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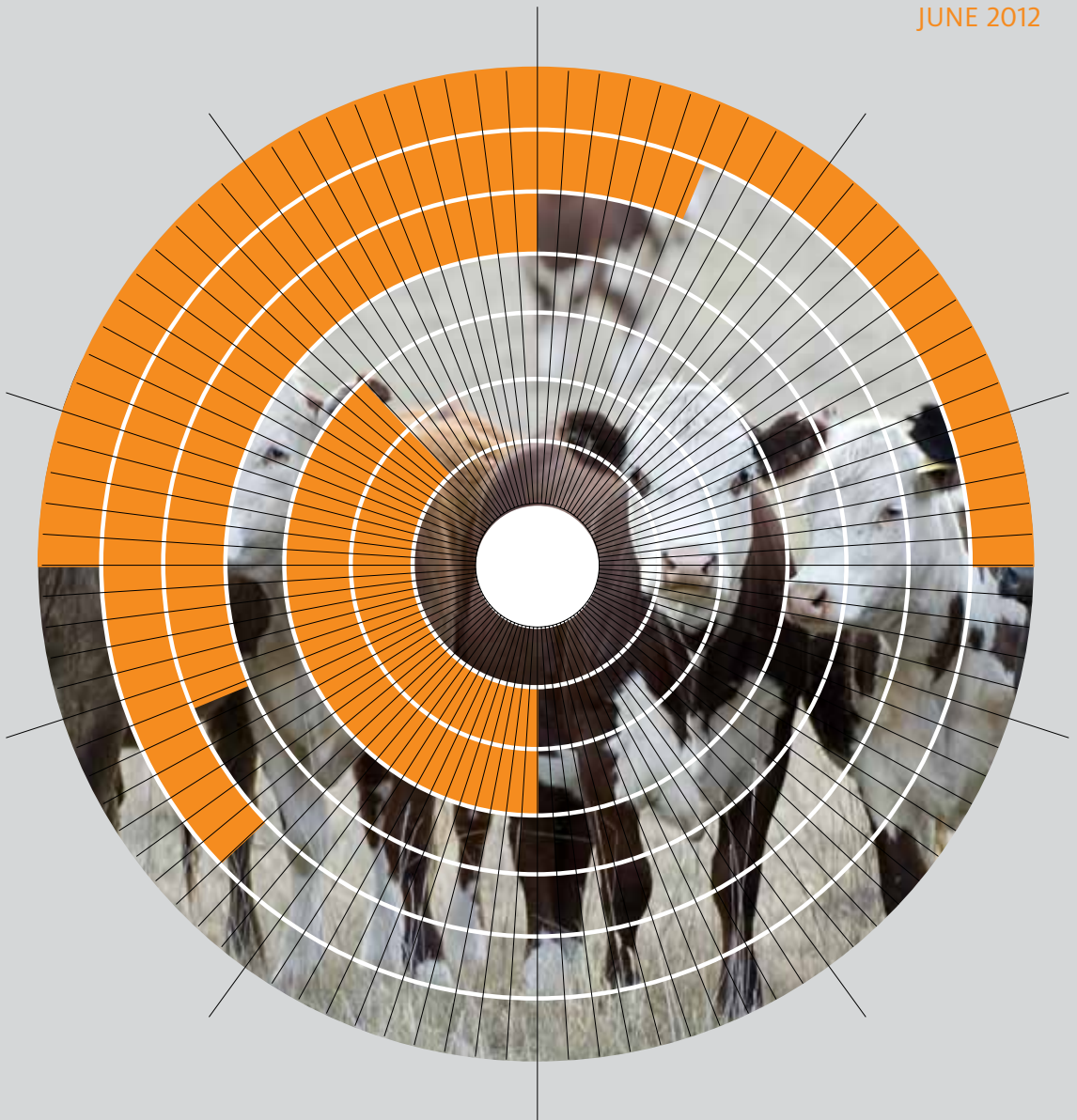
Australian beef

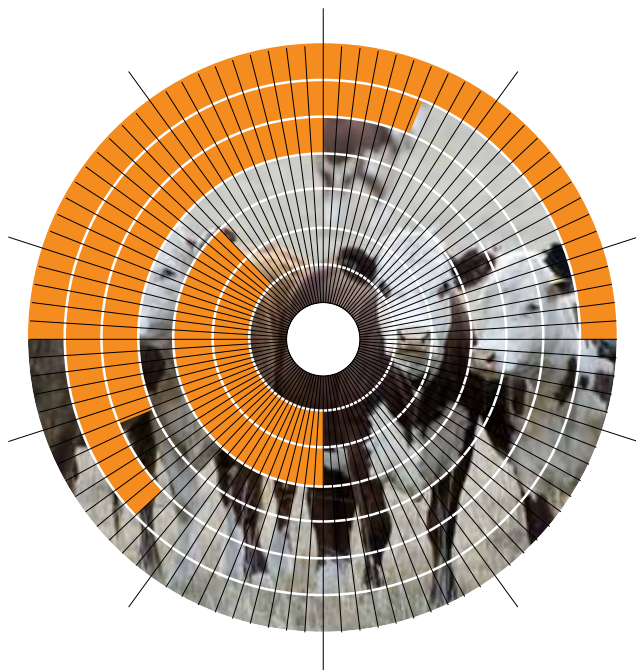
Financial performance of beef cattle producing farms, 2009–10 to 2011–12

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Research by the Australian Bureau of Agricultural
and Resource Economics and Sciences

JUNE 2012





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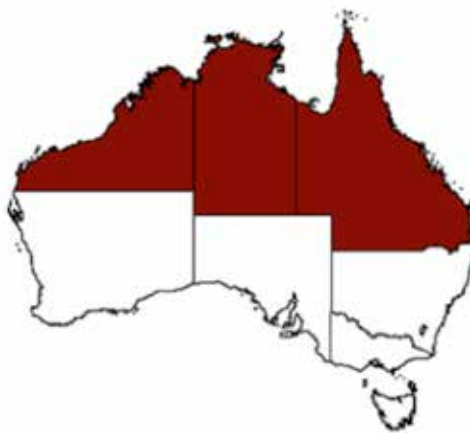
Chapter 1

Introduction

Improved seasonal conditions since 2009–10 have resulted in significant pasture growth in most cattle producing regions across Australia. Beef cattle producers have responded to the improved seasonal conditions by rebuilding herds. Beef cattle numbers in Australia rose from 24.0 million head in 2010 to 26.2 million head as at 30 June 2011, according to the Australian Bureau of Statistics. During this period, herd sizes rose in all states except Western Australia and the Northern Territory. In 2011–12 the Australian beef cattle herd is forecast to increase by a further 5 per cent to 27.6 million head (ABARES 2012).

This report presents the farm financial performance of beef cattle producing farms in northern and southern Australia from 2009–10 to 2011–12. Northern Australia is defined as northern Western Australia, the Northern Territory and Queensland. The remainder of Australia, including southern Western Australia, South Australia, New South Wales, Victoria and Tasmania, is defined as southern Australia (Map 1).

MAP 1 Northern Australian beef cattle industry



The report draws heavily on data from the ABARES annual Australian Agricultural and Grazing Industries Survey (AAGIS) to provide an overview of the production and financial performance of the Australian beef cattle industry. Meat & Livestock Australia funded the preparation of this report and also partly funded AAGIS.

In northern and southern Australia, farm businesses with fewer than 100 head of cattle are excluded from the analysis to focus on larger beef cattle producers. Farm businesses with fewer than 100 head of cattle represent just 2 per cent of the national beef cattle herd and only contribute around 5 per cent to the value of beef cattle sales.

Specialist feedlots are mainly involved in hand or mechanical feeding of cattle in a confined area, with cattle on feed mostly purchased from other producers. Unlike the farm businesses included in this report, specialist feedlots have minimal involvement in cattle grazing or cattle breeding. Farm businesses finishing more than 5000 cattle on grain for more than 70 days during the financial year have been excluded from this report to remove specialist feedlots and ensure a consistent definition of beef producers over the period for which AAGIS data are available. Since 2006 specialised feedlots have been listed in a separate ANZSIC industry classification in Australian Bureau of Statistics' collections; they are no longer included in the broadacre group of industries surveyed in AAGIS.

Chapter 2

Australian beef cattle industry

The Australian beef industry is divided into two markedly different regions—northern and southern Australia. Differences in climatic and pasture conditions have resulted in significant differences in stocking rates, average herd size and the main cattle breeds.

Cattle stocking rates in northern Australia are much lower, on average, than in southern Australia because of the lower quality and more variable quantity of pasture in most northern areas. More extensive improved pastures in many southern areas allow for much higher stocking rates.

Land in northern Australia has a lower carrying capacity. To be economically viable northern properties tend to be much larger in terms of average herd size and the area of land operated than properties in the south (Table 1). For example, in northern Australia, 87 per cent of the beef cattle herd is on properties with over 800 head of cattle, while in southern Australia 61 per cent of the beef cattle herd is on properties with fewer than 800 head of cattle (Table 2).

TABLE 1 Selected physical characteristics, by region average per farm

		Northern Australia			Southern Australia		
		2009–10	2010–11 ^p	2011–12 ^y	2009–10	2010–11 ^p	2011–12 ^y
Area operated as at 30 June	ha	24 415	22 134	na	5 698	5 443	na
Beef cattle as at 30 June	no.	1 591	1 610	1 552	441	422	425
Cows and heifers mated	no.	631	638	na	193	185	na
Calves branded	no.	460	454	440	167	161	166
Beef cattle purchases	no.	60	74	51	40	44	33
Beef cattle sales	no.	388	418	407	191	175	165
Within-year change in beef cattle numbers	%	4.8	4.0	6.7	1.7	5.7	9.0
Area cropped	ha	99	91	63	268	233	154
Sheep as at 30 June	no.	323	310	382	1 063	986	1 011

^p Preliminary estimates. ^y Provisional estimates. ^{na} not available.

TABLE 2 Distribution of broadacre beef cattle farms, by number of cattle at 30 June
 average between 2006–07 and 2010–11

	Number of farms	Share of farms	Share of beef cattle	Share of value of cattle sales
	no.	%	%	\$
Northern Australia				
< 100	1 622	17.6	1	2
100–200 head	1 417	15.4	2	2
200–400 head	1 684	18.3	4	5
400–800 head	1 436	15.6	6	7
800–1 600 head	1 335	14.5	12	13
1 600–5 400 head	1 326	14.4	29	30
> 5 400 head	406	4.4	46	40
Total	9 225	100	100	100
Southern Australia				
< 100	7 695	31.6	5	8
100–200 head	6 005	24.6	12	12
200–400 head	5 695	23.4	21	21
400–800 head	3 135	12.9	23	21
800–1 600 head	1 325	5.4	19	18
1 600–5 400 head	487	2.0	16	16
> 5 400 head	39	0.2	4	4
Total	24 381	100	100	100
Australia				
< 100	9 317	27.7	2	5
100–200 head	7 422	22.1	5	7
200–400 head	7 379	22.0	10	13
400–800 head	4 571	13.6	13	14
800–1 600 head	2 660	7.9	15	16
1 600–5 400 head	1 813	5.4	24	23
> 5 400 head	445	1.3	30	22
Total	33 606	100	100	100

Note: Excludes major feedlots.

The main breeds of cattle in northern Australia are *Bos indicus*. Over recent decades, the proportion of *Bos indicus* in the region has increased as producers introduced and selected cattle better suited for beef production in tropical conditions (Rutherford 1995). In southern Australia, British and European *Bos taurus* breeds, such as the Angus and Hereford, remain dominant.

Variations in breed, the types of cattle turned off and proximity to live export markets has resulted in cattle from the two regions being directed to different markets. In northern Australia, around 85 per cent of beef slaughter is exported and around 66 per cent of Australian live cattle exports are sourced from northern Australia. By contrast, 47 per cent of southern beef processing is directed to domestic markets (Gleeson et al. 2012).

To provide an insight into the performance of the beef cattle industry, farm businesses with different scales of operation were stratified into four groups based on the size of their beef cattle herd in each year the farm business was surveyed—small, medium, large and very large. Beef cattle producers operate significantly larger properties in northern Australia than their counterparts in southern Australia. For this reason different sized groups have been used in these regions to enable meaningful analysis of financial performance by scale (Table 3).

TABLE 3 Beef cattle herd group, by number of head

	Northern Australia	Southern Australia
Small	100–400	100–200
Medium	400–1 600	200–400
Large	1 600–5 400	400–800
Very large	> 5 400	> 800

Chapter 3

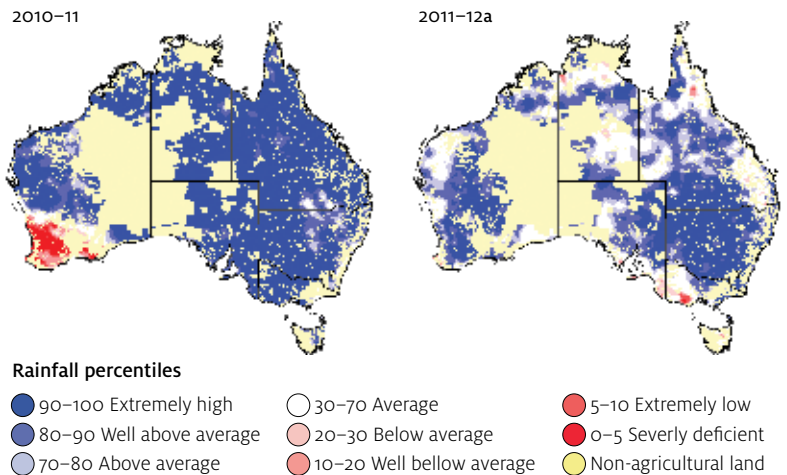
Cattle production

Seasonal conditions

Following a turnaround in seasonal conditions across much of northern Australia and parts of southern Australia in 2009–10, most of Australia’s agricultural regions received well above average rainfall through 2010–11 (Map 2).

In the summer of 2010–11 widespread flooding in parts of eastern and northern Australia resulted in considerable disruption to on-farm activities, as well as cattle transport and sales. However, losses of cattle were small in relation to the national herd and the main effect of flooding was damage to farm and public infrastructure.

MAP 2 Australian rainfall percentiles



a Year to March 2012.

Note: Percentiles is a way of dividing sorted data (in this case rainfall data) into 100 equal parts. The 10th percentile represents the lowest 10 per cent of the data and the 90th percentile represents the top 10 per cent of the data.

Source: Australian Bureau of Meteorology

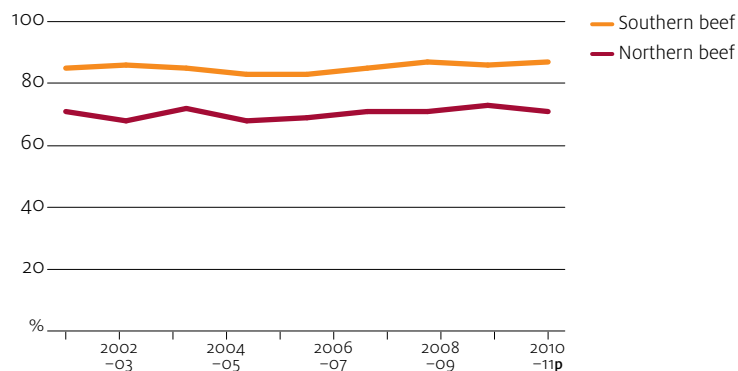
In 2011–12 average to above average seasonal conditions for the majority of broadacre farms resulted in excellent pasture growth. Flooding during late summer caused damage to some farms in southern Queensland and New South Wales. The most severe flooding occurred in central north and north-west New South Wales and south-west Queensland. However, as with the previous financial year the main effect of flooding was on infrastructure.

Branding rates

Branding rates are typically lower and more variable in northern Australia than in southern Australia, reflecting the greater variability in the quantity and quality of pasture. In addition, the extensive production systems and remote locations in the north make management practices, such as short-term supplementary feeding to deal with poor seasonal conditions, less cost effective than in southern Australia.

Improved seasonal conditions in 2009–10 led to an increase in the number of cows mated and calving in northern Australia. The number of calves branded in northern Australia increased in 2009–10 as branding rates rose to an eight-year high of 73 per cent (Figure 1). In 2010–11 branding rates for northern Australian beef cattle producers were slightly lower than the previous year at 71 per cent; however, they remained in line with the 10-year average.

FIGURE 1 Beef cattle branding rates – average per farm



p Preliminary estimate.

Note: Branding rate is defined as the number of calves marked as a proportion of cows mated.

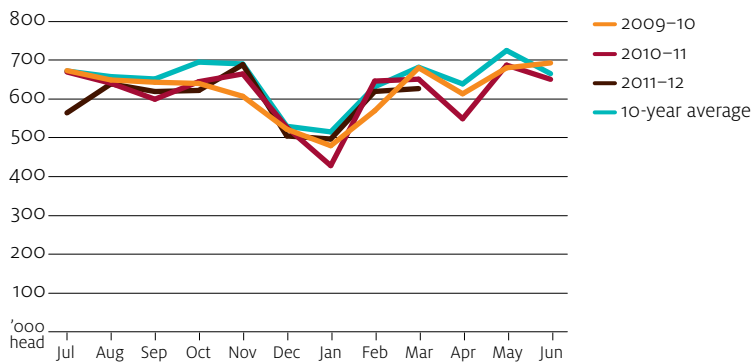
In southern Australia, the number of calves branded increased slightly in 2009–10 mainly due to a small increase in cows mated. The average branding rate was significantly higher than that recorded between 2002–03 and 2007–08 when prolonged drought conditions were experienced in much of southern Australia (Figure 1). In 2010–11, branding rates increased to 87 per cent, the highest in southern Australia since 2000–01.

Beef cattle slaughter

Slaughter of beef cattle in Australia typically exhibits a strong seasonal pattern, with slaughter being highest in late spring and lowest in mid to late summer. When seasonal conditions are poor producers increase turn-off of cattle for slaughter before summer, leading to a spike in slaughter numbers around October.

Since 2009–10 this spring turn-off effect has not been as apparent. Improved seasonal conditions have led to a reduction in the sales of beef cattle for slaughter as producers reduce turn-off to retain stock for herd rebuilding. Consequently, since 2009–10 cattle slaughter has returned to a more normal seasonal pattern, in line with the 10-year average to 2010–11 (Figure 2).

FIGURE 2 Cattle slaughter

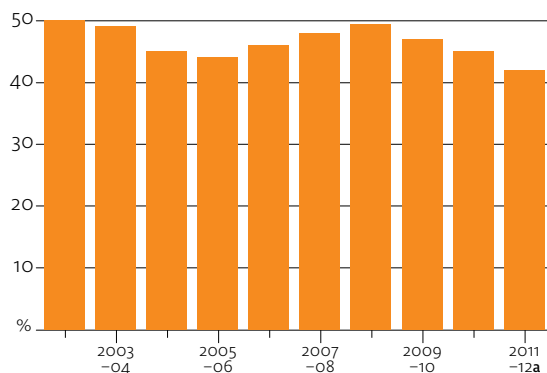


Source: Australian Bureau of Statistics

In 2002–03 and 2008–09 the female share of beef cattle slaughter increased to around 50 per cent (Figure 3) reflecting widespread destocking of breeding stock because of drought conditions. Improvements in seasonal conditions saw the female share of cattle slaughtered drop to 45 per cent in 2010–11. The figure fell to 42 per cent in the first nine months of 2011–12 as producers retained female calves and replacement heifers to boost breeding cow numbers and future calf production.

Beef cattle slaughter declined from 8.4 million head in 2009–10 to 8.1 million head in 2010–11. With increases in calf brandings, beef cattle numbers in Australia rose to 26.2 million head as at 30 June 2011 (ABS 2011). Herd sizes rose in all states except Western Australia and the Northern Territory.

Beef cattle slaughter is forecast to fall by 2 per cent in 2011–12 to around 7.9 million head, the lowest since 1995–96 (ABARES 2012). However, Australian beef and veal production is expected to remain largely unchanged in 2011–12, at 2.1 million tonnes. This is because widespread fodder availability throughout northern and eastern Australia and the higher proportion of adult males in total turn-off are expected to result in higher average carcase weights.

FIGURE 3 Female share of beef cattle slaughter

a Year to March 2012.

Source: Australian Bureau of Statistics

Live cattle exports

In 2009–10 live exports from Australia totalled 870 625 head of feeder and slaughter cattle (excluding breeder and dairy cattle). This number declined to 728 232 in 2010–11 largely due to enforcement of a 350 kilograms weight limit and imposition of an import quota by the Indonesian Government. In addition, in early June 2011 concerns about animal welfare saw the Australian Government suspend exports of live cattle destined for Indonesian abattoirs. The suspension was lifted on 6 July, once supply chain assurance principles were in place to achieve internationally agreed animal welfare outcomes.

Indonesia is Australia's primary market for live cattle exports, accounting for 456 017 (or 63 per cent) of total live cattle exports in 2010–11. Of these, 92 per cent were sourced from northern Australian ports. Australia's other large export markets for live cattle in 2010–11 were Turkey and Israel, together accounting for 151 351 cattle, all of which were sourced from southern Australian ports. In 2010–11 the number of cattle sourced from northern Australian ports for markets other than Indonesia was 76 045 (10 per cent of total live exports). Northern Australian cattle producers have increased specialisation of production toward, and subsequent dependence on, the Indonesian market over the past decade (Gleeson et al. 2012).

Given Indonesia's recently announced reduction in cattle import quota, as part of its 'Blueprint on beef self sufficiency program 2014', and the difficulty in redirecting large numbers to other markets in the short term, Australia's total live cattle exports to all markets are forecast to fall by 34 per cent in 2011–12 to 500 000 head (Gleeson et al. 2012).

Prices for beef cattle

The Australian weighted average saleyard price for beef cattle increased to 323 cents a kilogram (dressed weight) in 2010–11 from 288 cents a kilogram in 2009–10.

In 2011–12 the weighted average saleyard price is forecast to increase by 2 per cent to an average of 330 cents a kilogram. Saleyard prices are expected to be supported by a combination of strong domestic restocker demand for young cattle, limited supplies because of low slaughter rates and increased demand from emerging markets (ABARES 2012).

Grain finishing

In the four years to 2010–11, around 5 per cent of southern Australian and 4 per cent of northern Australian beef cattle producers used grain to finish beef cattle for sale. In both regions grain finishing farms, on average, operated a smaller area than non-grain finishing farms. Despite operating on a smaller area, grain finishing farms sold significantly more cattle than non-grain finishing farms.

Based on AAGIS results most beef cattle producers in northern Australia that used grain to finish cattle for sale were in south eastern and central Queensland. In northern Australia the proportion of beef cattle producers using grain to finish beef cattle decreased significantly from 2007–08 to 2010–11. This decrease, which was especially apparent in 2010–11, is likely to be due to several factors, including excellent pasture growth and an increase in the proportion of cattle being kept for herd rebuilding rather than being sold for slaughter.

Over this period, while the proportion of farms grain finishing cattle decreased, farms that did grain finish sold a higher proportion of grain finished cattle. In the north the margin between the average price received for cattle sold directly for slaughter by grain finishing farms and non-grain finishing farms also fell. In 2008–09 cattle sold for slaughter by grain finishing farms received an average of around \$220 per head more than cattle sold for slaughter by non-grain finishing farms. During 2010–11 grain finishing farms only received \$140 per head more for cattle sold for slaughter.

By contrast, the proportion of farms using grain to finish beef cattle for sale in southern Australia increased in 2009–10 and 2010–11. Unlike the north, the average proportion of cattle finished on grain did not change significantly. The margin between the average price received for cattle sold directly for slaughter by grain finishing farms and non-grain finishing farms widened, from an average premium of around \$54 per head for grain finishing farms in 2007–08 to \$127 per head in 2010–11. However, it should be noted that the price received for cattle in 2007–08 was likely affected by an increase in turn-off caused by drought conditions.

Chapter 4

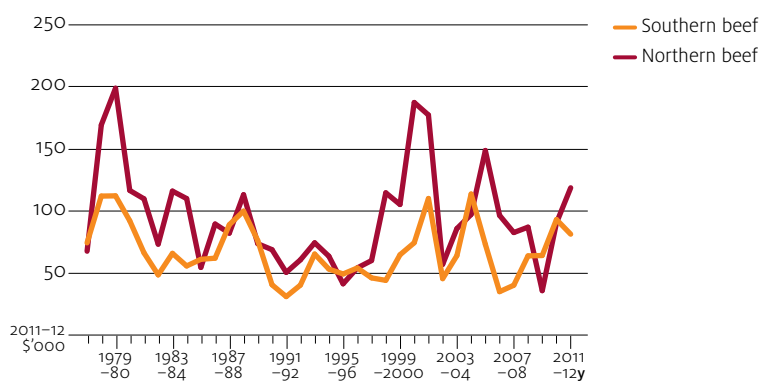
Farm financial performance

Historical financial performance of Australian beef producers

Since the end of the 1970s the average financial performance of northern Australian beef producers has exceeded the average financial performance of beef producers in southern Australia (Figure 4).

For the decade ending 2004–05 farm cash income for farm businesses in northern Australia averaged \$102 000 per farm business a year, compared with just \$68 000 a year in southern Australia (in 2011–12 dollars). Rates of return averaged 1.7 per cent a year in northern Australia and 0.7 per cent a year in southern Australia.

FIGURE 4 Farm cash income average per farm



y Provisional estimate.

The superior financial performance of beef producers in northern Australia, on average, has largely been a consequence of the much larger scale of operations of northern businesses enabling them to generate relatively large farm cash incomes and business profits (Gleeson et al. 2012). These relatively high profits combined with relatively lower land values, particularly in pastoral regions, resulted in higher rates of return to total capital used compared with those estimated for beef producers in southern Australia.

Financial performance of northern Australian beef producers

Annual farm cash income for beef producers in northern Australia averaged \$71 400 per farm business for the three years ending 2010–11, substantially below the average of \$102 000 per farm business for the decade ending 2004–05 (in 2011–12 dollars).

Rates of return averaged 1.6 per cent a year in northern Australia for the three years ending 2010–11.

In northern Australia, lower costs are expected to result in an increase in farm cash income for beef cattle producing farms from an average of \$90 690 per farm business in 2010–11 to an average of \$118 900 in 2011–12 (Table 4).

Table 4 Farm financial performance, northern beef industry average per farm

		2009–10	2010–11 ^p		2011–12 ^y
Farm cash receipts					
Beef cattle	\$	268 585	304 630	(5)	303 700
Beef cattle transferred out	\$	39 236	28 940	(27)	29 200
Crops	\$	23 083	28 380	(16)	31 200
Sheep and lambs	\$	6 294	7 300	(24)	6 800
Wool	\$	7 188	7 170	(26)	8 100
Total cash receipts	\$	371 459	407 870	(5)	404 600
Farm cash costs					
Beef cattle purchases	\$	40 199	45 660	(14)	35 800
Beef cattle transferred in	\$	33 174	24 640	(66)	12 600
Chemicals	\$	4 391	5 230	(21)	4 800
Contracts	\$	14 191	14 580	(15)	14 100
Fertilisers	\$	1 867	2 610	(22)	2 500
Fodder	\$	24 634	12 650	(10)	11 200
Fuel, oil and grease	\$	22 175	20 450	(5)	20 300
Handling and marketing	\$	8 149	8 680	(8)	na
Hired labour	\$	21 072	17 500	(10)	15 900
Interest	\$	46 429	47 300	(9)	45 500
Repairs and maintenance	\$	30 864	30 390	(5)	30 300
Total cash costs	\$	335 282	317 180	(8)	285 700
Farm financial performance					
Farm cash income	\$	36 177	90 690	(18)	118 900
Farm business profit	\$	-9 976	43 580	(24)	90 900
Rate of return					
- excl. capital appreciation	%	0.6	1.6	(11)	2.5
- incl. capital appreciation	%	-1.7	-2.3	(35)	na

^p Preliminary estimate. ^y Provisional estimate. ^{na} not available.

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

Total cash receipts in 2011–12 are expected to fall slightly compared with those recorded in 2010–11, despite some increase in receipts from crops and higher beef cattle prices. The fall is due to an estimated reduction in the number of cattle sold as producers continue building herd sizes.

Farm cash costs in northern Australia are projected to fall in 2011–12, compared with 2010–11, due to reduced expenditure on all major cost categories. The largest reductions are expected in the purchase of beef cattle, fodder, expenditure on interest payments, and repairs and maintenance. With total cash costs projected to fall by more than the reduction in total cash receipts, farm cash income is estimated to increase in 2011–12 for northern Australian beef cattle farms.

Financial performance by herd size

2010–11

Farm financial performance varied between producers with different herd sizes (Table 5). While farm cash income increased in 2010–11 for all herd size groups, those with a small herd size realised the smallest increase and those with a very large herd size the largest increase.

On average, farm cash receipts were higher for all producers. For small herd size producers, receipts from the sale of beef cattle decreased in 2010–11 because higher beef cattle prices were only able to partially offset a fall in the number of beef cattle sold. The increase in farm cash receipts for small herd size producers was mainly driven by an increase in receipts from crops, while increases in the receipts for sheep, lambs and wool also contributed to higher receipts. By contrast, beef cattle receipts increased for all other herd size producers. Higher prices received for cattle resulted in an increase in beef cattle receipts. This was despite a fall in the number of beef cattle sold by medium herd size producers. For very large herd size producers, a substantial increase in the number of cattle sold more than offset a decrease in prices received.

Farm cash costs decreased for all herd size producers except small producers. For small producers expenditure on fodder, hired labour and interest payments decreased. However, all other major cost categories increased, including beef cattle purchases. For large and very large herd size producers expenditure on beef cattle purchases also increased. Large decreases in expenditure on fodder, cattle transferred in and interest payments resulted in total cash costs decreasing for the large and very large herd size groups in 2010–11.

2011–12

Improved farm cash income is forecast for all herd size groups in 2011–12. For small and medium herd size producers this will be driven by increased farm cash receipts, which are expected to more than offset higher farm cash costs. The increase in farm cash receipts is expected to be largely due to projected higher receipts from beef cattle and crops. Higher beef receipts are expected due to an increase in the number of cattle sold. Increased crop production is expected as a result of good seasonal conditions, particularly for small and medium herd size producers located in south eastern and coastal Queensland.

TABLE 5 Farm financial performance, northern Australian beef industry, by herd size

	average per farm											
	Small			Medium			Large			Very large		
	2009 -10	2010 -11p	2011 -12y	2009 -10	2010 -11p	2011 -12y	2009 -10	2010 -11p	2011 -12y	2009 -10	2010 -11p	2011 -12y
Farm cash receipts												
Beef cattle	\$ 66 277	64 120 (13)	78 100 (13)	175 958	180 970 (8)	217 100 (8)	541 955	608 350 (7)	580 300 (10)	1 539 476	2 111 860 (10)	1 843 300
Beef cattle transferred out	\$ 0	243 (79)	0	0	3186 (98)	0	2 1372	0	0	704 711	573 650 (30)	655 300
Crops	\$ 9 430	18 980 (22)	22 400 (22)	26 374	21 980 (39)	34 800 (39)	43 262	51 470 (37)	40 400 (76)	30 610	70 960 (76)	32 500
Sheep and lambs	\$ 5 196	6 510 (69)	6 800 (69)	7 132	10 040 (33)	8 100 (74)	7 606	4 810 (74)	4 900 (92)	3 721	10 (92)	2 500
Wool	\$ 7 331	8 250 (66)	10 000 (66)	6 497	7 750 (39)	8 700 (83)	9 505	4 730 (83)	3 900 (92)	2 822	2 700 (92)	5 500
Total cash receipts	\$ 94 766	108 620 (12)	126 600 (12)	241 378	258 160 (8)	294 500 (8)	673 027	726 290 (8)	671 600 (11)	2 399 135	2 839 450 (11)	2 629 000
Farm cash costs												
Beef cattle purchases	\$ 9 994	13 380 (30)	13 600 (30)	30 280	25 110 (30)	21 200 (30)	63 957	78 470 (22)	54 300 (26)	262 723	350 070 (26)	279 100
Beef cattle transferred in	\$ 0	0	0	0	3 570 (57)	3 100 (57)	20 380	13 170 (66)	1 100 (83)	587 402	434 850 (83)	250 300
Chemicals	\$ 2 049	2 730 (23)	2 900 (23)	4 405	3 950 (43)	5 100 (43)	9 300	8 720 (27)	7 700 (83)	4 556	22 810 (83)	6 300
Contracts	\$ 2 098	2 840 (23)	3 000 (23)	9 122	7 760 (22)	10 400 (22)	25 043	22 330 (21)	27 400 (29)	106 664	135 040 (29)	85 000
Fertilisers	\$ 1 231	2 080 (19)	3 100 (19)	2 490	2 560 (39)	2 200 (48)	1 723	1 330 (48)	1 200 (74)	2 630	11 920 (74)	6 700
Fodder	\$ 5 192	4 490 (28)	3 200 (28)	15 656	7 100 (18)	7 000 (18)	50 477	19 840 (13)	17 600 (10)	148 909	96 520 (10)	90 500
Fuel, oil and grease	\$ 5 988	7 210 (12)	8 200 (12)	15 575	14 300 (8)	16 000 (8)	36 532	33 000 (10)	30 700 (10)	14 5178	129 750 (10)	116 900
Handling and marketing	\$ 1 935	3 190 (28)	na	5 699	4 980 (15)	na	14 453	1 5770 (15)	na	51 838	56 620 (21)	na
Hired labour	\$ 2 008	1 560 (74)	1 600 (74)	6 370	5 090 (40)	8 800 (40)	29 657	2 5080 (20)	22 300 (14)	248 529	218 020 (14)	172 000
Interest	\$ 8 461	7 910 (24)	7 300 (24)	31 463	31 540 (14)	32 600 (14)	92 532	104 780 (14)	89 900 (19)	28 5711	278 010 (19)	300 000
Repairs and maintenance	\$ 9 632	10 500 (13)	11 100 (13)	21 077	23 290 (10)	26 200 (8)	56 820	49 930 (6)	45 200 (9)	174 709	174 510 (9)	164 300
Total cash costs	\$ 75 301	85 670 (11)	91 400 (11)	207 259	188 720 (10)	201 800 (10)	555 204	523 610 (9)	450 200 (21)	2 515 670	2 448 560 (21)	1 992 800
Farm financial performance												
Farm cash income	\$ 19 465	22 950 (37)	35 200 (37)	34 119	69 440 (20)	92 700 (20)	117824	202 680 (15)	221 400 (79)	-116 535	390 890 (79)	636 200
Farm business profit	\$ -55799	-34 230 (26)	-25 300 (26)	-26 810	1 420 (904)	26 700 (24)	27 892	123 450 (24)	182 400 (18)	334 395	713 170 (18)	1 270 500
Rate of return												
- excl. capital appreciation	% -1.7	-1.1 (37)	-0.7 (37)	0.2	0.8 (34)	1.4 (34)	1.2	2.3 (11)	3.1 (14)	2.0	3.2 (14)	6.1
- incl. capital appreciation	% -3.1	-0.9 (318)	na	-0.9	-2.3 (40)	na	-2.8	-3.0 (60)	na	-0.4	-2.3 (54)	na

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

Higher farm cash costs have mainly been driven by increased fertiliser, fuel and repairs and maintenance expenditure for small herd size producers. For medium herd size producers increased costs were mainly due to increased expenditure on hired labour, maintenance and repairs, and contracts.

For large and very large-scale producers an expected increase in farm cash income is a result of an expected decrease in farm cash costs. This would more than offset a decrease in farm cash receipts due to an expected reduction in the number of beef cattle sold and transferred off corporate properties. The fall in farm cash costs is due to projected decreases in expenditure on beef cattle purchases, hired labour and repairs.

In addition to higher farm cash incomes, all herd size groups are projected to record a significant increase in farm business profit during 2011–12 (Table 5). Higher farm business profit is expected as a result of a rise in cattle numbers increasing the value of on-farm inventories.

Financial performance of corporate and family farms

The average financial performance of beef cattle producers in northern Australia is strongly influenced by that of larger businesses, particularly corporate farm businesses, including public companies, large private companies and Indigenous corporations. Farm cash income for corporately owned farm businesses in northern Australia is expected to increase from an average of \$250 350 per business in 2010–11 to average \$1.7 million per business in 2011–12 (Table 6). By contrast, farm cash income for family operated farm businesses is expected to average \$105 200 per business in 2011–12, up from \$86 190 in 2010–11.

TABLE 6 Farm financial performance, northern Australian beef industry, by family and corporate farms average per farm

	Family farms			Corporate		
	2009–10	2010–11p	2011–12y	2009–10	2010–11p	2011–12y
Farm cash receipts						
Beef cattle	\$ 235 803	260 210	(5) 280 500	1 023 776	2 454 750	(19) 2 966 400
Beef cattle transferred out	\$ 6 798	8 250	(30) 12 400	1 376 550	1 243 820	(27) 1 954 600
Total cash receipts	\$ 298 655	338 480	(5) 364 300	2 634 741	3 811 150	(16) 5 022 800
Farm cash costs						
Beef cattle purchases	\$ 30 690	34 010	(15) 29 300	357 467	676 920	(36) 789 200
Beef cattle transferred in	\$ 8 123	3 960	(40) 6 300	1 058 474	1 246 560	(32) 737 102
Contracts	\$ 11 483	12 080	(14) 13 100	97 398	114 710	(23) 127 300
Fodder	\$ 20 925	10 690	(12) 10 300	125 061	109 700	(20) 112 200
Fuel, oil and grease	\$ 18 143	17 360	(5) 18 700	143 335	164 230	(15) 198 700
Hired labour	\$ 13 127	11 690	(12) 12 700	318 748	329 850	(15) 371 300
Interest	\$ 44 282	45 860	(9) 45 800	20 763	34 010	(101) 12 200
Total cash costs	\$ 259 867	252 290	(5) 259 100	2 808 693	3 560 800	(17) 3 332 800
Farm financial performance						
Farm cash income	\$ 38 789	86 190	(10) 105 200	-173 952	250 350	(151) 1 690 100
Farm business profit	\$ -17 503	32 890	(28) 65 400	350 038	644 390	(36) 3 009 200
Rate of return						
- excl. capital appreciation	% 0.5	1.5	(11) 2.2	1.8	2.2	(28) 8.9
- incl. capital appreciation	% -2.1	-2.5	(34) na	3.2	0.5	(230) na

p Preliminary estimates. y Provisional estimates. na not available.

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

A reduction in the average number of cattle sold for live export in 2011–12 by family owned businesses is estimated to be much larger than for corporately owned businesses (Gleeson et al. 2012). As a consequence, family businesses that are most highly reliant on live cattle export are projected to record lower farm cash incomes compared with 2010–11.

Both corporately owned and family owned farm businesses in northern Australia are expected to increase beef cattle numbers during 2011–12. As a result, both the value of inventories of cattle and farm business profits are expected to rise on corporately owned and family owned farm businesses in 2011–12.

Financial performance of live export region

The majority of farm businesses that export live cattle for slaughter to markets in South-East Asia and the Middle East are located in northern Australia (Map 3). It is estimated that beef producers in this region accounted for 97 per cent of the total value of sales of cattle for live export for the three years to 2010–11. Generally, those farm businesses with the greatest reliance on sale of live export cattle are in the far northern and western extremes of the region.

In the northern Australian live cattle export region, farm cash income is projected to increase from an average of \$122 720 per farm business in 2010–11 to an average of \$161 900 in 2011–12 (Table 7). This increase is projected as a result of a reduction in total costs that is expected to more than offset lower cash receipts.

MAP 3 Northern Australian live cattle export region



TABLE 7 Farm financial performance, northern live cattle export region
average per farm

		2009–10	2010–11 ^p		2011–12 ^y
Farm cash receipts					
Beef cattle	\$	415 520	549 780	(10)	494 100
Beef cattle transferred out	\$	171 333	128 870	(34)	146 500
Crops	\$	5 764	6 230	(44)	9 400
Sheep and lambs	\$	2 115	3	(105)	600
Wool	\$	3 515	770	(100)	1 300
Total cash receipts	\$	648 063	721 050	(11)	691 000
Farm cash costs					
Beef cattle purchases	\$	58 978	67 710	(32)	59 600
Beef cattle transferred in	\$	102 740	100 760	(89)	56 500
Chemicals	\$	826	1 620	(20)	1 500
Contracts	\$	25 762	25 270	(14)	24 800
Fertilisers	\$	1 387	1 330	(44)	1 800
Fodder	\$	56 294	30 720	(9)	30 000
Fuel, oil and grease	\$	40 059	36 570	(8)	35 000
Handling and marketing	\$	14 980	16 340	(17)	na
Hired labour	\$	59 653	47 650	(16)	44 600
Interest	\$	67 960	73 430	(20)	70 000
Repairs and maintenance	\$	48 687	48 570	(9)	47 700
Total cash costs	\$	623 397	598 320	(21)	529 000
Farm financial performance					
Farm cash income	\$	24 666	122 720	(62)	161 900
Farm business profit	\$	29 187	99 610	(29)	243 700
Rate of return					
– excl. capital appreciation	%	1.1	1.9	(16)	3.9
– incl. capital appreciation	%	–0.7	–3.3	(28)	na

^p Preliminary estimates. ^y Provisional estimates. **na** not available.

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

Turn-off of cattle for live export was reduced in 2010–11 and is expected to be further reduced in 2011–12. However, farms received higher average prices for cattle for slaughter, partly due to higher sale weights for cattle resulting from excellent seasonal conditions in 2011–12. Total cash costs are expected to decrease with a substantial reduction in expenditure on cattle purchased and transferred onto northern properties. The increase in average farm cash income in the northern live cattle export region is mainly being driven by improved performance of the largest corporately owned farm businesses (ABARES 2012).

In 2011–12 beef cattle numbers are expected to increase in the northern live export region, further boosting the value of inventories of cattle on farms. As a result, farm business profit for beef cattle producers in the region is expected to increase in percentage terms by a relatively larger amount than farm cash income.

In 2011, 42 per cent of the estimated 1559 farm businesses in the northern live cattle export region, or 660 businesses, intended to export cattle to Indonesia. Around 300 of these businesses planned to sell more than 50 per cent of their total cattle turn-off for live export, according to an ABARES survey conducted in late June 2011 (ABARES 2011). Just over 40 per cent of businesses intending to sell more than 50 per cent of total turn-off for live export were located in northern Western Australia and a further 28 per cent in the Northern Territory.

As a result of further reductions in the number of cattle expected to be sold for live export to Indonesia in 2011–12, farm cash income for these businesses is projected to decline by around 40 per cent, from an average of \$519 000 per farm business in 2010–11 to around \$310 000 per farm business in 2011–12.

Financial performance by zone

Farm business profit of beef cattle producers in each zone (Map 4) is strongly related to herd size. The northern pastoral zone, which has the largest average herd size, had the highest average farm business profits in the three years ending 2011–12 (Table 8). This zone also recorded rates of return that were above the average for northern Australia.

MAP 4 Australian broadacre zones

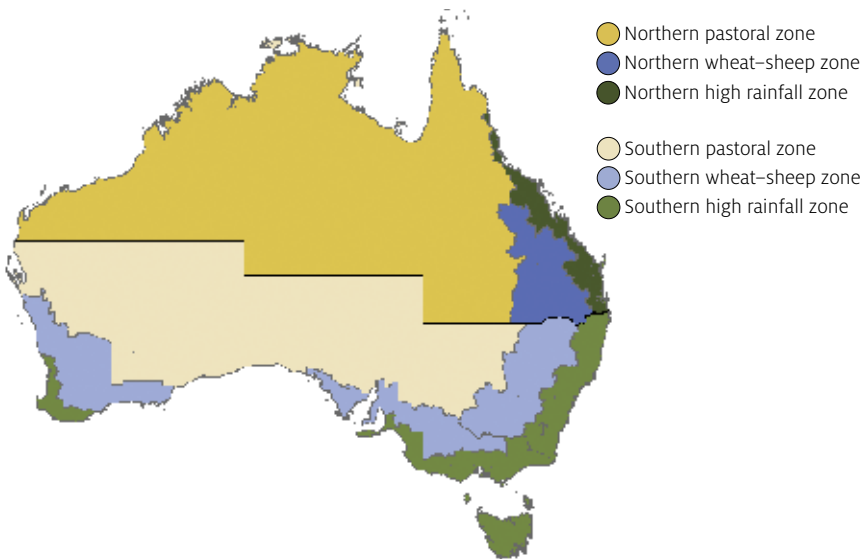


TABLE 8 Farm financial performance, northern Australian beef industry, by zone average per farm

	Pastoral zone						Wheat-sheep zone			High rainfall zone		
	2009-10	2010-11p	2011-12y	2009-10	2010-11p	2011-12y	2009-10	2010-11p	2011-12y	2009-10	2010-11p	2011-12y
Farm cash receipts												
Beef cattle	\$ 451 801	564 610 (8)	485 700	242 653	248 840 (7)	282 800	153 841	178 640 (10)	185 400			
Beef cattle transferred out	\$ 142 455	110 690 (28)	114 400	7790	0	0	0	145 (182)	0			
Crops	\$ 1 754	620 (62)	800	44 478	58 580 (18)	61 700	8 708	10 860 (23)	14 500			
Sheep and lambs	\$ 15 164	18 350 (33)	15 900	5 529	6 450 (34)	6 400	0	0	0			
Wool	\$ 25 567	23 540 (31)	28 300	1 692	3 040 (31)	2 200	45	20 (114)	0			
Total cash receipts	\$ 691 605	758 990 (8)	689 400	323 726	358 650 (7)	377 100	174 610	204 330 (10)	212 500			
Farm cash costs												
Beef cattle purchases	\$ 69 303	72 380 (23)	47 900	35 893	46 420 (22)	36 500	22 254	24 440 (27)	25 300			
Beef cattle transferred in	\$ 122 057	86 120 (75)	48 800	5 690	5 260 (66)	0	0	0	600			
Total cash costs	\$ 668 272	598 260 (15)	493 200	269 606	284 930 (8)	266 300	154 723	145 090 (11)	144 800			
Farm financial performance												
Farm cash income	\$ 23 333	160 730 (36)	196 200	54 120	73 720 (21)	110 800	19 887	59 240 (19)	67 700			
Farm business profit	\$ 69 098	168 900 (15)	266 300	-25 640	22 550 (73)	52 100	-52 751	-24 650 (36)	2 200			
Rate of return												
- incl. capital appreciation	% 1.5	2.7 (10)	4.5	0.5	1.5 (19)	2.2	-0.6	-0.1 (298)	0.5			
- incl. capital appreciation	% 0.1	-5.1 (27)	na	-2.7	-1.2 (85)	na	-2.9	0.5 (349)	na			

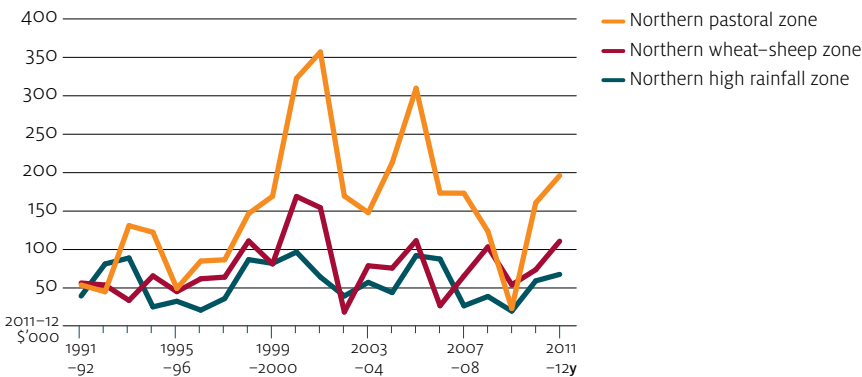
p Preliminary estimates, y Provisional estimates, na not available.

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

Of the three zones in the region, the northern high rainfall zone had the lowest estimated average farm cash income in the three years ending 2011–12 (Table 8). Small herd size is the primary cause of low performance across a range of financial performance measures, including farm cash income, farm business profit and rate of return. In the three years ending 2011–12 the average herd size in this region was 750 head, the lowest of all zones in northern Australia. This result is fairly typical of higher rainfall regions with a high proportion of smaller farm businesses. While the average financial performance of these businesses is low, the majority generate positive farm cash income because of substantial input of unpaid family labour.

Financial data for beef cattle producers in northern Australia from 2005–06 to 2009–10 indicates a deterioration in performance, although this varied between zones. The northern pastoral zone, with relatively high reliance on exports of live cattle, exhibited the strongest downward trend in average farm cash income (Figure 5). By contrast, farm cash income increased during this period for beef cattle producers in the northern wheat–sheep zone.

FIGURE 5 Farm cash income, northern Australian beef industry, by zone average per farm



y Projection estimate.

Increases in average farm cash income are expected in all zones in 2011–12 as a consequence of higher cattle prices and an increase in the sale weights of cattle. Higher sales weights are expected due to the excellent pasture conditions resulting from above average rainfall in 2010–11 and 2011–12.

Average farm cash income rose significantly in the northern pastoral zone in 2010–11 as cattle turn-off increased. This follows the steady rebuild of cattle numbers after heavy de-stocking in response to drought in the mid-2000s. Average farm cash income is projected to increase further in 2011–12 as higher prices are received for cattle sold and reduced cattle purchases decrease costs.

Financial performance of southern Australian beef producers

In southern Australia, annual farm cash income for beef producers averaged \$74 000 per farm business for the three years ending 2010–11. This was notably higher than the average farm cash incomes for the decade ending 2004–05 of \$68 000 per farm business, in real terms. Rates of return averaged 1.3 per cent a year in southern Australia for the three years ending 2010–11.

2011–12

In southern Australia, farm cash income for beef cattle producing farms is projected to decrease from an average of \$93 400 per farm business in 2010–11 to an average of \$81 600 per farm business in 2011–12 (Table 9), largely as a consequence of lower receipts in 2011–12.

Total cash receipts in 2011–12 are expected to fall compared with those recorded in 2010–11. Crop receipts are projected to fall from the record highs of 2010–11, which were the result of high grain yields and relatively strong grain prices. In addition, an expected reduction in the number of cattle sold as producers continue building herd sizes, combined with lower prices received, are expected to lower beef cattle receipts.

TABLE 9 Farm financial performance, southern beef industry average per farm

	Southern Australia			
	2009–10	2010–11 ^p	2011–12 ^y	
Farm cash receipts				
Beef cattle	\$ 138 841	142 370 (6)	132 900	
Beef cattle transferred out	\$ 443	100 (68)	0	
Crops	\$ 89 732	111 660 (12)	86 800	
Sheep and lambs	\$ 48 787	50 640 (9)	50 800	
Wool	\$ 27 700	30 150 (10)	25 900	
Total cash receipts	\$ 332 893	361 240 (5)	320 400	
Farm cash costs				
Beef cattle purchases	\$ 25 001	32 500 (15)	23 400	
Beef cattle transferred in	\$ 976	1 090 (35)	400	
Chemicals	\$ 15 283	14 900 (14)	13 800	
Contracts	\$ 14 292	15 730 (16)	11 700	
Fertilisers	\$ 22 444	21 410 (11)	22 000	
Fodder	\$ 7 089	4 780 (13)	3 600	
Fuel, oil and grease	\$ 17 451	17 270 (8)	16 800	
Handling and marketing	\$ 9 543	10 000 (8)	na	
Hired labour	\$ 12 894	12 770 (11)	11 600	
Interest	\$ 31 182	29 650 (15)	24 500	
Repairs and maintenance	\$ 23 963	23 290 (6)	25 500	
Total cash costs	\$ 268 426	267 840 (7)	238 800	
Farm financial performance				
Farm cash income	\$ 64 467	93 400 (12)	81 600	
Farm business profit	\$ -15 253	44 150 (24)	32 800	
Rate of return				
– excl. capital appreciation	% 0.5	1.9 (12)	1.6	
– incl. capital appreciation	% 1.8	1.2 (83)	na	

^p Preliminary estimate. ^y Provisional estimate. ^{na} not available.

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

Farm cash costs are also projected to fall in 2011–12 compared with 2010–11 due to reduced expenditure on the purchase of beef cattle, interest payments and contract expenditure. Farm cash income is projected to decrease in 2011–12 for southern Australia beef cattle farms because total cash receipts are expected to fall by more than the reduction in total cash costs.

Financial performance by herd size

2010–11

The financial performance of farms varied between producers of different scales of production. Farm cash income is estimated to have increased for all herd size categories in 2010–11. The increase was largest for small herd size producers and smallest for very large herd size producers.

Farm cash receipts increased for small, large and very large producers; however, receipts fell for medium herd size producers (Table 10). Receipts from the sale of beef cattle fell for small and very large producers due to large decreases in the number of cattle sold. For medium and large producers, higher prices received more than offset the relatively small decreases in cattle sold.

Total cash costs increased for small and very large herd size producers. For small producers this increase was mainly due to increased expenditure on fertiliser, repairs and maintenance, and fuel. For large herd size producers, the main increases were in beef cattle purchases, contracts, chemicals and hired labour. Total cash costs decreased for medium and large herd size producers. Despite increases in expenditure on beef cattle purchase, handling and marketing, both groups of producers experienced falls in many of the major cost categories, leading to a fall in total cash costs.

The farm cash income for all herd size producer groups increased in 2010–11 compared with the previous financial year.

2011–12

Farm cash income is expected to weaken for all herd size categories of producers in southern Australia in 2011–12 (Table 10).

Farm cash receipts are expected to remain relatively stable for medium herd size producers. For all other herd size producers they are expected to decrease as a result of further decreases in both the number of beef cattle sold and in prices received by small herd size producers, due to variations in quality and type of animals sold. Receipts from the sale of crops, sheep and lambs, and wool are also expected to decrease.

Total cash costs are also expected to decrease for small, large and very large size herd producers, but increase for medium size herd producers. Expenditure on the purchase of beef cattle is expected to fall across all herd size groups as herd rebuilding continues with the retention of stock rather than purchase of additional stock. For very large herd size producers, costs are projected to decrease across all major cost categories. For small herd size producers, costs are expected to decrease for most categories, with increases only for chemicals, contracts, hired labour and maintenance. Large herd size producers can also expect decreases in most categories, but increases in chemical and maintenance costs.

TABLE 10 Farm financial performance, southern Australian beef industry, by herd size

	average per farm														
	Small				Medium				Large				Very large		
	2009 -10	2010 -11p	2011 -12y	2009 -10	2010 -11p	2011 -12y	2009 -10	2010 -11p	2011 -12y	2009 -10	2010 -11p	2011 -12y	2009 -10	2010 -11p	
Farm cash receipts															
Beef cattle	\$ 57 425	51 860 (6)	43 300	82 518	86 240 (21)	86 700	173 344	202 840 (11)	180 100	517 190	508 830 (15)	456 800			
Beef cattle transferred out	\$ 548	0	0	0	45 (243)	0	134	80 (92)	0	1937	670 (84)	0			
Crops	\$ 54 491	79 940 (40)	60 400	74 211	91 130 (53)	85 700	143 432	119 570 (34)	110 800	160 738	266 540 (16)	123 200			
Sheep and lambs	\$ 29 880	42 500 (35)	42 500	45 057	33 750 (19)	35 800	57 365	69 180 (17)	62 500	107 976	107 920 (23)	104 000			
Wool	\$ 20 376	23 340 (34)	21 400	22 137	20 190 (21)	21 400	25 962	40 930 (15)	30 300	71 509	69 730 (21)	45 800			
Total cash receipts	\$ 183 397	217 040 (23)	180 300	246 074	245 140 (27)	245 700	432 477	469 140 (12)	426 700	916 256	1 030 960 (12)	779 600			
Farm cash costs															
Beef cattle purchases	\$ 16 749	13 990 (19)	8 700	17 098	20 960 (39)	13 200	26 041	33 270 (49)	25 200	74 063	127 830 (36)	95 800			
Beef cattle transferred in	\$ 1 348	640 (95)	400	0	0	0	245	0	0	3 884	8 520 (47)	1 900			
Chemicals	\$ 9 774	8 910 (35)	11 500	11 789	9 840 (55)	11 300	22 316	16 830 (35)	17 600	31 885	48 100 (16)	22 200			
Contracts	\$ 6 819	5 980 (33)	7 700	8 528	8 230 (41)	8 400	21 025	19 260 (28)	16 000	44 663	66 100 (18)	26 600			
Fertilisers	\$ 13 048	15 230 (33)	12 300	19 234	15 550 (48)	20 100	24 879	24 910 (18)	24 500	59 013	55 560 (19)	50 900			
Fodder	\$ 2 456	2 250 (22)	1 400	4 690	3 870 (27)	3 700	8 860	5 020 (34)	3 500	26 562	14 890 (61)	10 100			
Fuel, oil and grease	\$ 11 060	12 450 (21)	11 800	13 670	11 950 (31)	14 900	23 444	20 410 (19)	19 400	39 624	46 140 (13)	32 800			
Handling and marketing	\$ 5 369	5 260 (31)	na	5 798	6 990 (21)	na	12 555	15 970 (20)	na	29 343	24 580 (13)	na			
Hired labour	\$ 3 365	2 860 (45)	3 500	6 822	5 210 (23)	5 500	17 354	13 170 (31)	10 400	54 913	69 270 (14)	56 600			
Interest	\$ 15 371	14 400 (36)	13 900	19 217	14 770 (33)	15 400	44 386	44 550 (25)	37 400	96 538	104 720 (28)	62 000			
Repairs and maintenance	\$ 14 183	16 330 (18)	16 700	16 099	15 320 (37)	19 800	33 120	30 530 (14)	32 300	64 069	61 500 (9)	57 300			
Total cash costs	\$ 154 978	156 810 (25)	140 000	191 900	170 250 (28)	181 800	347 015	332 160 (17)	299 100	737 474	848 620 (13)	601 800			
Farm financial performance															
Farm cash income	\$ 28 420	60 230 (32)	40 200	54 173	74 890 (31)	63 800	85 462	136 980 (12)	127 600	178 782	182 340 (32)	177 800			
Farm business profit	\$ -40 115	18 630 (100)	-5 400	-22 150	19 690 (73)	6 500	4 853	70 960 (22)	65 700	53 336	164 900 (40)	171 200			
Rate of return															
- excl. capital appreciation	% -0.8	1.6 (55)	0.5	0.1	1.1 (43)	0.8	1.0	2.3 (11)	2.2	1.4	2.6 (20)	2.837			
- incl. capital appreciation	% -1.5	1.6 (61)	na	5.9	1.4 (51)	na	1.8	2.6 (32)	na	1.1	-0.4 (833)	na			

p Preliminary estimates; y Provisional estimates; na not available.

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

Financial performance by zone

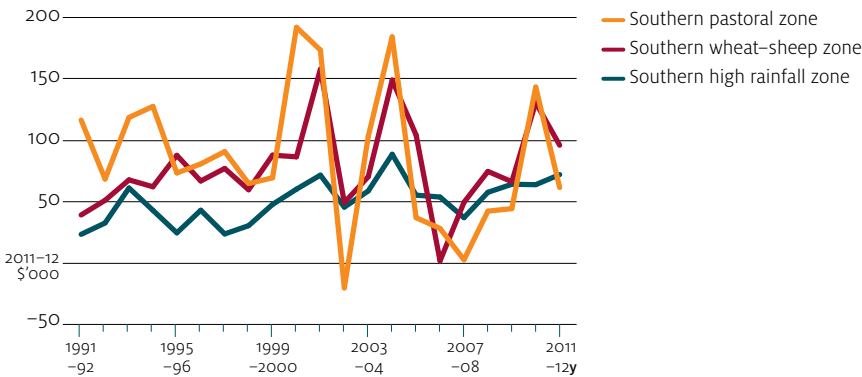
The financial performance of beef farms in the southern pastoral zone (Map 4) improved markedly in 2010–11, with farm cash incomes rising. Beef cattle receipts increased with the higher beef cattle turn-off that followed increased cattle numbers in recent years (Table 11). This zone also recorded average rates of return above those of the other southern zones in the three years ending 2011–12. In part, this reflects larger average herd sizes and low land values.

The southern wheat–sheep zone, which had the smallest herd size, outperformed the southern high rainfall zone in each of the three years to 2011–12 (Figure 6). On average, farm businesses in this zone had exceptionally high crop receipts in 2010–11 as a result of record grain yields and strong grain prices.

Average farm cash income is projected to decline for the southern pastoral and southern wheat–sheep zones in 2011–12 as lower cattle turn-off and grain yields lead to reduced receipts from beef cattle and crops.

By contrast, average farm cash income is projected to increase in the southern high rainfall zone. Total cash costs are expected to fall as beef cattle purchases are reduced from the high in 2010–11 and fodder and interest costs decrease. The fall in total cash costs is expected to more than offset lower beef receipts resulting from slightly reduced turn-off.

FIGURE 6 Farm cash income, southern Australian beef industry, by zone average per farm



y Provisional estimate.

TABLE 11 Financial performance, southern Australian beef industry, by zone

	average per farm									
	Pastoral zone			Wheat-sheep zone			High rainfall zone			
	2009-10	2010-11p	2011-12y	2009-10	2010-11p	2011-12y	2009-10	2010-11p	2011-12y	2011-12y
Farm cash receipts										
Beef cattle	\$ 104 046	152 010 (19)	90 100	134 714	144 760 (11)	135 100	144 315	140 060 (8)	134 200	
Beef cattle transferred out	\$ 4521	1 366 (91)	0	624	0	0	17	90	0	
Crops	\$ 54 786	61 510 (18)	35 000	180 896	240 440 (13)	181 000	27 468	26 200 (34)	21 300	
Sheep and lambs	\$ 64 144	97 960 (21)	84 600	52 217	56 920 (12)	56 300	45228	43010 (15)	44400	
Wool	\$ 50 428	90 690 (24)	84 600	26 959	32 750 (16)	27 500	26 568	24 150 (13)	20700	
Total cash receipts	\$ 348 619	497 360 (12)	380 600	428 365	508 120 (8)	429 600	263 867	250 340 (8)	236 300	
Farm cash costs										
Beef cattle purchases	\$ 20 892	36 390 (28)	20 300	27 708	40 060 (27)	32 900	23 376	27 010 (14)	16 700	
Beef cattle transferred in	\$ 0	0	0	0	230 (35)	0	341	460 (73)	600	
Repairs and maintenance	\$ 35 586	40 090 (15)	61 700	32 092	31 510 (7)	34 500	17 336	16 440 (9)	16 400	
Total cash costs	\$ 303 973	353 890 (10)	318 800	361 809	377 340 (10)	333 400	199 439	186 230 (8)	164 000	
Farm financial performance										
Farm cash income	\$ 44 646	143 470 (37)	61 800	66 557	130 780 (18)	96 200	64 428	64 100 (13)	72 300	
Farm business profit	\$ 13 697	103 030 (71)	57 900	-33 657	79 520 (29)	34 200	-4 281	15 630 (48)	30 100	
Rate of return										
- excl. capital appreciation	% 1.6	4.2 (55)	2.9	0.4	3.0 (16)	1.9	0.5	0.9 (19)	1.3	
- incl. capital appreciation	% 8.1	5.6 (45)	na	-0.4	1.5 (159)	na	3.2	0.8 (58)	na	

p Preliminary estimates. y Provisional estimates. na Not available.

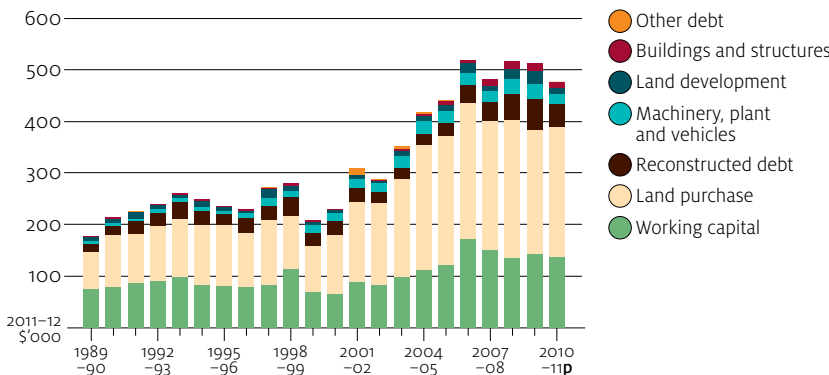
Note: The figures in parentheses are relative standard errors (RSEs) expressed as a percentage of the estimate. A guide on how to use RSEs is in the methodology section at the back of the report.

Debt

Growth in average debt per farm business in the beef cattle producing sector has slowed in real terms since 2006–07 (Figure 7).

Average debt for beef cattle producing farms almost tripled between 2000–01 and 2006–07, from an average of \$230 000 per farm business in 2000–01 to \$683 000 per farm business in 2006–07. Several factors contributed to the growth in debt over this period, including the effects of lower interest rates, increases in farm size, changes in commodities produced and reduced farm incomes in the 2000s as a consequence of widespread and extended drought.

FIGURE 7 Composition of farm debt, Australian beef industry average per farm



^p Preliminary estimate.

Throughout much of the 2000s, interest rates were historically low, reducing the cost of servicing debt and encouraging borrowing for farm investment. Provision of interest rate subsidies, as part of drought assistance programs to many farm businesses, also supported borrowing.

The largest contribution to increases in farm debt on beef cattle producing farms has been borrowing to fund new investment, particularly purchase of land, machinery and vehicles, and to develop land and farm improvements. Debt to fund purchase of land accounted for the largest share of debt on beef cattle producing farms, at around 53 per cent in 2010–11 (Figure 7).

Debt to fund land purchases increased by 260 per cent in real terms between 1990–91 and 2010–11. Borrowing to finance purchase of machinery, plant and vehicles increased 370 per cent from 1990–91. Over the same period, borrowing to fund land development increased by 90 per cent.

During the 2000s adverse seasonal conditions depressed farm cash incomes in many regions and led to increased borrowing to meet working capital requirements. Working capital debt increased by 180 per cent between 1990–91 and 2010–11, accelerating after widespread drought began in 2002–03. In 2010–11 working capital debt accounted for 29 per cent of average farm debt, second only to land purchase debt.

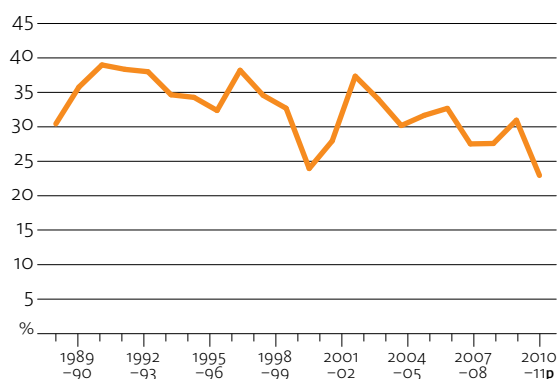
Around 16 per cent of farm businesses increased borrowing to fund on-farm investment each year for the 10 years ending 2010–11. This included borrowing to purchase land, vehicles and machinery, and plant and farm improvements.

A much higher proportion of farms businesses, around 24 per cent, increased borrowing to fund working capital in each of the 10 years ending 2010–11. However, the average amount borrowed was smaller than that borrowed for investment.

The proportion of restructured debt has increased since 2007–08. Relatively low interest rates for some categories of loans and concern about expected future interest rate increases encouraged restructuring and consolidation of farm debt.

Since 2006–07 there appears to have been more restricted access to credit from lending institutions and a diminished appetite on the part of farm businesses for further increases in farm debt. In 2010–11 the proportion of farm businesses increasing debt fell below the historical lows recorded in 2000–01 (Figure 8). Further, average debt for beef cattle producing farms is projected to decline slightly in 2011–12.

FIGURE 8 Farms increasing debt, Australian beef industry



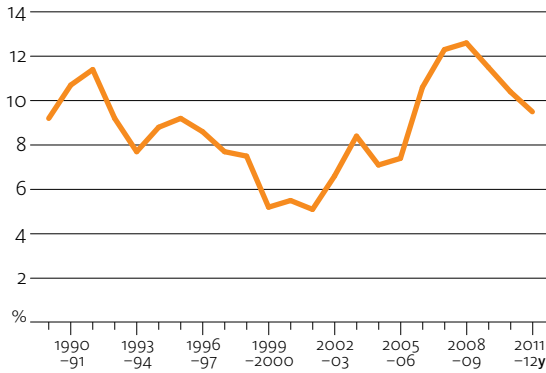
p Preliminary estimate.

Debt servicing

The interest-to-receipts ratio is the ratio of interest payments on farm debt to total farm cash receipts. It is a measure of a farmer's ability to service debt from farm revenue. The interest-to-receipts ratio declined in 2010–11 and is projected to further decline in 2011–12.

The interest-to-receipts ratio trended upward from 2001–02 to 2008–09 (Figure 9). On average, farm business debt and interest rates increased throughout 2000–01 to 2007–08, resulting in a rise in interest payments. Farm cash receipts also rose during this period, but at a slower rate than interest payments. Interest rate subsidies paid to farm businesses through drought assistance partially offset the increase in interest payments throughout this period.

FIGURE 9 Interest-to-receipts ratio, Australian beef industry



y Provisional estimate.

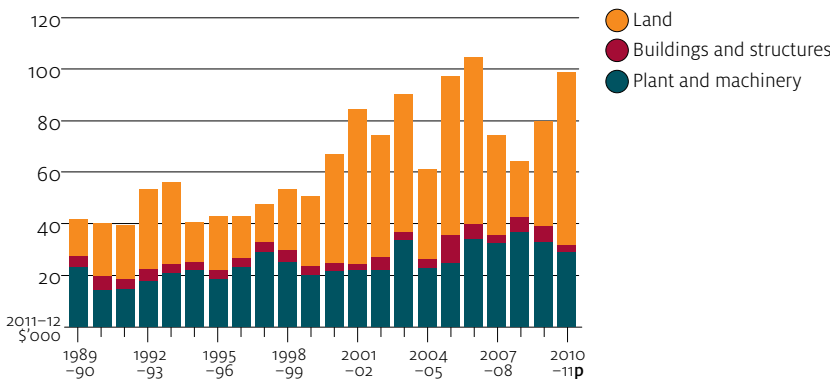
In 2010–11 higher farm cash receipts resulted in the interest-to-receipts ratio falling to 10 per cent. In 2011–12 slightly lower interest rates combined with a reduction in farm debt are projected to lead to a fall in interest payments and result in the interest-to-receipts ratio falling to 9.5 per cent. This is similar to the ratio recorded in the early 1990s.

Investment

Australian beef cattle producers’ expenditure on additional capital averaged \$99 000 per farm business in 2010–11, which is significantly higher than the 10-year average of \$66 400 per farm business (in 2011–12 dollars).

Investment in non-land capital, including vehicles, plant, machinery and farm improvements, was historically high in 2008–09 and 2009–10 and although declining slightly in 2010–11 was still relatively high in historical terms (Figure 10).

FIGURE 10 Capital purchases, Australian beef industry average per farm



p Preliminary estimate.

Between December 2008 and December 2009, the Australian Government offered investment allowances to businesses as part of its support for economic activity during the global financial crisis. This is likely to have contributed to an increase in investment in plant, machinery and farm improvements in 2008–09 and 2009–10.

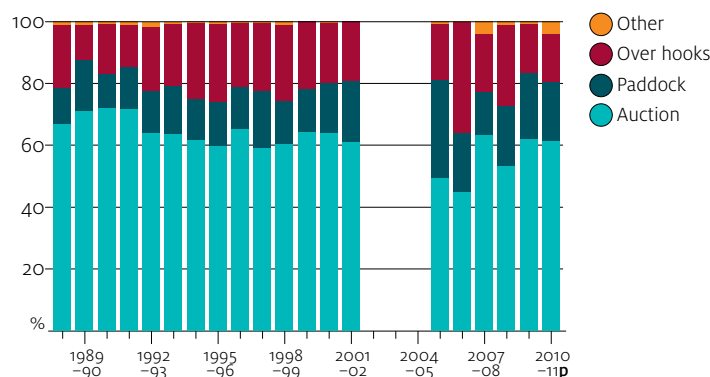
Continued relatively high levels of new non-land investment in 2010–11 can be attributed to factors such as improved cash flow for many farm businesses, ongoing expansion in crop enterprises and lower interest rates.

Selling methods

Australian beef cattle producers sell cattle primarily through auction, in the paddock and over the hooks. AAGIS data indicate significant differences between northern and southern Australian producers in preferred method of sale.

In southern Australia the auction system remained the main method of sale in 2010–11 with just over 60 per cent of beef cattle sales (Figure 11). Auction sales are most favoured by producers, particularly in southern Australia, who have smaller herds and who sell in small lot sizes. Generally, these producers are located in more closely settled areas where distances to saleyards and freight costs are relatively small. Typically, these areas also produce and trade a range of cattle types, including store, finished and stud, which are able to be sold at auction.

FIGURE 11 Method of selling beef cattle, southern Australia

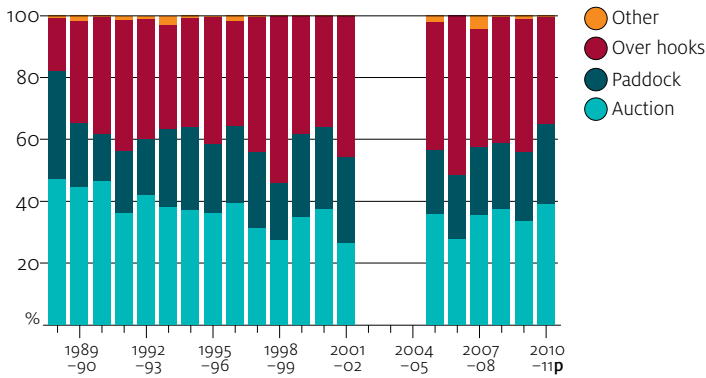


^p Preliminary estimate.

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

Larger herd size producers are more likely to sell over the hooks or in the paddock because they are able to generate larger sale numbers. Direct methods of sale, such as over the hooks, can also reduce the carcass damage and loss of meat quality caused by additional handling involved in saleyard and auction sales. In 2010–11 the proportion of cattle sold at auction in northern Australia was higher than over the hooks sales for the first time since 2000–01 (Figure 12). This appears to reflect increased demand from restockers for young cattle sold at auction, together with a small increase in the proportion of cattle directed to the domestic market as numbers of cattle sold for live export were reduced, relative to the high numbers in 2009–10.

FIGURE 12 Method of selling beef cattle, northern Australia



p Preliminary estimate.

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

Chapter 5

Survey methods and definitions

ABARES has 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 information is widely used for research and analysis that forms the basis of many publications, briefing material and industry reports.

The annual agricultural surveys currently undertaken are:

- Australian Agricultural and Grazing Industries Survey (AAGIS)
- Australian Dairy Industry Survey (ADIS).

Target populations

The AAGIS is designed from a population list drawn from the Australian Business Register and maintained by the Australian Bureau of Statistics (ABS). The Australian Business Register 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, ANZSIC and a size of operation variable.

The population list for the ADIS is a list of dairy farms that have paid levies based on their milk deliveries, sourced from the Levies Revenue Service. Dairy Australia provides the list, which consists of dairy businesses with their corresponding region and total milk production.

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 will be the smallest units, and in aggregate will 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 recent surveys 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

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 AAGIS is usually around 1600 and for ADIS around 300.

The main method of collection for both 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 and ADIS 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 address specific current issues.

Sample weighting

ABARES survey estimates are calculated by appropriately weighting the data collected from each sample farm and using this data to calculate population estimates. Sample weights are calculated so 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 agricultural census and survey data. The weighting methodology for AAGIS and ADIS uses a model-based approach, with a linear regression model linking survey variables and estimation benchmark variables (see Bardsley & Chambers 1984).

For AAGIS, the benchmark variables ABS provide 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.

For ADIS, the benchmark variables Dairy Australia provide are:

- total number of in-scope dairy farms
- total milk production.

Generally, larger farms have smaller weightings and smaller farms have larger weightings, 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 number of large farms.

Reliability of estimates

Reliability of the estimates of population characteristics published by ABARES depends on the design of the sample and 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 through on-farm interviews and telephone interviews from 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, and 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 post interview. Projection estimates are necessarily subject to greater uncertainty than 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, as they will be based on upgraded information and slightly more accurate input datasets.

Sampling errors

Only a subset 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 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.

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).

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).

Comparing estimates

When comparing estimates between two groups, it is important to recognise that some of the differences are subject to sampling error. As a rule of thumb, a conservative estimate 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 total cash receipts were \$100 000 in the beef industry and \$125 000 in the sheep industry—a difference of \$25 000—and the relative standard error is given as 6 per cent for each estimate. 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 a large number (towards infinity) of different samples was taken, in approximately 95 per cent of them, the difference between these two estimates would lie between \$6174 and \$43 826. Also, since zero is not in this confidence interval, it is possible to say that the difference between the estimates is 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.
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Physical items

Beef cattle	Cattle kept primarily for producing meat, irrespective of breed.
Dairy cattle	Cattle kept or intended mainly for producing milk or cream.
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.
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	<p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p>
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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	<p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p>

Total cash costs	<p>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.</p> <p>Handling and marketing expenses include commission, yard dues, and levies for farm produce sold.</p> <p>Administration costs include accountancy fees, banking and legal expenses, postage, stationery, subscriptions and telephone.</p> <p>Contracts paid, refers to expenditure on contracts such as harvesting. Capital and land development contracts are not included.</p> <p>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.</p>
Total cash receipts	<p>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.</p>

Financial performance measures

Build-up in trading stocks	<p>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.</p>
Depreciation of farm improvements	<p>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.</p>
Farm business equity	<p>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.</p>

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 beef producers

Farm survey data for the beef, lamb and sheep industries

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

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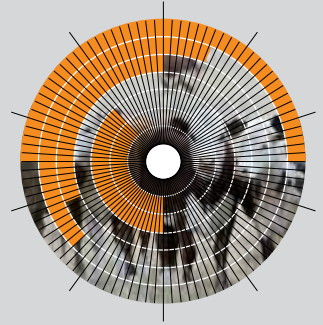
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The 'Biosphere' graphic element

The biosphere is a key part of the department's visual identity. Individual biospheres are used to visually describe the diverse nature of the work we do as a department, in Australia and internationally.



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