



Australian beef

09.1

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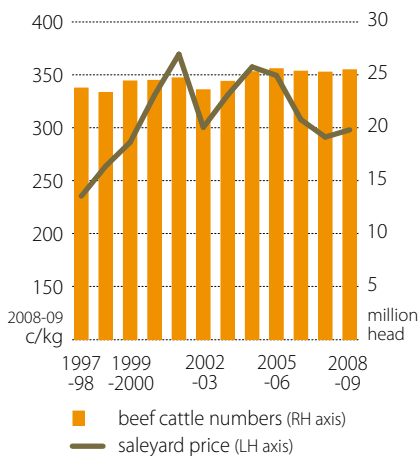
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Financial performance of beef farms

2006-07 to 2008-09

Over the past decade, the Australian beef industry has undergone a period of expansion, with producers responding to higher prices by increasing cattle numbers and production. However, adverse seasonal conditions in recent years have impeded farms' ability to maintain the growth in cattle numbers. In 2008-09, some improvement in seasonal conditions is projected to result in a slight increase in total beef cattle numbers (figure a).

a Beef and veal numbers and average saleyard price



Detailed estimates of production and financial performance are presented in this report to highlight the effect of the past two years' seasonal conditions on beef cattle businesses in northern Australia (which in this report covers Queensland, northern Western Australia and the Northern Territory) and southern Australia (covering New South Wales, Victoria, South Australia, Tasmania and southern Western Australia). In particular, this report focuses on beef cattle farms' financial capacity to expand production, given improved seasonal conditions in some areas and continued dry conditions in others.

For the purposes of this report, broadacre farms have been classified as beef cattle producing farms if they have more than 100 head of cattle. To investigate the physical and financial performance of beef cattle farms of differing scales, farms surveyed by ABARE have been classified as being in one of four groups – small, medium, large and very large - based on the size of their beef cattle herd (table 1). In general, beef cattle producers in northern Australia operate significantly larger farms (by area operated and number of cattle run) than their southern counterparts. Consequently, to enable a meaningful analysis of the northern and southern beef industry, different herd sizes have been used to allocate beef cattle farms into different size groups in these regions (tables 1 and 2).

1 Beef cattle group definitions, by beef cattle numbers

	Northern Australia	Southern Australia
Small	100 - 400	100 - 200
Medium	400 - 1 600	200 - 400
Large	1 600 - 5 400	400 - 800
Very large	more than 5 400	more than 800

Beef cattle farms with fewer than 100 head of cattle account for just 3 per cent of Australia's broadacre beef cattle herd and, on average, generate less than 5 per cent of farm cash receipts from the sale of cattle. As such, these farms have been excluded from the analysis presented in this report.

In this report, large feedlot operations have also been excluded from the analysis. A farm with a commercial feedlot has been defined as one with more than 1000 head of cattle fed on grain for more than 50 days.

However, there are some farms which undertake grain finishing for less than 50 days and have been included in the analysis. For example, in southern Australia, a disproportionately large number of very large cattle producing farms appear to have this type of grain finishing activity, resulting in these farms representing 4 per cent of cattle but 14 per cent of sales.

2 Distribution of broadacre beef cattle farms, by number of cattle, at 30 June

average between 2001-02 and 2007-08

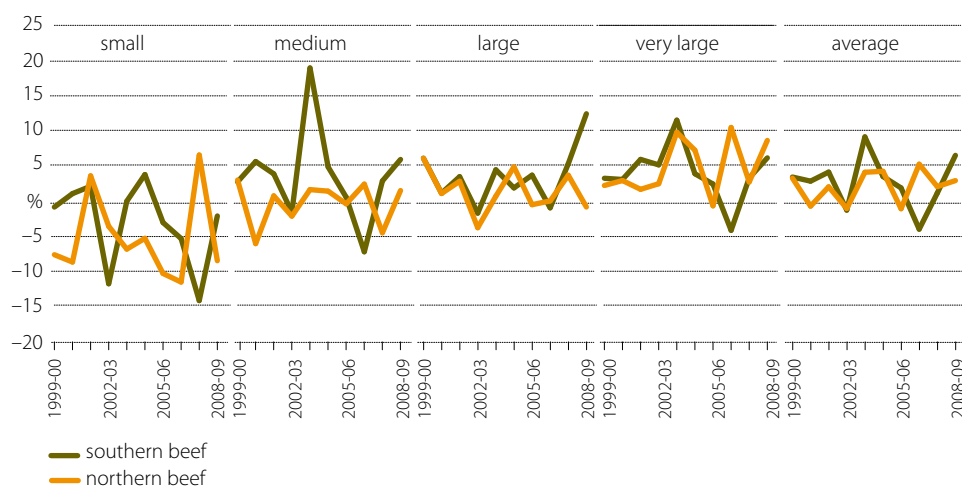
	number of farms no.	share of farms %	share of beef cattle %	share of value of cattle sales %
Northern Australia				
less than 100	2 628	24.5	1	2
100 – 400 head	3 443	32.2	6	7
400 – 800 head	1 396	13.0	6	6
800 – 1600 head	1 447	13.5	13	13
1600 – 5400 head	1 395	13.0	31	30
more than 5400 head	398	3.7	42	41
Total	10 707	100	100	100
Southern Australia				
less than 100	10 166	33.3	6	6
100 – 400 head	13 699	44.9	31	28
400 – 800 head	4 594	15.0	27	24
800 – 1 600 head	1 520	5.0	18	16
1600 – 5400 head	516	1.7	14	13
more than 5400 head	39	0.1	4	14
Total	30 534	100	100	100
Australia				
less than 100	12 794	31.0	3	4
100 – 400 head	17 141	41.6	17	18
400 – 800 head	5 990	14.5	15	15
800 – 1600 head	2 968	7.2	15	15
1600 – 5400 head	1 912	4.6	24	21
more than 5400 head	437	1.1	26	27
Total	41 241	100	100	100

Seasonal conditions and beef cattle numbers

Northern Australia

In northern Australia, improved seasonal conditions in 2006-07 allowed many beef cattle producers to begin herd rebuilding following the drought of 2005-06 (figure b and table 3). Very large scale beef farms achieved this through a reduction in beef cattle turn-off and increased beef cattle purchases and calf production. However, small scale producers in the high rainfall and cropping belt of southern Queensland continued to experience below average seasonal conditions, and responded by reducing average beef cattle numbers.

b Change in beef cattle numbers, by herd size



3 Selected physical characteristics, by herd size

average per farm

		small			medium			large		
		2006-07	2007-08	2008-09	2006-07	2007-08	2008-09	2006-07	2007-08	2008-09
Northern Australia										
Change in beef cattle numbers	%	-11.5	6.5	-8.5	2.4	-4.5	1.4	0.0	3.6	-0.9
Calves branded	no.	73	71	87	286	244	289	888	780	819
Beef cattle purchases	no.	33	34	20	116	71	84	256	106	242
Beef cattle sales	no.	121	86	122	376	315	365	875	697	1075
Change in sheep numbers	%	0.6	13.3	4.0	-10.5	14.2	4.5	22.1	-6.8	17.2
Area operated	ha	2 936	2 626	4 634	13 918	17 143	17 556	70 499	43 466	48 628
Area cropped	ha	100	107	240	194	171	160	217	318	219
Southern Australia										
Change in beef cattle numbers	%	-5.4	-14.2	-2.2	-7.2	2.8	5.9	-1.0	5.2	12.3
Calves branded	no.	55	47	47	103	92	102	213	209	216
Beef cattle purchases	no.	36	24	47	180	62	79	109	69	79
Beef cattle sales	no.	95	89	93	292	141	157	317	238	224
Change in sheep numbers	%	3.3	1.1	-9.7	-0.4	-1.2	5.5	6.0	4.2	3.9
Area operated as at 30 June	ha	1 266	1 024	962	2 724	2 968	1 995	2 937	5 107	2 768
Area cropped	ha	176	196	238	290	347	219	335	197	102
		very large			all farms					
		2006-07	2007-08	2008-09	2006-07	2007-08	2008-09			
Northern Australia										
Change in beef cattle numbers	%	10.4	2.7	8.6	5.2	2.0	2.9			
Calves branded	no.	3781	4271	4237	593	479	469			
Beef cattle purchases	no.	1193	298	787	195	73	114			
Beef cattle sales	no.	2867	3330	3637	569	441	526			
Change in sheep numbers	%	na	na	na	-1.3	8.1	7.1			
Area operated as at 30 June	ha	254 296	273 209	242 591	39 329	29 021	27 267			
Area cropped	ha	62	48	246	153	161	213			
Southern Australia										
Change in beef cattle numbers	%	-4.2	3.2	6.4	-4.0	1.1	6.6			
Calves branded	no.	594	678	742	184	171	203			
Beef cattle purchases	no.	484	155	353	157	60	108			
Beef cattle sales	no.	1071	731	947	343	214	267			
Change in sheep numbers	%	-1.2	14.9	1.0	1.4	5.1	1.3			
Area operated as at 30 June	ha	23 924	31 622	28 619	5 455	6 257	5 772			
Area cropped	ha	633	753	451	310	310	235			

In 2007-08, seasonal conditions varied across northern Australia, improving in eastern Queensland, but deteriorating for central-western Queensland and the southern and eastern areas of the Northern Territory. Overall, beef cattle numbers in northern Australia increased by 2 per cent on average in 2007-08, with all groups of beef producers increasing average herd size, except for medium scaled beef farms. Small scale beef farms recorded the largest proportionate increase in beef cattle numbers because of reduced turn-off, while very large scale beef farms were in a position to increase both beef cattle sales and the size of their herd because of higher branding rates (table 3).

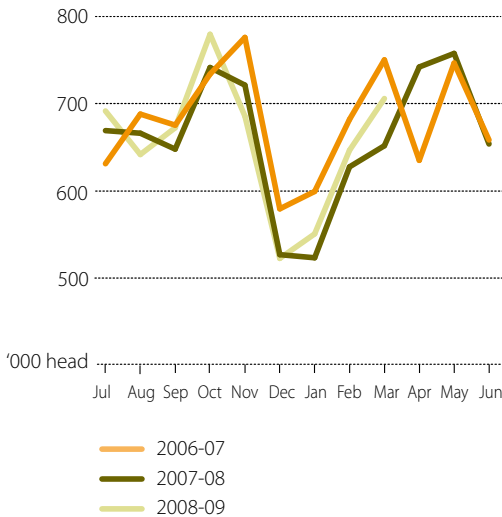
In 2008-09, improved grazing conditions in most parts of northern Australia are projected to boost average calf production of small, medium and large scale beef farms and maintain the relatively high branding rates of very large scale beef farms. Small scale beef farms are projected to run down beef cattle inventories, partly because of dry seasonal conditions, but also to increase cropping activities (table 3). Very large beef cattle farms are projected to continue to increase beef cattle turn-off, while also increasing beef cattle numbers by more than 8 per cent a farm on average in 2008-09. Overall, average beef cattle numbers on northern Australian farms are projected to increase by nearly 3 per cent a farm in 2008-09 (figure b and table 3).

Southern Australia

In southern Australia, severely dry seasonal conditions in 2006-07 restricted beef cattle production and resulted in further reductions in beef cattle numbers. On average, beef cattle numbers were down 4 per cent in 2006-07 (figure b and table 3).

In 2007-08, most parts of southern Australia continued to experience dry seasonal conditions, resulting in reduced branding rates. Despite this, beef cattle numbers increased by around 1.1 per cent on average as many southern Australian farms reduced beef cattle turn-off to begin herd rebuilding. However, many small scale beef farms, particularly in Victoria and Tasmania, sharply lowered the size of their herd in response to the dry conditions (table 3).

C Cattle slaughter

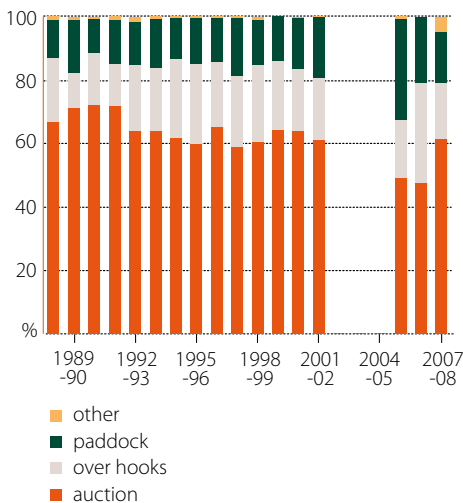


In the first half of 2008-09, seasonal conditions remained very dry in Victoria, southern New South Wales, Tasmania and parts of South Australia. With the majority of small scale farms operating in areas which continued to experience below average seasonal conditions, beef cattle turn-off is projected to increase leading to a reduction in beef cattle numbers on average in 2008-09. However, improved seasonal conditions in other parts of southern Australia are projected to allow many farms to expand beef cattle production and improve branding rates. Overall, beef cattle numbers on southern Australian farms are projected to increase by more than 6 per cent on average in 2008-09 (figure b and table 3).

Slaughter rates

The latest ABS slaughter data indicate that the number of cattle slaughtered in early 2008-09 increased relative to the two previous years, despite producers rebuilding herds, before falling roughly in line with 2007-08 cattle slaughter. In March 2009, more than 706 000 head of cattle were slaughtered, around 8 per cent more than in March 2008. In the nine months to March 2009, more than 5.9 million head of cattle were slaughtered in Australia, 2 per cent more than for the same period in 2007-08 (figure c).

d Method of selling beef cattle, southern Australia



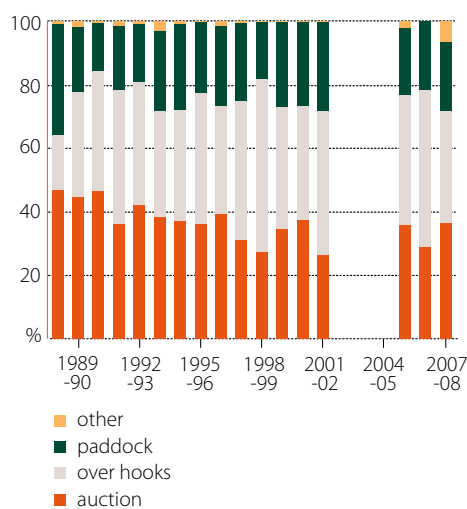
Note: Because of changes in data collected, consistent estimates cannot be provided for the period 2002-03 to 2004-05.

Selling methods used for beef cattle

In southern Australia, the proportion of beef cattle sold via auction has declined over the past 20 years, from around 70 per cent in the early 1990s to less than 50 per cent in 2006-07 (figure d). Increased slaughter of beef cattle in 2006-07 resulted in the proportion of cattle sold over-the-hooks almost doubling compared with the previous year. In 2007-08, improved seasonal conditions resulted in fewer cattle being slaughtered as producers began rebuilding cattle numbers. With proportionally less cattle sold for slaughter, the share of cattle sold via auction increased in 2007-08 while the share sold over-the-hooks declined.

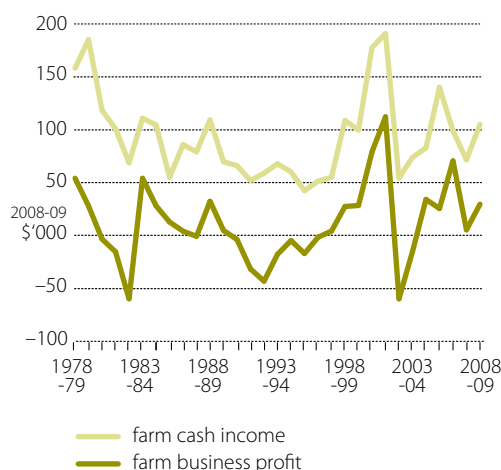
Northern Australian beef farms have historically sold a smaller proportion of beef cattle via auction compared with their southern counterparts, with beef sales over-the-hooks much more prevalent (figure e). In general, the proportion of beef cattle sold via auction has been declining and the share of beef sold over-the-hooks has increased. In 2007-08, the proportion of beef cattle auction sales rose because of increased beef cattle sales in eastern Queensland where auction sales are more common.

e Method of selling beef cattle, northern Australia



Note: Because of changes in data collected, consistent estimates cannot be provided for the period 2002-03 to 2004-05.

f Financial performance, northern Australia



g Financial performance, very large producers, northern Australia



Farm financial performance in northern Australia

2007-08

In 2007-08, farm financial performance in the northern beef industry weakened as farms held onto their beef cattle, forgoing their main source of income. With beef cattle inventories increasing by a smaller amount than in 2006-07, farm business profits are estimated to have reduced by more than farm cash income in 2007-08 (figure f and table 4).

Total farm cash receipts are estimated to have declined by around 30 per cent because of reduced beef cattle turn-off and lower average beef cattle prices received in 2007-08. With seasonal conditions varying across northern Australia, increased calving rates in some regions were more than offset by falls in others. However, most of these calves and younger stock were retained resulting in an estimated 23 per cent reduction in beef cattle sold in 2007-08. With the sale of a larger number of unfinished stock the average price received for beef cattle sold fell by around 19 per cent. Consequently, total beef cattle receipts are estimated to have fallen by more than one-third. Partially offsetting this reduction, crop receipts are estimated to have increased by nearly 50 per cent because of higher average winter crop prices and increased summer crop production in 2007-08 (table 4).

Farm cash costs are estimated to have declined by around 30 per cent in 2007-08, mainly because of a sharp reduction in beef cattle purchases and reduced fodder expenditure as grazing conditions improved in some areas. With the fall in fodder expenditure, interest payments became the largest single cost item for northern beef industry farms in 2007-08. On average, interest repayments increased by around 2 per cent to around \$61 300 a farm in 2007-08, and accounted for nearly 13 per cent of total cash costs compared with just 9 per cent in 2006-07 (table 4).

Financial performance by herd size, 2007-08

In 2007-08, very large beef farms realised much higher average farm cash incomes as costs fell relative to receipts. The two largest cost reductions were for beef cattle purchases and fodder expenditure. However, with beef cattle numbers increasing by a smaller amount compared with 2006-07, a year in which more herd rebuilding occurred, average farm business profits for very large beef farms were lower (figure g and table 4). Medium scale beef farms also increased farm cash income, on average, by 3 per cent in 2007-08 (figure h).

Improved seasonal conditions for many small scale beef farms, the majority of which are concentrated in southern and coastal Queensland, allowed for a reduction in purchased fodder and some herd rebuilding in 2007-08. With most of this occurring through reduced beef cattle turn-off, beef cattle receipts are estimated to have fallen by 40 per cent. Overall, small scale beef farms recorded a larger fall in receipts relative to costs, resulting in an average negative farm cash income for the first time in more than a decade (figure h).

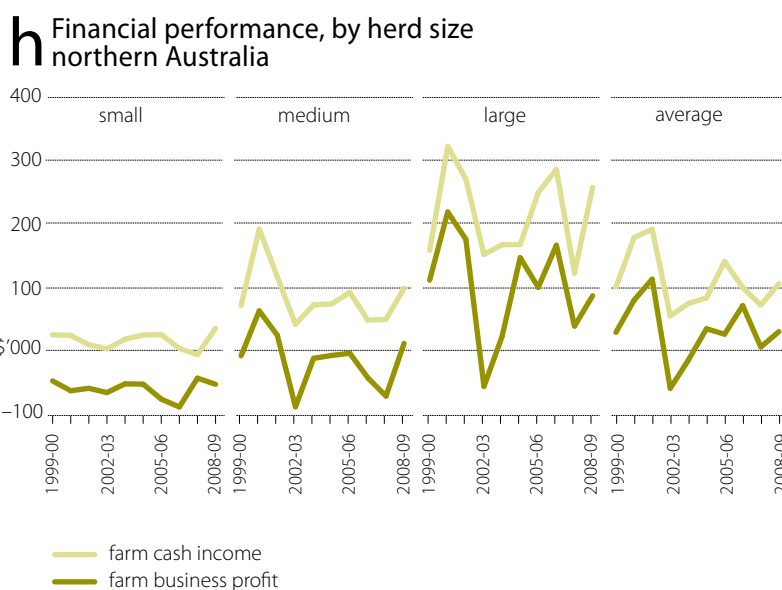
Large scale beef farms realised a sharp reduction in farm cash income because of a larger fall in total cash receipts relative to total cash costs in 2007-08. Improved pasture conditions are likely to have enabled many

4 Financial performance, northern beef industry

average per farm

	small			medium			large		
	2006-07	2007-08	2008-09	2006-07	2007-08	2008-09	2006-07	2007-08	2008-09
Farm cash receipts									
Beef cattle	\$ 89 957	54 420 (14)	70 700	298 501	213 480 (9)	254 100	795 221	547 900 (5)	858 900
Beef cattle transferred off-farm	\$ 360	0 (0)	na	1 612	20 160 (25)	na	207 561	19 170 (42)	na
Crops	\$ 31 842	39 760 (12)	108 800	45 938	91 900 (15)	115 200	71 294	108 520 (31)	108 500
Sheep and lambs	\$ 1 645	5 360 (55)	11 700	6 858	8 430 (34)	9 100	1 906	5 290 (130)	6 300
Wool	\$ 5 091	6 540 (38)	13 500	16 008	19 100 (23)	13 300	8 016	22 190 (49)	19 800
Total cash receipts	\$ 172 820	125 890 (9)	233 000	427 067	412 250 (5)	448 300	1 217 118	793 880 (6)	1 196 200
Farm cash costs									
Beef cattle purchases	\$ 20 161	16 390 (26)	7 400	79 385	39 440 (23)	45 800	184 209	75 160 (15)	131 900
Chemicals	\$ 4 153	6 610 (12)	12 300	5 752	16 580 (22)	16 400	8 055	17 570 (14)	15 700
Contracts	\$ 4 586	5 450 (12)	na	12 419	21 720 (14)	na	27 359	28 030 (13)	na
Fertilisers	\$ 4 875	4 800 (27)	28 200	6 948	8 020 (32)	23 200	5 239	2 340 (34)	28 100
Fodder	\$ 22 966	8 630 (18)	7 800	52 465	22 370 (13)	13 400	153 055	40 860 (13)	44 900
Fuel, oil and grease	\$ 15 583	11 630 (14)	17 400	21 654	29 900 (7)	29 400	55 567	51 690 (8)	38 600
Handling and marketing	\$ 4 142	3 070 (16)	na	11 811	11 110 (10)	na	15 365	20 760 (7)	na
Hired labour	\$ 5 509	3 010 (130)	5 700	13 030	12 270 (20)	13 600	57 871	34 500 (13)	43 700
Interest	\$ 24 152	18 450 (18)	17 500	45 756	54 280 (16)	34 400	104 412	151 500 (10)	111 100
Repairs and maintenance	\$ 16 246	14 650 (13)	17 500	31 099	33 460 (7)	31 600	76 615	67 390 (7)	69 700
Total cash costs	\$ 169 597	132 620 (8)	198 100	379 464	363 230 (8)	350 400	931 970	672 140 (5)	939 300
Farm financial performance									
Farm cash income	\$ 3 223	-6 720 (161)	34 900	47 603	49 020 (48)	97 900	285 148	121 740 (28)	256 900
Farm business profit	\$ -89 073	-43 720 (36)	-53 400	-43 230	-71 960 (38)	11 100	165 669	38 280 (85)	86 100
Rate of return									
- excl. capital app.	% -2.3	-0.8 (70)	-1.0	0.2	-0.1 (242)	0.9	2.5	1.5 (15)	1.6
- incl. capital app.	% 12.7	-3.8 (72)	na	10.2	0.9 (131)	na	16.3	2.0 (34)	na
very large									
northern Australia									
	2006-07	2007-08	2008-09	2006-07	2007-08	2008-09			
Farm cash receipts									
Beef cattle	\$ 2 449 154	2 141 810 (8)	2 812 800	482 807	304 170 (4)	392 600			
Beef cattle transferred off-farm	\$ 1 982 681	2 211 090 (35)	na	193 773	129 810 (32)	na			
Crops	\$ 33 147	6 750 (73)	51 300	44 615	65 740 (12)	108 000			
Sheep and lambs	\$ 0	0 (0)	0	3 420	5 960 (34)	9 400			
Wool	\$ 0	0 (0)	0	9 143	12 710 (21)	14 000			
Total cash receipts	\$ 4 625 952	4 468 530 (18)	4 612 300	809 087	567 480 (8)	671 000			
Farm cash costs									
Beef cattle purchases	\$ 806 946	244 670 (33)	482 200	133 678	46 240 (13)	62 900			
Chemicals	\$ 3 158	2 680 (38)	14 900	5 402	11 310 (11)	14 200			
Contracts	\$ 90 838	80 710 (10)	na	18 437	18 420 (7)	na			
Fertilisers	\$ 1 178	1 660 (40)	2 800	5 397	5 130 (19)	25 600			
Fodder	\$ 262 690	124 130 (11)	157 500	77 191	24 790 (7)	23 100			
Fuel, oil and grease	\$ 158 549	165 960 (8)	202 300	36 523	32 660 (4)	33 200			
Handling and marketing	\$ 16 674	103 480 (10)	na	10 012	14 100 (5)	na			
Hired labour	\$ 234 933	264 090 (8)	280 100	36 029	25 650 (9)	27 500			
Interest	\$ 217 100	208 530 (13)	284 700	62 285	63 420 (7)	51 600			
Repairs and maintenance	\$ 191 464	187 270 (8)	183 000	46 750	39 130 (4)	38 700			
Total cash costs	\$ 4 294 478	3 766 070 (17)	4 323 400	710 023	495 950 (7)	565 800			
Farm financial performance									
Farm cash income	\$ 331 475	702 460 (37)	288 900	99 064	71 540 (25)	105 100			
Farm business profit	\$ 1 129 070	738 480 (44)	798 300	70 550	5 400 (401)	29 600			
Rate of return									
- excl. capital app.	% 5.5	3.3 (34)	3.4	2.0	1.1 (28)	1.3			
- incl. capital app.	% 24.4	11.8 (17)	na	16.4	2.8 (30)	na			

Note: The figures in parentheses are relative standard errors expressed as a percentage of the estimate.



of these farms to rebuild beef cattle numbers, largely through a reduction in the number of beef cattle sold resulting in lower beef cattle receipts in 2007-08. With higher beef cattle numbers increasing the value of trading stocks, farm business profit is estimated to have fallen by a smaller amount than farm cash income in 2007-08 (figure h and table 4).

2008-09

Despite higher total cash costs, increased beef cattle turn-off for all scales of production is projected to lift total cash receipts and farm cash income of northern beef industry producers in 2008-09. Combined with an increase in the value of trading stocks, average farm business profit is projected to increase to around \$28 600 a farm in 2008-09 (figure h and table 4).

Total cash receipts are projected to increase by 18 per cent on average in 2008-09, mostly because of increased beef cattle turn-off following successive years of herd rebuilding. Combined with higher average saleyard prices, average beef cattle receipts are projected to increase by around 29 per cent a farm in 2008-09. However, there is projected to be wide variation around this average, with beef cattle receipts increasing by only 19 per cent for medium scale beef farms compared with 57 per cent for large scale beef farms (table 4). Small and medium scale beef farms are projected to realise much higher cropping receipts in 2008-09. On average, small scale beef farms are projected to increase crop plantings by around 21 per cent, resulting in almost half of these farms' total cash receipts coming from crops in 2008-09. This compares with 32 per cent and 18 per cent of total cash receipts in 2007-08 and 2006-07, respectively (table 4).

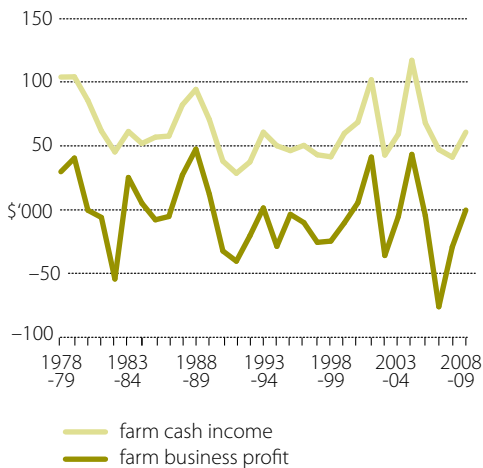
Total cash costs are projected to rise by around 14 per cent on average in 2008-09, largely because of a rise in beef cattle purchases and increased fertiliser expenditure associated with the expansion of crop areas planted and continued high fertiliser prices. Partly offsetting this increase, falls in interest rates are projected to reduce average interest costs. Also, fodder expenditure is projected to fall because of the combined effect of lower feed grain prices and improved grazing conditions (table 4).

Farm financial performance in southern Australia

2007-08

In 2007-08, farm cash income is estimated to have weakened, with farm cash receipts falling by more than farm cash costs. Despite the continued dry seasonal conditions in many parts of southern Australia, all scales of production, except small scale beef farms, increased beef cattle numbers in 2007-08. Consequently, higher beef cattle inventories boosted the value of trading stocks and led to a large reduction in average farm business losses of southern beef industry producers, despite weaker average farm cash incomes in 2007-08 (figure i).

i Financial performance, southern Australia

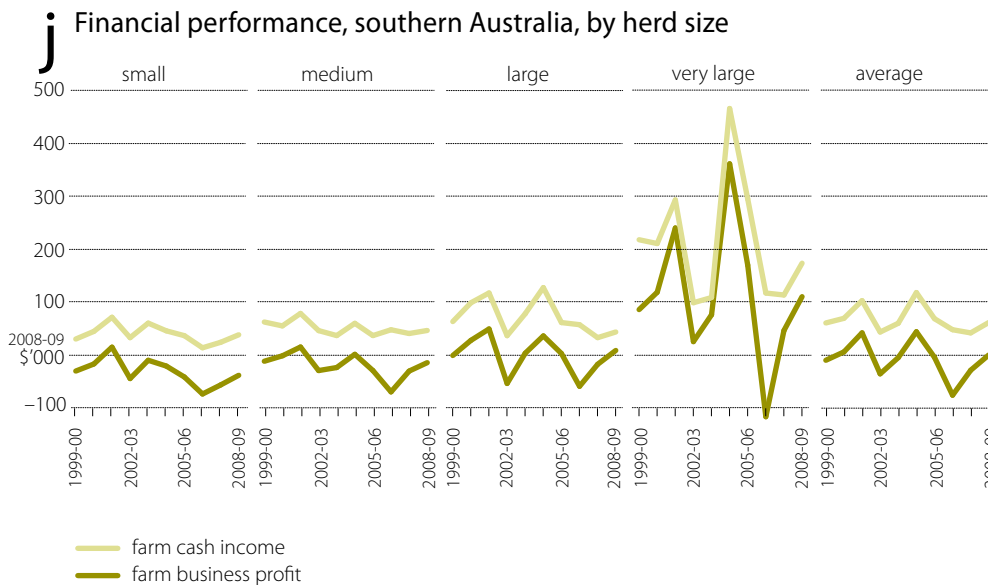


Farm cash receipts fell by around 29 per cent on average as all income streams declined in 2007-08 (table 5). Beef cattle receipts were sharply lower because of the combined effects of lower prices received for cattle sold and reduced beef cattle turn-off. With the exception of large scale beef farms, all scales of production increased the average area sown to crops in 2007-08 (table 3). However, dry conditions in southern New South Wales, Victoria and South Australia resulted in below average winter grain crop yields and left farms unable to fully capitalise on the higher winter grain prices on offer. On average, a reduction in sheep and lambs sold resulted in a fall in sheep and lamb receipts but an increase in flock size. Despite the increase in sheep numbers, average wool production and total wool receipts were lower in 2007-08.

Farm cash costs are estimated to have fallen by around 32 per cent in 2007-08, because of a 62 per cent reduction in the number of beef cattle purchased and reduced fodder expenditure as on-farm feed conditions improved for many producers. Partially offsetting these falls were increases in average interest payments and services expenses (table 5).

Financial performance by herd size, 2007-08

In 2007-08, all beef farms realised higher average farm business profits with small, medium and large beef farms reducing losses and very large beef farms returning to positive profits (figure j).



For all scales of production, the biggest fall in cash receipts was because of reduced beef turn-off in 2007-08. However, small scale beef farms reduced beef cattle turn-off but received higher average saleyard prices for cattle sold, resulting in a small increase in beef cattle receipts in 2007-08. Also, reduced wool, sheep and lamb receipts for small scale beef farms were softened by increased crop receipts because of higher winter grain prices and production (tables 3 and 5).

In 2007-08, all size categories recorded reduced average beef cattle purchase costs. Medium and large scale beef farms recorded the largest of these falls, with beef cattle purchase expenditure falling by around 60 per cent and 68 per cent respectively. Some improvement in grazing conditions in southern Australia is estimated to have enabled all scales of production to reduce average fodder expenditure in 2007-08. Partially offsetting these reductions, all size categories except small scale beef farms had higher average interest costs because of a combination of increased interest rates and average farm debt per farm (table 5).

5 Financial performance, southern beef industry

average per farm

	small			medium			large			
	2006-07	2007-08	2008-09	2006-07	2007-08	2008-09	2006-07	2007-08	2008-09	
Farm cash receipts										
Beef cattle	\$ 58 111	60 300 (11)	69 400	228 112	101 710 (11)	106 800	222 658	162 080 (6)	159 700	
Beef cattle transferred off-farm	\$ 90	210 (0)	na	0	3 610 (75)	na	198	420 (99)	na	
Crops	\$ 42 807	61 900 (27)	95 900	79 656	88 310 (15)	115 500	86 773	60 320 (33)	61 000	
Sheep and lambs	\$ 29 583	16 050 (19)	25 700	47 792	56 850 (18)	51 700	66 901	60 470 (12)	51 000	
Wool	\$ 21 407	18 150 (17)	11 800	43 287	36 640 (14)	29 900	50 293	58 990 (15)	35 300	
Total cash receipts	\$ 190 758	180 010 (11)	225 700	437 255	332 380 (7)	338 100	508 262	395 360 (7)	351 000	
Farm cash costs										
Beef cattle purchases	\$ 18 004	13 550 (16)	27 300	83 332	33 720 (19)	43 000	67 135	39 570 (18)	43 100	
Chemicals	\$ 7 323	7 180 (13)	11 100	16 008	16 650 (12)	18 400	17 001	11 090 (37)	8 400	
Contracts	\$ 7 171	6 330 (40)	na	18 433	11 820 (15)	na	13 003	13 820 (23)	na	
Fertilisers	\$ 13 093	18 870 (17)	21 800	19 321	24 550 (16)	24 500	31 368	26 620 (15)	25 600	
Fodder	\$ 12 952	5 750 (21)	6 000	37 739	10 310 (26)	5 100	46 490	18 660 (17)	12 400	
Fuel, oil and grease	\$ 12 553	13 830 (10)	16 300	21 659	25 570 (9)	21 200	31 905	21 650 (12)	18 000	
Handling and marketing	\$ 5 812	5 130 (8)	9 800	11 052	10 260 (10)	14 500	8 156	14 590 (7)	15 700	
Hired labour	\$ 2 919	4 510 (28)	3 100	11 452	13 700 (17)	19 000	20 020	14 770 (24)	13 200	
Interest	\$ 23 391	20 360 (16)	15 000	33 604	41 690 (14)	27 000	49 147	53 110 (28)	32 000	
Repairs and maintenance	\$ 16 484	13 420 (9)	16 400	23 919	22 980 (10)	22 400	38 446	29 000 (11)	28 100	
Total cash costs	\$ 177 578	156 470 (8)	187 900	389 992	292 200 (7)	292 200	451 400	363 010 (12)	307 100	
Farm financial performance										
Farm cash income	\$ 13 180	23 540 (48)	37 800	47 263	40 180 (27)	46 000	56 862	32 350 (66)	43 900	
Farm business profit	\$ -74 187	-57 060 (20)	-38 800	-70 195	-30 830 (39)	-14 900	-59 623	-18 040 (117)	8 100	
Rate of return										
- excl. capital app.	% -1.8	-1.3 (37)	-0.7	-0.6	0.4 (64)	0.5	-0.1	0.8 (27)	0.9	
- incl. capital app.	% 11.0	0.6 (190)	na	6.5	0.8 (112)	na	5.5	1.0 (197)	na	
very large										
southern Australia										
	2006-07	2007-08	2008-09	2006-07	2007-08	2008-09				
Farm cash receipts										
Beef cattle	\$ 864 809	508 290 (7)	717 900	260 945	148 290 (4)	196 100				
Beef cattle transferred off-farm	\$ 41 429	7 560 (43)	na	6 373	2 150 (40)	na				
Crops	\$ 258 419	226 600 (38)	301 800	94 788	90 190 (16)	124 100				
Sheep and lambs	\$ 95 840	82 070 (15)	95 900	52 568	44 150 (8)	48 400				
Wool	\$ 149 138	104 930 (19)	80 000	52 837	42 020 (9)	31 800				
Total cash receipts	\$ 1 556 479	1 035 230 (9)	1 311 300	531 972	372 380 (5)	444 900				
Farm cash costs										
Beef cattle purchases	\$ 300 517	95 380 (21)	202 900	88 677	34 520 (10)	61 100				
Chemicals	\$ 35 840	39 810 (20)	48 500	16 035	14 750 (10)	18 000				
Contracts	\$ 55 274	47 350 (19)	na	18 684	14 530 (12)	na				
Fertilisers	\$ 84 237	74 190 (8)	84 200	29 532	29 000 (7)	32 700				
Fodder	\$ 203 490	38 610 (19)	29 600	55 703	13 640 (10)	10 800				
Fuel, oil and grease	\$ 104 217	66 660 (18)	62 200	33 094	25 360 (7)	24 800				
Handling and marketing	\$ 32 022	34 610 (7)	60 300	11 670	12 100 (4)	19 900				
Hired labour	\$ 101 036	79 400 (12)	86 500	23 798	18 610 (9)	21 900				
Interest	\$ 86 355	134 590 (14)	110 700	41 263	47 060 (9)	36 100				
Repairs and maintenance	\$ 105 806	70 120 (15)	67 900	36 809	26 260 (6)	28 200				
Total cash costs	\$ 1 439 781	922 220 (8)	1 108 800	484 628	331 050 (4)	379 000				
Farm financial performance										
Farm cash income	\$ 116 698	113 010 (53)	202 500	47 344	41 330 (25)	65 900				
Farm business profit	\$ -117 143	45 850 (100)	142 800	-76 484	-29 290 (31)	4 900				
Rate of return										
- excl. capital app.	% -0.1	1.5 (22)	2.2	-0.5	0.5 (32)	1.0				
- incl. capital app.	% 9.2	2.4 (58)	na	8.0	1.3 (53)	na				

Note: The figures in parentheses are relative standard errors expressed as a percentage of the estimate.

2008-09

In 2008-09, average farm cash income is projected to improve for all scales of production, with total cash receipts rising relative to total cash costs for small, medium and very large beef farms. For large farms, total cash costs are projected to have fallen relative to total cash receipts. Overall, average farm cash income for southern industry beef farms is projected to increase to around \$67 700 in 2008-09, compared with \$39 940 in 2007-08 (figure i).

Although small and medium scale beef farms are projected to again record farm business losses in 2008-09, these are expected to be much lower than 2007-08. Despite a run-down in beef cattle inventories, small scale beef farms are projected to increase the average value of trading stocks because of increased grain and fodder stores. Medium scale beef farms are also projected to increase trading stock inventories leading to a bigger increase in farm business profit than farm cash income. Overall, average farm business profits for southern beef industry farms are projected to increase to around \$4700 a farm in 2008-09, compared with an average farm business loss of \$28 300 a farm in 2007-08 (figure i).

Total cash receipts for southern beef industry farms are projected to increase by nearly 20 per cent in 2008-09. Most of this increase is projected to come from increased beef cattle production, higher beef cattle saleyard prices, strengthening sheep and lamb prices and a sharp rise in crop receipts. Partially offsetting this rise, average wool production and wool prices received are projected to be lower. The largest increase in beef cattle turn-off is projected to be for very large farms, where improved seasonal conditions on the back of herd rebuilding which began in 2007-08 is projected to boost branding rates in 2008-09. Small and medium scale beef farms are projected to become even more reliant on non-beef cattle receipts, particularly from cropping activities in 2008-09 (table 5).

Southern beef industry total cash costs are projected to increase by around 14 per cent on average because of increased beef cattle purchases, fuel and chemicals, and average fertiliser expenditure in 2008-09. However, reduced interest rates are projected to lower average interest cost per farm and fodder expenditure is also projected to fall (table 5).

Farm investment and productivity improvements

Past investments to increase farm size and the productivity of existing land, combined with improved seasonal conditions for much of northern Australia and parts of southern Australia, enabled many beef industry farms to expand crop and livestock production in 2007-08. The ability of farms to fund such investments depends on a number of factors including the available farm business cash flows, the farm's equity position and the ability to access debt facilities, farm liquid assets, and off-farm income, as well as the price of equipment, vehicles, land and other items of farm capital.

Past investments

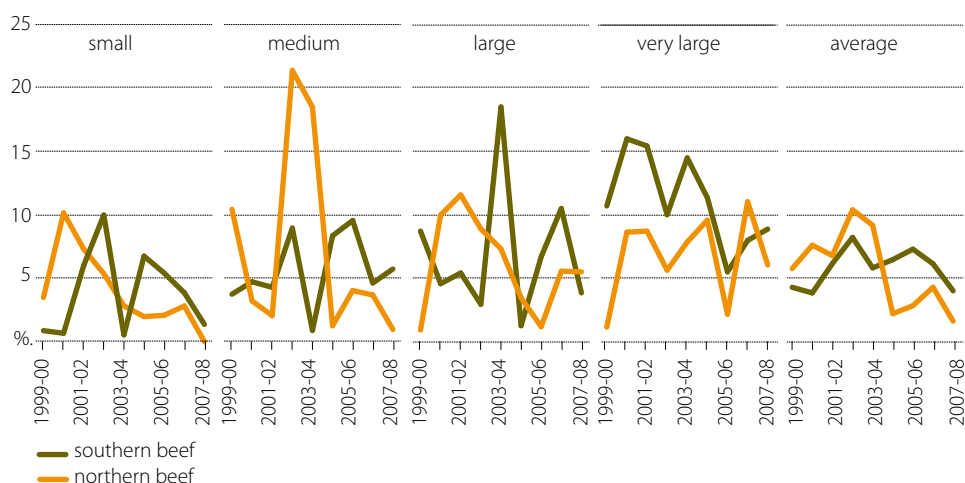
New investments are an important means of boosting farm productivity and incomes, with productivity growth providing better prospects for farm viability in the longer term. Compared with the historically high proportion of farms acquiring land from the mid-1990s to 2003-04, fewer farms acquired land in 2007-08. The proportion of southern beef farms acquiring land fell to a near decade low in 2007-08, while for northern beef farms it was the lowest since the survey began in 1977-78 (figure k).

During the 2000s, beef cattle farms of all scales of production in northern and southern Australia have undertaken considerable investments in new capital. Although fewer southern Australian farms have acquired land in recent years, the average expenditure on land purchases has increased reflecting higher land prices (figure l). In 2006-07 and 2007-08 there was an increase in non-land capital investments in both northern and southern Australia, on average. This suggests that many farms invested to improve the productivity of their existing business rather than investing in additional land. (figure m).

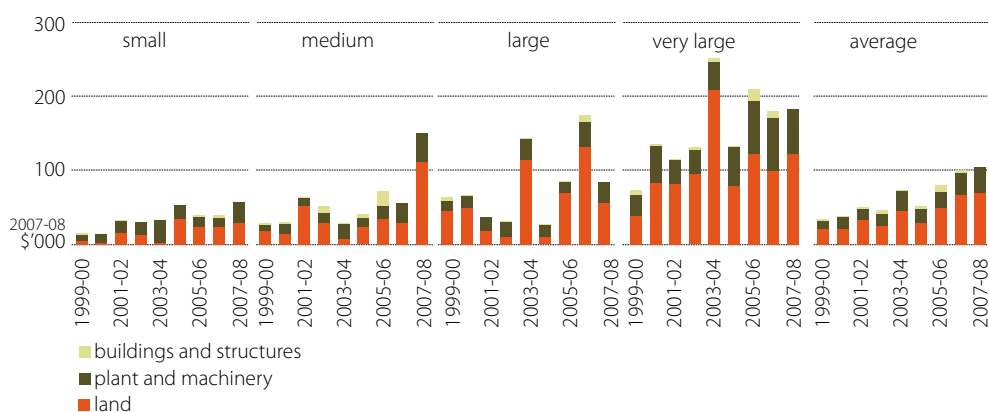
Use of farm debt

In line with the historically high levels of capital investment, average farm debt for land purchases and investment has been rising steadily for southern and northern beef industry farms (figures n and o). Increases in debt to fund land purchases have accounted for the largest share of this increase. In 2007-08, average farm business debt is estimated

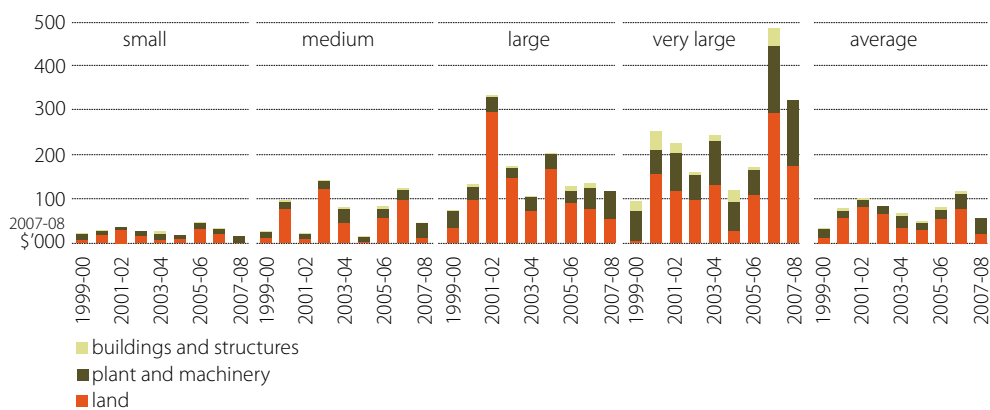
k Proportion of farms expanding, by herd size



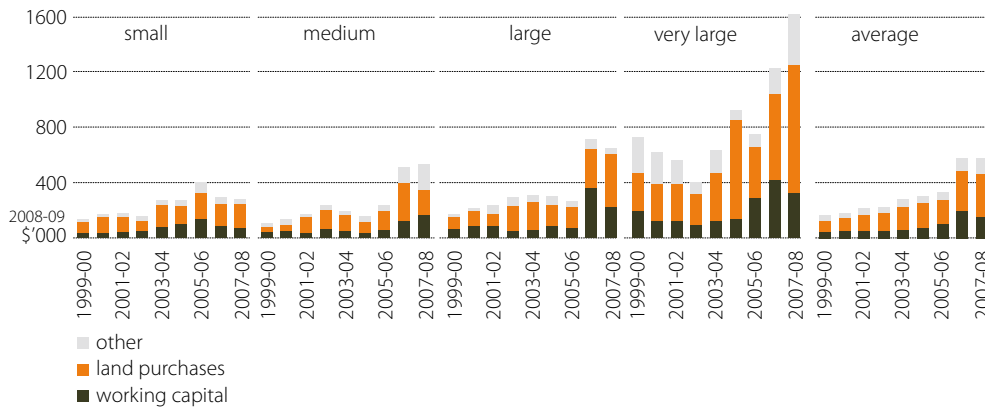
Capital purchases, southern Australia, by herd size



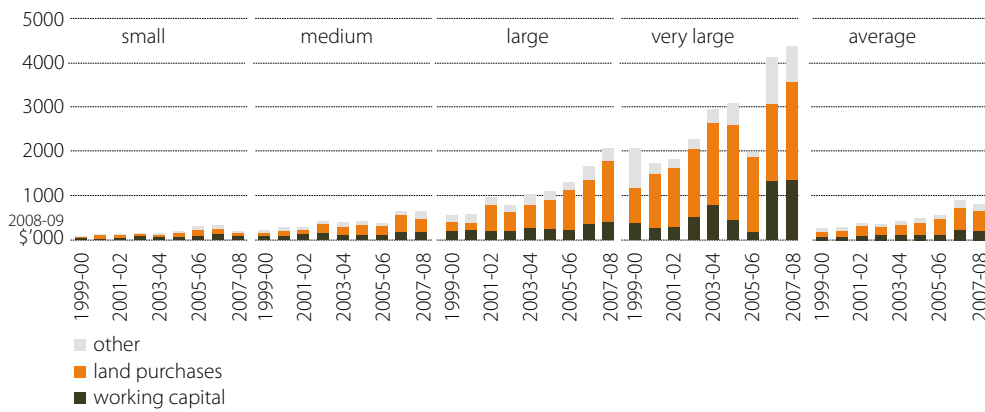
m Capital purchases, northern Australia, by herd size



n Farm business debt, southern Australia, by herd size



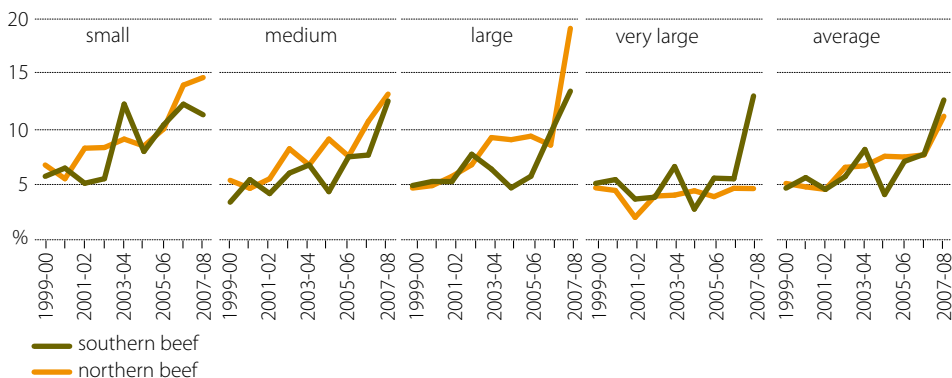
O Farm business debt, northern Australia, by herd size



to have remained high but fallen slightly with improved seasonal conditions reducing the need to borrow working capital which has risen substantially in recent years. Nevertheless, average farm debt has roughly tripled in real terms since 2000-01, increasing to average \$820 000 a farm in northern Australia and to around \$577 000 a farm in southern Australia.

Higher debt and rising interest rates have led to a steady increase in average farm debt servicing commitments. In 2007-08, the average beef farm in northern and southern Australia required between 11 per cent and 13 per cent of farm cash receipts to make interest payments. This represented a much higher proportion than at any time in the previous

p Debt servicing, by herd size
as measured by the ratio of interest paid to total cash receipts

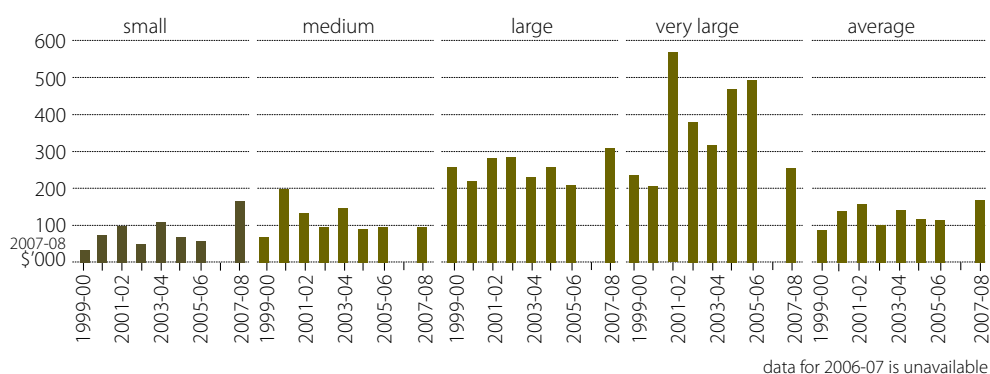


decade because of the combined effects of increased interest costs and lower farm cash receipts. In general, very large scale farms have had lower interest to receipts ratios than smaller farms. However, very large scale southern beef farms recorded a sharp rise in average interest to receipt ratio, in part, because of increased borrowings for land purchases in 2007-08 (figure p).

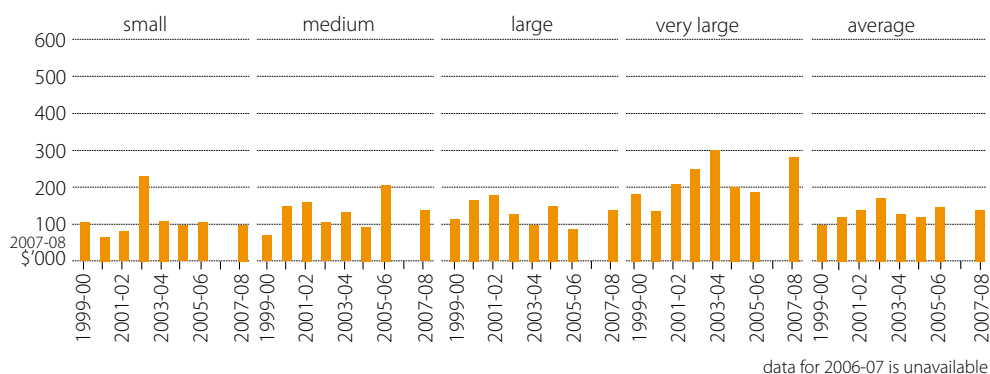
Use of liquid assets

Over the past decade, farm holdings of liquid assets (including farm management deposits) have shown volatility, as assets have been reduced during droughts and rebuilt in subsequent years. In 2007-08, holdings of liquid assets for northern beef farms averaged \$169 000 a farm, 8 per cent higher than the previous peak in 2001-02 (figure q). For southern beef farms liquid assets averaged \$139 000 a farm in 2007-08, 19 per cent lower than in 2002-03 (figure r).

q Farm liquid assets, by herd size, northern beef



r Farm liquid assets, by herd size, southern beef

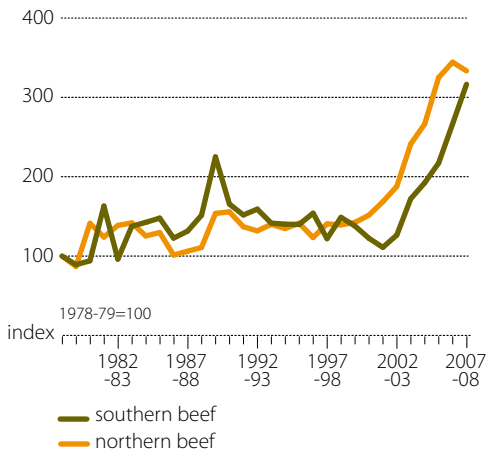


Future expansion

Given a return to more favorable seasonal conditions, many beef cattle farms have been able to rebuild beef cattle numbers to expand production and incomes. The industry's recent history of capital investments, particularly to acquire land, has also placed many beef farms in a position to further increase beef cattle numbers in the short to medium term.

Northern beef industry farms have, on average, been rebuilding beef cattle numbers since 2006-07 and are now in a position to significantly increase beef cattle production. Similarly, some southern beef cattle farms experienced

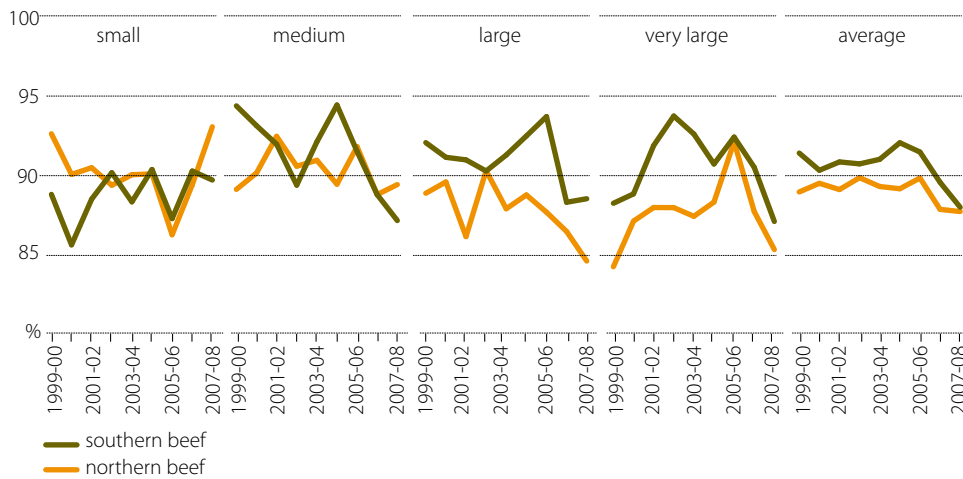
S Average land values for beef industry farms



improved seasonal conditions since 2007-08, allowing for an increase in average cow numbers and branding rates. With prices for beef cattle projected to remain stable in the coming years, growth in sales is likely to result in farms realising higher incomes and profits.

In recent years, average debt levels have steadily increased because of the substantial borrowings for capital investments and increased borrowings for working capital. Until recently, increasing land values have largely offset the effect of higher average farm business debt on farm equity. However, the recent downturn in economic conditions and continuation of dry seasonal conditions in some regions is likely to have weakened growth in land values, and in some places, led to lower land values (figure s). Consequently, average farm equity ratios have fallen slightly, but still remain high in historical terms (figure t).

t Farm equity ratio, by herd size



Assuming improved seasonal conditions and continued growth in beef cattle sales, increased farm cash incomes should allow some beef cattle farms to reduce their overall farm debt. However, some farms may experience difficulties in obtaining additional debt for new farm investments or working capital in 2009-10 as a consequence of lower farm equity.

Trends in productivity growth

Total factor productivity (TFP) measures outputs relative to total inputs used to produce the output. Productivity growth in Australia's broadacre and dairy industries is highly variable on a year-to-year basis. Between 1977-78 and 2006-07, productivity growth of beef industry producers (defined as farms mainly engaged in beef cattle and beef-sheep production) averaged 1.5 per cent a year, the same growth rate recorded for all Australian broadacre industries (table 6).

Productivity growth amongst beef specialists (defined as farms mainly engaged in running beef cattle), varied between northern and southern beef producing regions. Beef specialists in the northern region achieved an annual average TFP growth of 1.2 per cent a year, compared with 0.8 per cent a year for the southern region (table 7). In the northern region, higher overall performance was mainly a reflection of strong productivity growth during the 1990s. In the current decade, productivity growth appears to be continuing to rise, with only the drought years of 2002-03 and 2005-06 causing drops in performance (figure u).

Productivity growth in the northern beef region has been partly because of the expansion in output occurring in recent years. The expansion of live export trade has also stimulated an expansion in output, with minimal additional

6 Average annual input, output and TFP growth

broadacre and dairy industries, 1977-78 to 2005-06

	TFP growth %	output growth %	input growth %
Total broadacre	1.5	0.8	-0.6
Cropping	2.1	3.1	1.0
Mixed crop-livestock	1.5	0.1	-1.5
Beef a	1.5	1.7	0.1
Sheep	0.3	-1.4	-1.8
Dairy b	1.2	5.1	3.9

a Includes farms mainly engaged in beef cattle and beef-sheep production.

b Dairy industry estimates are for the period 1988-89 to 2006-07.

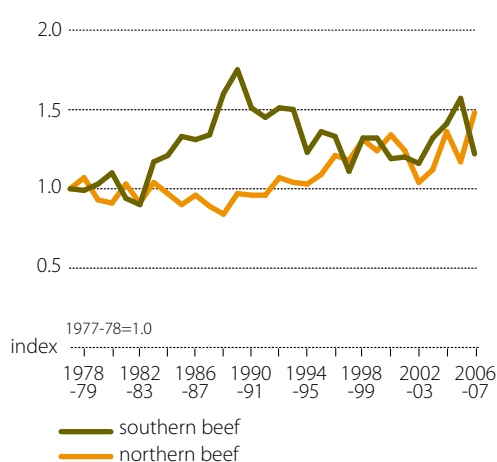
7 Average annual growth of beef specialists ^a

1977-78 to 2005-06

	TFP growth %	output growth %	input growth %
Northern region	1.2	1.3	0.1
Southern region	0.8	0	-0.9

a Includes farms mainly engaged in beef cattle production.

U Total factor productivity, beef specialists



input requirements. Other factors lifting productivity growth have included improved pest and disease control, the greater use of *bos indicus* breeds, higher fertility rates and increased turn-off weights.

In the southern beef region, productivity has been more variable, leading to lower overall productivity growth. In general, the region has been more heavily affected by seasonal conditions in recent years, causing notable fluctuations in productivity. This variability could therefore reflect destocking and subsequent rebuilding in response to drought. The southern region typically shows more variability than their northern counterparts, as southern farms are often smaller and more diversified.

Survey methodology and definitions

Target population

ABARE 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). This framework includes agricultural establishments in each statistical local area classified by size and major industry. The estimates published in this report cover establishments with an estimated value of agricultural operations of \$40 000 or more. A definition of the estimated value of agricultural operations is given in Australian Standard Industrial Classification (ABS 1983, cat. no. 1201.0).

Survey design and sample weighting

The population was stratified by operation size using the estimated value of agricultural operation (EVAO). The size of each stratum was determined using the Dalenius-Hodges method. The sample allocation to each stratum was done using a mixture of the Neyman allocation, which takes into account variability within strata of the auxiliary variable, in this case EVAO, and proportional allocation, which only considers the population number in each stratum. The Neyman allocation allocates large proportions of sample to strata with large variability, in the case of this survey, strata of larger farms.

The estimates presented in this report are calculated by appropriately weighting the data collected from each sample farm and then using the weighted data to calculate population estimates. Generally, larger farms have smaller weights and smaller farms have larger weights, reflecting the strategy of sampling a higher fraction of larger farms than of smaller farms (the former having a wider range of variability of key characteristics).

Reliability of estimates

The reliability of the estimates of population characteristics presented in this report depends on the design of the sample and the accuracy of the measurement of characteristics for the individual sample farms.

Sampling errors

Only a small number of farms out of the total number of farms in a particular industry are 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 the survey design and the estimation procedures, as well as the 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 smaller sampling errors than industry and state estimates.

To give a guide to the reliability of the survey estimates, sampling errors have been calculated for all estimates in this report. These estimated errors, expressed as percentages of the survey estimates and termed 'relative standard errors', are given next to each estimate in parentheses.

Calculating confidence intervals using relative standard errors

Relative standard errors (RSE) 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 is equal to \$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 19 in 20 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 19 in 20 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 rough 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 beef cattle producers and \$51 664 medium scale beef cattle 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:

$$\sqrt{(38 \times \$59\,334/100)^2 + (42 \times \$51\,664/100)^2} = \$31\,292$$

A 95 per cent confidence interval for the difference is:

$$\$7670 \pm 1.96 \times \$31\,292 = (-\$53\,662, \$69\,002)$$

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.

Definition of terms

Owner manager: The primary decision-maker for the business. This person is identified by discussion between interviewer and interviewee as (one of) the key decision-maker(s). This person is usually responsible for the day-to-day operation of the business and may own or have a share in the business.

Area of land at business premises: Includes all land operated by the business, whether owned or rented by the business.

Labour: Measured in work-weeks, as estimated by the owner manager. It includes all work on the business by the owner manager, partners, family, hired permanent and casual workers, but excludes work done by contractors.

Hired labour: Excludes the owner manager, partners and family labour, and work undertaken by contractors. Expenditure on contract services appears as a cash cost.

Capital: The value of capital employed by the business is the market value of all the assets used including leased items but excluding machinery and equipment either hired or used by contractors. Market valuations were provided by the owner manager of surveyed businesses and included the market value of land and fixed improvements used by the business, excluding the value of the owner manager's house. The house value deducted from the total value of land and fixed improvements was the present day replacement cost, depreciated for age.

Gross margin: The cash surplus generated from the production of a commodity. It is calculated as the difference between the average price received and the unit production cash costs.

Debt: Estimated as business debt. It includes all debts attributable to the business excluding personal debt and underwritten loans. Information collected at the survey interview was supplemented by information in the business accounts.

Total cash receipts: Total of revenues received by the business during the financial year, including revenues from the sale of crops, livestock and livestock products. It includes revenue received from royalties, rebates, refunds, plant hire, contracts, insurance claims and compensation, and government assistance payments.

Total cash costs: Payments made by the business for materials and services and for permanent and casual hired labour (excluding partner and other family labour). It includes the value of any lease payments on capital, produce purchased for resale, rent, interest, cropping and livestock related purchases. Capital and household expenditures are excluded from total cash costs. Handling and marketing expenses include commissions, levies etc. for business produce sold. Administration costs include accountancy fees, banking and legal expenses, postage, stationery, subscriptions and telephone. Other cash costs include relatively small cost items like stores, advisory services and travelling expenses.

Depreciation: Estimated by applying the diminishing value depreciation method to the market value of capital items at 30 June 2006. Capital items are categorised into several groups and relevant depreciation rates are applied. The capital groups include vehicles; handling, harvesting and packing equipment; cultivation and sowing equipment; computers, electronic and communications equipment; other plant and equipment; and buildings on the business premises.

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.

Farm business profit: Cash operating surplus plus buildup in trading stocks, less depreciation, less the imputed value of the owner manager, partner(s) and family labour.

Profit at full equity: Return to capital and management plus interest, rent and finance lease payments. It is the return produced by all the resources used in the business.

Rate of return: The return to all capital used. It is computed by expressing farm business profit as a percentage of the total opening capital of the business.

Equity ratio: Calculated as a percentage of owned capital at 30 June.

Off-farm income: Income not derived from the surveyed farm business. It includes all off-farm income from wages and salaries, other businesses, other investments and Commonwealth social support payments. It is estimated for the owner manager and spouse only.



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