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Performance of agriculture and resource industries in Northern Australia

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This paper presents the current outlook for agricultural and resource commodities in the Northern Australia region, along with recent financial performance information for key agricultural industries, particularly in the Northern Territory.

Northern Australia as defined in this paper is outlined in map 1. The region spreads from west of Karratha and Newman in the Pilbara region of Western Australia across to Mackay on the Queensland north coast.

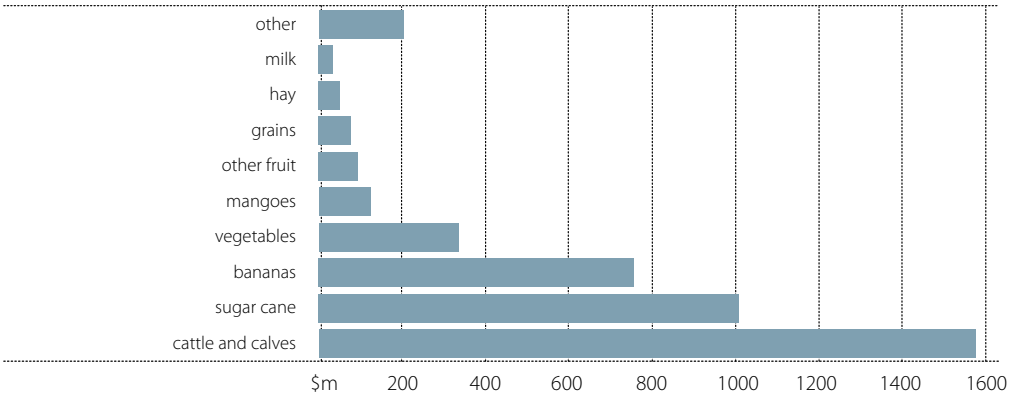
map 1 Northern Australia region

Agricultural sector profile - Northern Australia

Most of Australia's largest beef cattle producers are located in the Northern Australia region. In dollar value terms, beef cattle production is the most significant agricultural product in Northern Australia, accounting for 37 per cent, or $1.57 billion of the $4.26 billion total value of agricultural production in the region in 2006-07 (figure a).

The Australian sugar cane industry is located mainly along Australia's eastern coastline. Sugar cane accounted for nearly one-quarter ($1.01 billion) of the total value of agricultural production in Northern Australia in 2006-07. Bananas were the third largest commodity produced, accounting for a further 18 per cent ($755 million) of the total value of agricultural production.

a Value of agricultural production, Northern Australia, 2006-07



Source: Australian Bureau of Statistics.

Although the majority of fruit and vegetable production in Northern Australia occurs in northern Queensland, production also occurs in the more closely settled and irrigated areas around Darwin and Katherine in the Northern Territory and Kununurra in Western Australia. Vegetables accounted for nearly 8 per cent ($334 million) of the total value of agricultural production in 2006-07. Mangoes, which are mostly produced in northern Queensland, accounted for almost 3 per cent ($124 million) and other fruit a further 2 per cent ($94 million) of the total value of agricultural production in the region in 2006-07.

Number of farms

Australian Bureau of Statistics data indicate that in 2006-07 there were 8412 farms in northern Australia with an estimated value of agricultural operations of more than $5000 (table 1).

1 Number of farms, by industry classification, 2006-07 **a**

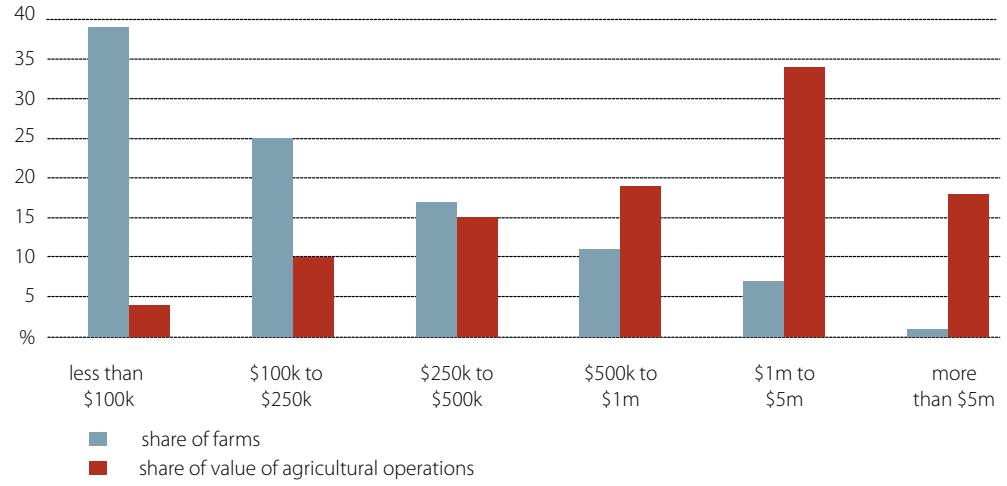
	Northern Australia		Northern Territory	
	no.	%	no.	%
Beef	3 064	36	194	37
Sugar cane	2 960	35	0	0
Fruit	1 155	14	224	43
Vegetables	339	4	48	9
Grain	52	1	2	0
Other	842	10	54	10
All agricultural industries	8 412	100	523	100

a Where the estimated value of agricultural operations is more than $5000.
Source: Australian Bureau of Statistics.

Farms are classified in table 1 according to the activities which generated the majority of their value of agricultural production. Beef and sugar farms are the most prevalent farm types in the region, together accounting for more than two-thirds of Northern Australian farms. Horticultural farms, including fruit and vegetable producers, accounted for a further 18 per cent of farms in the region in 2006-07.

In the Northern Territory, fruit farms accounted for 43 per cent of farms, while 37 per cent of farms were classified as beef farms. Vegetable farms accounted for 9 per cent of all farms in the Northern Territory in 2006-07.

b Distribution of farms by estimated value of agricultural operations, Northern Australia, 2006-07



Source: Australian Bureau of Statistics.

As in most parts of Australia, a large proportion of Northern Australian farms are relatively small in terms of their business size. Estimated value of agricultural operations (EVAO) is a measure of the value of production from farms and of their business size, which is somewhat similar to turnover. Around 39 per cent of farms in Northern Australia had an estimated value of agricultural operations of less than $100 000 and these farms accounted for only 4 per cent of total agricultural operations in 2006-07 (figure b). In comparison, more than 50 per cent of the region's value of agricultural operations came from the largest 8 per cent of farms that had a turnover of more than $1 million in 2006-07.

Employment profile

Australian Bureau of Statistics data from the 2006 Census show that around 501 000 people were employed in the Northern Australia region. The retail trade industry employed the largest number of people, with approximately 12 per cent (58 200 people) of the total labour force (figure c). The construction industry was the second largest employing sector, accounting for 10 per cent (52 400 people) of the total workforce. The healthcare and social assistance and public administration and safety industries both accounted for around 9 per cent of the region's labour force, employing 46 700 people and 42 800 people, respectively. Agriculture, forestry and fishing was the eighth largest employing sector, accounting for 6 per cent (32 200 people) of the Northern Australia labour force.

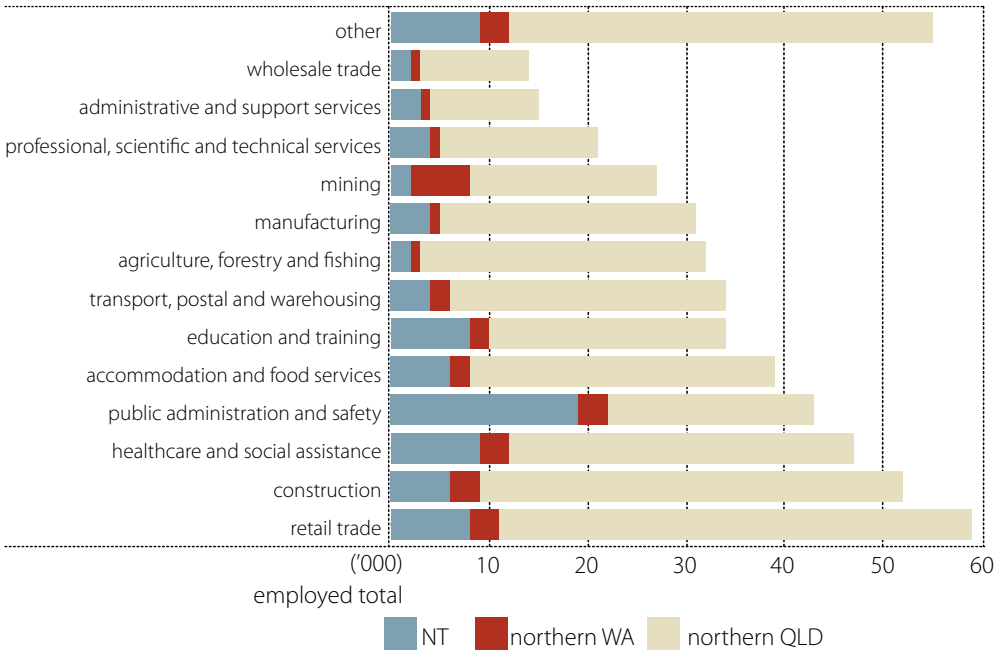
Agricultural sector performance

Live cattle industry

In the five years to 2008-09, Northern Australia accounted for around 95 per cent of Australia's live cattle exports in volume and value terms. In 2008-09, Northern Australian live cattle exports for slaughter numbered 841 000 head and were valued at $533 million (figure d).

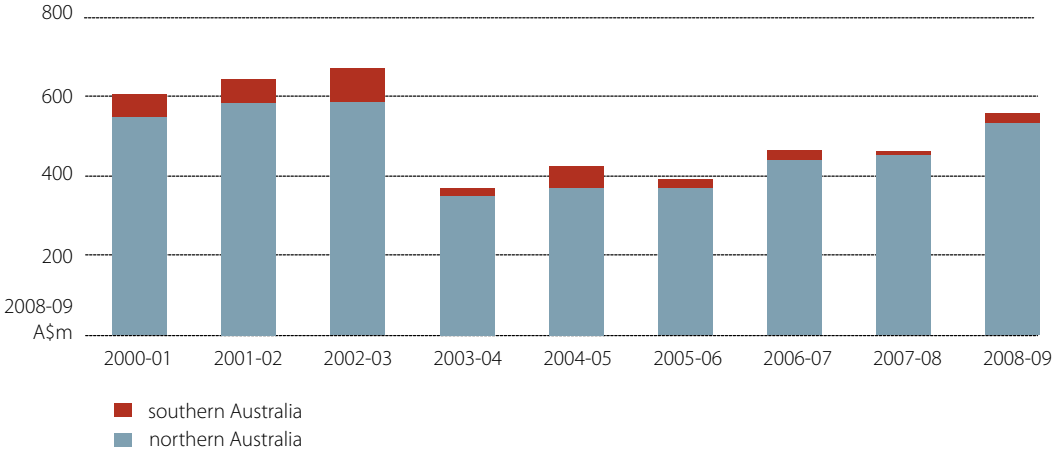
South-East Asian and Middle Eastern markets remain the main destinations for northern Australian live cattle exports, with Indonesia being the largest market (figure e). Since 2006-07, the quantity of live cattle exports has increased, largely because of increased demand from Indonesia. Over the period 2003-04 to 2005-06, the higher value of the Australian dollar, strong domestic competition for cattle for slaughter, competition from Brazilian and Indian beef and buffalo meat, together with slowing economic growth in Indonesia, the Philippines and Egypt, had led to a sharp reduction in the number of live cattle exported.

C Employment profile, Northern Australia, 2006 Census



Source: Australian Bureau of Statistics.

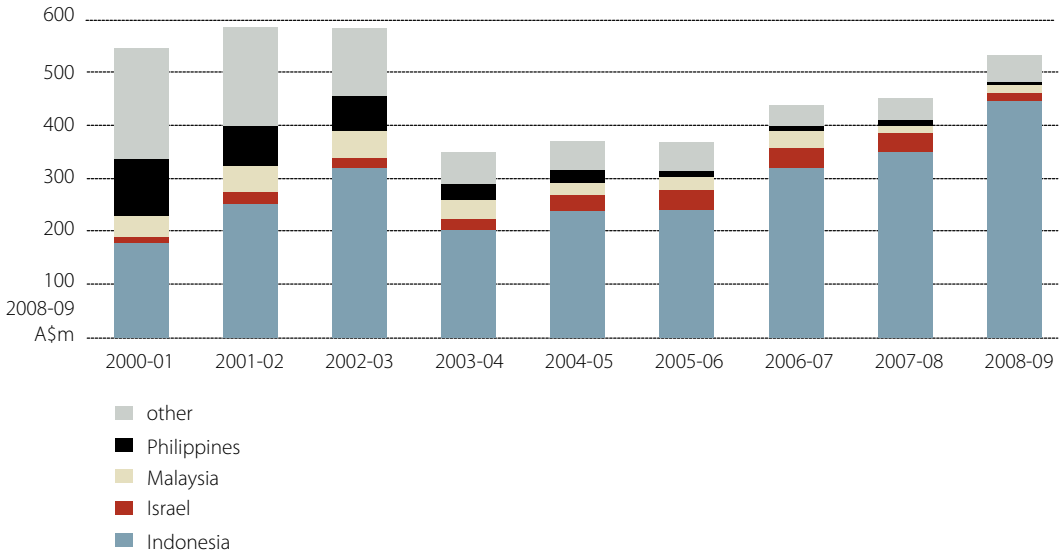
d Value of live cattle exports



In 2008-09, exports of live cattle are estimated to have increased by 20 per cent to around 856 000 head nationally, as the supply of suitable cattle from Australia increased and demand from Indonesia continued to grow.

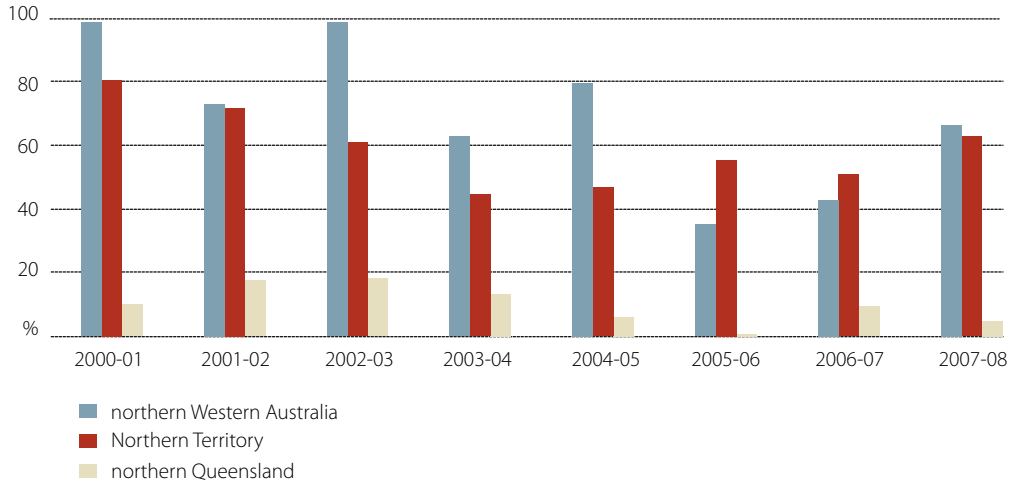
The importance of live cattle export trade varies across Northern Australian regions. In the Northern Territory, an average of 56 per cent of beef industry properties sold cattle for live export in the three years between 2005-06 and 2007-08, up from 51 per cent in the three year period to 2004-05. For the remainder of Northern Australia, an average of 48 per cent of beef industry properties in northern Western Australia and only 5 per cent of northern Queensland beef industry properties sold live export cattle between 2005-06 and 2007-08.

e Value of Northern Australian live cattle exports, by destination



This was down from an average of 81 per cent of northern Western Australian and 13 per cent of northern Queensland beef industry properties in the three years to 2004-05 (figure f).

f Proportion of Northern Australian beef industry properties selling live export cattle



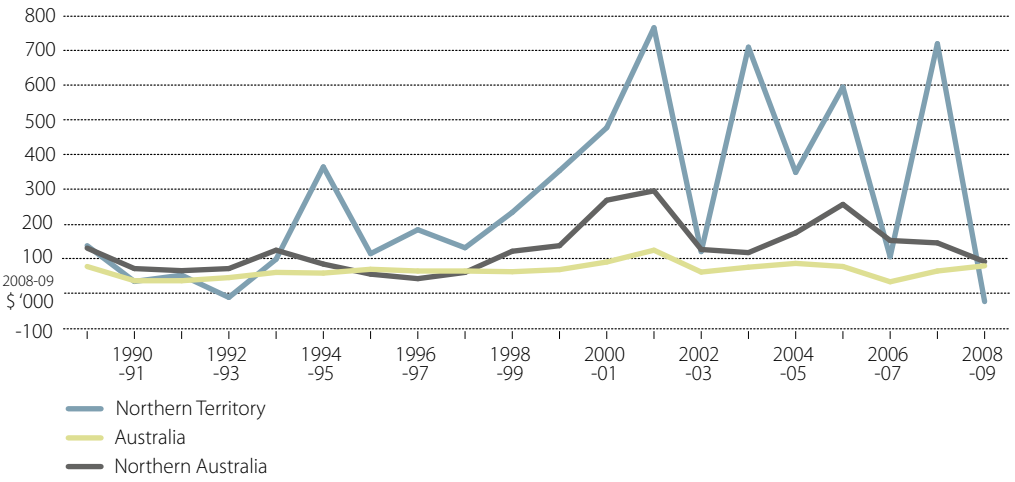
Broadacre farm performance

Australia

In 2007-08, improved seasonal conditions, combined with high prices for grains and sheep meat led to a doubling of average farm cash income for Australian broadacre farms from the historical low recorded in 2006-07 (figure g). Higher farm cash income was achieved despite a substantial increase in farm total cash costs, resulting mainly from a large increase in fertiliser and fuel prices, combined with higher interest rates (table 2).

Australian broadacre farm financial performance improved in 2008-09, building on the recovery recorded in 2007-08.

g Farm cash income, broadacre industry
average per farm



Northern Territory

Since 2002-03, there has been a pronounced increase in the variability of average annual farm cash income of Northern Territory broadacre properties resulting in a strong 'saw tooth' pattern of farm cash incomes. Average farm cash income, rates of return and other measures of financial performance (figure g) have been strong. However, the development of this pattern of farm cash incomes has been because of a combination of circumstances: drought in the southern Northern Territory, particularly in 2002-03, 2004-05 and 2007-08; a downturn in live cattle exports from 2002-03, resulting in producers targeting slaughter markets; and increased transfers of cattle between corporate group properties in the Northern Territory and other states, particularly Queensland.

In 2007-08, dry seasonal conditions in areas to the south of Katherine and increased numbers of cattle from northern regions directed to live export markets resulted in higher beef cattle turn-off and increased beef cattle receipts (table 2). Fewer beef cattle were purchased because of the drier conditions, but other farm costs, particularly fuel, freight and interest payments, increased. Overall, higher cash receipts more than offset increased expenditure, and farm cash incomes rose.

box 1 **Major financial performance indicators**

Total cash receipts: total revenues received by the business during the financial year.

Total cash costs: payments made by the business for materials and services and for permanent and casual hired labour (excluding owner manager, partner and family labour).

Farm cash income: *total cash receipts – total cash costs*

Farm business profit: *farm cash income + changes in trading stocks – depreciation – imputed labour costs*

Profit at full equity: return produced by all the resources used in the business.
farm business profit + rent + interest + finance lease payments – depreciation on leased items

Rate of return: return to all capital used $\frac{\textit{profit at full equity}}{\textit{total opening capital}} \times 100$

2 Financial performance, broadacre industries
average per farm

		Northern Territory				Australia			
		2006-07	2007-08 p		2008-09 s	2006-07	2007-08 p		2008-09 s
Receipts									
Beef cattle sales	$	819 320	1 393 900	(17)	1 190 000	115 250	100 300	(5)	116 000
Other receipts	$	715 720	1 207 200	(20)	645 000	231 700	314 800	(0)	334 000
Total cash receipts	$	1 535 040	2 601 100	(17)	1 837 000	346 950	415 100	(3)	450 000
Costs									
Beef cattle purchases	$	196 120	166 400	(34)	218 000	34 410	26 100	(12)	26 000
Fodder	$	62 880	114 100	(14)	92 000	23 150	12 500	(12)	10 000
Fuel, oil and lubricants	$	144 870	149 200	(11)	143 000	21 900	28 300	(4)	29 000
Repairs and maintenance	$	123 580	137 900	(10)	142 000	24 870	28 000	(4)	28 000
Interest payments	$	43 940	104 400	(21)	116 000	34 430	43 900	(5)	33 000
Hired labour	$	175 080	199 700	(13)	171 000	12 730	13 400	(6)	15 000
Other cash costs	$	689 870	1 033 800	(30)	979 000	164 310	200 500	(0)	229 000
Total cash costs	$	1 436 340	1 905 500	(17)	1 860 000	315 800	352 800	(3)	370 000
Financial performance									
Farm cash income	$	98 700	695 600	(26)	–23 000	31 150	62 300	(11)	80 000
Farms with negative farm cash income	%	40	56	(11)	67	45	38	(5)	36
Farm business profit	$	643 440	161 500	(128)	360 000	–64 750	–21 300	(34)	–7 000
Rate of return									
– excluding capital appreciation	%	5.6	1.6	(68)	2.6	–0.7	0.8	(22)	0.9
– including capital appreciation	%	21.6	11.7	(23)	na	7.1	2.7	(13)	na
Farm capital, debt and equity									
Farm capital at 30 June **a**	$	15 826 590	19 753 600	(11)	na	3 697 750	4 207 300	(2)	na
Farm debt at 30 June **bc**	$	1 047 720	1 454 300	(26)	na	471 650	547 200	(4)	na
Equity ratio at 30 June **bd**	%	90	89	(3)	na	87	87	(1)	na

a Excludes leased plant and equipment. **b** Average per responding farm. **c** Harvest loans are not included in farm debt. **d** Equity expressed as a percentage of farm capital. **p** Preliminary estimates. **s** Provisional estimates. **na** Not available.
Note: Figures in parentheses are standard errors expressed as a percentage of the estimate provided.

Improved seasonal conditions in 2008-09, particularly in the first half of the year, enabled Northern Territory properties to rebuild cattle numbers through a combination of increased cattle purchases and reduced cattle turn-off. Combined with lower beef cattle prices, beef cattle receipts were lower leading to a decline in estimated total cash receipts. Total cash costs are also estimated to have fallen, with increased cattle purchase expenditure more than offset by a reduction in other farm costs. But with total cash receipts declining by more than total cash costs, average farm cash income of Northern Territory broadacre farms is estimated to have fallen to -$23 000 a farm in 2008-09.

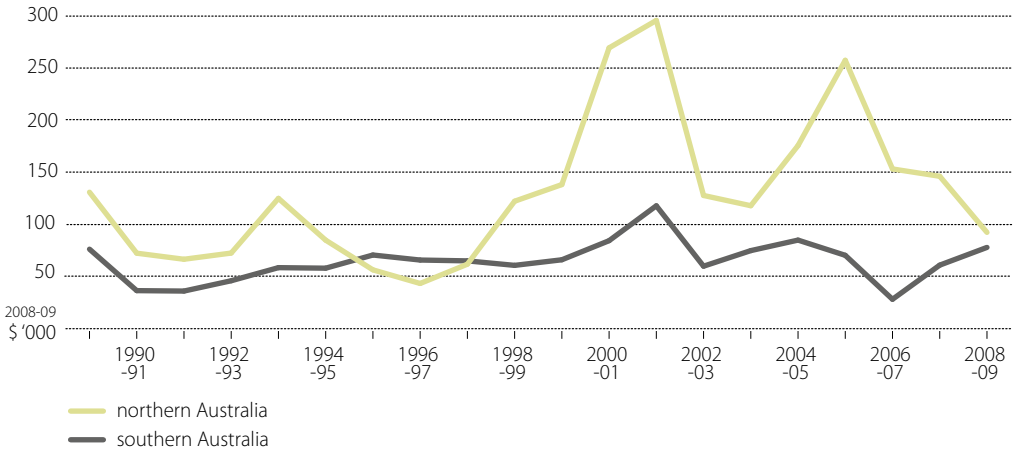
However, the large increase in the number of beef cattle carried is estimated to have boosted the value of farm trading stocks leading to a more than doubling of average farm business profit and higher average rates of return in 2008-09 (table 2).

Northern Australia

Historically, average farm cash incomes for broadacre farms in Northern Australia have been higher than those in southern Australia (figure h). In part, this is a consequence of the larger scale of farms in Northern Australia compared with those in the south.

In 2007-08, the average farm cash income for Northern Australian broadacre farms declined slightly to $140 900 a farm, as total costs increased by a greater amount compared with total cash receipts (table 3). Average farm receipts were higher on the back of increased beef cattle turn-off, particularly in the Northern Territory, and a lift in northern Queensland's summer crop production.

h Farm cash income, broadacre industry
average per farm



With dryer seasonal conditions for most of the Northern Territory and parts of northern Queensland in 2007-08, the average number of beef cattle purchased in the Northern Australian region declined, leading to a reduction in average beef cattle expenditure. Offsetting this was a large increase in beef cattle transfers between properties in the region which resulted in a sharp increase in the value of cattle transfers-in costs (which is the total farm-gate value of livestock transferred onto a farm). Subsequently, average total cash costs increased sharply (table 3).

In 2008-09, the average farm cash income for Northern Australian broadacre farms is estimated to have fallen to around $92 000 a farm, as farm cash receipts declined slightly and farm cash costs rose (table 3). Average farm receipts were lower despite a rise in beef cattle receipts because of increased cattle turn-off in northern Queensland and northern Western Australia, while increased beef cattle purchases contributed to the rise in total cash costs.

With improved seasonal conditions for the Northern Territory and north-west Queensland compared with 2007-08, Northern Australian broadacre farms are estimated to have increased the average number of beef cattle carried per farm in 2008-09, leading to increased farm trading stocks and an improvement in average farm business profit, despite the lower average farm cash income (table 3).

Beef industry performance

Beef farms have been defined in this section as farms classified to the specialised beef industry (table 1).

Nationally, average farm cash income for beef farms fell in 2007-08 because of a reduction in beef cattle turn-off and lower average prices received for beef cattle. In 2008-09, incomes recovered slightly because of higher beef cattle prices and increased beef cattle turn-off, particularly in Northern Australia. However, the rise in receipts is estimated to have been mostly offset by higher average total cash costs because of increased expenditure on beef cattle and hired labour, combined with higher beef cattle transfers-in resulting from the movement of cattle between properties in Northern Australia.

3 Financial performance, Northern Australia, broadacre industries
average per farm

		2006-07	2007-08 p		2008-09 s
Receipts					
Beef cattle sales	$	370 080	441 400	(8)	495 000
Total crop receips	$	35 110	71 600	(30)	61 000
Other receipts	$	291 740	272 600	(10)	224 000
Total cash receipts	$	696 930	785 600	(8)	781 000
Costs					
Beef cattle purchases	$	87 110	51 000	(14)	61 000
Fodder	$	36 740	29 900	(9)	28 000
Fuel, oil and lubricants	$	38 610	41 500	(8)	38 000
Repairs and maintenance	$	48 240	49 400	(8)	48 000
Interest payments	$	42 600	63 500	(12)	57 000
Hired labour	$	44 610	43 900	(9)	47 000
Other cash costs	$	256 960	365 500	(10)	410 000
Total cash costs	$	554 870	644 700	(10)	689 000
Financial performance					
Farm cash income	$	142 060	140 900	(25)	92 000
Farms with negative farm cash income	%	33	45	(24)	35
Farm business profit	$	188 610	30 500	(106)	74 000
Rate of return					
– excluding capital appreciation	%	3.3	1.3	(32)	1.7
– including capital appreciation	%	17.7	5.6	(18)	na
Farm capital, debt and equity					
Farm capital at 30 June a	$	8 440 850	8 594 700	(8)	na
Farm debt at 30 June bc	$	681 290	820 500	(13)	na
Equity ratio at 30 June bd	%	91	88	(2)	na

a Excludes leased plant and equipment. **b** Average per responding farm. **c** Harvest loans are not included in farm debt. **d** Equity expressed as a percentage of farm capital. **p** Preliminary estimates. **s** Provisional estimates.
Note: Figures in parentheses are standard errors expressed as a percentage of the estimate provided.

The majority of broadacre farms in Northern Australia and in the Northern Territory are classified as beef farms. As a consequence, the incomes of beef industry farms in these areas are similar to the incomes for all broadacre farms (figure i).

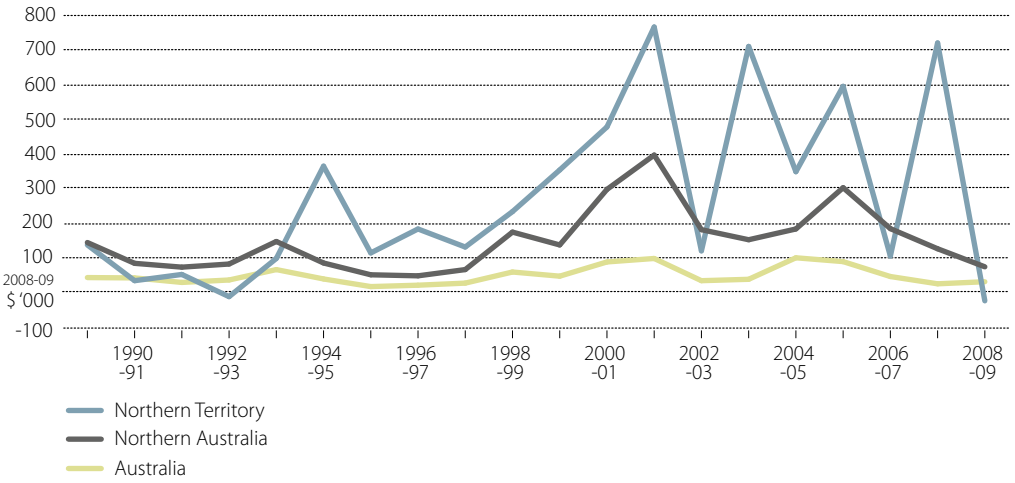
Vegetable farm performance

In 2007-08, average farm cash income of Australian vegetable farms fell by around 3 per cent to $166 100 a farm because of a larger increase in total cash costs compared with total cash receipts (table 4). However, at the same time, the proportion of vegetable farms realising a negative farm cash income fell to 13 per cent in 2007 08, compared with 17 per cent in 2006-07.

Nationally, total cash receipts averaged $570 100 a farm in 2007-08, of which 83 per cent came from the sale of vegetables. The remainder was largely from the sale of crops other than vegetables. While receipts from the sale of vegetables are estimated to have fallen by 6 per cent on average since 2006-07, there was an increase in receipts from the sale of beef cattle, sheep, wool and grains resulting in total cash receipts rising marginally in 2007-08. Total cash costs were up by around 2 per cent from the previous year with the largest share of average cash expenditure on hired labour (19 per cent), fertiliser (11 per cent) and contracts paid (10 per cent).

The financial performance of Northern Territory vegetable farms weakened in 2007-08, with average farm cash income declining to $179 800 a farm compared with $322 900 in 2006-07. In the same period, the average rate

i Farm cash income, beef industry
average per farm



of return excluding capital appreciation fell from 17 per cent in 2006-07 to just less than 6 per cent in 2007-08 (table 4). While the proportion of cash receipts from vegetables remained at 94 per cent, average vegetable receipts declined by around one-third in 2007-08. Most farm costs were lower in 2007-08, but not by enough to compensate for the reduction in total cash receipts.

Resource sector performance

In 2008-09, Australia's export earnings from mineral and energy resources increased by 37 per cent to a record $161 billion. This increase was largely underpinned by high contract prices for bulk commodities such as metallurgical and thermal coal and iron ore. This was partially offset by lower base metals, oil and liquefied natural gas prices.

Since March, the price of most commodities has increased significantly, following heavy price falls between July 2008 and March 2009. The major driver behind increasing minerals and energy commodity prices has been demand in China, where consumption has grown and offset falling demand in OECD economies such as the United States, the European Union and Japan. Demand for commodities in China has been underpinned by the government's economic stimulus package, which is targeted to infrastructure developments such as roads, railways and electricity networks. The stimulus package has also buoyed consumer sentiment, which has supported demand for consumer durables such as automobiles and electrical goods. For many commodities, particularly base metals, stock building has provided additional support for imports.

The increase in China's minerals and energy demand since early 2009 has been accompanied by significant increases in imports of some commodities such as iron ore, thermal and metallurgical coal and copper. This rise in imports has in turn provided support for Australia's minerals and energy exports countries, which was particularly important given the fall in demand from traditional markets such as Japan and the European Union.

For the remainder of 2009 and in 2010, minerals and energy commodity demand outside of China is also expected to increase. In the United States, house prices have started to stabilise which has encouraged an increase in housing construction, albeit from a relatively low level. Residential and commercial construction in the United States should support higher consumption of steel, aluminium, copper and other base metals. In Asia, including Japan, steel mills have announced intentions to restart idled capacity, which is expected to underpin demand for imports of iron ore and metallurgical coal.

4 Financial performance of vegetable growing farms, 2006-07 and 2007-08

average per farm

		Northern Territory				Australia			
		2006-07		2007-08 p		2006-07		2007-08 p	
Receipts									
Vegetable cash receipts	$	608 776	(24)	402 159	(20)	503 140	(10)	471 419	(6)
Other cash receipts	$	41 852	(22)	26 329	(35)	66 409	(10)	98 670	(14)
Total cash receipts	$	650 628	(22)	428 488	(20)	569 549	(9)	570 089	(7)
% of cash receipts from vegetables	%	94	(2)	94	(2)	88	(1)	83	(2)
Cash costs									
Fertiliser	$	50 513	(27)	37 915	(25)	35 179	(8)	42 899	(7)
Hired labour	$	75 252	(30)	30 078	(34)	75 795	(14)	76 251	(11)
Contracts paid	$	30 107	(27)	29 094	(41)	38 541	(21)	40 005	(15)
Packing materials	$	37 145	(27)	25 784	(23)	28 948	(21)	16 708	(15)
Repairs and maintenance - vehicles	$	20 061	(20)	19 287	(27)	19 884	(9)	21 903	(9)
Fuel, oil and grease	$	17 043	(26)	14 744	(16)	27 569	(7)	26 784	(8)
Crop and pasture chemicals	$	17 702	(30)	13 910	(16)	20 211	(12)	21 203	(9)
Interest paid	$	8 808	(20)	13 090	(35)	18 992	(11)	27 736	(10)
Total cash costs	$	327 752	(23)	248 652	(19)	397 555	(9)	403 992	(7)
Financial performance									
Farm cash income	$	322 876	(22)	179 836	(22)	171 994	(10)	166 097	(8)
Farms with negative farm cash income	%	11	(90)	0	(0)	17	(25)	13	(31)
Farm business profit	$	251 852	(27)	91 808	(43)	82 292	(19)	74 889	(17)
Rate of return									
– excluding capital appreciation	%	17.0	(21)	5.8	(30)	4.2	(15)	4.0	(13)
– including capital appreciation	%	20.4	(17)	4.7	(42)	7.7	(58)	4.1	(34)
Farm capital, debt and equity									
Farm capital at 30 June a	$	2 070 166	(13)	1 924 875	(20)	2 606 899	(6)	2 872 202	(7)
Farm debt at 30 June bc	$	180 771	(14)	180 753	(36)	262 522	(10)	378 346	(11)
Equity ratio at 30 June bd	%	91	(2)	91	(2)	90	(1)	87	(2)

a Excludes leased plant and equipment. **b** Average per responding farm. **c** Harvest loans are not included in farm debt. **d** Equity expressed as a percentage of farm capital. **p** Preliminary estimates.
Note: Figures in parentheses are standard errors expressed as a percentage of the estimate provided.

While the outlook for the remainder of 2009 and 2010 is generally positive, there is considerable uncertainty surrounding future commodity price movements. If world economic growth, and hence minerals and energy commodity demand, proves to be weaker than currently assumed, actual price outcomes could be lower than currently forecast. The rate at which idled production capacity will be restarted also poses a risk to the price outlook. Given the recent volatility in prices, some mining companies may be cautious in restarting idled capacity. The slow restart of idled capacity in the presence of improved growth in commodity demand represents an upward risk to price forecasts.

Growth in emerging market economies, particularly China, is expected to moderate. However, while export demand will soften, rising domestic demand as a result of industrialisation and urbanisation is contributing to a significant proportion of minerals demand in these economies, reducing the importance of export markets to their economic growth.

A higher Australian dollar will put downward pressure on export earnings as most energy and mineral commodities are traded in US dollar terms. As such, Australian dollar denominated commodity prices are higher when the Australian dollar is weaker, all else being equal. The Australian dollar in early October was trading at around US87c, compared with a low of US63c in early March 2009.

5 Advanced mining and development projects in Northern Australia

as at April 2009

project	company	status c	expected start-up	new capacity	capital expend.
Black coal – mining projects – Qld					
Blackwater Creek Diversion	Wesfarmers	Expansion, under construction	2010	nil (extension of Curragh mine life)	$130m
Carborough Downs longwall	Vale	Expansion, under construction	2011	4.2 Mt coking	US$330m (A$471m)
Clermont opencut	Rio Tinto	New project, under construction	2010	12 Mt thermal	US$1.3b (A$1.86b)
Kestrel	Rio Tinto	Expansion, under construction	2012	1.7 Mt coking	US$991m (A$1.42b)
Black coal – infrastructure projects – Qld					
Abbot Point Coal Terminal X25 expansion	Ports Corporation of Queensland	Expansion, under construction	mid-2009	Terminal capacity increase from 21 Mtpa to 25 Mtpa	$95m
Abbot Point Coal Terminal X50 expansion	Ports Corporation of Queensland	Expansion, committed	2011	Terminal capacity increase from 25 Mtpa to 50 Mtpa	$818m
Abbot Point Coal Terminal yard refurbishment	Ports Corporation of Queensland	Refurbishment, committed	2010	na	$68m
Coppabella to Ingsdon rail duplication	Queensland Rail	Expansion, committed	mid-2010	na	$80m
Dalrymple Bay Coal Terminal 7X expansion project Phases 2/3	Babcock & Brown Infrastructure	Expansion, under construction	mid-2009	Port capacity increase from 68 to 85 Mtpa	$679m
Grantleigh to Tunnel	Queensland Rail	Expansion, under construction	late 2009	na	$49m
Jilalan Rail Yard Upgrade	Queensland Rail	Expansion, under construction	late 2009	System capacity increase of 38 Mtpa	$500m
Stanwell -Wycarbah upgrade	Queensland Rail	Expansion, under construction	mid-2009	na	$72m
Vermont Rail Spur and Balloon Loop	Queensland Rail	New project, under construction	2009	4 Mtpa increase	$70m
Petroleum – oil and natural gas projects					
Blacktip gas discovery	ENI Australia	New project, under construction	late 2009	650 million cubic metres initially; 1.1 billion cubic metres ultimately	$500m
Montara/Skua oilfield	PTTEP	New project, under construction	late 2009	38 kbpd	US$700m (A$1.0b)
NWS CWLH	North West Shelf Joint Venture	Expansion, under construction	2011	60 kbpd of oil, 35 PJ pa gas	US$1.47b (A$2.1b)
NWS North Rankin B	North West Shelf Joint Venture	New project, under construction	2012	967 PJ pa	$5.1b (A$7.29b)
Pluto (train 1)	Woodside Energy	New project, under construction	late 2010	4.3 Mt LNG	$12b (inc site works for train 2)
Pyrenees	BHP Billiton/ Apache Energy	New project, under construction	early 2010	96 kbpd, 23 PJ pa gas	US$1.68b (A$2.4b)
Reindeer gas field/Devil Creek gas processing plant (phase 1)	Apache Energy/ Santos	New project, committed	late 2011	40 PJ pa gas	US$744m (A$1.06b)
Van Gogh	Apache Energy/ Inpex Alpha	New project, under construction	late 2009	38 kbpd	US$546m ($780m)
Petroleum – gas pipeline projects					
Dampier–Bunbury gas pipeline (DBNGP) expansion (Stage 5B)	DBP	Expansion, under construction	2010	40 PJ pa gas	$700m

continued...

5 Advanced mining and development projects in Northern Australia

as at April 2009 continued

project	company	status c	expected start-up	new capacity	capital expend.
Uranium					
Ranger pit extension	Energy Resources of Australia	Expansion, committed	2011	na	$57m
Iron ore – mining projects					
Hamersley Iron Brockman 4 project (Phase A)	Rio Tinto	Expansion, under construction	2010	22 Mt	US$1.5b (A$2.1b)
Hope Downs Stage 2	Hancock Prospecting/ Rio Tinto	Expansion, under construction	2009	8 Mt	US$350m (A$500m)
Mesa A	Rio Tinto/ Robe River	New project, under construction	2011	25 Mt	US$901m (A$1287m)
Pardoo direct shipping ore project	Atlas Iron	New project, under construction	2009	1 Mt in 2009, 3 Mt in 2010	$24m (for 3 Mt)
Sino Iron Project	CITIC Pacific Mining	New project, under construction	2010	27 Mt (concentrates and pellets in total)	US$3.5b (A$5.0b)
Western Australian Iron Ore Rapid Growth Project 4 (RGP4)	BHP Billiton	Expansion, under construction	2010	26 Mt	US$2.15b (A$3.06b)
Western Australian Iron Ore Rapid Growth Project 5 (RGP5)	BHP Billiton	Expansion, committed	2011	45 Mt	US$5.65b (A$8.1b) (incl. infrastructure)
Iron ore – infrastructure projects					
East Intercourse Island	Rio Tinto	Expansion, under construction	mid-2009	nil (wharf upgrade and shiploader replacement)	US$65m (A$93m)
Utah Point Berth Project	Port Hedland Port Authority	Expansion, under construction	mid-2010	18 Mt	$225m
Western Australian Iron Ore infrastructure	BHP Billiton	Expansion, committed, subject to government approval	2011	increased rail capacity to 300Mt	incl. in RGP5 capex
Lead–zinc–silver					
Mount Isa zinc-lead concentrator expansion	Xstrata	Expansion, under construction	na	75 kt Zn/Pb	$160m
Nickel					
Flying Fox (T5 deposit) (part of Forrestania project)	Western Areas	Expansion, under construction	late 2009	3.5–5 kt Ni in concentrates	$165m (including stage 1)
Other commodities					
Argyle underground development (diamonds)	Rio Tinto	New project, under construction	na	nil	US$1.5b (A$2.14b)
Liquid helium plant	BOC	New project, under construction	mid-2009	896 t He	$41m
Moranbah Ammonium Nitrate Project	Incitec Pivot	New project, under construction	2012	330 kt ammonium nitrate	$935m

Major resources sector projects

In 2008-09, expenditure on exploration in Australia's minerals and energy sector is estimated at $5.6 billion, the highest on record and more than twice the annual average expenditure of the past 25 years. The increase in exploration expenditure reflects the commodity price increases over the past five years.

In the Northern Territory, between November 2008 and April 2009, four resource projects were completed. The largest of these projects, in terms of capital expenditure, was the Bonaparte gas pipeline ($150 million) which links the offshore Blacktip gas field in the Bonaparte Basin to the Alice Springs-Darwin pipeline. Gas from the Blacktip Gas field will supply the Northern Territory market under a 25 year agreement that started in 2009.

Two projects at the McArthur River lead-zinc-silver mine were also completed. These were the $110 million project to convert the mine from an underground operation to opencut and the US$37 million upgrade of the concentrator.

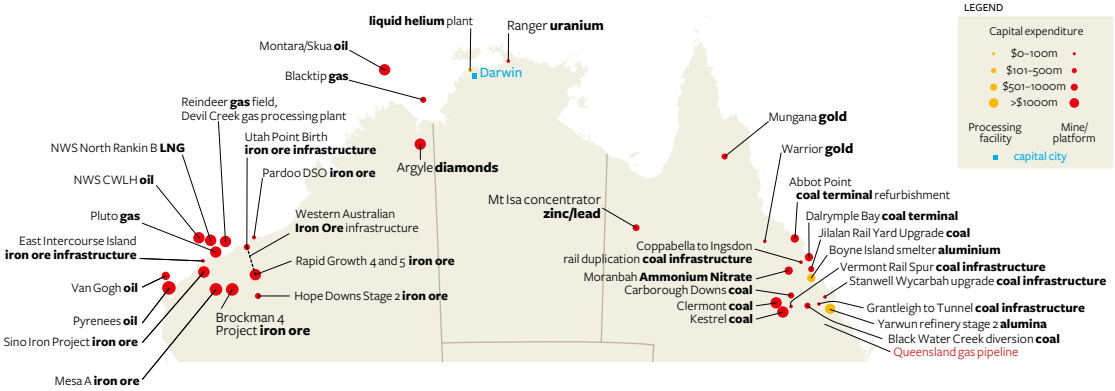
Energy Resources Australia (ERA) completed an upgrade of its Ranger laterite processing plant at a cost of $28 million. The expansion of the processing plant will enable additional annual production of 4000 tonnes of uranium oxide.

There were a further six projects completed in northern Queensland and Western Australia. Four of these were in Queensland; the Lake Lindsay and Vermont coal projects, the Handlebar Hill lead-zinc-silver mine and the upgrade of the Mount Isa copper smelter. In northern Western Australia, the Cape Lambert port expansion and the Wiluna gold mine were completed in the six months to April 2009.

As at April 2009, there were three energy projects at an advanced stage of development in the Northern Territory: the Montara/Skua oilfield, the Ranger pit extension and the BOC Helium plant, worth a total of $1.1 billion in capital expenditure.

Over the next five years, a number of copper, zinc, lead, uranium and iron ore, oil and gas, diamond, gold, coal and infrastructure projects in Northern Australia are expected to be completed (map 2), ensuring that minerals and energy production continues to increase. Table 5 lists the major development projects for Northern Australia as at April 2009.

2 Advanced minerals and energy projects
April 2009



In May and November of each year, ABARE produces a listing of major mining and mineral development projects in Australia. The next list, representing development projects in the six months from May to October 2009, will be released on 18 November on ABARE's website.

Outlook for selected commodities

ABARE's assessment of the outlook for world economic growth is provided in its quarterly publication, *Australian commodities*, which also includes market forecasts and detailed discussions of major Australian agricultural, mineral and energy commodities. The forecast summaries presented here for a number of the commodities important in this region are based on information in the September 2009 issue of *Australian commodities*.

Seasonal outlook

The Australian Bureau of Meteorology in its latest seasonal rainfall outlook (23 October 2009) for the November to January period indicates that drier than normal conditions are forecast for south-east Queensland and much of New South Wales. However, there is an increased chance of above average rainfall in north-east Western Australia and central and western Northern Territory. Across the rest of the country, including Victoria, South Australia, much of Western Australia and Queensland, the chances of exceeding median rainfall for November to January are between 40 and 60 per cent.

Beef

The Australian weighted average saleyard price of cattle is forecast to fall by 3 per cent in 2009-10 to 285 cents a kilogram (dressed weight). The principal driver behind this forecast is an expected rise in cattle turn-off, as a result of drier than normal spring and summer seasonal conditions across parts of eastern and northern Australia. An assumed appreciation of the Australian dollar relative to the US dollar in 2009-10 is also expected to put downward pressure on prices since export demand for Australian beef is unlikely to strengthen significantly in the short term.

In 2009-10, the likelihood of below average rainfall in south-eastern Australia is forecast to contribute to a 2 per cent increase in total Australian cattle slaughter to around 8.84 million head. Demand for Australian beef in Japan is expected to remain steady as only modest economic growth is assumed for 2010 and there is increasing competition from US beef in that market. In contrast, demand for Australian beef in the Republic of Korea is likely to continue to soften as competition from US beef has been considerably more pronounced. In Australia's other key export market, the United States, demand growth will be constrained by increased domestic availability of manufacturing quality beef as slaughterings of dairy cattle rise.

Reflecting the forecast higher cattle slaughterings, and the assumption of a slight reduction in average slaughter weights because of less favourable seasonal conditions, Australian beef and veal production is forecast to increase by 1 per cent to around 2.2 million tonnes in 2009-10.

Australian beef and veal exports are forecast to fall to around 940 000 tonnes (shipped weight) in 2009-10. This largely reflects lower export volumes to north Asia, as well as to the Russian Federation. Australian beef exports are highly dependent on demand in three markets: Japan, the Republic of Korea and the United States to which Australia shipped 78 per cent of its total beef exports in 2008-09. This share fell from 81 per cent a year earlier as beef exports to Indonesia in 2008-09 increased by 20 per cent to 38 000 tonnes. Beef exports to the Russian Federation were 37 000 tonnes, a 19 per cent fall from 2007-08, but still significantly higher than the average of 3200 tonnes between 2000-01 and 2006-07.

The demand for beef, and therefore live exports, is expected to remain strong in south-east Asian countries. Live cattle exports increased by 20 per cent in 2008-09 to 856 000 head. This principally reflects steady Indonesian demand, to which Australia shipped 28 per cent more beef cattle than in 2007-08.

Given the gradual process of herd rebuilding occurring in Queensland, the supply of cattle suitable for export in 2009-10 will be less than in 2008-09. As a consequence live exports are forecast to fall by 3 per cent to 830 000 head. Despite this forecast decline, the number of live cattle exports in 2009-10 will remain high in historic terms.

Sugar

World sugar prices have been booming since late June 2009, largely in response to less than average rainfall from the 2009 monsoon in India, a key sugar producing and consuming country, and a weather delayed harvest in Brazil, the world's largest sugar producer. On 14 October 2009, the world sugar indicator price (Intercontinental Exchange, no. 11 spot, fob Caribbean) was US22.7 cents a pound, below the US25.02 cents a pound reached on 31 August 2009, which was the highest nominal price for nearly 30 years.

Looking ahead, the world sugar indicator price is forecast to average US16.5 cents a pound in 2009-10 (October-September), compared with an estimated average of US15.5 cents a pound in 2008-09. This forecast reflects higher world sugar production in 2009-10, particularly in Brazil, and the anticipation of a recovery in Indian sugar production in 2010-11 that will begin to weigh on world sugar prices as the 2009-10 season advances.

The rising world sugar prices mean very favourable returns to Australian cane growers in 2009-10, despite the assumed appreciation of the Australian dollar. The average gross return to Australian growers for cane in 2009-10 is forecast to be $43.40 a tonne, up from $30.50 a tonne in 2008-09 and the highest level since 1995-96 in constant (2009-10) dollar terms.

Oil

In the year to September, West Texas Intermediate (WTI) prices averaged US$57 a barrel, which was a 42 per cent decrease from 2008. Since June, oil prices have remained relatively stable, trading between US$60 a barrel and US$75 a barrel. The relative stability of oil prices over the past few months reflects a combination of downward pressure from high OECD stocks and OPEC spare capacity and upward pressure from market expectations of higher oil demand in late 2009 and into 2010 associated with an improvement in economic conditions.

In 2008-09, Australia's crude oil and condensate production increased 9 per cent to 27.8 gigalitres. The increased production reflects the start-up of the Angel and Vincent fields as well as the ramp-up of capacity at the Stybarrow field.

In 2009-10, Australia's oil production is expected to decline by around 4 per cent to 26.7 gigalitres. The only significant addition to production is expected to come from the Pyrenees oil field, which is scheduled to commence during the first quarter of 2010. The positive effect of the Pyrenees oil field's initial output on total Australian production will be offset by continued maintenance at the Woollybutt field and the natural decline from other mature fields.

In 2009-10, the value of Australia's crude oil exports is estimated to be around $8.8 billion, similar to 2008-09. Higher oil prices are expected to be offset by lower export volumes and appreciation of the Australian dollar against the US dollar.

LNG

In September, the Gorgon joint venture (Chevron, ExxonMobil and Shell) announced that the Gorgon project would be developed. At an estimated cost of A$43 billion, it will be Australia's largest single resource project. The proposed project, which will comprise three LNG trains with a total capacity of 15 million tonnes a year and a domestic gas plant, is scheduled to export its first gas in 2014.

In 2008-09, Australia's liquefied natural gas (LNG) exports reached 16.2 million tonnes, an increase of 13 per cent from the previous year. The increase in exports mainly reflected the start-up of the fifth processing train at the North West Shelf project in September 2008. In 2009-10, Australian LNG exports are forecast to increase by a further 8 per cent to 17.6 million tonnes. This forecast increase reflects a full year of operation at the fifth train at the North West Shelf project.

LNG contract prices usually follow movements in oil prices but with some lags. In 2008-09, the value of Australian LNG exports was $10.1 billion. Reflecting lower LNG prices in 2009-10, the value of exports is forecast to decline by 29 per cent to $7.1 billion.

Zinc

World zinc spot prices averaged US$1472 a tonne in the year to September, which is around 20 per cent lower than the average for 2008. The lower average price is mainly the result of significantly weaker demand associated with the global economic downturn.

Mainly as a result of mine closures, Australian zinc mine production is estimated to have declined by 10 per cent to around 1.4 million tonnes in 2008-09. Closures during the year have included Teck Resources' Lennard Shelf mine (capacity 70 000 tonnes) in Western Australia. Partly offsetting the effect of these closures were increases in production from Xstrata's Mt Isa and McArthur River mines.

In 2009-10, Australia's zinc mine production is forecast to decline by a further 5 per cent to 1.35 million tonnes, as the full effect of production cuts and closures are realised. Zinc production at the Golden Grove mine is expected to fall significantly, in line with previously announced plans to switch to copper production.

In 2008-09, lower export volumes and world prices resulted in the total value of Australian zinc exports declining by 45 per cent to $1.9 billion. In 2009-10, the total value of zinc exports is forecast to be around $1.8 billion, as the combined effect of lower export volumes and an appreciation of the Australian dollar against the US dollar is expected to more than offset the effect of higher forecast prices.

Iron ore

Iron ore contract price negotiations between Rio Tinto and customers in the Republic of Korea, Japan and Chinese Taipei resulted in prices falling by 33 per cent for iron ore fines and 44 per cent for lump ore for Japanese fiscal year 2009-10. Fortescue Metals Group settled contract prices with Baosteel and the China Iron and Steel Association at a discount of 35 per cent for fines and 50 per cent for lump relative to JFY 2008. However, in mid-October, negotiations between Australia's two largest iron ore producers, BHP Billiton and Rio Tinto, were still ongoing with the Chinese steel industry.

In July 2009, the iron ore spot price exceeded the contract price for the first time since October 2008, and in early August reached a high of $111 a tonne CFR (cost and freight). The recent increase in spot prices reflects strong import demand from China. Movements in spot prices over the next 18 months are expected to continue to be affected by China's imports and the rate at which idled iron ore production capacity is restarted in Brazil and China.

Australian production of iron ore increased by 23 per cent in the June quarter 2009 compared with the previous quarter, and is expected to continue to expand over the next year. This increase was underpinned by higher production at Rio Tinto's Hamersley, Robe River and Hope Downs operations, Fortescue Metals Group's Cloudbreak operation and Mount Gibson Iron's Tallering Peak and Koolan Island operations.

In 2009-10, export volumes of iron ore are forecast to increase, compared with 2008-09 when they were significantly affected by weaker demand resulting from the global economic downturn. Largely reflecting record prices for JFY 2008, Australian export earnings from iron ore are estimated to have increased by 67 per cent to $34 billion. Export earnings from iron ore are forecast to decline by 20 per cent to $27 billion in 2009-10. This is largely a reflection of the price reduction for JFY 2009, the effect of which is forecast to more than offset an 18 per cent increase in export volumes.

Copper

In 2008-09, Australian copper mine production is estimated to have increased by 3 per cent to 889 000 tonnes. Increased production at BHP Billiton's Olympic Dam and the commissioning of Oz Minerals' Prominent Hill

more than offset lower production at Xstrata's Queensland operations and mine closures in the first half of the financial year. Mines that closed in 2008-09 include Compass Resources' Browns Oxide SX-EW (10 000 tonnes), Barminco's Eloise (16 000 tonnes), Matrix Metals Leichardt SX-EW (9000 tonnes) and CopperCo's Lady Annie SX-EX (20 000 tonnes). Despite these closures and declining production at other mines, refined production increased by 12 per cent to 499 000 tonnes, reflecting significant increases in refining production at Xstrata's Townsville refinery and BHP Billiton's Olympic Dam operation.

Australia's copper export earnings declined by 14 per cent to $5.8 billion in 2008-09. This reflects a significant decline in world copper prices that was not fully offset by increased export volumes and a lower Australian dollar. In 2009-10, a forecast increase in world copper prices and steady export volumes are expected to more than offset an appreciation in the Australian dollar, resulting in export earnings increasing by 8 per cent to $6.2 billion.

Gold

Australia's gold mine production fell by 5 per cent to 218 tonnes in 2008-09. This was the second consecutive annual decline and reflects output around 30 per cent lower than the record of 306 tonnes in 1997-98. The largest falls in production were recorded by Anglogold Ashanti's Sunrise Dam (down 4.6 tonnes) and Newcrest's Cadia Hill (down 3.6 tonnes). In addition, the Mount Magnet mine was placed on care and maintenance, contributing around 3 tonnes to this annual decline.

In 2009-10, Australia's total gold mine production is forecast to rise by 15 per cent to 251 tonnes. More than half of this growth is expected to stem from Newmont's Boddington redevelopment in Western Australia, which has a capacity of more than 30 tonnes of gold a year.

In 2008-09, Australian export earnings from gold grew by around 48 per cent, to a record $16.1 billion, supported by high export volumes and a high Australian dollar denominated gold price. In 2009-10, the value of gold exports is forecast to rise by a further 1 per cent to $16.4 billion.

Uranium

In 2008-09, Australia's uranium mine production increased by 2 per cent to 10 311 tonnes of U_3O_8. The small increase reflects higher production at Energy Resources of Australia's (ERA) Ranger mine in the Northern Territory. Production at Ranger increased in the first half of 2009 reflecting the processing of higher grade ore and the commissioning of a laterite processing plant (used for the processing of high clay content ore).

In 2008-09, the value of Australia's uranium exports increased by 12 per cent to $990 million, as higher export prices more than offset a small decline in export volumes. As all of Australia's uranium production is exported, uranium exports are expected to increase in line with higher production in 2009-10. Export unit prices for uranium are expected to average higher in 2009-10, reflecting higher contract prices at the Ranger mine.

Aluminium and alumina

Australia's aluminium export earnings declined by 5 per cent to $4.7 billion in 2008-09, as a fall in aluminium prices more than offset higher export volumes and a depreciation of the Australian dollar. In line with lower forecast production, Australia's exports of aluminium are forecast to decline in 2009-10. This, combined with lower export prices and an assumed appreciation of the Australian dollar, is forecast to result in the value of Australian aluminium exports declining by 26 per cent to $3.5 billion in 2009-10.

In 2008-09, Australia's production of alumina increased by 1 per cent to 19.6 million tonnes, as Rio Tinto Alcan's Gove refinery continued to approach capacity following an expansion in 2007. In 2009-10, Australia's production of alumina is forecast to remain largely unchanged at around 19.7 million tonnes.

Australia's alumina export earnings increased by 4 per cent to around $6 billion in 2008-09. This reflected a 4 per cent increase in export volumes. In 2009-10, alumina export earnings are forecast to decline by 19 per cent to $4.9 billion as a result of forecast lower export prices and an assumed appreciation of the Australian dollar.

6 Mine production of minerals and energy commodities

		2007-08		2008-09		
		Northern Territory	Australia	Northern Territory	Australia	NT share %
Gold	t	16	229	12	218	5.5
Iron	kt	615	324 693	2 207	353 800	<1
Lead	kt	35	641	35	596	5.9
Zinc	kt	134	1 571	145	1 411	10.3
Silver	t	38	1 867	40	1 785	2.2
Uranium	t	4 472	8 577	4 815	8 744	55.1
Manganese	kt	4 174	5 436	2 869	3 749	76.5
Titanium minerals	kt	9	2 694	3	2 432	<1
Zircon	kt	16	580	3	534	<1
Bauxite	kt	5 251	63 463	5 651	64 418	8.8
Crude oil	ml	909	25 537	866	27 789	3.1
Natural gas	Mm^3	541	41 700	537	44 200	1.2