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Australian lamb

Financial performance of slaughter lamb producing farms 2009–10 to 2011–12

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Summary

Around 19 500 Australian broadacre farms sell more than 200 lambs for slaughter per year. These farms are classified as slaughter lamb producers in this report. Most of these farms are mixed enterprise, deriving a substantial proportion of their receipts from cropping, beef cattle, sheep and wool, as well as from the sale of slaughter lambs.

The average financial performance of Australian slaughter lamb producing farms is expected to remain strong in 2011–12. This is due to increases in the production of lambs, wool, beef cattle and broadacre crops resulting from generally good seasonal conditions, together with relatively high prices of lambs, sheep and wool. Average farm cash income for Australian slaughter lamb producing farms is projected to decrease from an average of $191 270 per farm in 2010–11 to $170 200 per farm in 2011–12, still around 40 per cent above the average for the ten years ending 2009–10, in real terms.

Around 11 000 slaughter lamb producers earned more than 20 per cent of their total farm receipts from the sale of slaughter lambs. These businesses are classified as specialist slaughter lamb producers in this report. These farms generally have much smaller cropping and beef cattle enterprises than other slaughter lamb producing farms, resulting in a smaller overall scale of operations. As a consequence they have lower farm cash incomes, on average.

Farm cash income for specialist slaughter lamb producers (that is, farms more reliant on lambs) is projected to increase from an average of $101 110 a farm in 2010–11 to $118 700 a farm in 2011–12. If achieved this would be the highest farm cash income recorded for specialist slaughter lamb producers in over 20 years, in real terms.

Farm business debt declined in 2010–11 and farm business equity ratios are relatively high, averaging 87 per cent at 30 June 2011. A further reduction in farm debt is expected in 2011–12 and, combined with lower interest rates, is expected to lead to improvements in the debt servicing position of farms. Nevertheless, the proportion of farm receipts needed to meet interest payments remains relatively high.

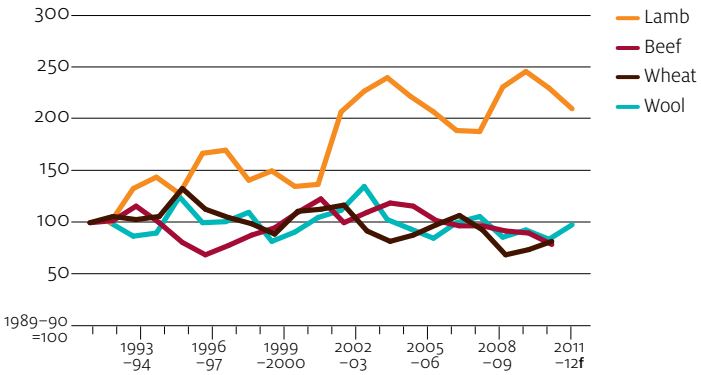
Overall, Australian slaughter lamb producers are estimated to be in a relatively strong financial position in 2011–12. Improved seasonal conditions in the last two years have resulted in increased production of livestock and crops, lower production costs and an increase in sheep and lamb numbers. High farm cash incomes have resulted in record investment in land, vehicles, plant, machinery and improvements in recent years. This investment should provide a basis to further increase farm productivity and, together with strong farm equity, underpin farm financial performance over the medium term.

Chapter 1
Introduction

The incentives for Australian farmers to increase production of slaughter lambs have been strong over the past decade as farmers have experienced much larger increases in prices for lambs relative to wool, beef cattle and wheat (Figure 1). This is the result of the combined effects of strong growth in international demand for Australian lamb meat and constrained supplies because of falling sheep numbers and adverse seasonal conditions through the 2000s. At the same time, wool prices remained relatively low, despite a sharp contraction in wool production.

Many sheep producers responded to these market signals by switching their focus from wool to meat production, particularly lamb meat production.

FIGURE 1 Index of real commodity prices



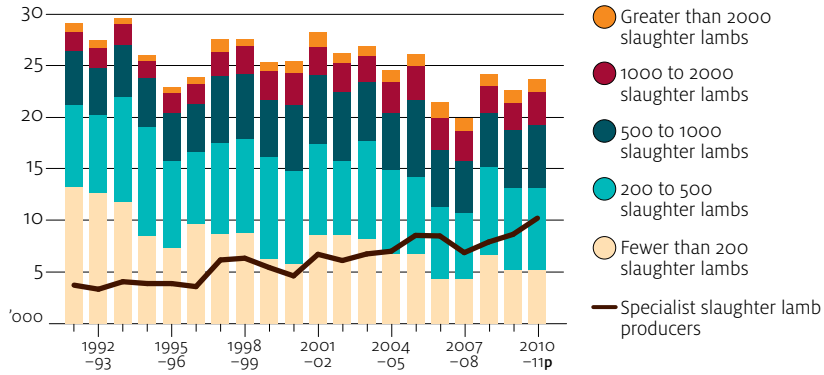
f ABARES forecast.

The ABARES Australian Agricultural and Grazing Industries Survey (AAGIS) indicates that, while the overall number of farms that sold lambs for slaughter has generally trended steadily downward over the long term, declining by around 19 per cent in the twenty years ending 2010–11 to around 23 700, most of this reduction has been on farms that sold only a relatively small number of slaughter lambs (Figure 2). The number of farms that sold less than 200 lambs per year has declined by around 60 per cent. The number that sold between 200 and 500 has declined, by less than

1 per cent. However, the number of slaughter lamb farms of all other scales has increased markedly, especially farms selling between 1000 and 2000 (up 73 per cent) and farms selling more than 2000 slaughter lambs (up 46 per cent).

The same period has seen a large increase in the number of farms that receive a substantial proportion of their receipts from the sale of slaughter lambs. The number of farms deriving more than 20 per cent of their receipts from the sale of slaughter lambs has increased by 174 per cent, from 3700 in 1991–92 to 10 200 in 2010–11(Figure 2).

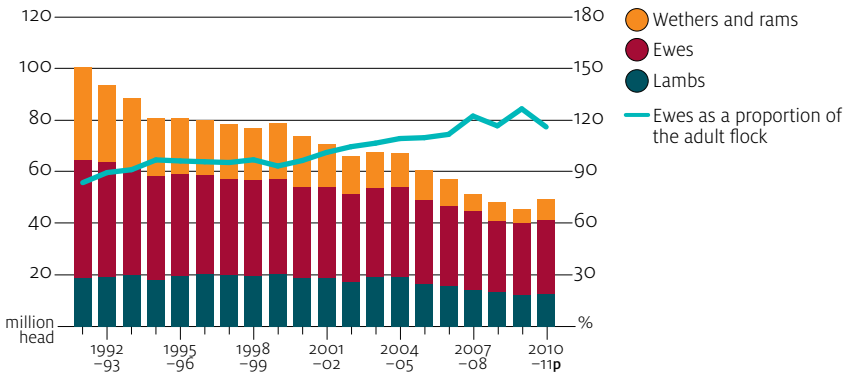
FIGURE 2 Number of farms selling slaughter lambs



p Preliminary estimate.

In each year over the 10 years to 2010 total sheep numbers declined (Table 1 and Figure 3). The change in focus to lamb production saw a sharp decline in the number of wethers in the Australian sheep flock (Figure 3) and a commensurate increase in the proportion of ewes. The proportion of ewes increased from around 62 per cent in 1999–2000 to around 84 per cent in 2009–10.

FIGURE 3 Composition of the Australian sheep flock



p Preliminary estimate.
Source: Australian Bureau of Statistics

The number of lambs slaughtered remained high relative to flock numbers over this period, fluctuating between a high of almost 20.9 million in 2007 and a low of 16.4 million in 2003. The increased focus on production of lambs for meat resulted in a 12 per cent increase in average slaughter weight for lambs over the decade to 2011 and has been the main contributor to an increase of 16 per cent in total lamb meat production. This aided an increase in total lamb meat exports of 66 per cent between 2002 and 2011 (Table 1).

TABLE 1 Sheep numbers and lamb production

	Sheep numbers	Lambs slaughtered b	Slaughter weight a	Lamb meat production ab	Lamb meat exports a
	million head	'000	kg/hd	kt	kt
2002	106	17 086	19.8	338	116
2003	99	16 430	20.1	330	123
2004	101	16 675	20.4	340	131
2005	101	18 228	20.6	375	170
2006	91	19 483	20.5	400	176
2007	86	20 971	20.8	436	193
2008	77	19 970	20.4	407	179
2009	73	20 493	20.7	424	198
2010	68	18 609	21.6	402	186
2011	74	17 793	22.1	393	193
	%	%	%	%	%
Percentage change between 2002 and 2011	–30	4	12	16	66

a Carcase weight. **b** Data from 2007 does not include farm kills.
Source: Australian Bureau of Statistics

The extended run of historically high prices for sheep and lambs created an incentive for flock rebuilding. However, adverse seasonal conditions through much of the 2000s constrained moves to expand production during this period.

In 2010–11 much improved production conditions due to well above average rainfall in the eastern states saw sheep numbers increase; an increase in real wool prices added further incentive to expand sheep numbers. Strong demand resulted from restockers and sheep and lamb prices increased further. Farmers started to rebuild sheep flocks and the number of lambs slaughtered declined to 17.8 million in 2011 (Table 1), the lowest calendar year total since 2004.

Preliminary estimates by the Australian Bureau of Statistics indicate the national sheep flock as at 30 June 2011 reached 74 million head, an estimated 4.9 per cent increase over the previous year (ABS 2011). This was the first significant increase in the Australian sheep flock in over a decade. Most flock growth during 2010–11 was in wethers and lambs, as wethers were retained for wool production and the number of lambs marked increased, resulting in a small decline in the proportion of ewes in the national flock to 77 per cent (Figure 3).

Slaughter lamb producers

In order to monitor changes in the production and financial performance of the Australian slaughter lamb industry, Meat & Livestock Australia (MLA) funds a range of surveys and analytical research. This report draws heavily on information obtained from the annual ABARES AAGIS, which is partly funded by MLA. Issues examined in this report include the financial performance of slaughter lamb producing farms, as well as recent investment by slaughter lamb producers in new capital to expand production and improve productivity.

Between 2008–09 and 2010–11 an average of around 23 500 broadacre farms sold lambs for slaughter (Table 2). Around 5 per cent of broadacre producers (1200 farms) each sold more than 2000 lambs per year for slaughter, accounting for 28 per cent of the gross value of broadacre slaughter lamb production in this period. At the other extreme, this included around 24 per cent of producers that sold fewer than 200 lambs for slaughter each year, just 3 per cent of the gross value of slaughter lamb production. On average, these businesses generated only around 5 per cent of their total farm cash receipts from the sale of slaughter lambs. They have therefore been excluded from this analysis of the lamb industry.

TABLE 2 Distribution of broadacre farms selling lambs for slaughter, by number of slaughter lambs sold, 2008–09 to 2010–11

	Average number of producers	Share of producers	Share of slaughter lambs sold	Share of slaughter lamb value of production
	no.	%	%	%
Fewer than 200 slaughter lambs	5 700	24	4	3
200–500 slaughter lambs	8 200	35	19	17
500–1000 slaughter lambs	5 600	24	26	26
1000–2000 slaughter lambs	2 800	12	25	26
Greater than 2000 slaughter lambs	1 200	5	27	28
All broadacre farms selling slaughter lambs	23 500	100	100	100

Note: Includes only broardacre farms with an estimated value of agricultural operations greater than $40 000. Slaughter numbers are per annum.

An average of 17 800 broadacre farms sold more than 200 lambs for slaughter each year between 2008–09 and 2010–11. These farms are classified as slaughter lamb producing farms in this report.

To investigate the physical and financial characteristics of slaughter lamb producing farms of different scales surveyed by ABARES, farms have been classified into four groups based on the number of slaughter lambs sold per year:

- small-scale farms—200 to 500 lambs sold for slaughter
- medium-scale farms—500 to 1000 lambs sold for slaughter
- large-scale farms—1000 to 2000 lambs sold for slaughter
- very large-scale farms—more than 2000 lambs sold for slaughter.

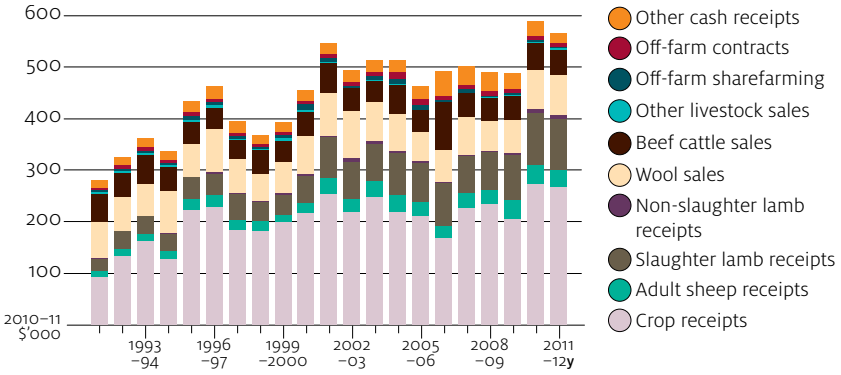
In this report, slaughter lamb producing farms that sold greater than 200 lambs per year for slaughter are classified as specialist slaughter lamb producers if they earned, on average, more than 20 per cent of farm receipts from the sale of lambs for slaughter in the three-year period ending in the current year. An average of 11 000 farms were classified as specialist slaughter lamb producers between 2008–09 and 2010–11. The proportion of producers classified as specialist slaughter lamb producers increased over time to average 57 per cent between 2008–09 and 2010–11, accounting for 64 per cent of the total value of slaughter lamb production.

Chapter 2

Characteristics of slaughter lamb producers

Broadacre slaughter lamb producers mostly operate diversified farm businesses, cropping and running beef cattle in addition to producing wool, sheep and lambs (Figure 4). On average, Australian slaughter lamb producers received 17 per cent of total farm cash receipts from the sale of slaughter lambs in the three years ending 2010–11. The contribution of slaughter lambs to total farm cash receipts ranged from around 22 per cent in Victoria and Tasmania, to 20 per cent in New South Wales, 16 per cent in South Australia and 10 per cent in Western Australia.

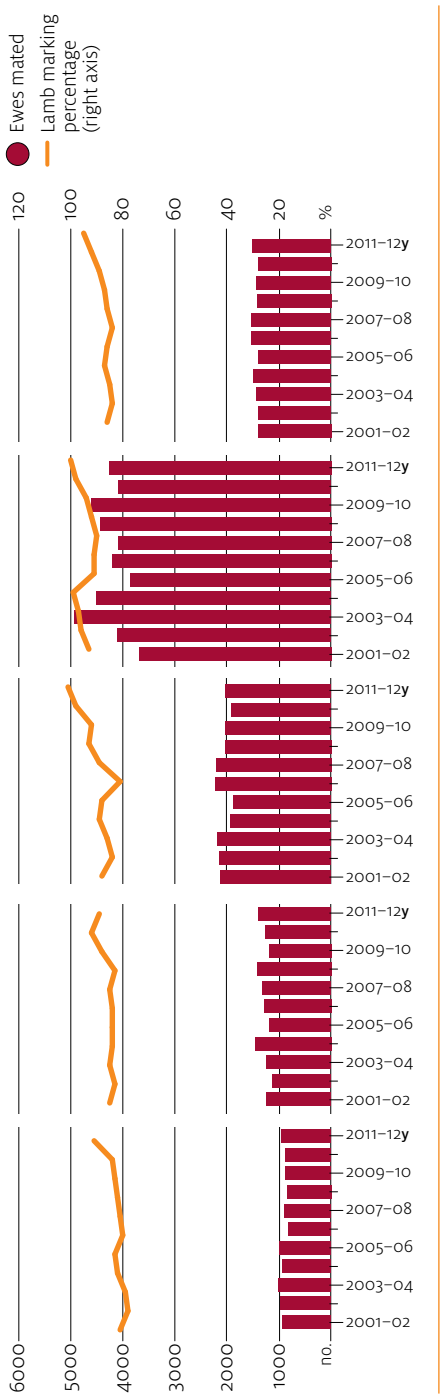
FIGURE 4 Composition of receipts, slaughter lamb producers Australia



y Provisional estimate.
Source: AAGIS

For a sheep and wool producer to place greater focus on slaughter lamb production, significant changes in flock demographics and management are required. Producers generally increase the proportion of ewes in their flock to maximise lamb production, thereby decreasing the proportion of wethers in order to free up resources (Table 3). Increased specialisation in lamb production is also reflected in an increase in the lambing rate (Figure 5).

FIGURE 5 Number of ewes mated and lambing rate, by number of lambs sold for slaughter



y Provisional estimate.

TABLE 3 Physical characteristics, by number of lambs sold for slaughter, 2008–09 to 2010–11
average per farm

		Small	Medium	Large	Very large	Slaughter lamb producers	Specialist slaughter lamb producers
Area operated	ha	2 560	3 460	4 370	6 520	3 400	2 050
Area sown to crops	ha	439	719	869	1 094	640	261
Beef cattle at 30 June	no.	91	127	159	317	129	94
Sheep at 30 June	no.	1 680	2 380	3 520	7 000	2 560	2 180
– rams	%	1	2	2	1	1	1
– ewes	%	60	62	63	66	63	65
– wethers	%	11	8	5	4	8	4
– lambs	%	27	29	30	29	28	29
Ewes mated	no.	870	1 289	1 988	4 376	1 420	1 290
Lambs marked	no.	724	1 126	1 878	4 148	1 269	1 230
Lamb marking percentage	%	83	87	94	95	89	96
Adult sheep sold	no.	303	403	483	1 098	418	238
Total lambs sold	no.	385	767	1 414	3 646	893	1 050
– prime lambs	no.	222	469	909	2 419	560	731
– other lambs for slaughter	no.	133	244	436	1 004	276	288
– lambs not for slaughter	no.	31	54	68	222	57	27
Sheep and lambs shorn	no.	1 700	2 450	3 660	7 660	2 660	2 210
Wool production	kg	7 340	10 740	15 200	31 600	11 330	8 920
Wool cut per head shorn	kg/hd	4.3	4.4	4.2	4.1	4.3	4.0
Average price received							
Wool	c/kg	627	572	552	547	579	526
Adult sheep	$/hd	78	77	80	78	78	81
Slaughter lambs	$/hd	97	103	110	107	105	110

Source: AAGIS

The increased lambing rates reflect an increase in the use of non-merino, first cross ewes and specialty sheep meat breeds. First cross and specialty sheep meat breeds have a higher incidence of twinning. Increased use of improved pastures, fodder crops and supplementary feeding enhances ewe fertility and reduces lamb mortality rates.

In addition, sheep and lamb turn-off rates generally increase as producers expand their production of lambs to be sold for slaughter (Figure 6). In the three years to 2010–11 very large-scale slaughter lamb producers' turn-off rates averaged 67 per cent, while the rate for small-scale producers averaged 41 per cent.

In the three years ending 2010–11 a number of other characteristics distinguished very large slaughter lamb producers. Apart from, on average, having more than four times as many sheep as their small-scale counterparts, very large producers joined more than five times as many ewes and sold almost 10 times as many lambs for slaughter (Table 3).

Very large-scale slaughter lamb producers, on average, realised a 10 per cent price premium in real terms, compared with the average for all slaughter lamb producers over this period, reflecting their production of lambs specifically bred and finished for slaughter.

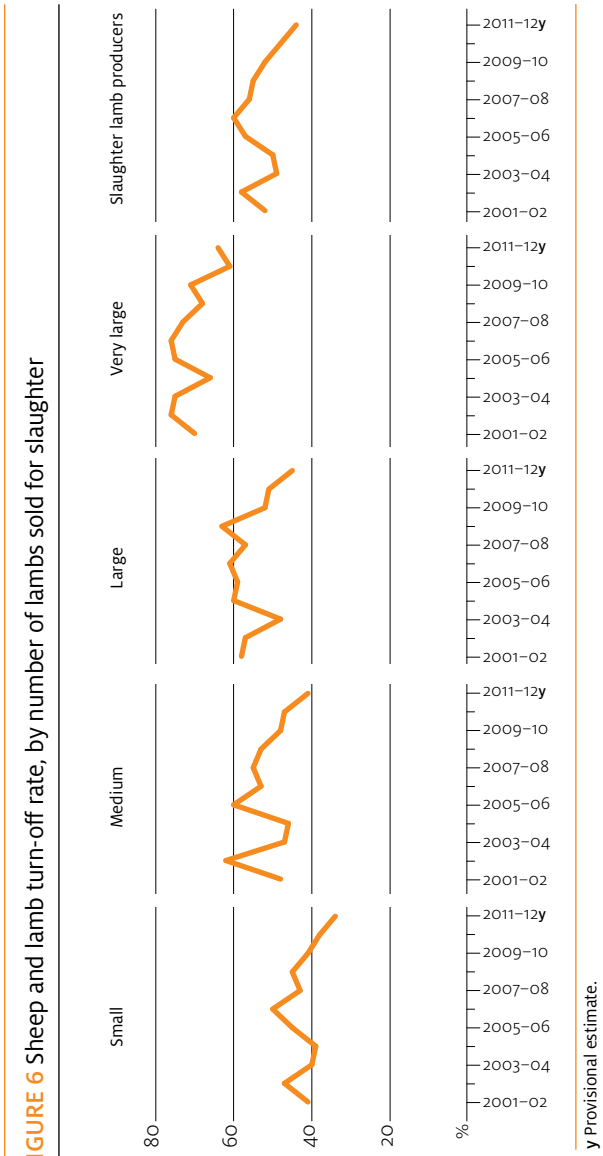


FIGURE 6 Sheep and lamb turn-off rate, by number of lambs sold for slaughter

One consequence of increasing the scale and specialisation of slaughter lamb production is a decline in wool quality. Wool quality is adversely affected by the greater focus on producing sheep with desirable meat traits rather than wool traits. In recent years, this has resulted in larger-scale lamb producers realising a lower average price for wool. In the three years ending 2010–11, very large-scale slaughter lamb producers realised a 13 per cent lower average real price for wool than the price received by their small-scale counterparts. Specialist slaughter lamb producers realised a 9 per cent lower average real price for wool than the price received by all slaughter lamb producers (Table 3).

Chapter 3
Slaughter lamb production

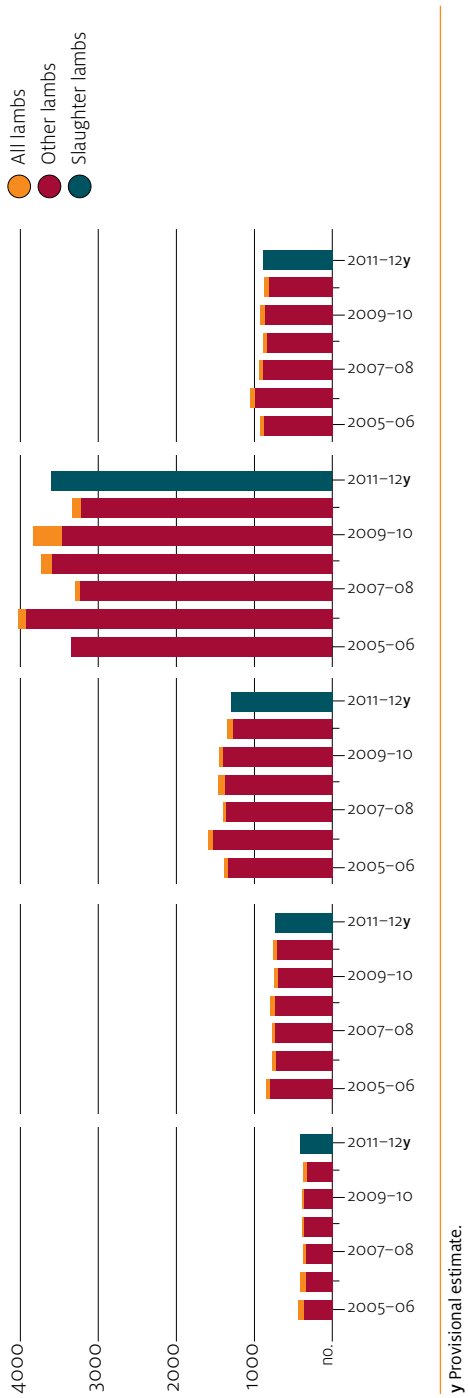
Turn-off rates for sheep and lambs peaked in 2006–07 (Figure 6) as drought in the eastern states reached its greatest extent. In the period since, the turn-off rate has trended downwards as producers have attempted to rebuild sheep numbers. In 2010–11 the turn-off rate for slaughter lamb producers averaged 48 per cent, the lowest turn-off rate since 1996–97. In 2011–12 the average turn-off rate is estimated to have declined further to average 44 per cent.

In 2010–11 above average rainfall in eastern Australia from late autumn extending throughout the remainder of the year resulted in an increase in the average lamb marking percentage and an increase in the number of lambs marked in the eastern states. By contrast, in Western Australia, severe drought through 2010 resulted in increased turn-off of sheep and a reduction in overall sheep numbers before seasonal conditions improved in 2011. Despite the increase in turn-off from Western Australia, overall, at the national level, the average number of both sheep and lambs sold declined in 2010–11. At the same time, sheep numbers increased for producers at all scales of production (Table 4) in response to the improved grazing conditions in eastern Australia and high lamb, sheep and wool prices.

Throughout 2011 seasonal conditions were generally good and most regions saw abundant pasture growth. This is estimated to have resulted in an increase in the number of lambs marked as ewe matings and lamb marking percentages increased for all scales of production except medium scale. Overall, the number of lambs marked is expected to increase by around 12 per cent. Increased lamb numbers are projected to result in an increase of around 3 per cent in the number of lambs sold. This increase is driven by small and very large producers with medium and large producers expected to slightly reduce numbers sold (Table 4 and Figure 7). Drier seasonal conditions through autumn 2012 may result in a larger increase in turn-off.

Turn-off of adult sheep is expected to decline by around 5 per cent in 2011–12. Overall, total sheep and lamb numbers are expected to increase by around 9 per cent for slaughter lamb producers. This is driven by a large increase in lambs marked, a small increase in lambs sold and a reduction in the number of adult sheep sold. The largest increase is expected for large-scale producers, with the increase in sheep numbers for very large and specialist slaughter lamb producers expected to be below the rate of increase reported in 2010–11 (Table 4).

FIGURE 7 Lamb sales, by production group



y Provisional estimate.

TABLE 4 Selected physical characteristics, slaughter lamb industry, ranked by slaughter lamb sales, per annum average per farm

	Area operated	Change in sheep numbers	Ewes mated	Lambs marked	Lamb marking percentage	Sheep sold	Lambs sold	Slaughter lambs sold	Area sown to crop	Change in beef cattle numbers
	ha	%	no.	no.	%	no.	no.	no.	ha	%
Small										
2009–10	2 238	1.8	883	736	83	306	390	364	471	–1.9
2010–11p	2 153	4.3	882	743	84	269	377	328	394	9.7
2011–12y	2 198	8.4	952	863	91	227	421	na	386	8.2
Medium										
2009–10	3 355	2.2	1 195	1 046	88	346	743	701	742	–2.5
2010–11p	2 949	4.4	1 265	1 157	92	304	761	709	669	–1.5
2011–12y	2 993	8.3	1 400	1 247	89	296	739	na	617	6.3
Large										
2009–10	5 181	4.6	2 029	1 858	92	413	1 447	1 407	932	–5.6
2010–11p	5 731	9.6	1 916	1 879	98	380	1351	1 269	800	0.0
2011–12y	5 815	10.5	2 025	2 055	101	363	1 303	na	783	7.1
Very large										
2009–10	6 959	–8.3	4 594	4 317	94	1 576	3 843	3 462	1286	–2.0
2010–11p	6 832	8.6	4 078	4 002	98	675	3 343	3 229	1042	10.2
2011–12y	6 712	5.0	4 264	4 269	100	772	3 602	na	996	3.2
All slaughter lamb producers										
2009–10	3 228	0.1	1 436	1 275	89	432	923	863	688	–2.8
2010–11p	3 357	6.3	1 402	1 295	92	327	872	812	600	4.9
2011–12y	3 421	8.7	1 513	1 432	95	310	896	na	574	6.7
Specialist slaughter lamb producers										
2009–10	2 035	1.1	1 288	1 213	94	239	1 100	1 064	302	–2.7
2010–11p	2 301	8.8	1 322	1 282	97	201	978	961	229	4.2
2011–12y	2 337	7.2	1 444	1 435	99	266	1 026	na	203	6.4

p Preliminary estimate. y Provisional estimate.

Chapter 4
Farm financial performance 2010–11 and 2011–12

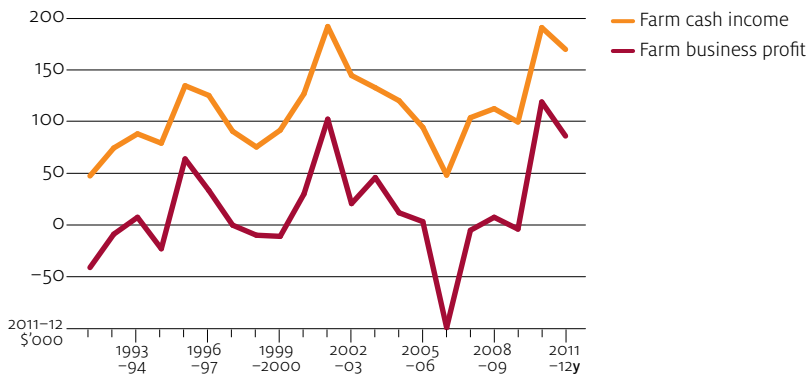
2010–11

In 2010–11 the financial performance of slaughter lamb producers strengthened, with growth in farm receipts exceeding growth in farm costs. On average, farm cash income rose by 90 per cent, compared with 2009–10 to $191 270 a farm (Table 5). This was around 55 per cent above the average for the ten years ending 2010–11 in real terms (Figure 8).

Slaughter lamb producers' receipts from lamb sales increased by around 15 per cent. This was despite a reduction of 6 per cent in the number of lambs sold for slaughter as average prices received for slaughter lambs increased by 22 per cent, compared with 2009–10 (Table 5). Average prices for non-slaughter lambs rose by 45 per cent as reduced supply and strong restocker demand led to record saleyard prices. Similarly, receipts from adult sheep increased by 4 per cent despite a reduction of 24 per cent in the number of adult sheep sold.

Higher wool prices resulted in wool receipts increasing by 19 per cent and beef cattle receipts rose by 15 per cent in response to higher saleyard prices as cattle turn-off was reduced by 2 per cent.

FIGURE 8 Financial performance of slaughter lamb producers



y Provisional estimate.

TABLE 5 Financial performance of slaughter lamb producers

average per farm

		2009–10	2010–11p		2011–12y
Physical					
Area operated	ha	3 228	3 360	(9)	3 400
Area sown to crop	ha	688	600	(5)	600
Beef cattle at 30 June	no.	127	130	(10)	100
Sheep at 30 June	no.	2 608	2 600	(3)	2 800
Ewes mated	no.	1 436	1 400	(3)	1 500
Lambs marked	no.	1 275	1 300	(3)	1 400
Lamb marking percentage	%	89	92	(1)	95
Sheep and lamb turn–on rate	%	8	8	(11)	5
Sheep and lamb turn–off rate	%	52	48	(3)	44
Sheep sold	no.	432	330	(6)	300
Total lambs sold	no.	923	870	(4)	900
Slaughter lambs sold	no.	863	810	(4)	na
Receipts					
Sheep and lamb sales	$	127 301	143 910	(3)	139 200
Adult sheep receipts	$	35 247	36 510	(6)	33 700
Lamb receipts	$	92 054	107 400	(6)	105 400
Slaughter lamb receipts	$	87 669	101 020	(6)	na
Non-slaughter lamb receipts	$	4 385	6 380	(18)	na
Crop receipts	$	204 760	272 690	(5)	265 700
Wool sales	$	64 491	76 570	(5)	78 000
Beef cattle sales	$	44 559	51 420	(15)	49 400
Total cash receipts	$	483 765	583 560	(4)	564 300
Costs					
Sheep and lamb purchases	$	20 876	26 650	(9)	19 300
Fodder	$	5 856	4 740	(13)	3 400
Fertiliser	$	47 392	48 320	(4)	49 200
Sprays	$	33 510	33 030	(6)	35 300
Fuel, oil and lubricants	$	29 709	29 060	(4)	31 200
Repairs and maintenance	$	33 815	33 450	(4)	37 900
Interest payments	$	46 746	44 800	(6)	41 500
Hired labour	$	13 034	12 010	(10)	12 500
Total cash costs	$	383 634	392 290	(4)	394 100
Farm capital and debt					
Total capital value	$	4 663 733	4 538 780	(4)	4 501 100
Farm debt	$	674 298	596 580	(6)	560 500
Equity ratio	%	85	87	(1)	na
Farm financial performance					
Farm cash income	$	100 131	191 270	(5)	170 200
Farm business profit	$	–3 279	119 460	(8)	86 600
Rate of return excl. capital appreciation	%	1.2	3.9	(6)	3.1
Prices					
Slaughter lamb price	$/hd	102	124	(1)	na
Average lamb price	$/hd	100	123	(1)	121
Population of farms	no.	17 530	18 480		18 400

p Preliminary estimates. **y** Provisional estimates. **na** Not available.
Note: Figures in parentheses are standard errors expressed as a percentage of the estimate provided.

In the eastern states, the 2010–11 spring was the wettest on record and despite widespread heavy rainfall around harvest, grain yields also reached a record. High yields, combined with relatively strong grain prices, saw grain receipts increase by 33 per cent. Overall, total cash receipts for slaughter lamb producers increased by around 11 per cent.

Improved farm financial performance occurred for all scales of slaughter lamb production (Figure 9) in all states, including Western Australia (Figure 10).

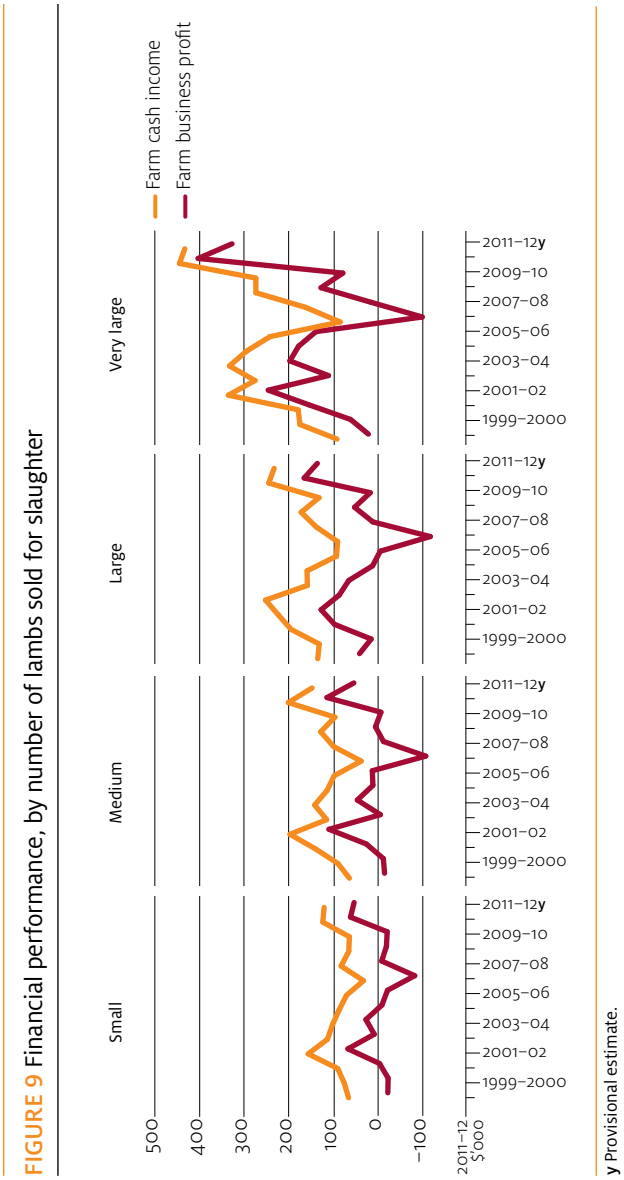
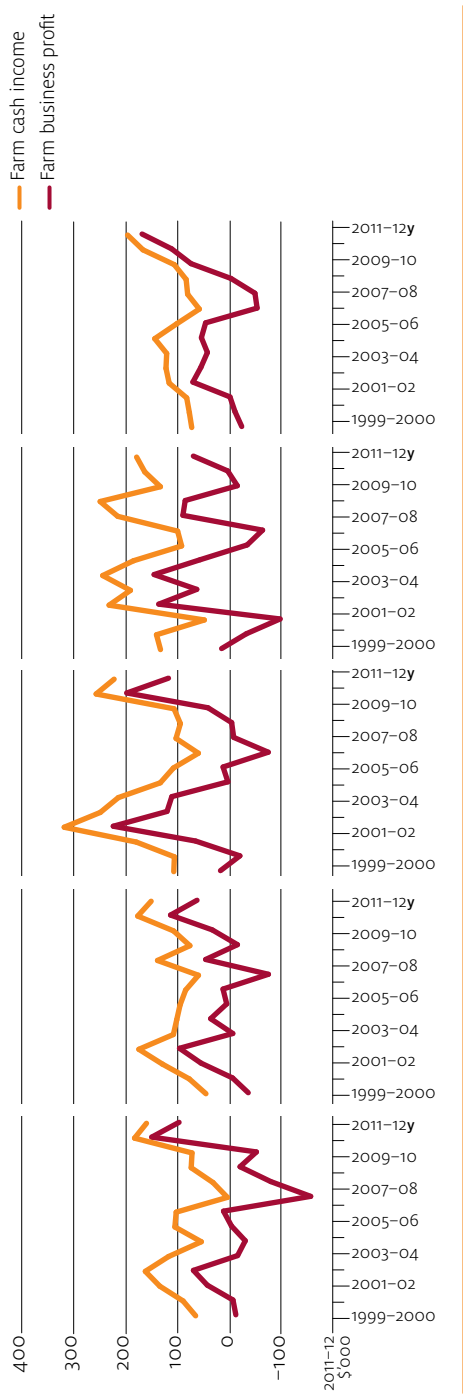


FIGURE 9 Financial performance, by number of lambs sold for slaughter

y Provisional estimate.

FIGURE 10 Farm cash income, slaughter lamb producers, by state



y Provisional estimate.

2011–12

In 2011–12 slaughter lamb producers' receipts from lamb sales are projected to decline. An increase in the number of lambs expected to be sold was more than offset by a reduction in average prices received for lambs, compared with the very high prices recorded in 2010–11 (Table 5). Receipts from adult sheep are also expected to be slightly reduced due to lower prices and despite an increase in the number expected to be sold.

Compared with 2010–11, lower grain prices and lower yields from winter crops in the eastern states are estimated to have reduced slaughter lamb producers' crop receipts by around 3 per cent, on average. This was despite crop receipt increases in Western Australia due to record grain production in 2011–12. By contrast, wool receipts are expected to increase slightly due mainly to an increase in wool production. Overall, with relatively small reductions in lamb, sheep and grain receipts and a small increase in wool receipts, average total cash receipts for slaughter lamb producers are expected to decline by around 3 per cent.

Increased expenditure on crop sprays, repairs, fertiliser, fuel and farm labour is expected to be offset by a reduction in expected expenditure on purchases of sheep and lambs, beef cattle, fodder and interest payments. As a result, average farm cash costs are expected to remain relatively unchanged compared with 2010–11.

The financial performance of slaughter lamb producing farms is forecast to remain strong, on average. With farm cash receipts declining by around 3 per cent and farm cash costs remaining largely unchanged, farm cash income is expected to decline from an average of $191 270 per farm in 2010–11 to average $170 200 per farm in 2011–12, still around 40 per cent above the average for the ten years ending 2009–10, in real terms.

A small reduction in farm cash income and farm business profit is expected for all scales of slaughter lamb production (Figure 9) in New South Wales, Victoria and South Australia. However, farm cash incomes are projected to increase in Western Australia, mainly because of higher receipts from crops. Farm cash incomes are also projected to increase in Tasmania where there is less reliance on crop receipts, and a greater increase in turn-off of sheep, lambs and beef cattle is expected (Figure 10 and Table 7).

Farm cash income for specialist slaughter lamb producers is projected to increase to average $118 700 a farm in 2011–12. If realised, this would be the highest farm cash income recorded for specialist slaughter lamb producers in the past 22 years, in real terms (Figure 11 and Table 6).

Increases in sheep and cattle numbers on farms in 2010–11 and 2011–12 resulted in a rise in the value of on-farm inventories and contributed to relatively larger increases in farm business profits, particularly in the eastern states (Figure 8 and Figure 10).

Over the past three years, very large-scale producers have generated an average rate of return excluding capital appreciation of 4.2 per cent, large producers 3.2 per cent, medium producers 2.4 per cent and small producers 2.1 per cent.

Very large-scale slaughter lamb producers are expected to continue to realise the highest rate of return excluding capital appreciation in 2011–12, averaging 4.9 per cent compared with the average for all slaughter lamb producers of 3.1 per cent and 2.5 per cent for specialist slaughter lamb producers (Table 5 and Table 6).

TABLE 6 Financial performance of specialist slaughter lamb producers

average per farm

		2009–10	2010–11p		2011–12y
Physical					
Area operated	ha	2 035	2 300	(11)	2 300
Area sown to crop	ha	302	230	(9)	200
Beef cattle at 30 June	no.	98	90	(12)	100
Sheep at 30 June	no.	2 154	2 300	(5)	2 600
Ewes mated	no.	1 288	1 320	(5)	1 400
Lambs marked	no.	1 213	1 280	(5)	1 400
Lamb marking percentage	%	94	97	(2)	99
Sheep and lamb turn-on rate	%	11	9	(15)	7
Sheep and lamb turn-off rate	%	63	54	(4)	51
Sheep sold	no.	239	200	(10)	300
Total lambs sold	no.	1 100	980	(6)	1 000
Slaughter lambs sold	no.	1 064	960	(6)	na
Receipts					
Sheep and lamb sales	$	135 985	145 020	(5)	152 700
Adult sheep receipts	$	19 977	21 650	(10)	28 600
Lamb receipts	$	116 008	123 360	(8)	124 100
Slaughter lamb receipts	$	113 151	121 270	(8)	na
Non-slaughter lamb receipts	$	2 857	2 090	(39)	na
Crop receipts	$	55 204	78 840	(9)	89 900
Wool sales	$	42 577	56 810	(7)	62 800
Beef cattle sales	$	34 949	33 630	(12)	33 400
Total cash receipts	$	291 062	335 540	(5)	358 500
Costs					
Sheep and lamb purchases	$	24 368	28 160	(14)	21 600
Fodder	$	5 490	4 260	(24)	3 900
Fertiliser	$	23 362	20 670	(10)	23 400
Sprays	$	13 332	10 730	(12)	12 000
Fuel, oil and lubricants	$	16 482	15 770	(7)	17 700
Repairs and maintenance	$	20 704	21 490	(7)	25 100
Interest payments	$	26 047	24 300	(11)	22 300
Hired labour	$	5 822	5 630	(16)	6 400
Total cash costs	$	227 745	234 430	(6)	239 800
Farm capital and debt					
Total capital value	$	3 384 253	3 258 530	(5)	3 256 300
Farm debt	$	370 110	309 310	(11)	293 500
Equity ratio	%	89	90	(1)	na
Farm financial performance					
Farm cash income	$	63 317	101 110	(8)	118 700
Farm business profit	$	–13 756	46 640	(17)	53 900
Rate of return excl. capital appreciation	%	0.5	2.4	(11)	2.5
Prices					
Slaughter lamb price	$/hd	106	126	(2)	na
Average lamb price	$/hd	105	126	(1)	121
Population of farms	no.	8 660	10 240		10 000

p Preliminary estimates. **y** Provisional estimates. **na** Not available.
Note: Figures in parentheses are standard errors expressed as a percentage of the estimate provided.

TABLE 7 Financial performance of slaughter lamb producers, by state

average per farm

	Farm cash income				Farm business profit				Rate of return excluding capital appreciation			
	2009–10	2010–11p		2011–12y	2009–10	2010–11p		2011–12y	2009–10	2010–11p		2011–12y
	$	$	$	$	$	$	%	%	%			
New South Wales	72 526	182 800	(9)	160 000	–51 062	149 820	(11)	97 400	0.2	5.2	(10)	3.7
Victoria	108 104	176 740	(9)	151 000	33 738	113 740	(14)	63 000	1.9	3.9	(10)	2.5
Queensland	150 850	226 240	(44)	83 900	36 938	136 070	(81)	33 900	1.7	4.6	(45)	2.4
South Australia	107 013	256 580	(10)	222 100	41 769	197 680	(13)	117 700	2.3	5.5	(8)	3.8
Western Australia	133 228	163 230	(16)	178 900	–14 411	4 110	(624)	70 000	1.0	1.5	(31)	2.4
Tasmania	106 595	166 690	(10)	196 200	74 472	111 650	(18)	168 400	2.4	3.1	(11)	4.3
Australia	100 131	191 270	(5)	170 200	–3 279	119 460	(8)	86 600	1.2	3.9	(6)	3.1

p Preliminary estimates. **y** Provisional estimates.

Note: Figures in parentheses are standard errors expressed as a percentage of the estimate provided.

TABLE 8 Financial performance of slaughter lamb producers, ranked scale of slaughter lamb sales average per farm

		Small				Medium			
		2009–10	2010–11p		2011–12y	2009–10	2010–11p		2011–12y
Receipts									
Adult sheep receipts	$	25 545	28 750	(11)	24 700	27 937	35 720	(14)	31 000
Slaughter lambs	$	35 043	37 790	(21)	na	69 678	85 430	(12)	na
Total lamb receipts	$	36 937	42 430	(5)	47 500	72 758	91 210	(4)	85 600
Slaughter lamb price	$/hd	96	115	(3)	na	99	120	(2)	na
Average lamb price	$/hd	95	113	(3)	110	98	120	(2)	115
Beef cattle sales	$	25 157	31 540	(20)	33 200	42 541	37 030	(14)	39 400
Wool sales	$	44 831	55 850	(10)	60 700	55 402	68 880	(8)	68 000
Crop receipts	$	148 314	172 550	(11)	179 500	216 546	300 280	(10)	277 300
Total cash receipts	$	317 254	363 990	(7)	364 200	454 226	570 070	(6)	536 200
Costs									
Sheep and lamb purchases	$	8 009	13 410	(19)	6 900	17 083	18 700	(13)	15 000
Shearing and crutching expenses	$	8 642	8 880	(10)	9 400	12 332	12 350	(7)	13 400
Contracts	$	10 140	10 400	(17)	10 100	15 548	17 550	(16)	17 300
Sprays	$	24 565	21 080	(11)	22 800	33 906	32 450	(9)	34 000
Fertiliser	$	33 185	28 230	(11)	29 100	51 858	52 920	(8)	51 600
Fodder	$	3 823	2 230	(39)	1 500	3 543	2 820	(22)	3 000
Fuel, oil and lubricants	$	20 768	19 060	(7)	20 600	30 627	31 050	(8)	34 000
Freight, handling and marketing	$	19 225	19 970	(10)	18 600	30 423	33 150	(8)	30 500
Hired labour	$	6 898	5 610	(16)	6 000	10 342	10 090	(14)	11 500
Interest payments	$	30 785	27 290	(13)	26 200	39 609	44 430	(12)	40 400
Repairs and maintenance	$	24 253	22 730	(8)	25 700	33 211	34 080	(7)	40 100
Total cash costs	$	253 532	240 750	(7)	243 900	358 127	369 820	(6)	389 000
Financial Performance									
Farm cash income	$	63 722	123 230	(11)	120 200	96 099	200 250	(9)	147 200
Farm business profit	$	–20 966	61 260	(20)	53 100	–6 952	113 810	(17)	53 600
Rate of return excluding capital appreciation	%	0.6	3.1	(13)	2.8	0.9	3.8	(13)	2.3

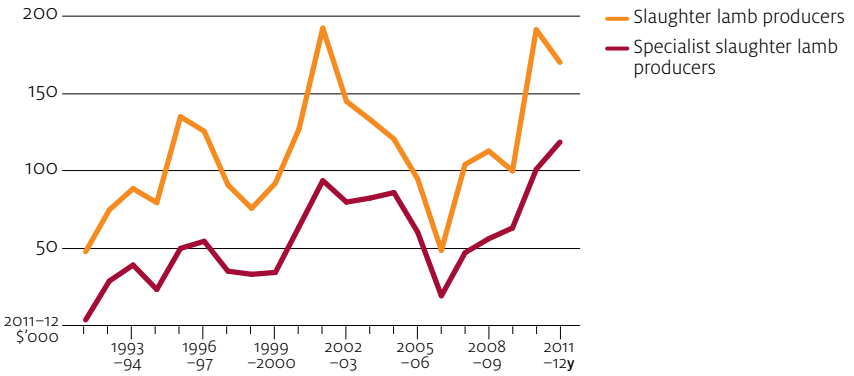
continued...

TABLE 8 Financial performance of slaughter lamb producers, ranked scale of slaughter lamb sales average per farm ...*continued*

		Large				Very large			
		2009–10	2010–11p		2011–12y	2009–10	2010–11p		2011–12y
Receipts									
Adult sheep receipts	$	36 244	40 410	(14)	43 800	121 749	80 270	(18)	77 200
Slaughter lambs	$	150 330	167 100	(21)	na	356 169	411 440	(12)	na
Total lamb receipts	$	153 197	176 820	(3)	157 400	383 777	423 090	(29)	432 500
Slaughter lamb price	$/hd	107	132	(2)	na	103	127	(7)	na
Average lamb price	$/hd	106	131	(2)	121	100	127	(3)	119
Beef cattle sales	$	64 670	67 260	(16)	52 100	129 940	210 080	(210)	196 200
Wool sales	$	80 520	92 070	(11)	100 200	188 894	207 860	(10)	177 600
Crop receipts	$	287 622	375 170	(14)	362 100	332 383	507 100	(31)	499 300
Total cash receipts	$	677 209	806 180	(7)	768 600	1 227 740	1 475 410	(48)	1 427 100
Costs									
Sheep and lamb purchases	$	36 607	42 050	(12)	29 400	83 191	111 010	(78)	92 200
Shearing and crutching expenses	$	20 931	20 650	(10)	21 600	53 175	44 660	(9)	42 800
Contracts	$	28 844	27 550	(23)	21 300	54 586	51 320	(22)	51 000
Sprays	$	47 733	52 350	(14)	52 400	57 811	61 430	(35)	74 100
Fertiliser	$	57 172	68 310	(10)	72 200	94 486	101 560	(22)	103 000
Fodder	$	10 056	8 970	(27)	5 700	19 600	19 290	(109)	11 800
Fuel, oil and lubricants	$	40 019	40 420	(10)	41 200	59 309	53 310	(36)	58 400
Freight, handling and marketing	$	47 744	47 440	(10)	41 400	79 445	84 630	(24)	73 600
Hired labour	$	17 088	16 640	(19)	16 000	53 078	50 710	(74)	49 800
Interest payments	$	70 685	64 370	(15)	60 400	125 748	107 520	(25)	93 500
Repairs and maintenance	$	43 937	45 320	(10)	49 700	73 861	67 820	(22)	74 100
Total cash costs	$	545 487	561 850	(8)	536 500	954 541	1 031 160	(52)	994 700
Financial Performance									
Farm cash income	$	131 722	244 340	(11)	232 200	273 199	444 250	(42)	432 300
Farm business profit	$	17 058	165 010	(18)	135 500	78 393	402 440	(56)	326 500
Rate of return excluding capital appreciation	%	1.8	4.2	(12)	3.6	2.0	5.6	(27)	4.9

p Preliminary estimates. **y** Provisional estimates. **na** Not available.
Note: Figures in parentheses are standard errors expressed as a percentage of the estimate provided.

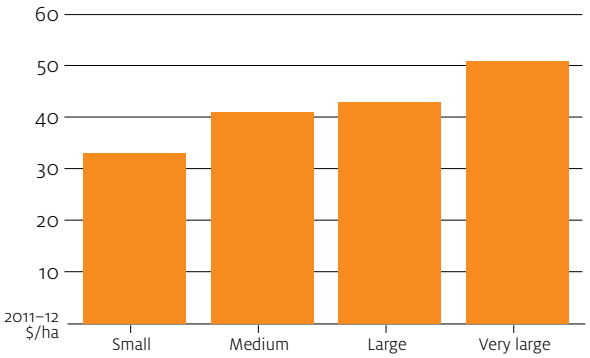
FIGURE 11 Farm cash income, slaughter lamb producers and specialist slaughter lamb producers



y Provisonal estimate.

Higher rates of return for larger-scale slaughter lamb producers mostly reflect higher average farm cash income per hectare generated by larger-scale slaughter lamb producers. In the three years ending 2010–11 farm cash income averaged $51 per hectare operated for very large-scale producers compared with $33 per hectare for small-scale producers (Figure 12).

FIGURE 12 Average farm cash income per hectare operated for slaughter lamb producers, 2008–09 to 2010–11



Financial performance by sale type

According to the AAGIS survey, in the three years ending 2010–11 around 86 per cent of lambs produced for slaughter were sold direct to slaughter. Around 11 per cent were sold for further finishing with 7 per cent sold as stores and 3 per cent sold to feedlots or for backgrounding. A further 2 per cent were reportedly sold for live export.

To explore the financial performance of producers selling to these different markets, slaughter lamb producers were grouped according to which market they predominantly sold lambs to during the period 2008–09 to 2010–11. These groups are:

- predominantly sold lambs directly for slaughter
- predominantly sold lambs for live export
- predominantly sold lambs to feedlots or for backgrounding
- predominantly sold lambs as stores or breeders.

In the three years to 2010–11 around 87 per cent of farms predominately sold lambs direct to slaughter (Table 9). Producers who sold lambs directly for slaughter realised the highest sale price for lambs, averaging $106 a head, while producers who predominantly sold lambs to feedlots realised the lowest prices, averaging $78 a head over this period. This result largely reflects the type of lambs being sold by these producers—that is, lighter lambs are sold to feedlots. Producers selling lambs for live export also received relatively lower prices, averaging $80 a head or 25 per cent less than that realised by producers who sold lambs directly for slaughter. Producers selling lambs as stores or breeders averaged $83 a head (Table 9).

Average farm business profit for farms predominantly selling lambs as stores or breeders and to feedlots were lower than those selling lambs direct to slaughter. Farm cash income-to-receipts ratios and rates of return were also lower for these farms indicating that these farms generated low receipts relative to production costs. The inability of these farms to finish the majority of their lambs for sale direct to slaughter appears to be largely due to poor seasonal conditions. A high proportion of these farms were located in Western Australia and recorded dry conditions during the three years to 2010–11.

Almost all producers who mostly sold lambs for live export were in Western Australia. These farms had the largest sheep flocks, on average, but derived the smallest percentage of receipts from the sale of sheep and lambs of any group. Receipts for these farms were predominantly derived from the sale of grain. These farms also recorded the strongest financial performance during this period, with the highest average farm cash income, highest farm cash income-to-receipts ratio and the highest rate of return.

TABLE 9 Physical and financial performance indicators, by main market targeted, 2008–09 to 2010–11 average per farm

		Direct for slaughter		Breeders or store		Feedlot/ backgrounding		Live export	
Number of farms **a**	no.	15 493		741		523		554	
Share of farms	%	87		4		3		3	
Share of lambs sold	%	86	(2)	7	(13)	3	(41)	2	(12)
Location of farms									
Eastern states	%	85	(1)	77	(1)	78	(1)	1	(60)
Western Australia	%	15	(1)	23	(3)	22	(2)	99	(1)
Pastoral zone	%	4	(1)	9	(6)	16	(60)		
Wheat–sheep zone	%	65	(1)	68	(1)	52	(19)	88	(2)
High rainfall zone	%	31	(1)	23	(2)	32	(2)	11	(12)
Physical									
Area operated at 30 June	ha	2 741	(4)	5 986	(12)	11 257	(222)	6 135	(54)
Area sown to crops	ha	606	(3)	928	(16)	357	(101)	1 089	(13)
Beef cattle at 30 June	no.	120	(5)	192	(41)	202	(56)	96	(45)
Sheep at 30 June	no.	2 349	(2)	5 047	(14)	3 056	(34)	3 494	(12)
Ewes mated	no.	1 309	(2)	2 812	(13)	1 562	(32)	1 973	(11)
Lambs marked	no.	1 194	(2)	2 293	(11)	1 280	(35)	1 655	(12)
Lamb marking percentage	%	91	(1)	82	(4)	82	(7)	84	(2)
Sheep sold	no.	340	(5)	924	(27)	413	(62)	797	(13)
Total lambs sold	no.	896	(2)	1 464	(13)	809	(41)	917	(12)
– direct for slaughter	%	98	(2)	14	(18)	4	(157)	10	(33)
– for live export	%			1	(82)			88	(13)
– to feedlot/backgrounding	%			1	(114)	95	(37)		
– to breeders/store	%	2	(17)	85	(14)	1	(83)	2	(46)
Sheep turn–off rate	%	53	(2)	46	(8)	40	(19)	48	(8)
Prices received									
Wool	c/kg	569	(1)	666	(6)	570	(23)	592	(5)
Adult sheep	$/ hd	80	(2)	67	(13)	57	(38)	67	(9)
Lambs	$/ hd	106	(1)	83	(6)	78	(13)	80	(4)
Farm financial performance									
Adult sheep receipts	$	27 676	(5)	62 755	(19)	23 526	(52)	54 422	(16)
Lamb receipts	$	95 303	(2)	120 911	(10)	63 229	(50)	73 754	(13)
Total cash receipts	$	493 556	(2)	759 771	(10)	368 338	(70)	775 448	(9)
Total cash costs	$	360 880	(2)	614 339	(10)	278 756	(77)	550 714	(8)
Farm cash income	$	132 676	(4)	145 432	(27)	89 582	(82)	224 735	(19)
Farm cash income to receipts margin	%	27	(3)	19	(23)	24	(63)	29	(14)
Farm business profit	$	45 075	(13)	–5 455	(970)	21 477	(230)	69 801	(58)
Rate of return excl. capital appreciation	%	2.3	(6)	1.4	(61)	1.6	(98)	2.5	(22)

a A further 550 farms sold to a range of markets such that no single market dominated.
Note: Figures in parentheses are standard errors expressed as a percentage of the estimate provided.

Grain finishing of lambs

In the three years to 2010–11 just over 8 per cent of slaughter lamb producers finished some of their lambs with grain and around 10 per cent of lambs sold for slaughter were finished on grain, according to estimates from the AAGIS. Further, the number of farms finishing lambs on grain declined in each of these three years. To gain an insight into the possible economic benefits of grain finishing lambs before sale, slaughter lamb producers in the AAGIS were classified into one of two groups, depending on their use of grain to finish lambs for sale during this period (Table 10).

TABLE 10 Physical and financial performance indicators, by use of grain finishing for lambs, 2008–09 to 2010–11 average per farm

		Grain finishing of lambs		No. grain finishing of lambs	
Estimated population of farms	no.	1 500		16 400	
Share of farms sold for slaughter	%	10	(16)	90	(2)
Location of farms					
Eastern states	%	66	(1)	83	(1)
Western Australia	%	34	(1)	17	(1)
Physical					
Area operated at 30 June	ha	2 775	(18)	3 458	(4)
Area sown to crops	no.	1 207	(9)	590	(3)
Sheep at 30 June	no.	2 378	(11)	2 575	(2)
Lambs marked	no.	1 248	(13)	1 271	(2)
Sheep and lamb turn-on rate	%	13	(23)	7	(6)
Sheep and lamb turn-off rate	%	59	(9)	51	(2)
Total lambs sold	no.	1 068	(16)	877	(2)
Grain finishing					
Lambs grain finished	no.	741	(12)		
Average length of grain finishing	days	53	(6)		
Proportion of lambs sold grain finished	%	72	(13)		
Prices received					
Adult sheep price	$/hd	75	(8)	78	(2)
Slaughter lamb price	$/hd	105	(4)	105	(1)
Farm financial performance					
Adult sheep receipts	$	26 407	(19)	33 713	(5)
Lamb receipts	$	111 233	(14)	90 417	(2)
Total cash receipts	$	731 425	(11)	500 197	(2)
Sheep and lamb purchases	$	28 224	(26)	19 916	(5)
Fodder cost	$	8 874	(21)	6 072	(11)
Total cash costs	$	573 966	(11)	366 352	(2)
Farm cash income	$	157 459	(23)	133 845	(4)
Farm cash income per ha operated	$	57	(23)	39	(4)
Farm business profit	$	41 879	(80)	42 878	(13)
Rate of return excl. capital appreciation	%	2.5	(24)	2.2	(6)

Note: Financial statistics are expressed in 2011–12 dollars. Figures in parentheses are standard errors expressed as a percentage of the estimate provided.

Producers who used grain to finish lambs in the three years ending 2010–11 generally had a much higher proportion of their farm planted to grain crops. On average, 43 per cent of the farm area operated was planted to grain crops on farms grain finishing lambs, compared with an average of just 17 per cent for farms with no grain finishing. Further, a relatively high proportion of farms grain finishing lambs were in Western Australia.

On average, grain finishing farms fed grain to 741 lambs, or 72 per cent of the lambs sold, for an average of 53 days. These farms sold 1068 lambs with around 98 per cent of lambs sold directly for slaughter over this period. By comparison, non-grain finishing farms sold an average of 877 lambs, of which 85 per cent were sold directly for slaughter. Producers who grain finished lambs realised an average price for lambs sold directly to slaughter of $107 a head, the same average price as their non-grain finishing counterparts. This indicates that both groups produced lambs of similar average slaughter weight and quality.

Farms grain finishing lambs had a higher sheep and lamb turn-on rate than farms that did not grain finish, but still not a high turn-on rate. This indicates that most lambs finished on grain were bred on-farm, but that some farms also purchased additional lambs for grain finishing.

Farms that used grain to finish lambs achieved slightly stronger farm financial performance, on average, in the three years ending 2010–11. On average, grain finishing farms generated a slightly higher average farm cash income, a significantly higher farm cash income per hectare and a slightly higher rate of return compared with their non-grain finishing counterparts.

To further explore these apparent benefits of grain finishing, slaughter lamb producers who grain finished lambs were divided into three groups, based on the average length of time lambs were fed:

- less than 40 days
- 40 to 60 days
- more than 60 days.

The largest share of lambs finished on grain were those finished for 40 to 60 days (53 per cent). Lambs finished for less than 40 days accounted for 29 per cent of grain finished lambs and lambs finished for more than 60 days, 19 per cent (Table 11).

In 2008–09 and the first half of 2009–10 drought conditions appear to have influenced the decision to feed grain, as well as the duration and intensity of grain feeding. During this period more than 60 per cent of producers who fed lambs on grain for more than 60 days experienced drought. By comparison, just 10 per cent of producers feeding for less than 40 days and 18 per cent of producers feeding for 40 to 60 days reported their properties to be in drought.

Further, farms grain finishing lambs for 40 to 60 days had a higher average sheep and lamb turn-on rate than farms in other groups. This may indicate that more farms in this group purchased additional lambs for grain finishing.

The financial performance of the three grain finishing groups appears to mostly reflect these differences in seasonal conditions. The group of producers grain finishing lambs for more than 60 days included the highest proportion of drought-affected farms and realised the poorest financial performance. Average cash costs were significantly higher relative to the total cash receipts generated for this group of farms, resulting in lower farm cash income and lower rates of return.

TABLE 11 Physical and financial performance indicators of producers grain finishing lambs, by length of time on grain, 2008–09 to 2010–11 average per farm

		Less than 40 days		40 to 60 days		More than 60 days	
Estimated population of farms	no.	512		624		324	
Estimated number of lambs grain finished	'000	310	(7)	572	(22)	201	(14)
Share of grain finished lambs	%	29	(19)	53	(22)	19	(19)
Physical							
Area operated	ha	2 926	(9)	2 731	(39)	2 623	(15)
Area sown to crops	no.	1 367	(9)	1 129	(20)	1 105	(20)
Sheep at 30 June	no.	2 639	(10)	2 274	(26)	2 168	(12)
Lambs marked	no.	1 453	(12)	1 150	(27)	1 112	(10)
Sheep and lamb turn-on rate	%	7	(31)	21	(42)	10	(38)
Sheep and lamb turn-off rate	%	55	(14)	64	(15)	56	(13)
Total lambs sold	no.	1 053	(13)	1 142	(29)	947	(17)
Grain finishing of lambs							
Lambs grain finished	no.	605	(19)	916	(22)	621	(19)
Average length of grain finishing	days	27	(8)	52	(3)	97	(10)
Proportion of lambs sold grain finished	%	60	(10)	82	(22)	71	(9)
Slaughter lamb price	$/hd	100	(6)	105	(6)	112	(5)
Farm financial performance							
Adult sheep receipts	$	34 204	(30)	25 185	(36)	16 457	(35)
Lamb receipts	$	106 408	(11)	119 653	(27)	102 648	(20)
Total cash receipts	$	899 167	(13)	690 139	(22)	546 165	(12)
Sheep and lamb purchases	$	17 989	(30)	38 484	(50)	24 637	(35)
Fodder cost	$	7 792	(16)	10 405	(45)	7 637	(37)
Total cash costs	$	642 354	(10)	569 846	(24)	473 978	(13)
Farm cash income	$	256 814	(30)	120 293	(40)	72 188	(36)
Farm business profit	$	115 705	(63)	15 760	(301)	–24 366	(164)
Rate of return excluding capital appreciation	%	3.5	(35)	2.1	(40)	1.4	(58)

Note: Financial statistics are expressed in 2011–12 dollars. Figures in parentheses are standard errors expressed as a percentage of the estimate provided.

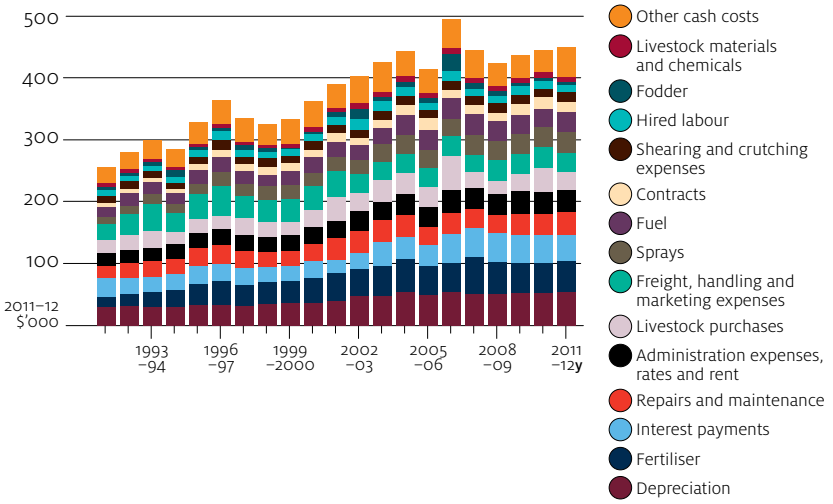
There was no significant difference in the average price received for lambs sold for slaughter across the three feeding groups. These prices were similar to the average price received by all slaughter lamb producers in the three years to 2010–11. This suggests all three groups were selling animals of similar weight and quality, on average. This in turn suggests that these producers mainly used grain to get lambs to minimum acceptable sale weight, rather than using grain to produce heavier lambs.

Compared with expenditure by farms not using grain finishing, fodder expenditure per unit of livestock carried was not significantly higher for any of the groups finishing lambs on grain. This, together with information on grain use data collected in the AAGIS, suggests that farms grain finishing lambs predominantly used grain grown on-farm rather than purchased grain.

Farm costs

Average total farm cash costs for slaughter lamb producers rose by 73 per cent and depreciation on farm capital increased by 82 per cent over the 20 years from 1991–92 to 2010–11, in real terms (Figure 13). However, a large proportion of this increase is attributable to the rise in the average scale of operations of slaughter lamb producing farms. This rise was mostly due to an increase in the scale of cropping enterprises and changes in cropping technologies.

FIGURE 13 Farm costs, slaughter lamb producers, Australia



y Provisional estimate.

In 1991–92 slaughter lamb producing farms ran an average of 2530 sheep and 97 head of beef cattle, and planted 208 hectares of crop. By 2010–11 enterprise size had increased to an average of 2600 sheep, 129 head of beef cattle and 600 hectares of crop. The average scale of operations, expressed in sheep equivalents increased by 70 per cent, from 5790 sheep equivalents in 1991–92 to 9700 sheep equivalents in 2010–11.

Further, the fastest rates of increase in farm expenditure have been for crop related items. In real terms, expenditure on crop sprays has increased at an annual rate of 5.4 per cent a year over the 20 years to 2010–11, fertiliser expenditure by 5.2 per cent, contract expenditure by 4.9 per cent, depreciation on vehicles, plant and machinery by 3.7 per cent and fuel 3.3 per cent. In addition, expenditure on interest payments increased at a rate of 4.9 per cent a year. By contrast, the annual rate of growth in all other farm cash costs averaged 1.8 per cent a year. Included in these other cash costs is most livestock related expenditure, including shearing, veterinary chemicals and livestock materials, hired labour and livestock purchase expenditure.

Expenditure on fodder increased markedly in years of widespread severe drought, including 1994–95, 2002–03 and 2006–07. In 2006–07 expenditure on fodder increased by over 300 per cent. However, by 2010–11 fodder expenditure was relatively low and is projected to fall to the lowest recorded in over 20 years in 2011–12.

Farm investment

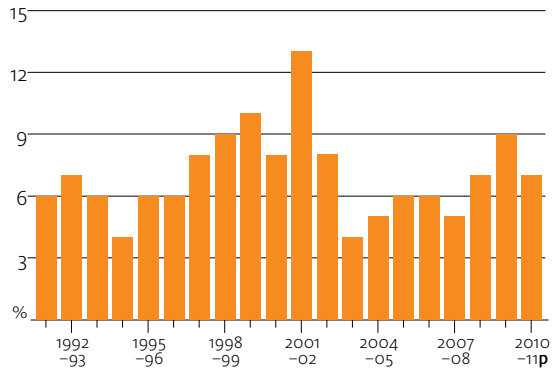
The capacity of producers to generate farm income will be influenced by both their past investments in additional land to expand the scale of their farming activities and in new infrastructure, plant and machinery to boost productivity in the longer term.

Over the past decade slaughter lamb producers have responded to rising lamb prices and improved financial performance by undertaking considerable new investments in land, plant and machinery. In 2009–10 new investment rose further to be the highest recorded in the past 20 years, in real terms.

The proportion of slaughter lamb producers buying land increased between 2007–08 and 2009–10, then declined slightly in 2010–11 but remained relatively high in historical terms. This contrasts with the general decline in recent years for most broadacre farms (ABARES 2012).

After steep rises in the value of land operated by slaughter lamb producers through the early and mid-2000s, reported land values levelled off and declined slightly in the high rainfall and wheat–sheep zones in 2010–11 (Figure 14). In part, reductions in reported land values may reflect a low level of land transactions in many regions in 2009–10 and 2010–11, particularly among other farm types, generating relatively little new information on which to base valuations (ABARES 2012).

FIGURE 14 Proportion of slaughter lamb producers purchasing land

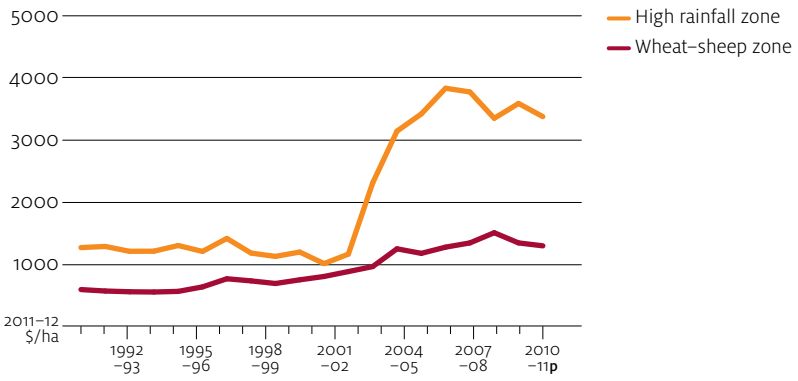


p Preliminary estimate.

Only a relatively small proportion of farms buy land in any one year (Figure 15), but most producers make some investment in plant, vehicles, machinery or infrastructure each year. However, because of the much larger average value of land transactions, the value of land purchases dominates total investment.

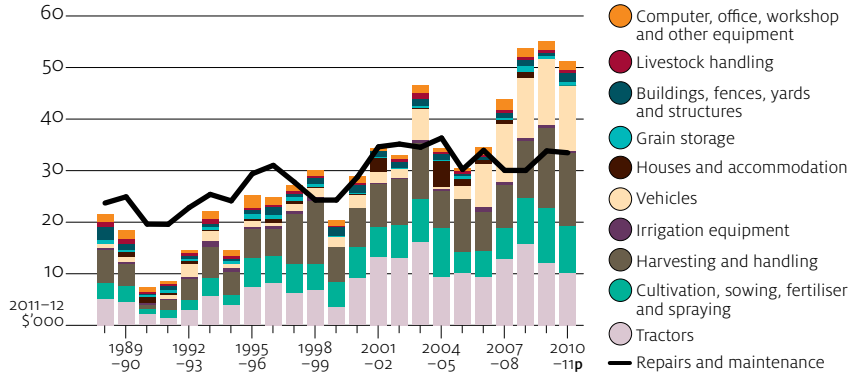
Net investment in plant, vehicles, machinery and farm infrastructure for all scales of slaughter lamb producers was historically high in 2008–09, 2009–10 and 2010–11 (Figure 16). In this period the largest increase in net investment was for large and very large producers.

FIGURE 15 Land value per hectare for slaughter lamb producing farms



p Preliminary estimate.

FIGURE 16 Composition of net capital additions, slaughter lamb producers



p Preliminary estimate.

In 2008–09 and 2009–10 investment in plant, machinery and farm infrastructure (such as buildings, irrigation systems, water supply structures and fencing) is likely to have been stimulated by the investment allowance offered to businesses that committed to investing in depreciating assets between 31 December 2008 and 31 December 2009. This was part of the Australian Government's Nation Building and Jobs Plan to support economic activity during the global financial crisis. In 2010–11 historically high farm cash incomes resulted in net investment in non-land capital remaining high.

Net investment is the difference between the total value of plant, vehicles, machinery and farm infrastructure purchased and the total value of those items sold or disposed of. In addition to the acquisition of new capital items and the replacement of old items, there is ongoing maintenance and repair of existing plant, vehicles, machinery and farm infrastructure. This expenditure is recorded in ABARES surveys as the cash cost of repairs and maintenance. A significant proportion of reported annual expenditure on repairs and maintenance is actually the capital cost of replacing and upgrading items of farm capital, such as fencing, stockyards and watering facilities.

Much of the rising trend in real expenditure on net capital additions and repairs and maintenance over the past 23 years is due to an increase in the average scale of operations of slaughter lamb producing farms, increased production of crops and increased intensification of enterprises.

In the three years ending 2010–11 motor vehicles, tractors and crop harvesting and handling equipment each accounted for around 24 per cent of average total net capital additions for slaughter lamb producing farms; cultivation, sowing and planting equipment accounted for 18 per cent, buildings, housing, yards and watering facilities 5 per cent, computing and workshop equipment 3 per cent and livestock handling equipment 1 per cent.

Poor seasonal conditions through the early and mid-2000s reduced farm cash incomes. As a result, expenditure on repairs and maintenance slowed in real terms as farmers sought to reduce discretionary expenditure. In the period since 2007–08 generally high real net capital additions are likely to have resulted in a reduction in expenditure on repairs and maintenance as farms acquired a higher proportion of newer plant (Figure 16).

Farm debt

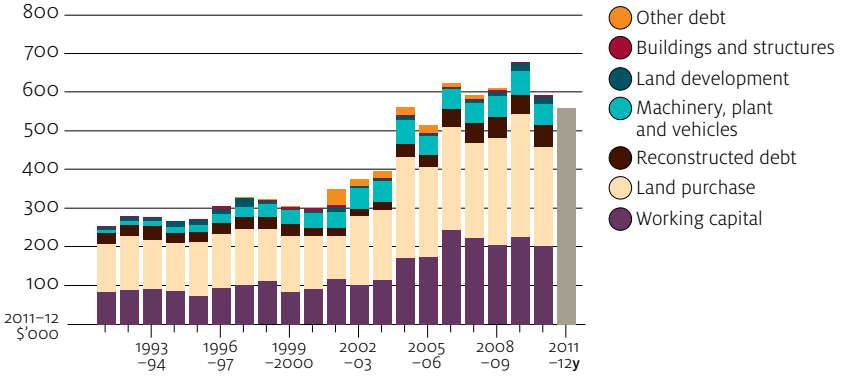
Producers fund farm investment from their farm business cash flows by running down liquid assets, by utilising off-farm income or assets and by increasing farm business debt.

Average debt per farm business more than doubled between 2000–01 and 2009–10 in real terms, from an average of $299 700 per farm in 2000–01 to $674 300 in 2009–10. A number of factors contributed to growth in debt over this period, including the effects of lower interest rates, increases in the size and scale of farm enterprises, increased cropping and reduced farm cash incomes in the 2000s.

Increasing farm size and change in enterprise mix have been particularly important factors in debt increases for slaughter lamb producers. The largest contributor to increased farm debt over the past 20 years has been borrowing to fund the purchase of land, machinery and vehicles, and to develop land and fixed improvements.

Debt to fund the purchase of land accounts for the largest share of debt on slaughter lamb producing farms, at around 43 per cent in 2010–11 (Figure 17). Debt to fund the purchase of land increased by 230 per cent, in real terms, between 1990–91 and 2010–11. However, borrowing to finance the purchase of machinery, plant and vehicles increased most over the past 20 years, rising 640 per cent since 1990–91, in real terms. Over the same period, borrowing to finance land development increased by 350 per cent and borrowing to fund farm buildings and structures increased by 190 per cent.

FIGURE 17 Composition of farm business debt, slaughter lamb producers



y Provisional estimate.

Movement of resources away from less input intensive wool production to more intensive cropping and slaughter lamb activities required substantial new investment in machinery and borrowing to purchase inputs. In addition, expansion of cropping activities and increased use of inputs, such as herbicides and fertiliser, contributed to the increase in farm debt as producers borrowed to purchase annual inputs. Deregulation of grain markets also led to increased borrowing to provide working capital between grain harvests and construct grain storage.

During the 2000s poor seasonal conditions depressed farm cash incomes in many regions and led to increased borrowing to meet working capital requirements. Working capital debt increased by 245 per cent between 1990–91 and 2010–11, in real terms, accelerating in the period between 2002–03 and 2006–07 as a result of widespread drought.

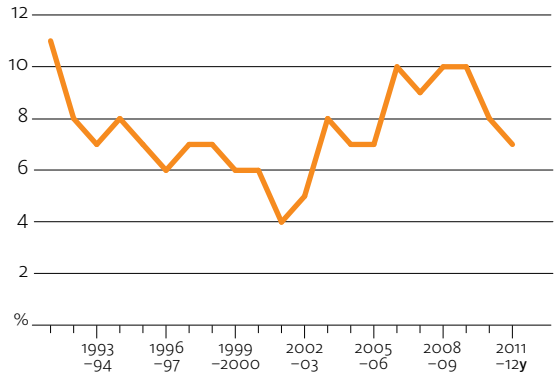
The proportion of restructured debt increased from around 6 per cent in 2006–07 to around 10 per cent in 2010–11. Reconstructed debt is mostly pre-existing debt incurred for a range of purposes that has been consolidated into longer-term and, usually, lower interest rate loans.

Average debt for slaughter lamb producers declined to average $596 580 per farm in 2010–11 and is projected to decline by a further 5 per cent in 2011–12 (Figure 17 and Table 5). Reductions in average farm business debt are projected for producers of all scales in 2011–12. The reductions in farm business debt are partly due to high farm cash incomes, more restricted access to credit from lending institutions and a diminished appetite for further increases in debt by producers (ABARES 2012).

Debt servicing

Large increases in farm debt in the decade ending 2009–10 have resulted in a marked rise in the proportion of farm receipts required to fund interest payments. Further, this proportion has remained high despite lower interest rates in the period since 2008–09. Higher farm receipts in 2010–11 and a small reduction in farm debt resulted in a slight fall in the proportion of farm receipts required to fund interest payments (Figure 18). In 2011–12 the ratio of interest payments to farm receipts is projected to further reduce due to ongoing reductions in farm debt and lower interest rates. Nevertheless, the proportion of farm receipts needed to meet interest payments is expected to remain relatively high, compared with those recorded historically (Figure 18).

FIGURE 18 Ratio of interest payments to total cash receipts, slaughter lamb producers



y Provisional estimate.

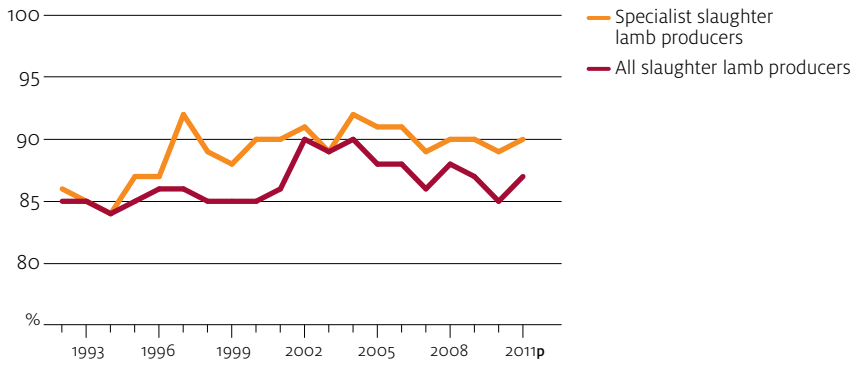
Farm equity

The rapid rise in land prices during the early 2000s resulted in increases in farm equity ratios (the proportion of farm capital owned). However, with a continued increase in farm debt in the period to 2009–10 and static land values, some reduction in equity ratios has been recorded.

Historically, the average equity ratio for specialist slaughter lamb producers has been significantly higher than that for all slaughter lamb producers. Equity ratios for specialist slaughter lamb producers averaged 90 per cent at 30 June 2011. Average equity ratios for all slaughter lamb producers averaged 87 per cent at 30 June 2011 and were similar to those recorded in 2000, before the largest increases in land values occurred (Figure 19).

Overall, equity ratios remain strong relative to long-term historical averages. Some reductions in equity ratios in recent years have occurred for large and very large-scale producers with high recorded levels of new investment but a strong capacity to service debt (Martin & Phillips 2011).

FIGURE 19 Equity ratio slaughter lamb producers



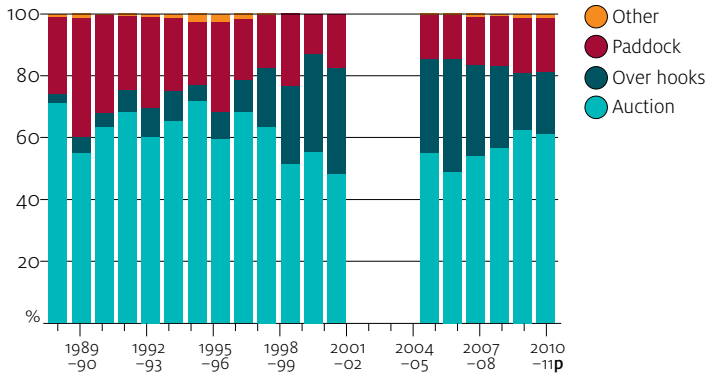
p Preliminary estimate.

Chapter 5

Selling methods for adult sheep and lambs

The greater focus over the past decade on production of lambs specifically bred for slaughter and on better finishing of lambs before sale, has resulted in producers changing their method of sale (Figure 20). In the early 1990s almost all lambs sold by slaughter lamb producing farms were sold by auction or in the paddock. However, since the early 1990s the proportion of lambs sold over the hooks increased, on average, from less than 5 per cent to more than 30 per cent between 2001–02 and 2006–07. In 2009–10 and 2010–11 the proportion of lambs sold over the hooks is estimated to have fallen to an average of around 17 per cent. The reduction since 2006–07 may be due to increased demand from restockers and finishers, leading to stronger auction markets.

FIGURE 20 Lamb selling methods, slaughter lamb producing farms



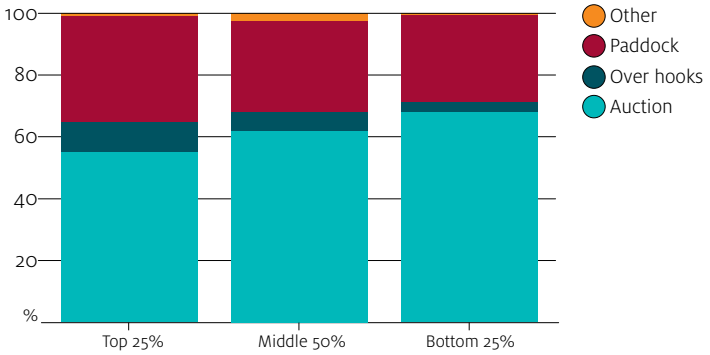
p Preliminary estimate.

When slaughter lamb producers were ranked by farm financial performance group, as measured by rate of return (excluding capital appreciation) for the period 2008–09 to 2010–11, considerable differences in selling methods were apparent for the top 25 per cent of producers, compared with those used by other producers (Figure 21). The better performing slaughter lamb producers, on average, sold a significantly larger proportion of their lambs over the hooks or in the paddock and markedly fewer by auction than producers in other performance groups during this period.

The production of more meat breeds of sheep also appears to have resulted in some changes in the method used to sell adult sheep (Figure 22). Historically, adult sheep have either been sold by auction or in the paddock. Although these methods of sale still dominate, during the late 1990s and most of the 2000s the proportion of adult sheep sold over the hooks increased modestly. In the five years to 2010–11, around 7 per cent of adult other sheep were sold over the hooks.

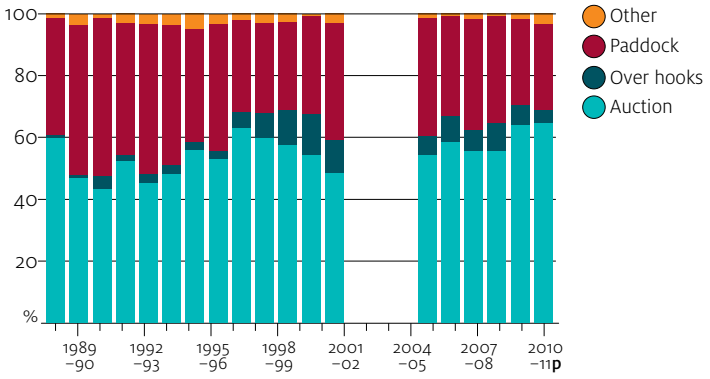
In 2009–10 and 2010–11, strong demand from restockers led producers to direct sheep to sale by auction and the proportion of sheep sold by auction rose to 64 per cent, the highest recorded in the past 20 years (Figure 22).

FIGURE 21 Lamb selling methods used, by farm performance group, 2008–09 to 2010–11



Note: Farms ranked by rate of return excluding capital appreciation.

FIGURE 22 Adult sheep selling methods, slaughter lamb producing farms



p Preliminary estimate.

Chapter 6
Survey methodology and definitions

Target population

ABARES (and its predecessor organisations) have conducted surveys of selected Australian agricultural industries since the 1940s. These surveys provide a broad range of information on the economic performance of farm business units in the rural sector. This comprehensive set of information is widely used for research and analysis that forms the basis of publications, briefing material and industry reports.

The information in this report is derived from the annual Australian Agricultural and Grazing Industries Survey (AAGIS). This survey covers farm business units that are mainly engaged in running sheep or beef cattle or growing grain, oilseeds or pulses.

ABARES surveys are designed, and samples selected, on the basis of a framework drawn from the Business Register maintained by the Australian Bureau of Statistics (ABS). The framework comprises businesses registered with the Australian Taxation Office. The Australian Business Register-based population list provided to ABARES consists of agricultural establishments with their corresponding statistical local area, industry definition and a size of operations variable.

Industry definitions are based on the 2006 Australian and New Zealand Standard Industrial Classification (ANZSIC06). This classification is in line with an international standard applied comprehensively across Australian industry, permitting comparisons between industries, both within Australia and internationally. Farms assigned to a particular ANZSIC have a high proportion of their total output characterised by that class. There is further information on ANZSIC and on farming activities included in each of these industries in the Australian and New Zealand Standard Industrial Classification (ABS/Statistics New Zealand 2006, cat. no. 1292.0).

The industries covered in the AAGIS are the sheep (ANZSIC Class 0141), beef (ANZSIC Class 0142), sheep–beef (ANZSIC Class 0144), grains (ANZSIC Class 0146 and 0149) and grains–livestock (ANZSIC Class 0145) industries.

ABARES surveys target farming establishments that make a significant contribution to the total value of agricultural output (commercial farms). Farms excluded from the ABARES target population are the smallest units that in aggregate contribute less than 2 per cent to the total value of agricultural production for the industries covered by the surveys.

The size of operation variable used in ABARES survey designs is usually 'estimated value of agricultural operations' (EVAO). However, in some surveys in recent years other measures of agricultural production have also been used. EVAO is a standardised dollar measure of the level of agricultural output. A definition of EVAO is given in *Agricultural Industries: Financial Statistics* (ABS 2001, cat. no. 7506.0). Since 2004–05 the ABARES survey has included establishments classified as having an EVAO of $40 000 or more. Between 1991–92 and 2003–04 the survey included establishments with an EVAO of $22 500 or more. Between 1987–88 and 1991–92 the survey included establishments with an EVAO of $20 000 or more. Before 1986–87 the survey included establishments with an EVAO of $10 000 or more.

Survey design and sample weighting

The target population is grouped into strata defined by ABARES region, ANZSIC and size of operation. The sample allocation is a compromise between allocating a higher proportion of the sample to strata with high variability in the size variable, and an allocation proportional to the population of the stratum.

A large proportion of sample farms is retained from the previous year's survey. The sample chosen each year maintains a high proportion of the sample between years to accurately measure change, while meeting the requirement to introduce new sample farms to account for changes in the target population and to reduce the burden on survey respondents.

The sample size for the AAGIS is usually around 1600.

The main method of collection for AAGIS surveys is face-to-face interviews with the owner–manager of the farm. Detailed physical and financial information is collected on the operations of the farm business during the preceding financial year. Cooperating farms are required to provide detailed accounting information. Respondents to the AAGIS are also contacted by telephone in October each year to obtain estimates of projected production and expected receipts and costs for the current financial year.

ABARES surveys also allow supplementary questionnaires to be attached to the main or to the telephone surveys. These additional questions help to address specific issues.

Sample weighting

ABARES survey estimates are calculated by appropriately weighting the data collected from each sample farm and then using the weighted data to calculate population estimates. Sample weights are calculated so that population estimates from the sample for numbers of farms, areas of crops and numbers of livestock correspond as closely as possible to the most recently available ABS estimates from data collected from Agricultural Census and Surveys. The weighting methodology for the AAGIS uses a model-based approach, with a linear regression model linking the survey variables and the estimation benchmark variables (see Bardsley & Chambers 1984).

For the AAGIS, the benchmark variables provided by ABS include:

- total number of farms in scope
- area planted to wheat, rice, other cereals, grain legumes (pulses) and oilseeds
- closing numbers of beef and sheep.

Generally, larger farms have smaller weights and smaller farms have larger weights, reflecting both the strategy of sampling a higher fraction of the larger farms than smaller farms (the former having greater variability of key characteristics and accounting for a much larger proportion of total output) and the relatively lower numbers of large farms.

Reliability of estimates

The reliability of the estimates of population characteristics published by ABARES depends on the design of the sample and the accuracy of the measurement of characteristics for the individual sample farms.

Preliminary estimates and projections

Estimates for 2009–10 and all earlier years are final. All data from farmers, including accounting information, have been reconciled, final production and population information from the ABS has been included, and no further change is expected in these estimates.

The 2010–11 estimates are preliminary, based on full production and accounting information from farmers. However, editing and addition of sample farms may be undertaken and ABS production and population benchmarks may also change.

The 2011–12 estimates are projections developed from the data collected by on-farm interviews and telephone interviews in the period October to December, as well as from the preliminary estimates. Projection estimates include crop and livestock production, receipts and expenditure up to the date of interview together with expected production, receipts and expenditure for the remainder of the projection year. Modifications are made to expected receipts and expenditure where significant production and price change has occurred after interview. Projection estimates are necessarily subject to greater uncertainty than the preliminary and final estimates.

Preliminary and projection estimates of farm financial performance are produced within a few weeks of the completion of survey collections. However, these may be updated several times at later dates. These subsequent versions will be more accurate because they will be based on upgraded information and slightly more accurate input datasets.

Sampling errors

Only a subset of farms out of the total number of farms in a particular industry is surveyed. The data collected from each sample farm are weighted to calculate population estimates. Estimates derived from these farms are likely to be different from those that would have been obtained if information had been collected from a census of all farms. Any such differences are called 'sampling errors'.

The size of the sampling error is most influenced by survey design and estimation procedures, as well as sample size and the variability of farms in the population. The larger the sample size, the lower the sampling error is likely to be. Hence, national estimates are likely to have lower sampling errors than industry and state estimates.

To give a guide to the reliability of the survey estimates, standard errors are calculated for all estimates published by ABARES. These estimated errors are expressed as percentages of the survey estimates and termed 'relative standard errors'.

Calculating confidence intervals using relative standard errors

Relative standard errors (RSEs) can be used to calculate 'confidence intervals' that give an indication of how close the actual population value is likely to be to the survey estimate.

To obtain the standard error, multiply the relative standard error by the survey estimate and divide by 100. For example, if average total cash receipts are estimated to be $100 000 with a relative standard error of 6 per cent, the standard error for this estimate is $6000. This is one standard error. Two standard errors equal $12 000.

For a 66 per cent confidence interval, there is roughly a two-in-three chance that the 'census value' (the value that would have been obtained if all farms in the target population had been surveyed) is within one standard error of the survey estimate. This range of one standard error is described as the 66 per cent confidence interval. In this example, there is an approximately two-in-three chance that the census value is between $94 000 and $106 000 ($100 000 plus or minus $6000).

For a 95 per cent confidence interval, there is roughly a nineteen-in-twenty chance that the census value is within two standard errors of the survey estimate (the 95 per cent confidence interval). In this example, there is an approximately nineteen-in-twenty chance that the census value lies between $88 000 and $112 000 ($100 000 plus or minus $12 000).

The size of the RSE is mainly influenced by the design of the survey, the sample size and the variability in the population. For example, the larger the sample size, the lower the RSE is likely to be.

Comparing estimates

When comparing estimates between two groups, it is important to recognise that the differences are subject to sampling error. As a rule of thumb, a conservative estimate (an overestimate) of the standard error of the difference can be constructed by adding the squares of the estimated standard errors of the component estimates and taking the square root of the result.

For example, suppose the estimates of farm cash income are $59 334 for small-scale slaughter lamb producers and $51 664 for medium-scale slaughter lamb producers, with the relative standard errors given as 38 and 42 per cent respectively. The difference between these two estimates is $7670. The standard error of the difference can be estimated as:

$$\sqrt{(6 \times \$100\,000 / 100)^2 + (6 \times \$125\,000 / 100)^2} = \$9605$$

A 95 per cent confidence interval for the difference is:

$$\$25\,000 \pm 1.96 \times \$9605 = (\$6174, \$43\,826)$$

Hence, if 100 different samples are taken, in 95 of them, the difference between these two estimates is between –$53 662 and $69 002. Also, since zero is in this confidence interval, it is possible to say that the difference between the estimates is not statistically significantly different from zero at the 95 per cent confidence level.

Glossary

Owner–manager	The primary decision maker for the farm business. This person is usually responsible for day-to-day operation of the farm and may own or have a share in the farm business.

Physical items

Hired labour	Excludes the farm business manager, partners and family labour, and work done by contractors. Expenditure on contract services appears as a cash cost.
Labour	Measured in work weeks, as estimated by the owner–manager or manager. It includes all work on the farm by the owner–manager, partners, family, hired permanent and casual workers and sharefarmers, but excludes work done by contractors.
Sheep and lamb turn-off rate	Proportion of average sheep and lamb numbers sold during the financial year.
Total area operated	Includes all land operated by the farm business, whether owned or rented by the business, but excludes land share farmed on another farm.

Financial items

Capital	The value of farm capital is the value of all the assets used on a farm, including the value of leased items but excluding machinery and equipment either hired or used by contractors. The value of 'owned' capital is the value of farm capital excluding the value of leased machinery and equipment. ABARES uses the owner–manager's valuation of the farm property. The valuation includes the value of land and fixed improvements used by each farm business in the survey, excluding land share farmed off the sample farm. Residences on the farm are included in the valuations. Livestock are valued at estimated market prices for the land use zones within each state. These values are based on recorded sales and purchases by sample farms. Before 2001–02 ABARES maintained an inventory of plant and machinery for each sample farm. Individual items were valued at replacement cost, depreciated for age. Each year, the replacement cost was indexed to allow for changes in that cost. Since 2001–02 total value of plant and machinery is based on market valuations provided by the owner–manager for broad categories of capital, such as tractors, vehicles and irrigation plant. The total value of items purchased or sold during the survey year was added to or subtracted from farm capital at 31 December of the relevant financial year, irrespective of the actual date of purchase or sale.

Change in debt	Estimated as the difference between debt at 1 July and the following 30 June within the survey year, rather than between debt at 30 June in consecutive years. It is an estimate of the change in indebtedness of a given population of farms during the financial year and is thus unaffected by changes in sample or population between years.
Farm business debt	Estimated as all debts attributable to the farm business, but excluding personal debt, lease financed debt and underwritten loans, including harvest loans. Information is collected at the survey interview and supplemented by information contained in the farm accounts.
Farm liquid assets	Assets owned by the farm business that can be readily converted to cash. They include savings bank deposits, interest bearing deposits, debentures and shares but exclude items such as real estate, life assurance policies and other farms or businesses.
Receipts and costs	Receipts for livestock and livestock products sold are determined at the point of sale. Selling charges and charges for transport to the point of sale are included in the costs of sample farms. Receipts for crops sold during the survey year are gross of deductions made by marketing authorities for freight and selling charges. These deductions are included in farm costs. Receipts for other farm products are determined on a 'farm gate' basis. All cash receipt items are the revenue received in the financial year. Farm receipts and costs relate to the whole area operated, including areas operated by on-farm sharefarmers. Thus, cash receipts include receipts from the sale of products produced by sharefarmers. If possible, on-farm sharefarmers' costs are amalgamated with those of the sample farm. Otherwise, the total sum paid to sharefarmers is treated as a cash cost. Some sample farm businesses engage in off-farm contracting or share farming, employing labour and capital equipment also used in normal on-farm activities. Since it is not possible to accurately allocate costs between off-farm and on-farm operations, the income and expenditure attributable to such off-farm operations are included in the receipts and costs of the sample farm business.

Total cash costs	Payments made by the farm business for materials and services and for permanent and casual hired labour (excluding owner–manager, partner and other family labour). It includes the value of livestock transfers onto the property as well as any lease payments on capital, produce purchased for resale, rent, interest, livestock purchases and payments to sharefarmers. Capital and household expenditures are excluded from total cash costs. Handling and marketing expenses include commission, yard dues, and levies for farm produce sold. Administration costs include accountancy fees, banking and legal expenses, postage, stationery, subscriptions and telephone. Contracts paid, refers to expenditure on contracts such as harvesting. Capital and land development contracts are not included. Other cash costs include stores and rations, seed purchased, electricity, artificial insemination and herd testing fees, advisory services, motor vehicle expenses, travelling expenses and insurance. While 'other cash costs' may comprise a relatively large proportion of total cash costs, individually the components are relatively small overall and, as such, have not been listed.
Total cash receipts	Total of revenues received by the farm business during the financial year, including revenues from sale of livestock, livestock products and crops, plus the value of livestock transfers off a property. It includes revenue received from agistment, royalties, rebates, refunds, plant hire, contracts, share farming, insurance claims and compensation, and government assistance payments to the farm business.

Financial performance measures

Build-up in trading stocks	The closing value of all changes in the inventories of trading stocks during the financial year. It includes the value of any change in herd or flock size or in stocks of wool, fruit and grains held on the farm. It is negative if inventories are run down.
Depreciation of farm improvements	Estimated by the diminishing value method, based on replacement cost and age of each item. The rates applied are standard rates allowed by the Commissioner of Taxation.
Farm business equity	The value of owned capital, less farm business debt at 30 June. The estimate is based on those sample farms for which complete data on farm debt are available.

Farm business profit	Farm cash income plus build-up in trading stocks, less depreciation and the imputed value of the owner–manager, partner(s) and family labour.
Farm cash income	The difference between total cash receipts and total cash costs.
Farm equity ratio	Calculated as farm business equity as a percentage of owned capital at 30 June.
Imputed labour cost	Payments for owner–manager and family labour may bear little relationship to the actual work input. An estimate of the labour input of the owner–manager, partners and their families is calculated in work weeks and a value is imputed at the relevant Federal Pastoral Industry Award rates.
Off-farm income	Collected for the owner–manager and spouse only, including income from wages, other businesses, investment, and government assistance to the farm household and social welfare payments.
Plant and equipment	For items purchased or sold during the financial year, depreciation is assessed as if the transaction had taken place at the midpoint of the year. Calculation of farm business profit does not account for depreciation on items subject to a finance lease because cash costs already include finance lease payments.
Profit at full equity	Farm business profit, plus rent, interest and finance lease payments, less depreciation on leased items. It is the return produced by all the resources used in the farm business.
Rates of return	Calculated by expressing profit at full equity as a percentage of total opening capital. Rate of return represents the ability of the business to generate a return to all capital used by the business, including that which is borrowed or leased. The following rates of return are estimated: rate of return, excluding capital appreciation; and rate of return, including capital appreciation.

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Further information on lamb producers

Farm survey data for the beef, lamb and sheep industries

abare.gov.au/AME/mla/mla.asp

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