

Economic outlook for sheep and wool

Dale Ashton

Australian Bureau of Agricultural and Resource Economics

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Since the early 1990s the Australian sheep industry has undergone significant structural adjustment. Shifts in enterprise mix on Australian farms have resulted in declining sheep numbers and fewer wool producing farms. At the same time, there has been a substantial movement of resources into grains and other livestock enterprises.

The current drought has severely affected the sheep and wool industry, with further substantial declines in sheep numbers and wool production occurring in 2002-03. Wool producers' incomes will continue to be affected by the drought and subsequent losses in production over the coming year.

Once there is a widespread break in the drought, some rebuilding of Australia's sheep flock is expected to occur over the medium term. However, there are some significant economic issues that are likely to affect developments in the sheep and wool industry over the next few years.

Despite these challenges, the sheep and wool industry remains one of Australia's most important agricultural industries, contributing around 18 per cent of the gross value of farm production and \$5.2 billion in export income in 2002-03.

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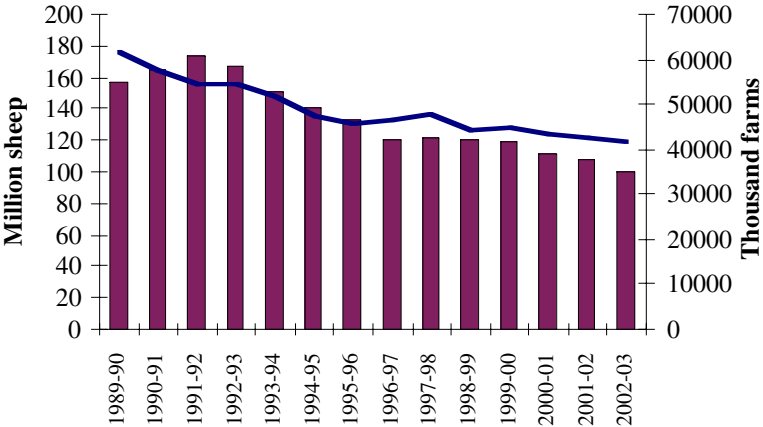
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Introduction

Since the early 1990s the Australian sheep industry has undergone significant structural adjustment. Major issues facing the industry during that period included the management and disposal of the wool stockpile created under the former Reserve Price Scheme; an underlying long run decline in demand for raw wool; and low returns from wool production relative to other farm enterprises that have resulted in a substantial reduction in farm level resources devoted to sheep.

Overall, shifts in enterprise mix on Australian farms have resulted in declining sheep numbers and fewer wool producing farms (figure 1) as producers have increased their grains and other livestock enterprises at the expense of sheep and wool.

Figure 1: Sheep and farm numbers :



a Broadacre farms with sheep

The current drought has severely affected the sheep and wool industry, with further substantial declines in sheep numbers and wool production occurring in 2002-03. Over the coming year wool producers’ incomes will continue to be significantly affected by the drought and related production effects.

Once there is a widespread break in the drought, some rebuilding of Australia’s sheep flock is expected to occur over the medium term. However, there are some significant economic issues that are likely to affect developments in the sheep and wool industry over the next few years. One major issue is whether the decline in wool demand that occurred in the 1990s can be reversed sufficiently to sustain higher wool prices than those of the past decade. Another issue of considerable importance is the future size of

the sheep flock and the consequent implications for Australian wool, mutton and lamb production.

Despite these challenges, the sheep and wool industry remains one of Australia's most important agricultural industries, contributing around 18 per cent of the gross value of farm production and \$5.2 billion in export income in 2002-03.

Outlook for sheep and wool

Competition in world fibre markets

Supply issues have dominated outcomes for world fibre markets over the past year, resulting in higher prices for wool, cotton and synthetic fibres. These price rises occurred despite generally subdued consumer demand for textiles and apparel.

Smaller cotton harvests in China and the United States contributed to a 10 per cent fall in world cotton production in 2002-03 and a 25 per cent rise in world cotton prices. Prices for synthetic fibres rose by around 4 per cent in 2002-03 as oil prices increased and as cotton became relatively less price competitive. With wool supply falling much further than initially expected, largely because of drought in Australia, world wool prices rose by around 25 per cent in 2002-03.

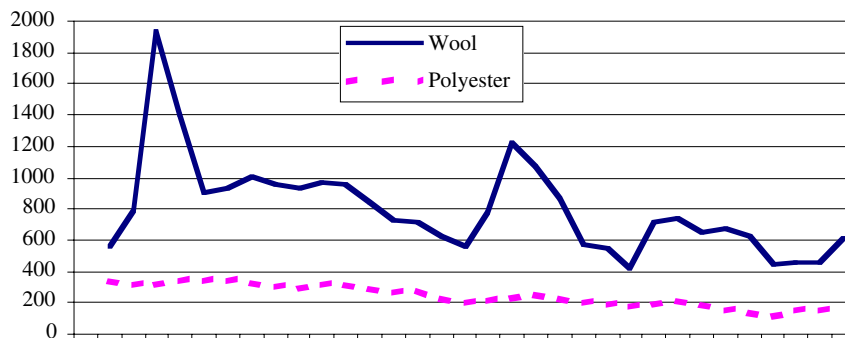
An assumed improvement in world economic growth in 2003-04 is expected to strengthen consumer demand for textiles and apparel and help maintain fibre prices close to current levels. The extent of any price increases is likely to be moderated as producers – particularly cotton and wool producers – respond to improved returns by increasing production.

With world economic growth assumed to average around 3.5 per cent a year over the period 2004–08, demand for textiles and apparel is expected to remain strong and world fibre prices are likely to remain generally higher (in nominal terms) than in recent years. The continued reduction in barriers to trade in textiles and clothing is also expected to be a positive for world fibre prices, with the Multifibre Arrangement due to be completely phased out by 2005.

However, uncertainty about the timing and extent of a recovery in world economic growth will be a major influence on fibre markets over the next few years. Also, competition between all three fibres is expected to remain intense over the medium term.

Prices for synthetic fibres, the main substitute for wool, have trended downward in real terms since the 1960s (figure 3). Because of the ready substitutability of synthetic fibres for wool in most apparel, wool prices have also trended down – thus maintaining their overall competitiveness. Continuing productivity improvements in synthetic fibre manufacture means synthetic fibre prices can be expected to continue trending down over the longer term.

Figure 3: Fibre prices



Wool prices to ease

The significant rise in wool prices that has occurred over the past year has been driven largely by supply factors, with low stocks and falling wool production contributing to strong auction prices in 2002-03. In particular, the sharp rise in prices that occurred in January and October 2002 were caused mainly by buyer concern about the availability and quality of wool as drought conditions intensified throughout Australia. In 2002-03, the Australian eastern market indicator averaged 1049 cents a kilogram (clean), some 25 per cent higher than in the previous year.

Wool prices are expected to remain strong in 2003-04; however, the market is likely to remain highly volatile as market participants respond in particular to new supply information such as revisions to Australian flock numbers and wool production forecasts. The Australian eastern market indicator is forecast to average 910 cents a kilogram (clean) in 2003-04 (table 1).

Wool prices are projected to fall from current highs over the next few years. However, with wool production currently at a fifty year low, prices are likely to average higher than in the 1990s. A major contributor to the decline in prices is expected to be increased Australian wool production in the next few years as producers respond to the still relatively favourable prices.

There are a number of risks associated with this outlook. On the production side, the timing of an end to the current Australian drought remains highly uncertain. In particular, the duration and geographic spread of the drought will have important implications for the size of the sheep flock and the volume of wool production over the next few years.

On the demand side, some potential downside risk is posed by developments in world

Table 1: Outlook for Australian wool

	Unit	2000 -01	2001 -02	2002 -03 f	2003 -04 z	2007 -08 z
Eastern market indicator (clean)						
- nominal	Ac/kg	764	841	1 049	910	780
- real a	Ac/kg	812	869	1 049	885	687
Auction price (greasy)	Ac/kg	450	527	683	592	507
Sheep numbers b	million	111	107	100	104	115
Sheep shorn	million	140	127	117	110	141
Cut per head	kg	4.31	4.38	4.20	4.27	4.29
Wool production (greasy)						
- shorn	kt	602	555	490	470	607
- other c	kt	55	52	45	46	64
- total	kt	657	607	535	516	671
Total closing stocks d						
- weight (greasy)	kt	141	81	96	60	47
Wool exports (balance of payments basis)						
- volume (greasy equiv.)	kt	855	686	547	549	703
- nominal value	A\$m	3 897	3 687	3 790	3 290	3 731
- real value a	A\$m	4 142	3 809	3 790	3 201	3 288

a In 2002-03 Australian dollars. b Closing sheep and lamb numbers at 30 June on enterprises with an estimated value of agricultural operations of \$5 000 or more. c Includes wool on sheepskins, fellmongered and slipe wool. d Includes WoolStock Australia (formerly Wool International) holdings in 2000-01, and privately held stocks of unsold wool. f ABARE forecast. z ABARE projection.

Sources: Australian Bureau of Statistics; Australian Wool Exchange; ABARE.

economic growth, consumer incomes and demand for textiles and apparel in major wool consuming countries. Some of the key short and longer term factors affecting demand for wool are discussed in box 1. Also, because of the rapid decline in Australian wool availability over the past year, the extent to which increased spending on textiles and apparel as a whole will translate into increased demand for raw wool remains unclear.

From a longer term perspective, the major reduction in availability of wool in recent years may mean a largely permanent shift out of wool by some processors. Lower supplies of wool (compared with availability over the past decade) are likely to mean that there is a substantial excess of wool processing capacity. As currently under-utilised wool textile machinery is converted to processing other fibres, the demand for raw wool will decline until it eventually reaches a more sustainable supply–demand equilibrium.

Wool supply to rise slowly

In June 2003, the Australian Wool Innovation Production Forecasting Committee estimated shorn wool production to have fallen by 12 per cent in 2002-03 to 490 000 tonnes. Due to the prolonged nature of the drought, the committee forecast shorn wool production in 2003-04 would fall a further 4 per cent to 470 000 tonnes. Sheep shorn numbers are forecast to fall to 110 million in 2003-04, 6 per cent lower than the previous year. Average fleece weights are forecast to rise by 2 per cent, due to improved seasonal conditions and a lower proportion of lambs in Western Australia and the southern regions of Victoria and South Australia.

Lambing percentages are expected to remain low in 2003-04 with ewes in many drought-affected regions being in poor condition. Also, many producers have sold sheep and lambs due to the high cost of maintaining stock condition through hand feeding and because of high market prices for sheep and lambs.

Looking further out, the picture for the Australian sheep flock is not as clear-cut as for the short term. There are many factors that are likely to have some impact – both positive and negative – on the size and composition of the sheep flock over the next few years. Overall, higher wool prices are expected to result in some rebuilding of the sheep flock over the medium term and shorn wool production is projected to rise slowly.

Potential for rebuilding the flock

The change in sheep numbers during any given year is defined by the number of ewes mated and lambs marked, minus slaughterings, live exports and deaths. In 2001-02, the national flock comprised 45 per cent breeding ewes and 35 per cent lambs.

Slaughterings, deaths and live exports accounted for 38 per cent of the flock (based on flock numbers at the beginning of the year), resulting in an estimated 3.5 per cent decline in total numbers over the year.

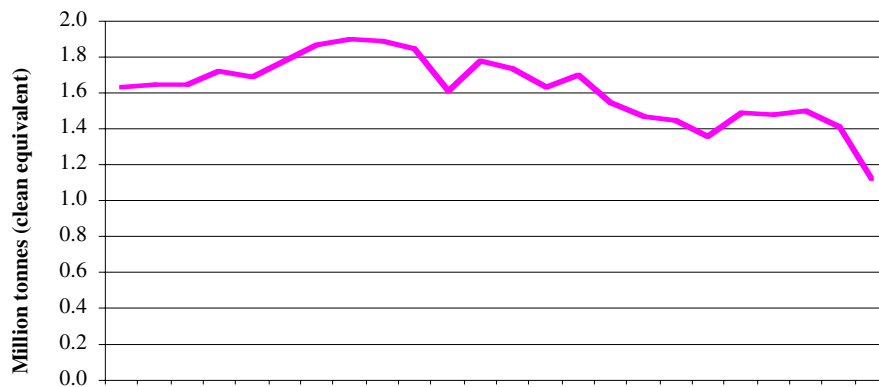
On the basis of the above data, what needs to change before flock numbers can increase?

Looking at each of the components separately and assuming no other changes, breeding ewes as a proportion of the total flock would need to rise to over 50 per cent. However, since 1995-96 this proportion has remained steady at around 47 per cent as the number of breeding ewes has declined in line with the fall in total sheep numbers.

Box 1: Demand for wool in a changing world

After peaking in the late 1980s, world consumption of wool declined throughout the 1990s. Slower world economic growth and a substantial contraction in economic activity in the countries formerly comprising the Soviet Union were the main reasons for the decline in consumption in the early 1990s. Despite some short-lived recoveries (in 1991, 1994 and 1999), consumption declined further during the latter half of the decade.

World retail consumption of wool



The decline in wool consumption occurred at a time when total consumption of apparel fibres was rising. Since 1990, total world apparel fibre consumption has been growing at a rate of around 3 per cent a year – driven mainly by growth in population and a 0.7 per cent a year increase in consumption per person. Most of the growth in total fibre consumption over the past decade was in synthetic fibres, which has grown by nearly 6 per cent a year since 1990. Cotton consumption grew by around 1.6 per cent a year over the same period, while wool consumption declined.

The 1990s was a time of excess production over consumption in world fibre markets and steadily declining prices. These trends mainly reflected subdued growth in consumer spending on textiles and high levels of fibre availability, combined with strong competition between natural fibres and synthetic fibres as production of synthetics expanded rapidly.

In general, fibre demand is influenced by a combination of factors and many of these appear to have been changing to the detriment of wool.

- In most countries there is an ever-growing array of demands competing for a slice of consumers' budgets and the proportion of consumer expenditure being devoted to apparel is declining.
- Competition among the individual fibres has been increasing – based primarily on price, physical attributes of the fibre, and demand for particular types of end product.
- Fashion trends that have favoured casual wear have been to the detriment of wool.
- The effects on consumer spending patterns of an aging population in most developed countries suggest that wool is competing in what are likely to be declining market segments.

Despite fewer breeding ewes, lamb marking rates have increased over the past decade. Lamb marking rates would need to remain well above 80 per cent before total sheep numbers would rise (assuming no other changes).

With sheep deaths at a historic low in 2001-02, further reductions in farm level mortality rates are unlikely. The deterioration in seasonal conditions in 2002 and 2003 is likely to mean higher on farm sheep deaths and further declines in the total number of sheep in the national flock.

Live sheep exports accounted for nearly 6 per cent of opening sheep numbers in 2001-02. For the sheep flock to increase this proportion would need to drop to under 4 per cent (assuming no other changes) — this equates with a fall in live sheep exports from 6.2 million to around 4 million.

On the basis of the observations above, it would appear that the main avenue for a quick turnaround in sheep numbers is through changes in slaughterings.

Since 1998-99, total sheep slaughterings as a proportion of the opening flock have risen from around 25 per cent to over 30 per cent as stock numbers continually declined. The last time this proportion was so high was in 1971-72, when the sheep flock was around 172 million head.

A small decline in slaughterings, to 28 per cent of the flock, would bring about a rise in total sheep numbers. With a trend toward increased prime lamb production occurring over the past decade, any reduction in slaughterings is more likely to occur from the adult sheep population as returns from wool and prime lambs encourage flock rebuilding.

Enterprise mix will be important

The amount of resources (including land) devoted to wool, beef and crop production in Australia has varied over time. Resource use in the different broadacre agricultural enterprises is influenced by many factors, including changes in the relative prices of the commodities being produced, and different rates of productivity improvement among each enterprise.

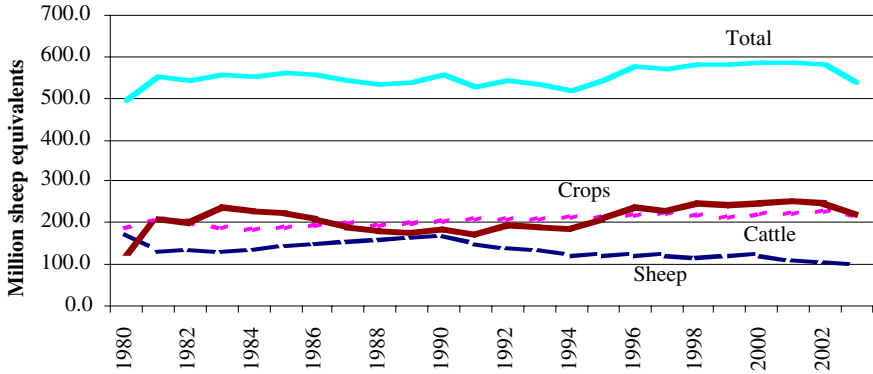
During the 1990s, a combination of good crop prices relative to wool prices, falling sheep numbers and an increasing cattle herd, favourable climate conditions in the latter part of the decade, and improved cropping practices contributed to a significant growth in agricultural production. Estimates of past intensities of broadacre agricultural production in Australia are shown in figure 4.

In deciding on strategies for recovering from the drought, Australian broadacre agricultural producers will be faced with important decisions on how best to allocate resources between various production activities. The many individual decisions that will be made, when aggregated across the sector, will have important implications for how the farm sector develops over the next few years.

Among the most critical decisions, in terms of their aggregate effect, may occur on mixed livestock–cropping farms. In deciding on the mix and scale of farm activities, producers take into account returns from a range of enterprises, such as wool, lamb, mutton, beef cattle and crops.

Over the next five or six years it seems highly likely that the area under grains and other crops will be largely maintained or increased to some extent from pre-2002 drought plantings. This is not surprising given the large on-farm investment in grain growing equipment and infrastructure in recent years and good prospects for continued relatively good returns from grains.

Figure 4: Resource use in Australian broadacre agriculture



Nevertheless, with wool prices projected to remain relatively attractive over the medium term there are likely to be increased incentives for some movement of resources back into sheep and wool production, thereby reversing or at least halting the trend of the past decade out of sheep.

Within the sheep industry itself, the likelihood that production costs in many areas may not vary much between the different types of sheep enterprises means that prices received by farmers for wool and sheep meat will be the most important determinant of incomes from these enterprises. Relative movements in wool and sheep meat prices influence the breed, age and sex composition of the flock. Prices will therefore have a

strong effect on the types of sheep run and, hence, on the production of wool, lamb and mutton.

With the exception of the past year, wool prices have been trending lower relative to prices for lamb, mutton and live export sheep since 1995-96. This change in relative returns has coincided with a greater emphasis by some producers on sheep meat production rather than wool.

In developing its broadacre agriculture projections to 2007-08, ABARE has taken into account the various interactions within the sector, including expected returns and possible changes in relative returns between the different principal enterprises. Given the cutback in cropping areas and livestock numbers during the drought, there is scope for significant recovery in the various enterprises over the next few years using the existing land and water resource base.

Sheep meat

The worsening drought throughout calendar 2002 resulted in lower lambing percentages and a 2 per cent fall in total lamb slaughter for the 2002-03 financial year. Lower Australian lamb supplies, combined with strong domestic and overseas demand for lamb, resulted in a 10 per cent rise in average saleyard lamb prices in 2002-03 (table 2).

Lower supplies and uncertainty surrounding the timing and extent of a break in the drought will continue to be the key factors driving sheep meat markets in the short term. For adult sheep, developments in the wool market will also have a strong influence on outcomes over the coming year.

Although wool prices are forecast to ease somewhat in 2003-04, returns from wool growing are expected to remain favourable enough to encourage producers to begin rebuilding sheep flocks – contingent on there being a break in the drought.

In the short term, the most likely avenue for flock rebuilding will be the retention of adult sheep from sale for slaughter. As a result, adult sheep slaughter is forecast to fall slightly in 2003-04.

Growth in the specialist lamb industry and productivity improvements resulted in a rise in lamb production from around 275 000 tonnes to 335 000 tonnes in the ten years to 2002-03. The rise occurred at a time when total sheep numbers fell from around 140 million (in 1993) to an estimated 100 million in 2003. With prices for lamb projected to remain attractive over the medium term there are further incentives for some movement of farm resources back into sheep and wool production.

Table 2: Outlook for Australian sheep meat

	Unit	2000 -01	2001 -02 f	2002 -03 z	2003 -04 z	2007 -08 z
Saleyard price for sheep						
- nominal	Ac/kg	101	183	156	176	213
- real a	Ac/kg	107	189	156	171	188
Saleyard price for lambs						
- nominal	Ac/kg	201	314	344	326	293
- real a	Ac/kg	214	324	344	317	258
Retail price for lamb						
- nominal	Ac/kg	763	947	1 039	983	884
- real a	Ac/kg	811	978	1 039	956	779
Slaughtering						
Sheep	'000	16 628	14 484	14 663	14 446	14 842
Lamb	'000	18 629	17 433	17 109	17 439	17 864
Production c						
Mutton	kt	348	276	290	275	305
Lamb	kt	367	349	335	337	357
Consumption per person						
Mutton	kg	5.8	4.5	4.7	2.5	4.7
Lamb	kg	12.3	11.4	11.4	12.1	14.1
Exports						
Mutton d	kt	180	158	168	164	155
Lamb d	kt	115	109	116	126	129
- to United States	kt	28	29	26	37	50
Live sheep	'000	5 936	6 443	6 267	5 500	5 500

a In 2002-03 Australian dollars. b At 31 March on establishments with an estimated value of agricultural operations of \$5 000 or more in 1998-99, and at 30 June thereafter. c Carcass weight. d Fresh, chilled and frozen, shipped weight. f ABARE forecast. z ABARE projection.

Sources: Australian Bureau of Statistics; Department of Agriculture, Fisheries and Forestry; ABARE.

With sheep numbers expected to rise over the medium term, lamb slaughter is projected to increase to nearly 18 million by 2007-08. With continuing strong growth in demand from both domestic and export markets, lamb prices are expected to stay relatively high over the projection period.

A key factor in the outlook for sheep meat is the expectation that adult sheep turnoff will decline over the medium term. While total numbers slaughtered are projected to rise slightly over the next five years, slaughterings as a proportion of the total flock are expected to be lower than the relatively high numbers of the last three years.

Live sheep exports

The live sheep export trade is dominated by the Middle East, with the largest buyers being Saudi Arabia, Kuwait, the United Arab Emirates, Jordan, Oman and Bahrain. Live sheep for export are sourced primarily from Western Australia, South Australia and Victoria.

A number of producers are specialising in live sheep for export by increasing the proportion of fat tailed breeds (such as Dorper and Damara sheep) in their flocks. These breeds are particularly suited to the market requirements for live sheep for slaughter.

After the reopening of the Saudi Arabia market in 2000, total live sheep exports expanded rapidly, reaching a record 6.8 million in 2001, before slipping to around 6.3 million in 2002-03 as the sheep flock declined and suitable stock become more difficult to source.

Lower sheep numbers in the short term are expected to constrain the availability of sheep for live export. As a result, live sheep exports are forecast to fall to around 5.5 million in 2003-04, and to remain around this level out to 2007-08.

Farm financial performance

During the past eighteen months Australia has faced the most widespread and severe drought since at least 1982-83. All states and territories have felt its impact and in some areas of Queensland, Western Australia and New South Wales farms have experienced more than two years of low rainfall.

The drought has had a serious impact on rural businesses, families and communities. Fortunately, many farm families entered the 2002-03 drought with incomes and farm equity levels relatively high as a consequence of several years of generally good commodity prices and mainly favourable production conditions. Results from ABARE's annual farm survey provide a basis for evaluating the financial performance of the rural sector.

For Australia as a whole, farm cash incomes for specialist wool producers improved over the two financial years prior to the drought – that is, 2000-01 and 2001-02 (figure 2) – largely because of higher prices for wool, lamb and mutton. Farm cash incomes for mixed enterprise wool producers were also substantially higher, with higher beef and grain prices contributing a large proportion of the increase.

The drought affected both pasture and water availability leading to a higher turnoff of livestock for slaughter. Despite lower saleyard prices for cattle and sheep, the higher turnoff is estimated to have resulted in a rise in cash receipts from livestock in 2002-03. Similarly, increases in wool prices are estimated to have more than offset the effect on revenues of lower production resulting from a fall in sheep numbers and wool cut per head. Overall, total cash receipts for specialist sheep farms are estimated to have risen by around 2 per cent in 2002-03. With significantly reduced income from crops, total

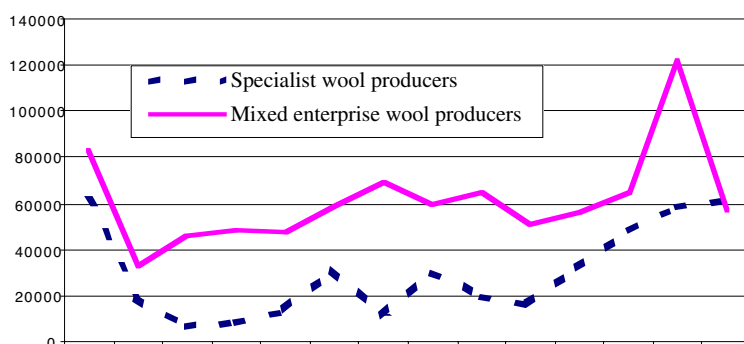
cash receipts for mixed livestock–crops farms are estimated to have fallen by 19 per cent in 2002-03.

Extended supplementary feeding of livestock and sharply higher feed grain and fodder prices led to a large increase in feeding costs for livestock farms in 2002-03. However, reduced expenditure on other items – particularly cropping related expenses – resulted in lower overall cash costs for both specialist sheep and mixed livestock–cropping farms.

As a result, farm cash incomes (that is, total cash receipts minus total cash costs) for specialist sheep farms are estimated to have risen by around 4 per cent in 2002-03. In contrast, farm cash incomes for mixed livestock–cropping farms are estimated to have fallen by around 43 per cent in 2002-03.

In Western Australia, farm cash incomes of specialist sheep farms in 2002-03 were more than two and a half times higher than incomes in the previous year, largely due to higher returns from the sale of wool, adult sheep and beef cattle. For mixed livestock–cropping farms in Western Australia, farm cash incomes rose by around 40 per cent in 2002-03, with lower cropping receipts partly offsetting higher returns for

Figure 2: Farm cash income, wool industry farms



wool.

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