37	-21.4
24 Transport to mill	4.77	5.31	11.4
SUBTOTAL: Shipping costs (*)	20.96	20.66	-1.4
Subtotal as % of total cost	9.7%	9.8%	
SUBTOTAL: COSTS TO MILLS	44.70	45.48	1.7
Subtotal as % of total cost	20.7%	21.6%	
TOTAL COSTS: c/kg	215.49	210.22	-2.4
TOTAL COSTS EXCLUDING TAXES: c/kg	202.49	200.13	-1.2
TOTAL COSTS: %	100%	100%	
AVERAGE GREASY WOOL VALUE: c/kg	650.20	504.76	-22.4
COST TO GROWERS AS % OF GREASY WOOL VALUE	26.3%	32.6%	
TOTAL COST AS % OF GREASY WOOL VALUE	33.1%	41.6%	
NOTE: (+) - divided through by production; (*) - divided through by exports			(R) Revised
Percentage changes and subtotals have been calculated on un-rounded values.			

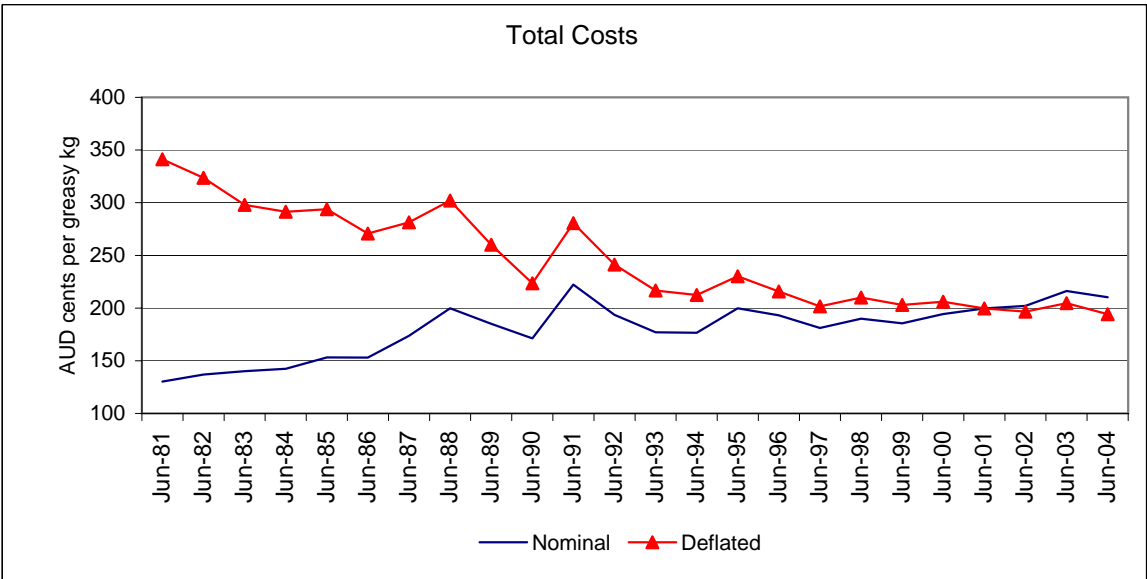
TABLE 3
THREE YEAR COMPARISON OF CHARGES BY ACTIVITY

ACTIVITY	basis of charge	JUNE 2002	JUNE 2003	% CHANGE 03-02	JUNE 2004	% CHANGE 04-03
1 On Farm Fibre Measurement	\$ per test	2.00	2.00	0.0	2.00	0.0
2 Crutching - contract	\$ per 100	152.00	156.00	2.6	168.00	7.7
- non-contract	\$ per 100	69.36	72.55	4.6	75.91	4.6
3 Shearing	\$ per 100	178.18	184.69	3.7	195.95	6.1
4 Classing	\$ per week	728.50	728.50	0.0	805.00	10.5
5 Shedhands	\$ per week	658.60	683.60	3.8	729.60	6.7
6 Pressing	\$ per week	688.00	717.00	4.2	766.60	6.9
7 Woolpacks (Nylon):						
Average new & second hand	\$ per pack	9.67	10.12	4.7	8.59	-15.1
8 Transport to store	\$ per bale	9.22	9.09	-1.4	9.38	3.2
9 Insurance: sheep's back to store	% value	0.109%	0.119%	9.2	0.127%	6.7
10 Warehousing : sale by sample	\$ per bale	18.41	18.53	0.7	18.74	1.1
traditional sale	\$ per bale	22.45	23.09	2.9	22.62	-2.0
11 Broker's commission (net of wool tax)	% value	1.044%	1.039%	-0.5	1.036%	-0.3
12 Insurance: store fire	% value	0.156%	0.179%	14.7	0.199%	11.2
13 Core test certificate: pre-sale	\$ per lot	34.65	38.50	11.1	38.50	0.0
14 Staple strength & length cert. pre-sale	\$ per lot	26.40	28.05	6.3	28.05	0.0
15 Interlotting	\$ per bale	7.23	7.52	4.0	7.35	-2.3
16 Rehandling ("Bulkclassing")	\$ per bale	30.64	30.84	0.7	29.47	-4.4
17 Wool-tax levy	% value	2.00%	2.00%	0.0	2.00%	0.0
Staple strength & length cert.: post-sale	\$ per lot	34.10	36.30	6.5	36.30	0.0
18 Buying costs	\$ per bale	24.16	\$27.95	15.7	\$28.31	1.3
19 Post service charge	\$ per bale	10.92	12.01	10.0	13.68	13.9
20 Transport to dump - main centre	\$ per bale	1.75	1.84	5.1	1.93	4.9
21 Shipment preparation	c per kg	7.35	7.31	-0.5	7.38	0.9
22 Sea freight	c per kg	9.58	8.41	-12.3	7.60	-9.6
23 Insurance: marine & port to mill	% value	0.07%	0.07%	0.0	0.07%	0.0
24 Transport to mill	c per kg	5.26	4.77	-9.4	5.31	11.4
Consumer Price Index (ABS, Catalogue No 6401.0)		+2.8		+2.7		+2.5

STATISTICS USED	2003/04	2002/03	% Changes from previous season
- Shorn wool production *	480,000 tonnes	499,000 tonnes	-3.8%
	2,711,864 bales	2,833,778 bales	-4.3%
- Total sales **	2,233,963 bales	2,406,186 bales	-7.2%
<i>Source: *Australian Wool Innovation Production Forecasting Committee , ** AWEX Logistics Report</i>			
- Average bale weight **	177.00 kg	176.09 kg	0.5%
- Average auction price :			
Greasy	504.76 cents/kg	650.20 cents/kg	-22.4%
Clean	786.23 cents/kg	1012.77 cents/kg	-22.4%
<i>Source: AWEX</i>			
- Number of sheep & lambs shorn (millions)	106.1	117.5	-9.7%
<i>Source: AWPFC</i>			
- Average fleece weight	4.50 kg	4.30 kg	4.7%
<i>Source: AWPFC</i>			
- Total exports (greasy equivalents)	449,295 tonnes	474,618 tonnes	-5.3%
- Exports: % of total wool production	93.6%	95.1%	
<i>Source: ABS</i>			
- Proportions: * Bulkclassified	7.49%	6.87%	
* Interlotted	3.32%	2.93%	
* Traditional	0.1%	0.1%	
* Sale by sample	99.9%	99.9%	
<i>Source: AWEX</i>			
<i>Note: 2002/03 figures have been revised.</i>			

TABLE 4
HARVESTING, MARKETING AND DISTRIBUTION COSTS FOR AUSTRALIAN WOOL
NOMINAL AND DEFLATED COSTS AND WOOL PRICES - cents/kg greasy
BASE YEAR: 2000-2001

Season	Nominal				CPI	Deflated			
	Greasy cents/kg	Growers cost	Buyers cost	Total cost		Greasy cents/kg	Growers cost	Buyers cost	Total cost
Jun-81	264	98	32	130	51.1	691	257	84	341
Jun-82	265	101	36	137	56.6	626	239	85	324
Jun-83	291	105	35	140	62.9	618	224	74	298
Jun-84	303	112	30	142	65.4	619	229	62	291
Jun-85	342	120	34	153	69.7	657	230	64	294
Jun-86	361	122	31	153	75.6	639	217	54	271
Jun-87	527	134	39	174	82.6	853	218	64	281
Jun-88	696	160	40	200	88.5	1053	242	60	302
Jun-89	647	148	37	185	95.2	910	208	52	260
Jun-90	555	139	32	171	102.5	725	182	41	224
Jun-91	414	191	31	222	106.0	522	241	39	281
Jun-92	359	152	42	194	107.3	447	189	52	241
Jun-93	314	135	42	177	109.3	384	165	52	217
Jun-94	335	136	41	177	111.2	403	163	49	212
Jun-95	507	157	43	200	116.2	584	180	50	230
Jun-96	387	151	43	193	119.8	432	168	48	216
Jun-97	403	140	41	181	120.2	449	156	46	202
Jun-98	445	150	40	190	121.0	492	166	44	210
Jun-99	334	146	39	186	122.3	365	160	43	203
Jun-00	393	157	38	194	126.2	417	166	40	206
Jun-01	437	159	40	200	133.8	437	159	40	200
Jun-02	512	159	43	202	137.6	498	154	42	197
Jun-03	650	171	45	216	141.3	616	162	42	205
Jun-04	505	165	45	210	144.8	479	152	42	194



Note: Deflated data used in Charts 1 and 3

CHART 1 - HARVESTING, MARKETING AND DISTRIBUTION COST FOR AUSTRALIAN WOOL AND GREASY WOOL VALUE - DEFLATED TIME SERIES (BASE YEAR 2000-2001)

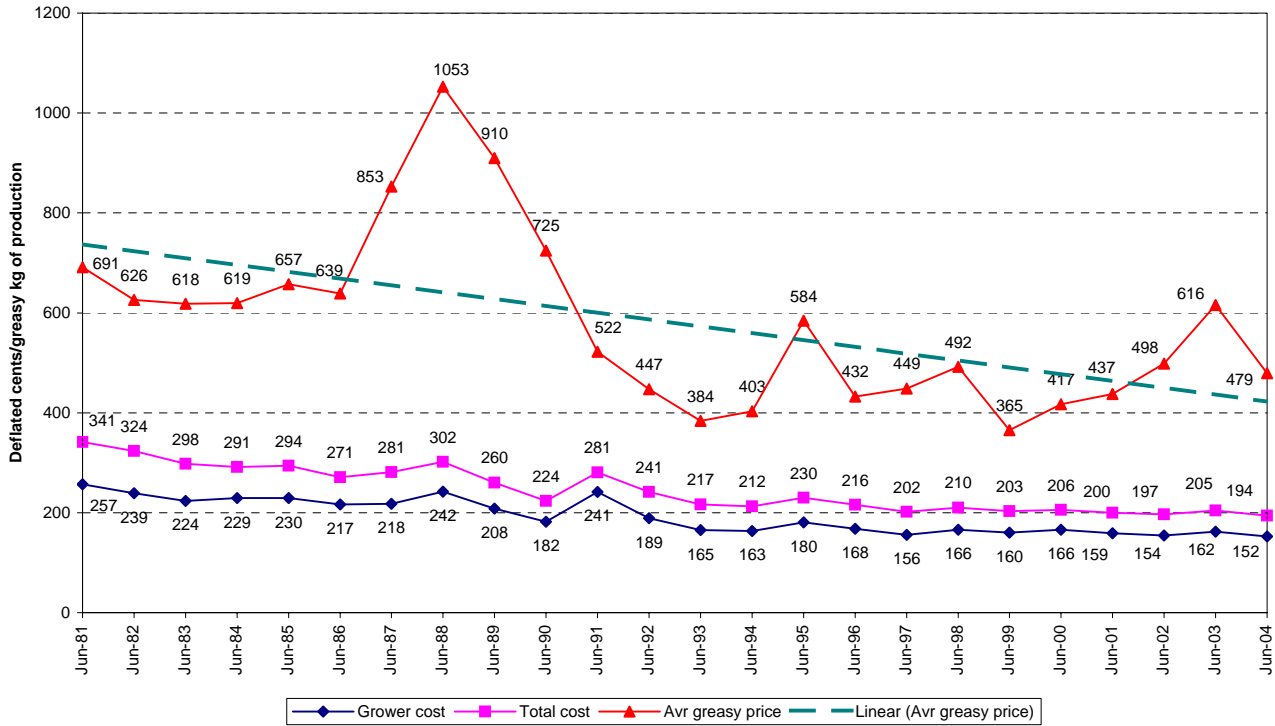


CHART 2 - HARVESTING, MARKETING & DISTRIBUTION COST FOR AUSTRALIAN WOOL: GROWER COST AS % OF GREASY WOOL VALUE - TIME SERIES (nominal values)

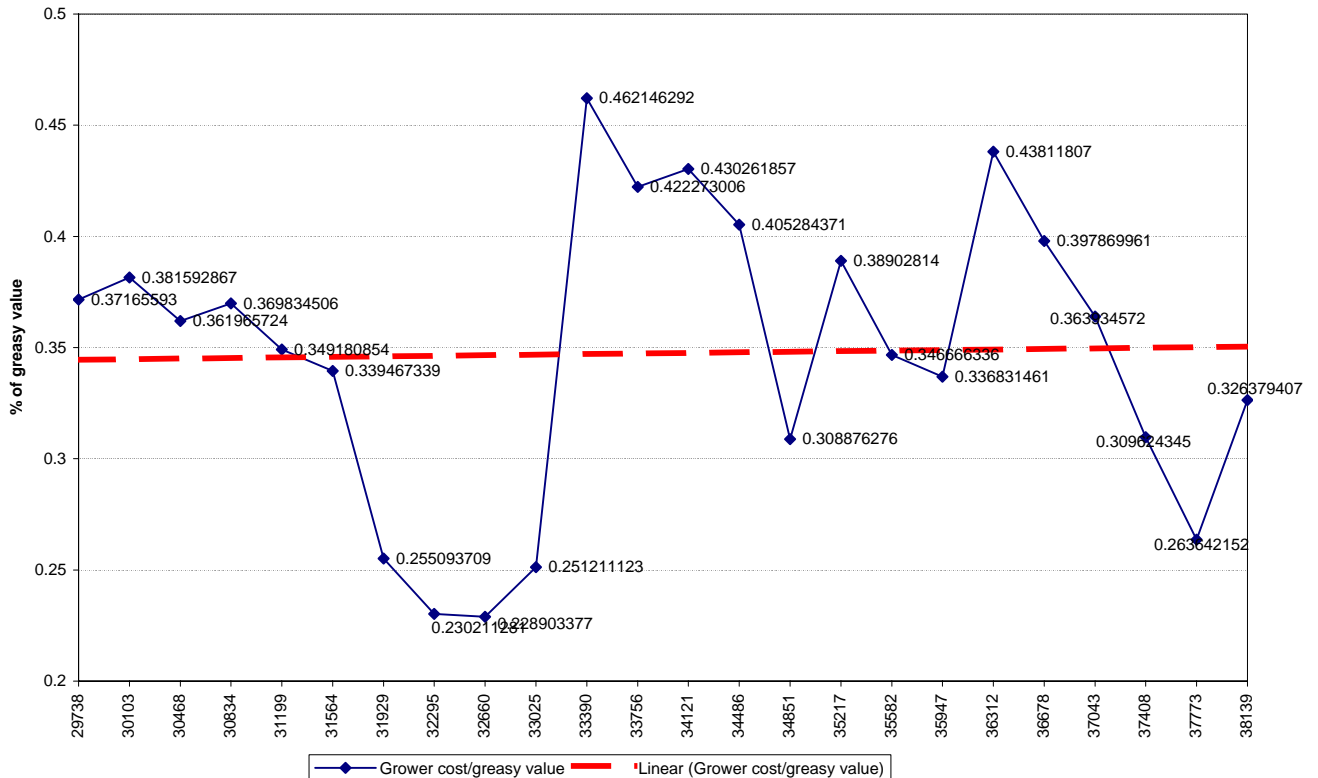


CHART 3 - HARVESTING, MARKETING & DISTRIBUTION COST FOR AUSTRALIAN WOOL; GROWERS, BUYERS & TOTAL COST (cents/greasy kg of production) - deflated time series

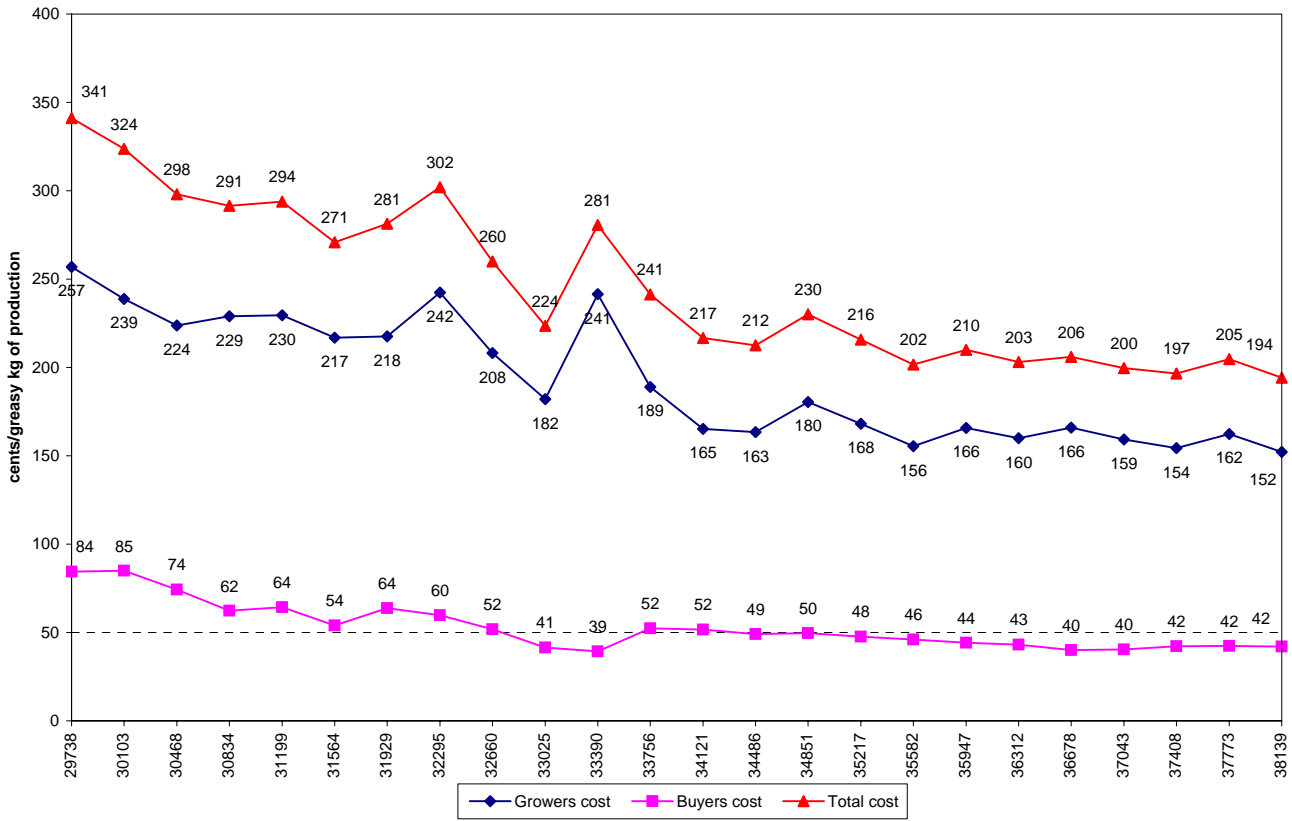
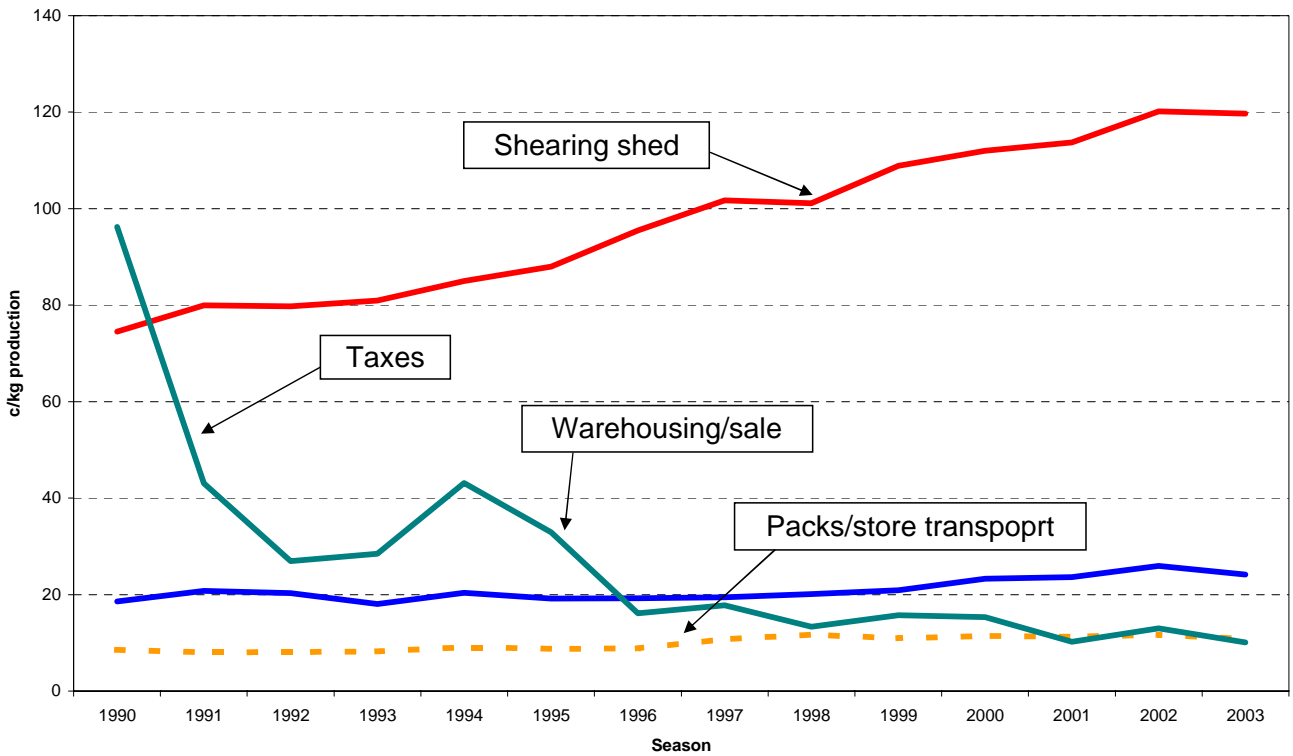


CHART 4 - WOOLGROWERS' MAIN COST COMPONENTS c/kg production



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 and has not changed since the previous season. It is also estimated that in the 2003/04 season the number of fibre measurement tests fell by 19% and amounted to 2,430,000.

Total cost Australia	=	\$4.860 m	
Average cost per kg production	=	1.01 cents/kg	(-15.8%)

Source: Australian Wool Innovation Limited (AWI) and AWTA

(2) *Crutching*

Non-contract rate:		<u>Cents per sheep</u>
Award rate, full crutch and wig		62.70
Workers compensation @ 12.07%		7.57
Superannuation @ 9%		<u>5.64</u>
	Total	75.91
Contract rate:		
Shearers, shedhands, worker's compensation, payroll tax, travel, contractors margin, etc.		168.00

Note:

It is estimated that 20% of sheep crutched in 2003/04 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 2003/04

Weighted average cost	=	94.33 cents/sheep	
Total cost Australia	=	\$80.066 m	
Cost per kg production	=	16.68 cents/kg	(-0.8%)

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:

- 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	195.95	32.20	58.37	30.66	317.18
Work Comp (12.07%)	23.65	3.89	7.05	3.70	38.28
Mess & Cook	15.28	3.82	7.64	3.82	30.56
Travel Allowance	7.50	1.87	3.75	1.87	14.99
Other costs (a)	64.81	10.65	19.30	10.14	104.91
Total cost/sheep	308.22	52.69	96.62	50.46	507.99
(a) Other Costs			Bank Charges		8.72
			Cheque forms + FID		0.73
			Payroll tax		14.91
			Superannuation (9%)		28.55
			Levy for shearing		50.00
			Sundry costs		2.00
					104.91

Non-contract Shearing (Cents per Sheep):

Item	Shearers	Classer	Shedhands	Presser	Total
Labour	195.95	32.20	58.37	30.66	317.18
Work Comp (12.07%)	23.65	3.89	7.05	3.70	38.28
Mess & Cook	15.28	3.82	7.64	3.82	30.56
Travel Allowance	7.50	1.87	3.75	1.87	14.99
Total cost/sheep	243.41	42.04	77.32	40.32	403.08

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

(3) Shearing

Total weighted cost per sheep	=	282.29 cents/sheep	(+5.6%)
Total cost Australia	=	\$299.514 m	(-4.6%)
Average cost per bale	=	\$110.45/bale	(-0.3%)
Average cost per kg production	=	62.40 cents/kg	(-0.8%)

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

(4) Classing

Total weighted cost per sheep	=	48.43 cents/sheep	(+9.5%)
Total cost Australia	=	\$51.382 m	(-1.1%)
Average cost per bale	=	\$18.95/bale	(+3.3%)
Average cost per kg production	=	10.70 cents/kg	(+2.8%)

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

(5) Shedhands

Total weighted cost per sheep	=	88.90 cents/sheep	(+6.2%)
Total cost Australia	=	\$94.322 m	(-4.1%)
Average cost per bale	=	\$34.78/bale	(+0.2%)
Average cost per kg production	=	19.65 cents/kg	(-0.3%)

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

(6) Pressing

Total weighted cost per sheep	=	46.40 cents/sheep	(+6.4%)
Total cost Australia	=	\$49.233 m	(-4.0%)
Average cost per bale	=	\$18.15/bale	(+0.4%)
Average cost per kg production	=	10.26 cents/kg	(-0.2%)

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

(7) Woolpacks

The average retail price of nylon wool pack is estimated at \$8.59 in the 2003/04 season (\$10.11 previous season). This estimate is based on the average price of new packs of \$8.65 (98% of market share) and the average price of \$5.50 per second hand pack (2% of market share)..

Total cost Australia	=	\$28.657 m	
Average cost per kg production	=	5.74 cents/kg	(-15.5%)

Source: Woolpacks importing company Alexander Colquhoun & Sons and AWEX

(8) Transport to Store

<u>State</u>	<u>Production share (%)</u>		<u>Average cost per bale</u>	
Queensland	4.4	=	\$13.93	(+3.9%)
New South Wales	35.6	=	\$10.97	(+2.9%)
Victoria	19.4	=	\$7.22	(+3.4%)
South Australia	13.5	=	\$8.00	(+5.6%)
Western Australia	24.0	=	\$8.48	(+3.3%)
Tasmania	3.1	=	\$11.18	(+4.1%)
Weighted average Australia		=	\$9.38/bale	(+3.2%)
Total cost Australia		=	\$25.437 m	
Cost per kg production		=	5.30 cents/kg	(+2.6%)

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

(9) Insurance - Sheep's Back to Store

Average 0.127% of gross value	=	0.64 cents/kg	(-17.1%)
This was based on brokers' receivals and it was assumed that a similar figure applies to other wool.			
Total cost Australia	=	\$3.077 m	

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

(10) Warehousing

99.9%	Sold by sample at auction	\$18.74 per bale	
0.1%	Sold "traditionally" at auction	\$22.62 per bale	
Average cost = \$18.74 per bale (assuming non-auction wool costs are similar to auction wool costs).			
Total cost Australia	=	\$50.833 m	
Cost per kg production	=	10.59 cents/kg	(+0.6%)

Source: Mr Phil Fyfe, care of NCWSBA

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

Calculated to average 1.036% of gross proceeds less wool-tax,

ie. 1.036% of 98.0% of 504.76 cents/kg = 5.12 cents/kg.

Total cost Australia	=	\$24.599 m	
Cost per kg production	=	5.12 cents/kg	(-22.6%)

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

Source: Mr Phil Fyfe, care of NCWSBA

(12) Insurance - Store Fire

Calculated to average a rate of 0.199% of value of wool sold at auction; this rate was applied for all wool.

Total cost Australia	=	\$4.821 m	
Cost per kg production	=	1.00 cents/kg	(-13.7%)

Source: Mr Phil Fyfe, care of NCWSBA

(13) Core Test Certificate: Pre-Sale

In 2003/04 the AWTA pre-sale tested 447,342 lots (2,713,087 bales). Certification fee, including supervision and sampling, varies with lot size. In 2003/04 the average lot size was estimated at 6 bales, same as in previous season. The average pre-sale certification fee for 6 bales lots has not changed in 2003/04 season and amounted to \$38.50.

Total cost of pre-sale testing	=	\$17.223 m	
Cost per kg production	=	3.59 cents/kg	(-3.8%)

Source: Australian Wool Testing Authority (AWTA); Key Test Data & Raw Wool Testing Fees

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

In 2003/04 the AWTA issued 308,217 lots with pre-sale Staple Length and Strength Certificates (336,414 lots in 2002/03). The cost of the certificate for lots of 6 bales and over was \$28.05 and has not changed from the previous season.

Total cost Australia	=	\$8.645m	
Cost per kg production	=	2.47 cents/kg	(-4.8%)

Source: Australian Wool Testing Authority (AWTA); Key Test Data & Raw Wool Testing Fees

(15) Interlotting

It was estimated that 3.32% of auction wool was interlotted in 2003/04 (2.93% in 2002/03 season) at an average rate of \$7.35 per bale. Assuming a similar cost applies to non-auction wool, then:

Total cost Australia	=	\$0.661 m	
Cost per kg production	=	0.14 cents/kg	(+10.0%)

Source: Interlotting share – AWEX Data Base, average interlotting rate – Mr Phil Fyfe, care of NCWSBA.

(16) Rehandling or "Bulkclassing"

It was estimated that in 2003/04 season 7.49% of auction wool was sold after being rehandled (6.87% in 2002/03) at the average cost of \$29.47 per bale (\$30.84 previous season). Assuming that similar costs apply to non-auction wool, then:

Total cost Australia	=	\$5.985 m	
Cost per kg production	=	1.25 cents/kg	(+3.6%)

Source: Rehandling share – AWEX Data Base, average rehandling rate – Mr Phil Fyfe, care of NCWSBA.

(17) Wool-tax Levy

In 2003/04 season the wool tax levy remained unchanged at 2%. The levy has been collected by Australian Wool Innovation since 30 April 2002.

Total cost Australia	=	\$48.457 m	
Cost per kg production	=	10.10 cents/kg	(-22.4%)

Source: The Woolmark Company Pty Ltd (TWC)

(18) Buying Costs

It was estimated that in the 2003/04 season the average buying cost under the auction system amounted to \$28.31 per bale an increase of 1.3% from the previous season (\$27.95 per bale). The reason behind a minimal cost change lies in the fact that the number of bales sold in the 2003/04 season was almost identical with the sales throughput one year earlier. This means that the slightly higher variable costs of running the companies (increased salaries, office rental, etc) were spread over almost the same number of bales. Assuming the same cost of buying for private treaty merchants then:

Total cost Australia	=	\$63.242 m	
Cost per kg production	=	15.99 cents/kg	(+0.7%)

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

(19) Post Service Charge

The average post service charge in 2003/04 was \$13.68 per bale for auction wool (\$12.01 in the previous season). Assuming the same applies to non-auction wool, then:

Total cost Australia	=	\$37.098 m	
Cost per kg production	=	7.73 cents/kg	(+13.3%)

Source: Mr Phil Fyfe, care of NCWSBA

(20) Transport to Dump - Main Centre

In 2003/04 wool buyers paid on average \$1.93 per bale for transporting wool from brokers' stores to main centre dumps.

Total cost Australia	=	\$5.234 m	
Cost per kg production	=	1.09 cents/kg	(+4.4%)

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 2003/04 was estimated at \$1,357 per TEU - twenty foot container equivalent unit. (\$1,336/TEU in 2002/03).

Total cost Australia	=	\$33.159 m	
Cost per kg of exported wool	=	7.38 cents/kg	(+0.9%)

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

(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 \$1,419 per TEU - a decrease from the previous season's rate of \$1,569 per TEU. This fall was basically due to the freight rates reductions in all but Japanese and Korean trades.

Total cost Australia	=	\$34.149 m	
Cost per kg of exported wool	=	7.60 cents/kg	(-9.6%)

Source: Mr Phil Fyfe, care of ACWE,
Elders Wool Group
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)
7.38 + 7.60 + 5.31 = 20.29 cents/kg

Insurance (cost) : 0.07% * (504.76 + 7.73 + 20.29) = 0.37 cents/kg of exported wool.

The fall of insurance costs was based on decrease of wool prices.

Total cost Australia	=	\$1.676 m	
Cost per kg of exported wool	=	0.37 cents/kg	(-21.4%)

Source: Mr Phil Fyfe, care of ACWE
Elders Wool Group
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	58.0	=	5.48
India	8.3	=	7.30
Italy	19.0	=	4.24
France	5.7	=	2.58
Germany	4.8	=	2.78
U.K.	1.0	=	4.61
Japan	3.2	=	12.47
Total	100.0	Wt Average	5.31

Total cost Australia = \$23.860 m
Cost per kg of exported wool = 5.31 cents/kg (+11.4%)

Source: Mr Phil Fyfe, care of ACWE

Elders Wool Group

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 2003-04 Season

Profit blocks 2003/0		4
INCOME		Average
Sheep Trading		\$7.78
Wool		\$24.56
Hedged Position		\$0.19
Total Income/DSE		\$32.53
EXPENSES		
Enterprise Expenses		
A/Health & Breeding		\$1.79
Contract Services		\$0.29
Freight		\$0.27
Insurance		\$0.04
Materials		\$0.19
Selling Costs: Wool		\$1.73
Selling Costs: Stock		\$0.81
Shear & Crutching		\$4.59
Supplementary Feed		\$3.08
Total Enterprise Expenses/DSE		\$12.78
Gross Margin/DSE		\$19.75
Administration		\$1.01
Chemicals		\$0.30
Contract Services		\$0.21
Depreciation		\$1.02
Electricity & Gas		\$0.30
Fertiliser		\$2.43
Fuel & Lubricants		\$0.61
Insurance		\$0.37
Irrigation		\$0.01
Landcare		\$0.09
Lime/Gypsum		\$0.26
Materials		\$0.21
M/Vehicle Expenses		\$0.51
Rates & Rents		\$0.83
R & M General		\$1.19
Seed		\$0.32
Wages		\$2.67
Wages (Owner)		\$3.75
Total Overhead Expenses/DSE		\$16.10
Total Expenses/DSE		\$28.88
Net Profit/DSE		\$3.65

Key performance indicators blocks 2003/0		4
		Average
Cost Production/Kg Clean Wool		\$7.22
Price Received/Kg Clean Wool		\$8.47
Price as % of Micron Indicator		87%
Kg Clean/Adult Shorn		3.6
Average Adult Fibre Diameter (micron)		19.2
% Income from Wool		77%
Kg Clean Wool/Ha		34.1
Kg Clean Wool/Ha/100mm rain		5.4
% DSE's as Wethers		31%
Mid Winter Stocking Rate (DSE/Ha)		10.3
% of Potential Stocking Rate		0.5
DSE/Labour Unit		4,912
Enterprise Size (Annual Ave DSE's)		8,309

Sheep block profitability by fibre diameter 2003/0		4
		Average Profit
	Micron range	(\$/DSE)
	<17.6	-3.36
	17.6-18.5	3.89
	18.6-19.5	3.20
	19.6-20.5	4.43
	>20.5	10.32

Note:

- 1 Preliminary data for South East Australia
- 2 The data is biased, it is not industry average.

Source:

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