Australian Government
Australian Bureau of Agricultural and Resource Economics – Bureau of Rural Sciences

Australian crop report

14 September 2010 no. 155

www.abare-brs.gov.au

Science and economics for decision-makers

ISSN 1447-8358

Australian Bureau of Agricultural and Resource Economics – Bureau of Rural Sciences
Postal address GPO Box 1563 Canberra ACT 2601 Australia
Switchboard +61 2 6272 2010
Facsimile +61 2 6272 2001
Email info@abare-brs.gov.au
Web abare-brs.gov.au

On 1 July 2010, the Australian Bureau of Agricultural and Resource Economics (ABARE) and the Bureau of Rural Sciences (BRS) merged to form ABARE–BRS.

This report was prepared by Henry To, Amelia Brown, James Fell, Max Foster, Margaret Nicholson, Lee Georgeson, Matt Miller, Johnny Xu and Dean Mansfield, with the assistance of Jim Walcott and ABARE–BRS survey collection officers.

For further information, contact Peter Collins on +61 2 6272 2017.

To ensure that you are notified of the release of the Crop report, please email info@abare-brs.gov.au.

For general media inquiries, call +61 2 6272 3232 or email media@daff.gov.au.

The next issue of the Australian crop report is scheduled to be released on 7 December 2010.

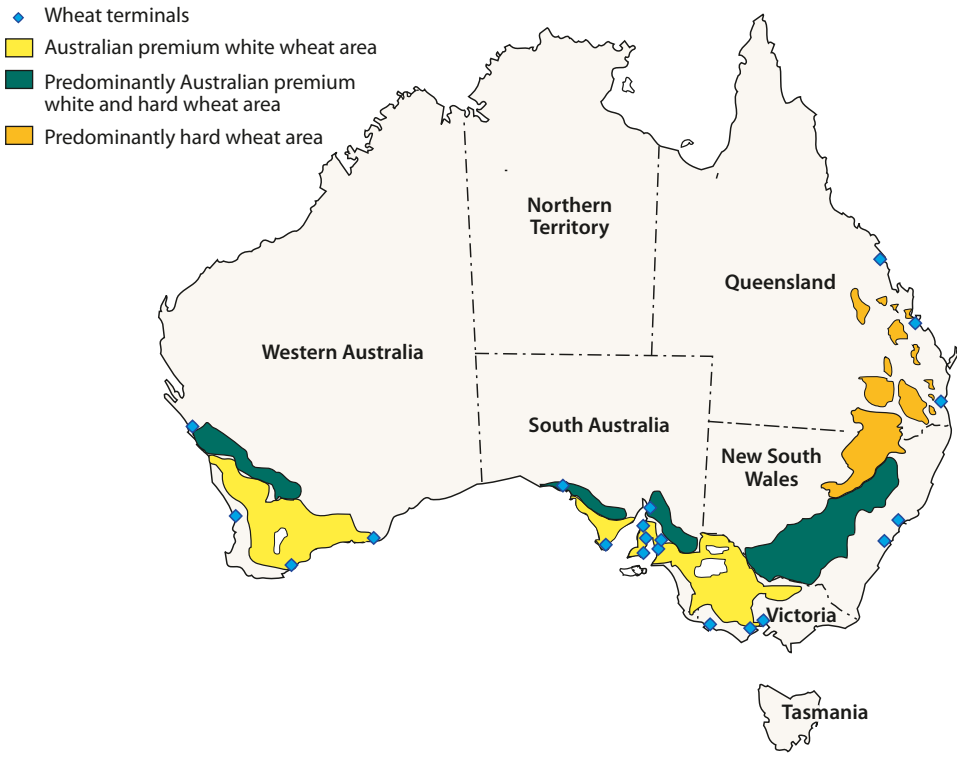
in the next issue …

- 2010–11 winter crop area and production estimates updated
- 2010–11 summer crop area estimates and production forecasts updated

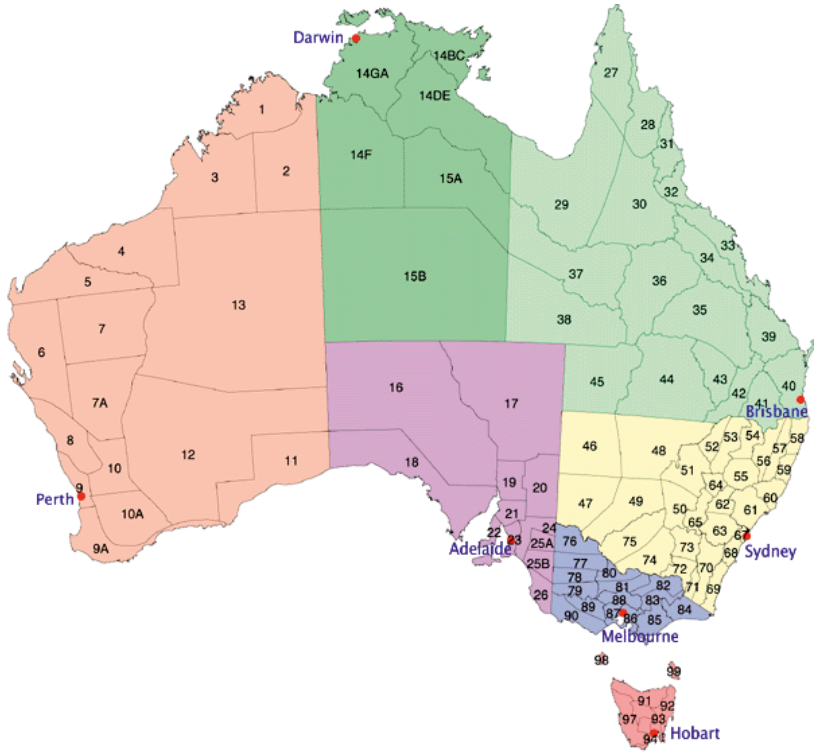
ABARE–BRS project 1076

Contents

Australian wheat growing regions



Australian meteorological districts



Overview

Winter cropping regions in the eastern states are in a positive position after receiving average to above average rainfall for July and August. Widespread rainfall recorded in the eastern states in the first two weeks of September has further boosted the already high winter crop yield expectations.

In contrast, most cropping regions in Western Australia have remained dry throughout winter, following on from a dry autumn and summer. Yield potential has been significantly reduced and, as a result, good regular rainfall is required over the next several weeks to achieve, at best, average yields.

Looking ahead, the Australian Bureau of Meteorology, in its latest seasonal rainfall outlook (24 August 2010) for the September to November period, indicates a reasonably positive outlook for most of the country, with the odds favouring neither wetter nor drier conditions. In south-west Western Australia there is a chance of exceeding median rainfall of between 60 and 65 per cent.

Total winter crop production in 2010–11 is forecast to be around 40.7 million tonnes, which is 16 per cent higher than last season and would be the third largest on record. The forecast is an upward revision of around 5.5 million tonnes from the ABARE–BRS forecast in June 2010, which was based on the expectation of average crop yields. Since June there have been highly favourable seasonal conditions in the eastern states, which have increased the prospect of crops achieving above average yields, particularly in New South Wales.

There are two main downside risks to the positive production outlook in the eastern states. First, there is the potential for crop damage arising from Australian plague locusts in the south-eastern states and spur-throated locusts in Queensland. Second, the wet conditions have increased the potential risk of stripe rust, which could affect crop yields in some regions. On the upside, the continuation of good rainfall in the eastern states and/or improved conditions in Western Australia could lead to higher than expected yields.

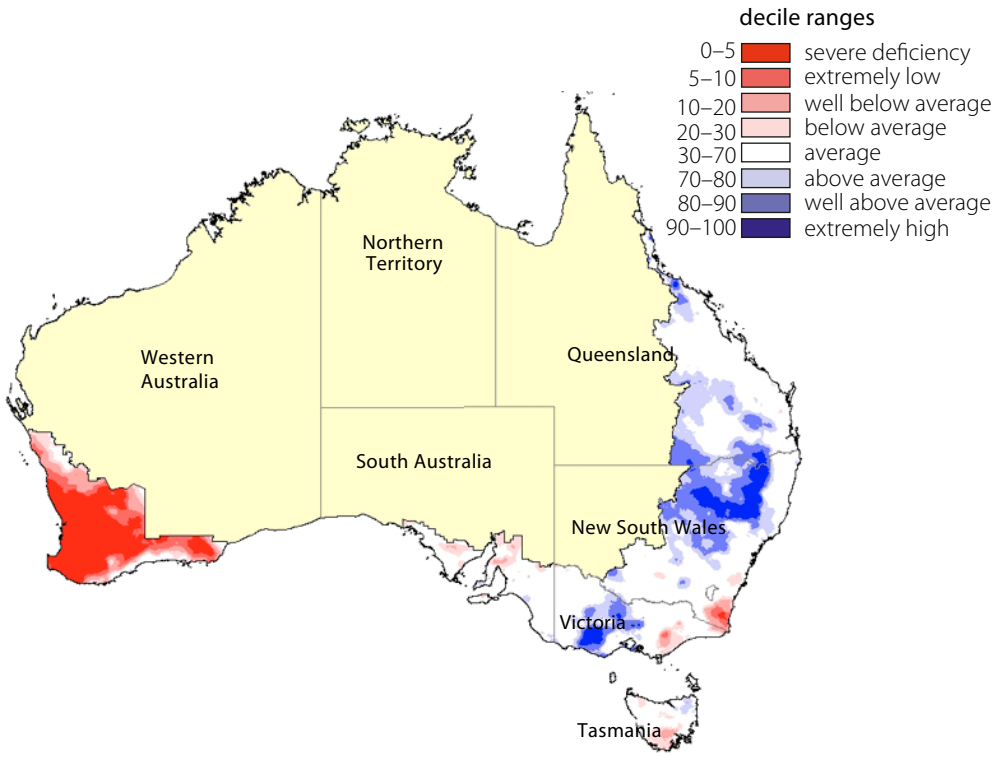
Of the major winter crops, wheat production is forecast to rise by 16 per cent to 25.1 million tonnes in 2010–11, which is around 3 million tonnes above ABARE–BRS's June forecast. Production in Western Australia has been revised down, but this has been more than offset by forecast increases in the other states. Barley production in 2010–11 is forecast to be 8.8 million tonnes and canola production is forecast to be 2.2 million tonnes.

Total summer crop area is forecast to rise by 60 per cent to 1.3 million hectares in 2010–11, compared with the below average plantings last season. The area planted to cotton and grain sorghum is forecast to rise by 96 per cent and 55 per cent, respectively, while rice plantings are forecast to more than triple.

Rainfall and soil moisture

The map of winter rainfall (June–August 2010) illustrates that most of the grains belt over Queensland, New South Wales and Victoria received average to above average winter rainfall. South Australia received average to below average winter rainfall. However, the first two weeks of September have seen very good rainfall recorded over the eastern states. This rainfall has caused some flooding in parts of Victoria but has been beneficial for winter crops in Queensland, New South Wales, Victoria and South Australia as they enter the crucial spring stage.

map **1** Australian rainfall deciles: 1 June to 31 August 2010



Winter rainfall percentiles displayed for wheat–sheep and high-rainfall zones only.

Source: Bureau of Meteorology.

In contrast to the eastern states, Western Australia's cropping belt has experienced a prolonged period of dry weather. Between January and August 2010, there were serious to severe rainfall deficiencies over much of the winter cropping belt (map 2). It has been the second driest start to the year on record and the driest winter on record for south-west Western Australia, one of the country's biggest winter crop producing regions. However, there are some parts of southern Western Australia, around Esperance, where seasonal conditions have been reasonable and crop prospects are still positive, assuming spring rainfall eventuates.

map **2** Rainfall deficiencies - six months to 31 August 2010

Rainfall percentiles displayed for wheat–sheep and high-rainfall zones only.

Source: Bureau of Meteorology.

Details of rainfall received in the April–August growing period are provided in table A. Rainfall in the eastern states has been significantly above the long-term average for this period, as well as much higher than the past two seasons. For example, the western Riverina region in New South Wales, a major winter cropping region that has experienced dry springs over the past two seasons, recorded 143 per cent of its long-term average between April and August this year, compared with 93 per cent this time last season and 63 per cent in the 2008–09 season. In contrast, major grain growing regions in Western Australia have recorded rainfall well below the long-term average and below that for the past two seasons. Rainfall analysis maps are based on historical monthly rainfall data provided by the Australian Bureau of Meteorology.

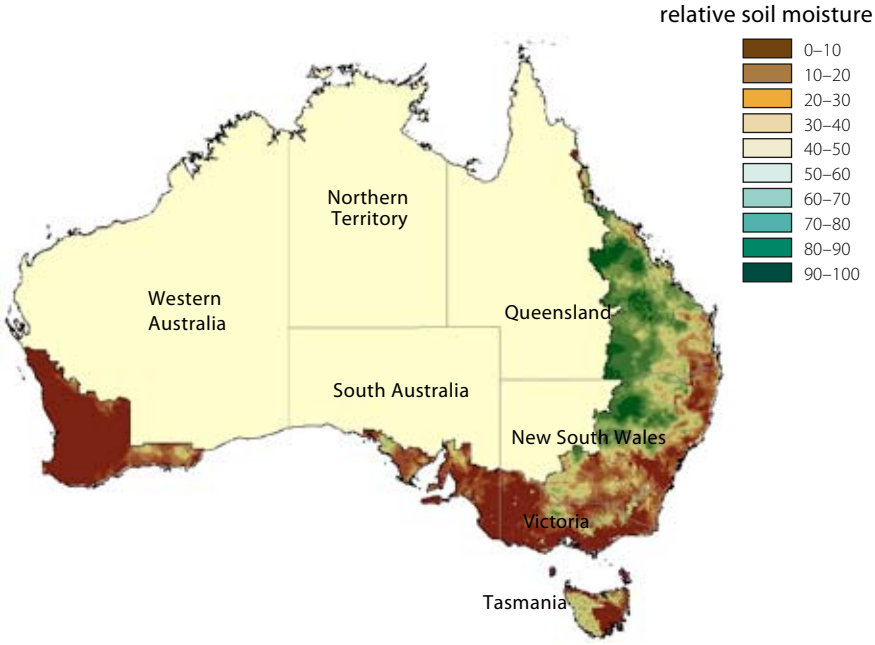
The Australian Bureau of Meteorology's latest seasonal rainfall outlook (24 August 2010) for the September–November period is reasonably positive for most of the country, with the odds favouring neither wetter nor drier conditions. In south-west Western Australia there is a chance of between 60 and 65 per cent of exceeding median rainfall. The chance of exceeding average rainfall is more than 60 per cent over a small region in northern New South Wales, with odds decreasing to less than 40 per cent over small parts of southern Victoria.

The national outlook for maximum temperatures over spring favours warmer than normal conditions across the south-east of the country. The outlook for minimum temperatures favours warmer than normal nights Australia-wide.

Maps 3 and 4 show the relative levels of modelled upper layer (~0.2 metres) soil moisture and lower layer (~0.2 to ~1.5 metres) soil moisture at the end of August 2010 for the wheat–sheep and high-rainfall zones. These data are from a collaborative project between the Bureau of Meteorology, the CSIRO and ABARE–BRS to develop estimates of soil moisture and other components of the water balance at high resolution across Australia. These maps show soil moisture estimates relative to the long-term record. Moisture estimates are ranked in deciles, where the darkest green areas (90 to 100 per cent decile) indicate that the soil moisture falls into the 10 wettest years of the past century, while the darkest brown (0 to 10 per cent decile) means that soil moisture levels fall into the 10 driest years of the past century.

Map 3 shows that for the cropping regions of Queensland and northern New South Wales lower layer soil moisture at the end of August 2010 is near or at the maximum for the time of year. Before the widespread rainfall in early September, there were large areas of New South Wales, northern Victoria and South Australia where lower layer soil moisture levels fell within the 40 to 50 per cent decile, which is close to the average historical soil moisture for the time of year. However, for much of Western Australia there appears to be little reserve (lower layer) soil moisture, so crops will be heavily dependent on rainfall in the next month and some are likely to experience moisture stress. Above average rainfall will be needed to increase lower soil moisture profiles for the flowering and grain fill stage.

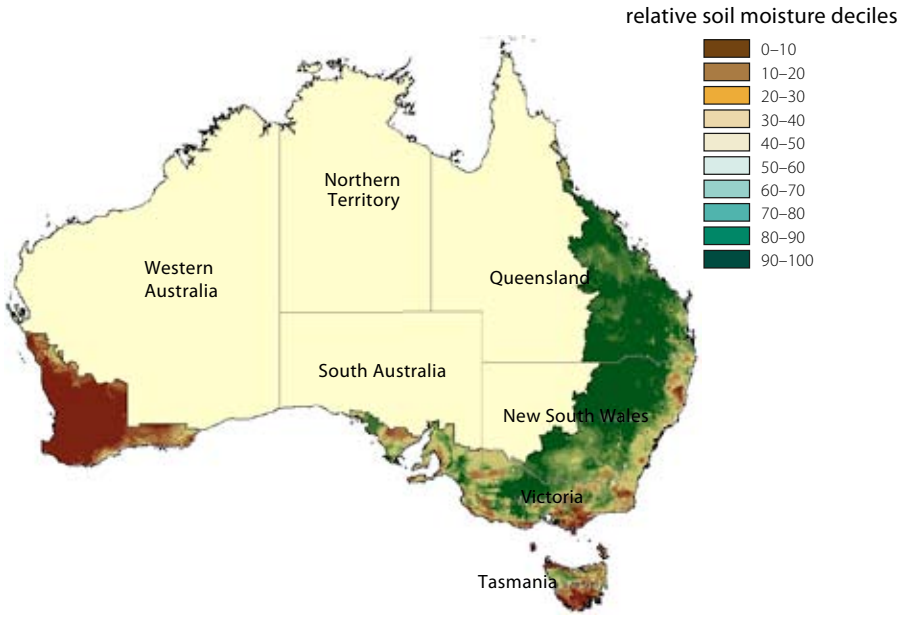
map **3** Lower soil moisture, August 2010



Soil moisture at lower layer displayed for wheat–sheep and high-rainfall zones only.

Source: ABARE–BRS; CSIRO; Bureau of Meteorology (Australian water availability project).

map **4** Upper soil moisture, August 2010



Soil moisture at upper layer displayed for wheat–sheep and high-rainfall zones only.

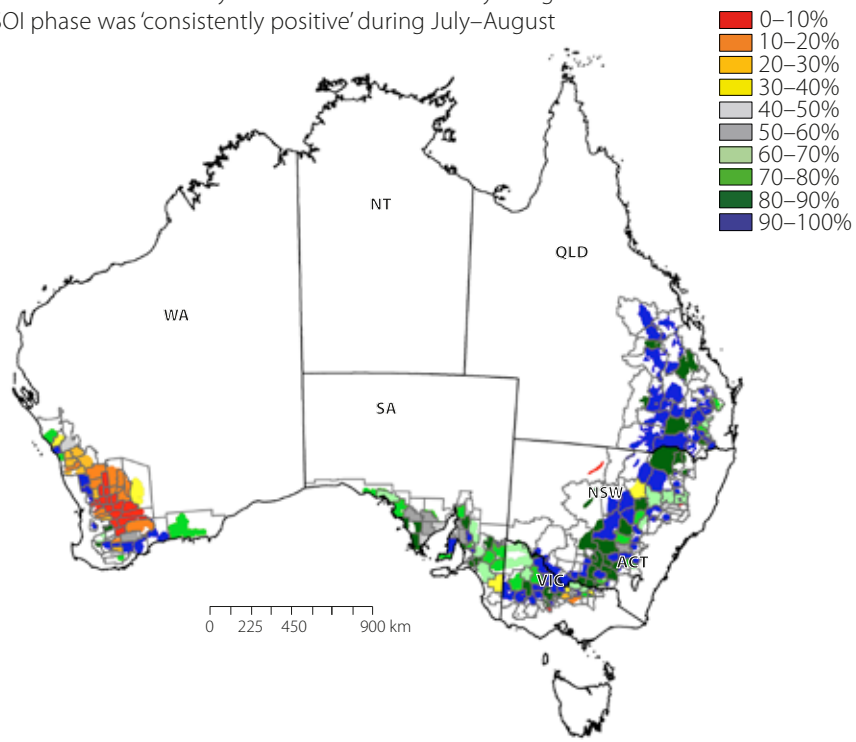
Source: ABARE–BRS; CSIRO; Bureau of Meteorology (Australian water availability project).

At the end of August 2010, upper layer soil moisture levels for many cropping regions in eastern Australia were near or at the maximum for the time of year. In contrast, most of Western Australia's cropping regions' upper layer soil moisture is near or at the minimum. The upper layer soil moisture responds quickly to seasonal conditions and will often show a pattern that reflects the rainfall and temperature events of the same month. Lower layer soil moisture is a larger, deeper store that is slower to respond and tends to reflect accumulated events over seasonal and longer time scales.

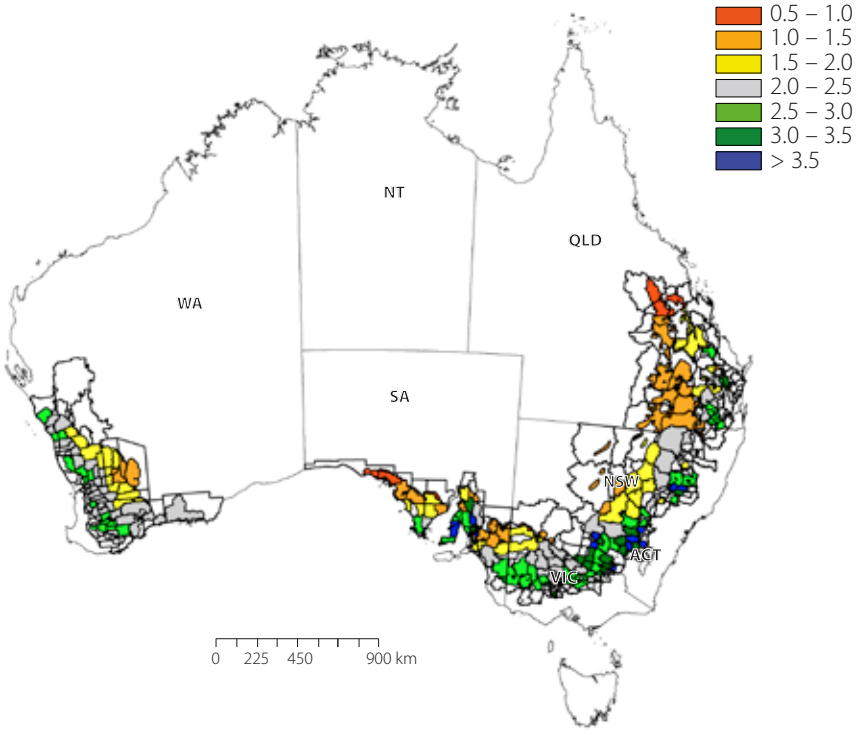
A number of organisations provide forecast yields for grains, including wheat and grain sorghum. The shire scale wheat forecasting system of the Queensland Department of Primary Industries and Fisheries combines starting soil moisture conditions with the seasonal outlook, including the most recent trend in the Southern Oscillation Index (SOI). The median shire wheat yields (map 6) at the end of August, before early September rainfall events (map 5), show most cropping regions are ranked in the highest decile for Queensland, New South Wales and Victoria, and relatively high for South Australia.

Conversely, in Western Australia wheat yields in the majority of the grains belt are forecast to be ranked in the lowest deciles. However, there are areas in the south of the cropping belt where conditions have been reasonable and the forecast yield is ranked in a relatively high decile in these regions.

map **5** Forecast median shire yield ranked relative to all years given the SOI phase was 'consistently positive' during July–August

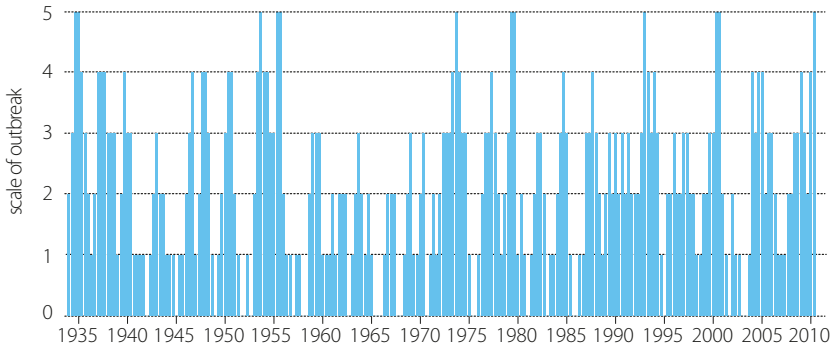


map **6** Simulated long-term median wheat yields, by shire (1901–2005)



box 1 **Damage from previous locust outbreaks**

Outbreaks of Australian plague locust are frequent, with major outbreaks occurring in 1934–35, 1955, 1973–74, 1979 and 1993–94 (see figure). Lesser, but significant, outbreaks have occurred in other years, such as 1984–85 and 2004–05.



Source: Australian Plague Locust Commission 2010.

Locust outbreaks can have serious adverse effects on grain production in those areas through which the swarms pass, but studies have indicated that the effects on aggregate crop production have in the past been low.

Bullen (1975) observed that damage to crops in areas at risk (that is, eastern Australia) was around 0.2 per cent of the value of production in 1973–74. Bullen further observed that in 1934–35 plague locusts appeared to have caused possible losses of 2 to 4 per cent of total production in vulnerable areas.

Wright (1986) studied the 1984–85 outbreak and concluded that the total damage to winter cereal crops, summer crops, horticulture and irrigated lucerne was $3.6 million in New South Wales (0.06 per cent of production). Wright estimated damage to wheat crops in NSW of $2.4 million and a survey quoted by Wright estimated damage to wheat crops in Victoria of $1.5 million. Based on these figures, it is estimated that losses to wheat production in New South Wales and Victoria were around 0.24 per cent and 0.33 per cent of production, respectively.

Following the 1973–74 outbreak, a Queensland Department of Primary Industries census indicated that spur-throated locusts (as opposed to plague locusts) caused total losses of around 2.7 per cent of vulnerable crops in Queensland.

The plague of 1973–74 is of interest when comparing the current locust situation. The previous work identifies the 1973–74 plague as a scale 5 outbreak and it had significant populations of spur-throated locusts in Queensland, as is the case now. Additionally, the weather conditions in the lead-up to, and during, the plague of 1973–74 were similar to those currently. However, since 1973–74 the Australian Plague Locust Commission has been established to better coordinate locust control, and control technologies have improved.

In summary, while locust damage for individual properties and regions can be significant, damage to crop production from a national perspective has been relatively low in past outbreaks. Past experience is a useful guide to the damage that locusts may cause, although circumstances around individual outbreaks can differ.

References

Bullen, FT 1975, *Economic Effects of Locusts in Eastern Australia*, report to the Reserve Bank of Australia, Canberra.

Wright, DE 1986, 'Economic Assessment of Actual and Potential Damage to Crops Caused by the 1984 Locust Plague in South-eastern Australia', *Journal of Environmental Management*, 23:293-308.

A April to August rainfall in major grain growing regions [a]

	average [b] mm	2008 mm	2009 mm	2010 mm	2008 % of average	2009 % of average	2010 % of average
Queensland							
Central Highlands (35)	147	121	106	326	82	72	222
Maranoa (43)	156	106	138	183	68	89	117
West Darling Downs (42)	162	124	177	181	77	109	112
East Darling Downs (41)	192	119	182	209	62	95	109
Moreton South Coast (40)	332	258	384	224	78	116	67
New South Wales							
North West Plains (W) (52)	169	123	161	209	73	96	124
North West Plains (E) (53)	195	131	171	255	67	88	131
North West Slopes (N) (54)	209	130	164	307	62	78	147
North West Slopes (S) (55)	221	180	166	294	81	75	133
Northern Tablelands (N) (56)	240	174	275	305	73	115	127
Central West Plains (S) (50)	185	116	170	214	63	92	116
Central West Plains (N) (51)	175	107	184	218	61	105	124
Central West Slopes (N) (64)	224	153	148	275	68	66	123
Central West Slopes (S) (65)	235	157	189	307	67	80	130
Central Tablelands (N) (62)	235	176	168	322	75	71	137
Central Tablelands (S) (63)	331	203	273	308	61	82	93
Riverina (W) (75)	155	98	144	222	63	93	143
Riverina (E) (74)	208	128	169	228	62	81	110
South West Slopes (N) (73)	259	180	234	279	69	90	108
South West Slopes (S) (72)	386	275	378	370	71	98	96
Southern Tablelands (GM)(70)	255	160	207	272	63	81	107
Victoria							
North Mallee (76)	139	114	143	181	82	103	130
South Mallee (77)	164	132	178	188	81	109	115
North Wimmera (78)	198	154	217	214	78	110	108
South Wimmera (79)	258	208	294	278	81	114	108
Lower North (80)	198	133	163	245	67	82	124
Upper North (81)	243	177	219	299	73	90	123
Lower North East (82)	391	299	395	438	76	101	112
Upper North East (83)	545	333	396	442	61	73	81
North Central (88)	354	254	278	388	72	79	110
Central Western (89)	296	238	301	353	81	102	119
South Australia							
Upper South East (25B)	224	203	239	245	91	107	109
Murray Mallee (25A)	146	130	106	326	89	73	223
Murray River (24)	160	150	159	181	94	99	113
East Central (23)	339	299	348	299	88	103	88
West Central (22)	253	256	342	284	101	135	112
Lower North (21)	228	203	229	204	89	101	90
Upper North (19)	158	121	132	160	77	84	101
Western (18)	187	116	160	180	62	86	96
Western Australia							
North Coast (8)	276	231	249	170	84	90	62
Central Coast (9)	605	461	445	274	76	74	45
Northern Central (10)	231	207	204	130	90	88	56
South Coast (9A)	599	478	466	307	80	78	51
South Central (10A)	270	248	206	160	92	76	59
South East (12)	129	75	100	74	58	77	57
Tasmania							
Northern (91)	525	436	733	528	83	140	101
Midlands (93)	229	150	384	265	65	167	115

a Australian meteorological districts are shown in map on page iv.
b Average from 1913 to 2010.

Winter crop production

Total winter crop production in 2010–11 is forecast to reach 40.7 million tonnes (table B) and, if achieved, would be the third largest winter crop on record. Average to above average winter rainfall for Queensland, New South Wales, Victoria and South Australia has resulted in an upward revision of the ABARE–BRS June forecast. Total winter crop production in New South Wales is forecast to be the highest on record, because of above average yields and a historically high area planted. In addition, the relatively high current grains prices and favourable seasonal conditions have encouraged many farmers across the eastern states to apply additional fertiliser to increase yields.

B Winter crop production – Australia [a]

	New South Wales	Victoria	Queensland	Western Australia	South Australia	Australia
	kt	kt	kt	kt	kt	kt
1997–98	8 558	3 398	1 637	12 097	5 360	31 116
1998–99	9 718	3 495	2 322	12 232	6 305	34 159
1999–00	11 495	5 139	2 222	13 311	4 751	36 981
2000–01	10 834	6 232	1 340	8 726	7 486	34 696
2001–02	11 171	5 873	1 142	12 050	8 927	39 240
2002–03	3 505	1 955	836	6 812	4 227	17 402
2003–04	10 768	6 945	1 473	16 683	7 450	43 395
2004–05	10 724	4 203	1 383	12 982	5 339	34 710
2005–06	11 987	6 278	1 436	13 948	7 524	41 251
2006–07	3 815	1 774	926	8 255	2 794	17 605
2007–08	4 000	4 711	1 196	10 751	4 713	25 433
2008–09	9 441	3 890	2 326	13 784	4 864	34 386
2009–10 **s**	7 521	6 205	1 478	12 448	7 465	35 191
2010–11 previous	9 830	4 933	1 902	12 070	6 318	35 124
2010–11 **f**	**14 505**	**6 692**	**2 022**	**9 711**	**7 655**	**40 656**
% change 2009–10 to 2010–11	*93*	*8*	*37*	*-22*	*3*	*16*

a State production include wheat, barley, oats, canola, lupins, field peas, chickpeas, faba beans and lentils. Australian totals also include triticale, linseed and safflowerseed. **f** ABARE–BRS forecast. **s** ABARE–BRS estimate.

This upgrade to the production forecast for the eastern states is expected to more than offset a downward revision for Western Australia, where winter crop production is now expected to be the lowest since the 2006–07 drought. The total area sown to winter crops nationally in 2010–11 is estimated to have decreased marginally as compared with last year to 22 million hectares (table C). The lower area planted to crop reflected lower prices for grains relative to expected returns from other enterprises at the time of planting.

Of the major winter crops, wheat production is forecast to increase by around 16 per cent to 25.1 million tonnes in 2010–11. Barley production in 2010–11 is forecast to reach just less than 8.8 million tonnes, a 9 per cent increase from the previous season. Canola production is forecast at around 2.2 million tonnes in 2010–11, 17 per cent more than last season, largely reflecting a significant increase in area planted and expected higher yields, particularly in southern New South Wales.

There are two main risks to the positive production outlook in the eastern states. First, there is the potential for an outbreak of Australian plague locusts in the south-eastern states and spur-throated locusts in Queensland. Second, the wet conditions have increased the potential risk of stripe rust, which could affect crop yields in some regions. On the upside, the continuation of good rainfall in the eastern states and/or improved conditions in Western Australia could lead to higher than expected yields.

C Winter crop area – Australia a

	New South Wales	Victoria	Queensland	Western Australia	South Australia	Australia
	'000 ha	'000 ha	'000 ha	'000 ha	'000 ha	'000 ha
1997–98	4 543	2 315	1 213	7 141	3 047	18 260
1998–99	4 927	2 454	1 420	7 419	3 376	19 582
1999–00	4 955	2 670	1 337	7 464	3 342	19 763
2000–01	5 398	2 706	1 126	7 390	3 667	20 280
2001–02	5 309	2 684	788	7 173	3 866	19 817
2002–03	4 782	2 928	774	7 174	3 965	19 623
2003–04	6 070	3 126	1 039	7 689	4 034	21 982
2004–05	6 456	3 130	878	7 936	4 018	22 445
2005–06	5 599	2 985	972	7 409	3 874	20 864
2006–07	5 636	3 121	813	6 475	4 164	20 245
2007–08	6 315	3 398	879	7 262	4 141	22 017
2008–09	6 295	3 495	1 212	7 901	3 979	22 910
2009–10 **s**	6 112	3 175	1 335	7 646	4 020	22 311
2010–11 previous	6 271	3 049	1 319	7 521	3 964	22 147
2010–11 **f**	**6 320**	**3 058**	**1 168**	**7 482**	**3 989**	**22 039**
% change 2009–10 to 2010–11	*3*	*-4*	*-13*	*-2*	*-1*	*-1*

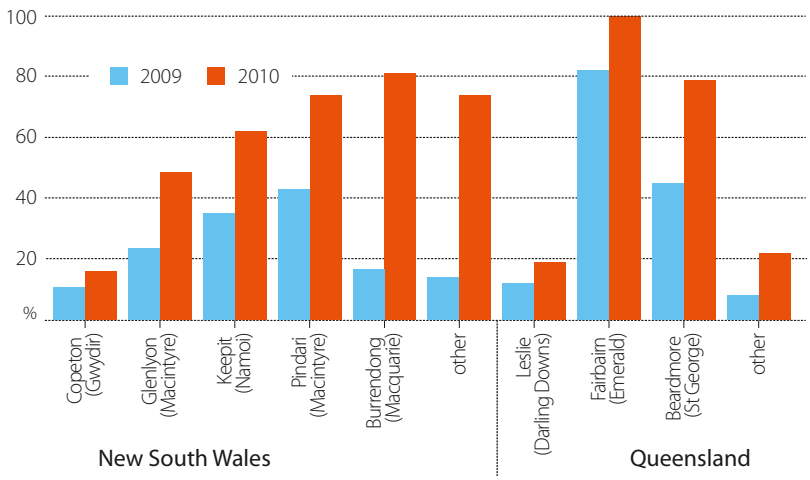
a State areas include wheat, barley, oats, canola, lupins, field peas, chickpeas, faba beans and lentils. Australian totals also include triticale, linseed and safflower. **f** ABARE–BRS forecast. **s** ABARE–BRS estimate.

Summer crop production

Total summer crop area is forecast to increase by around 60 per cent to 1.3 million hectares in 2010–11 following below average plantings last season (table D). Average to above average winter rainfall in key growing regions of northern New South Wales and southern Queensland is forecast to result in an increase in the area planted to grain sorghum. An increase in the availability of irrigation water is forecast to result in a significant increase in the area planted to both cotton and rice. Total summer crop production is forecast to increase by 52 per cent to around 3.8 million tonnes in 2010–11, reflecting an increase in the area sown to summer crops.

Australian cotton production is forecast to increase by nearly 70 per cent in 2010–11, to 653 000 tonnes, based on a forecast near doubling in the area planted to irrigated and dryland cotton. The forecast increase reflects a combination of high cotton prices, a marked recovery in irrigation water supplies, favourable soil moisture levels for dryland cotton crops, and the availability of improved cotton varieties. Implicit in the forecast are near record plantings of dryland cotton in 2010–11. The Australian cotton crop is planted from mid-September, and the planting window closes in mid-November because of restrictions placed on the use of the genetically modified cotton varieties, which now make up 92 to 95 per cent of total Australian cotton plantings.

a Capacity, major irrigation dams for cotton
as at 9 September 2010



As at 9 September 2010, the storage levels of the public dams serving the cotton regions were at 53 per cent of capacity (figure a), compared with 27 per cent at the same time in 2009 and 32 per cent in mid-June 2010. Only in the Gwydir region of New South Wales and the Darling Downs/Cecil Plains region of Queensland has the availability of irrigation water not improved sharply over the past two months. However, these two regions typically account for around 30 per cent of Australian cotton production.

D Summer crop plantings and production – Australia [a]

	New South Wales		Queensland		Australia	
	'000 ha	kt	'000 ha	kt	'000 ha	kt
1997–98	617	2 588	640	1 139	1 336	3 820
1998–99	885	3 228	721	1 712	1 742	5 097
1999–00	742	2 882	771	2 031	1 592	5 026
2000–01	825	3 366	816	1 786	1 761	5 286
2001–02	777	3 146	794	1 772	1 640	5 029
2002–03	509	1 582	521	1 199	1 098	2 871
2003–04	436	1 766	708	1 806	1 212	3 679
2004–05	436	1 766	708	1 806	1 337	3 889
2005–06	760	2 794	615	1 458	1 442	4 369
2006–07	332	1 036	520	1 079	916	2 175
2007–08	378	1 650	756	2 826	1 205	4 584
2008–09	395	1 426	700	2 300	1 157	3 798
2009–10 **s**	319	1 273	410	1 123	797	2 483
2010–11 **f**	539	1 973	664	1 709	1 271	3 767
% change 2009–10 to 2010–11	*69*	*55*	*62*	*52*	*60*	*52*

a State production includes sorghum, rice, cottonseed, maize and sunflowers. Australian production also includes soybeans, peanuts, mung beans and navy beans. **f** ABARE–BRS forecast. **s** ABARE–BRS estimate.
Note: Previous refers to the numbers published in the previous issue of the *Australian Crop Report*.

The area planted to rice in 2010–11 is forecast at around 67 000 hectares, a significant increase from the 19 000 hectares planted in the previous season. The increase reflects the increase in availability of irrigation water.

At this early stage of the season, the total area planted to grain sorghum is forecast at 602 000 hectares, a 55 per cent increase from the area sown last year. Assuming average yields, grain sorghum production in 2010–11 is forecast to rise by 39 per cent to 1.7 million tonnes.

New South Wales

- The majority of **winter crops** in New South Wales were sown during the optimal planting window and into either a reasonable or, in many cases, a full moisture profile. Average to above average winter rainfall across the entire winter cropping region further boosted yield prospects. On top of this, widespread early spring rainfall has meant that winter crop prospects are the best they have been for a numbers of years.
- Although conditions have been ideal, there is a risk of plague locusts, particularly in southern and central New South Wales, which could damage crops. The wet winter has also increased the prospect of fungal disease, which may negatively affect yields in some areas. However, growers are prepared and are expected to take necessary steps to mitigate the risks associated with locusts and disease by using both aerial spraying and ground spraying.
- Total winter crop production in New South Wales is forecast to be at a record 14.5 million tonnes, nearly double last season's drought-affected crop. Seasonal conditions across the entire winter cropping zone have been ideal, which has resulted in a significant upward revision in the yield forecast for the state. The total area planted to winter crops in 2010–11 is estimated at around 6.3 million hectares, 3 per cent more than in 2009–10 and the second highest area planted on record.
- The area planted to **wheat** in New South Wales in 2010–11 is estimated to have decreased marginally to just less than 4 million hectares. Wheat production is forecast at just less than 9.9 million tonnes in 2010–11, and, if realised, would represent the biggest wheat crop on record, reflecting the favourable winter conditions across the majority of the state.
- **Barley** production in 2010–11 is forecast to almost double to a record of around 2.5 million tonnes, reflecting a forecast significant increase in yields. The area planted to barley in 2010–11 is estimated to have increased marginally to just more than 1 million hectares.
- **Canola** production is forecast to reach 500 000 tonnes in 2010–11, more than double the previous crop, reflecting both an increase in the area planted and higher yields. Last season, canola production in New South Wales was adversely affected by dry spring conditions, particularly in southern New South Wales. The area planted to canola is estimated to have increased by 29 per cent in 2010–11, to 310 000 hectares.
- The area planted to **grain sorghum** is forecast to increase by around 46 per cent in 2010–11, to 175 000 hectares, reflecting above average winter rainfall in key growing regions. Assuming average yields at this early stage of the season, production is forecast to increase by around 26 per cent to 578 000 tonnes.

Winter crop forecasts, 2010–11, New South Wales

	area	yield [a]	production	production change from 2009–10
	`000 ha	t/ha	kt	%
Wheat	3 950	2.50	9 875	96
Barley	1 020	2.40	2 448	91
Canola	310	1.61	500	106

a Yields are based on area planted.

- The area planted to **rice** in 2010–11 is forecast at around 67 000 hectares, a significant increase from the 19 000 hectares planted in the previous season. The increase in the forecast area planted reflects the increase in availability of irrigation water.
- Production from **cotton** growing in New South Wales is forecast to increase by more than 50 per cent in 2010–11, to 385 000 tonnes of **cotton lint** and 545 000 tonnes of **cottonseed**. If realised, this would be the largest New South Wales cotton harvest since 2001–02, but still well below the record output of 533 000 tonnes of cotton lint in 2000–01. The production forecast is based on the expectation of a 41 per cent increase in irrigated cotton plantings and a fourfold increase in dryland cotton plantings. Forecast irrigated cotton plantings are constrained by limited supplies of irrigation water in the Gwydir region, although soil moisture levels are likely to remain favourable for dryland cotton production in those New South Wales regions that receive reliable summer rainfall.

Summer crop forecasts, 2010–11, New South Wales

	area	yield [a]	production	area change from 2009–10
	`000 ha	t/ha	kt	%
Sorghum	175	3.30	578	46
Sunflowers	21	1.36	29	11
Cottonseed	236	2.31	545	90
Cotton lint	236	1.64	385	90
Rice	67	9.10	610	253

a Yields are based on area planted.

Victoria

- The average to above average rainfall recorded in August and early September across nearly all parts of Victoria built on one of the best starts to the winter cropping season in many years.
- Between 50 millimetres and 150 millimetres of rain fell across the state in August and early September, with the heaviest rainfall recorded in the Western District and parts of the North East. Some flooding occurred in the North East, while in the Western District the rain has raised concerns about waterlogging in the major canola producing region of Victoria. Conditions in the Mallee and Wimmera are shaping up to be very favourable leading into spring and yields are expected to be above average in these regions.
- Although conditions have been favourable, there is a risk that plague locusts could damage crops.
- Winter crop production in Victoria is forecast to be 6.7 million tonnes in 2010–11, 8 per cent higher than last season.
- **Wheat** production in 2010–11 is forecast to be 3.4 million tonnes, 7 per cent higher than 2009–10 and, if realised, would be the highest production since 1983–84. The area planted to wheat is estimated to have fallen by around 5 per cent from last season, while wheat yields are forecast to be 2.3 tonnes a hectare, the highest since 2001–02 and 12 per cent higher than last season.
- Despite a 9 per cent reduction in area planted, **barley** production is forecast to be 2 million tonnes in 2010–11, 4 per cent higher than last season. The decline in the area planted was because of the relatively unfavourable returns to barley at planting time. The lower area planted is expected to be more than offset by a 15 per cent increase in yields from last season, to a forecast 2.35 tonnes a hectare.
- Yields for **canola** are forecast to reach a new record of 1.80 tonnes a hectare, reflecting the good start to the season and the recent follow-up rain recorded in canola producing regions. Area planted is estimated to have increased 12 per cent from last season to 262 000 hectares and production is forecast to reach 472 000 tonnes, a new record if realised. However, concerns of waterlogging in the Western District represent a risk to this production forecast.

Winter crop forecasts, 2010–11, Victoria

	area	yield [a]	production	production change from 2009–10
	`000 ha	t/ha	kt	%
Wheat	1 476	2.30	3 395	7
Barley	853	2.35	2 005	4
Canola	262	1.80	472	17

a Yields are based on area planted.

Queensland

- Queensland's cropping regions recorded average to above average rainfall over July and August. This was in contrast to June, which was particularly dry with below average rainfall recorded over most of the state. Around 5 to 10 millimetres of rain fell over the cropping regions in that month. The dry conditions meant that some farmers were not able to complete their winter planting programs and some land was left fallow, particularly in the Darling Downs.
- So far in early September, around 25 to 50 millimetres of rainfall has been recorded over the cropping regions of Queensland. This follow-up rain will further boost winter crop yield potential and summer crop prospects. As a result, the 2010–11 winter crop season is looking substantially better than last season, when a dry winter and spring reduced yields and production.
- Although conditions have been favourable, there is a risk that locusts could damage crops.
- The area sown to winter crops in Queensland is estimated to have decreased by 13 per cent in 2010–11, to 1.2 million hectares. Total winter crop production is forecast to be around 2 million tonnes next season, which is around 37 per cent higher than in 2009–10.
- The area planted to **wheat** is estimated to be 900 000 hectares, 18 per cent less than last season and less than ABARE–BRS's June forecast. Despite the decline in area planted, wheat production is forecast to rise by 31 per cent to 1.6 million tonnes, reflecting higher forecast yields.
- **Barley** production is forecast to reach 191 000 tonnes, the highest since 2003–04 and 47 per cent higher than last season. The area planted to barley is estimated to have increased by around 6 per cent to 106 000 hectares, reflecting the relatively strong feed demand from livestock industries in southern Queensland.
- **Chickpea** production is forecast to be 236 000 tonnes in 2010–11, which is 70 per cent higher than last season. The favourable prices for chickpeas at the time of planting resulted in plantings increasing by around 26 per cent from last season.

Winter crop forecasts, 2010–11, Queensland

	area	yield [a]	production	production change from 2009–10
	`000 ha	t/ha	kt	%
Wheat	900	1.75	1 575	31
Barley	106	1.80	191	47

a Yields are based on area planted.

- The additional fallow land available in the Darling Downs is forecast to be used for **grain sorghum** plantings. The area planted is forecast to rise by nearly 60 per cent to 425 000 hectares. Dry conditions last season prevented plantings in southern Queensland, while wet conditions prevented plantings in central Queensland. The planting window for grain sorghum is open until the end of February 2011 in central Queensland and, assuming average yields, production is forecast to be around 1.1 million tonnes.

- Production from **cotton** farming in Queensland is forecast to more than double in 2010–11, to 268 000 tonnes of **cotton lint** and 378 000 tonnes of **cottonseed**. If realised, this would be the largest Queensland cotton harvest since the record output of 297 000 tonnes of cotton lint in 2004–05. The production forecast is based on the expectation of an 85 per cent increase in irrigated cotton plantings and a 270 per cent increase in dryland cotton plantings. Much of the increased cotton production in Queensland is expected to occur in the irrigated cropping regions of St George and Dirranbandi, where good rainfall throughout 2010 has replenished both public and on-farm irrigation dams.

Summer crop forecasts, 2010–11, Queensland

	area	yield [a]	production	area change from 2008–09
	`000 ha	t/ha	kt	%
Sorghum	425	2.65	1 127	59
Sunflowers	12	1.01	12	56
Cottonseed	172	2.20	378	104
Cotton lint	172	1.55	268	104

a Yields are based on area planted.

Western Australia

- Winter crop prospects are below average for most of Western Australia and favourable spring rainfall will be needed for crops to achieve, at best, average yields. Southern parts of the grain belt have fared slightly better and, in some parts near Esperance, rainfall was average over the winter months. In these limited areas, current crop prospects are good if spring rainfall is received.
- Winter crop production is forecast to be just more than 9.7 million tonnes in 2010–11, around 2.7 million tonnes less than the 2009–10 harvest, because of a reduced area planted and reduced yields The area sown to winter crops is estimated to have fallen by 2 per cent to 7.5 million hectares.
- The area sown to **wheat** is estimated to be around 4.9 million hectares in 2010–11, slightly lower than in 2009–10. This reflects expected lower wheat prices at planting time. Wheat production is forecast to fall by 26 per cent to 6.1 million tonnes in 2010–11, compared with 8.2 million tonnes in 2009–10.
- The area sown to **barley** is estimated to have fallen in 2010–11 to 990 000 hectares. Expected lower prices around planting time and growers' concerns of the barley crop being downgraded to feed barley, were the main reason for lower plantings. Barley production is forecast to decline by 23 per cent to around 1.7 million tonnes in 2010–11.
- The area sown to **canola** is estimated to have risen in 2010–11 to 875 000 hectares, in response to the expected higher relative returns to canola at planting time. Canola

production is forecast to decrease by 3 per cent to 945 000 tonnes in 2010–11, largely reflecting dry seasonal conditions.

- **Rice** was planted in the Ord Valley for the first time since 1983. Harvesting is expected to be completed by September. Total rice production in 2010–11 is estimated to be around 1500 tonnes, from a total planted area of 240 hectares. In contrast to previous growing practices in the Ord Valley, rice was planted at the beginning of the dry season.

Winter crop forecasts, 2010–11, Western Australia

	area	yield a	production	production change from 2009–10
	`000 ha	t/ha	kt	%
Wheat	4 850	1.25	6 063	-26
Barley	990	1.70	1 683	-23
Canola	875	1.08	945	-3
Lupins	391	1.00	390	-5

a Yields are based on area planted.

South Australia

- Planting of 2010–11 winter crops across South Australia was completed by June. Although rainfall in July was below average in most of the cropping areas, August rainfall was mostly above average and there was good followup rainfall in early September. The rainfall has replenished soil moisture and put crops in a good position for spring.
- Growers, predominantly on the Eyre Peninsula, were concerned about mice consuming seed after sowing and, consequently, lower crop yields. However, cold and wet weather in August and early September, as well as mice baiting, is expected to have reduced mouse populations, but there are still concerns these populations may rebuild before the harvest.
- Although conditions have been favourable, there is a risk that plague locusts could damage crops.
- Total area planted to winter crops in South Australia in 2010–11 is estimated to be similar to last season, at 3.99 million hectares. Reflecting the positive August and September conditions, total winter crop production is forecast at 7.7 million tonnes, a 3 per cent increase from 2009–10.
- The area planted to **wheat** in South Australia in 2010–11 is estimated at 2.2 million hectares, an increase of 2 per cent compared with 2009–10, in response to some producers moving out of barley into wheat production because of expected lower returns for barley at planting time. Wheat production is forecast at 4.2 million tonnes in 2010–11, which is a 5 per cent increase from 2009–10.

- The area planted to **barley** in 2010–11 is estimated to have fallen by 8 per cent, compared with 2009–10. Yields are forecast to be 2.2 tonnes a hectare, around 6 per cent higher than last season. Production is forecast to be 2.4 million tonnes in 2010–11, around 3 per cent lower than last season.
- Reflecting higher relative returns at the time of planting, the area planted to **canola** in South Australia is estimated to have increased by 11 per cent to 195 000 hectares in 2010–11. Canola production is forecast to increase by 8 per cent from last season, to be 312 000 tonnes in 2010–11.

Winter crop forecasts, 2010–11, South Australia

	area	yield a	production	production change from 2009–10
	`000 ha	t/ha	kt	%
Wheat	2 190	1.90	4 161	5
Barley	1 100	2.20	2 420	-3
Canola	195	1.60	312	8

a Yields are based on area planted.

1 Australian crop production

at 14 September 2010

	area planted				yield				production			
	Five year average a	2008–09	2009–10 s	2010–11 f	Five year average a	2008–09	2009–10 s	2010–11 f	Five year average a	2008–09	2009–10 s	2010–11 f
	'000 ha	'000 ha	'000 ha	'000 ha	t/ha	t/ha	t/ha	t/ha	kt	kt	kt	kt
Wheat	12 827	13 530	13 788	13 374	1.43	1.58	1.57	1.88	18 523	21 420	21 656	25 099
Barley	4 597	5 015	4 479	4 077	1.60	1.59	1.80	2.15	7 389	7 997	8 048	8 771
Oats b	992	870	919	937	1.29	1.33	1.35	1.74	1 268	1 160	1 244	1 633
Triticale	359	323	350	330	1.32	1.12	1.56	1.96	477	363	545	646
Sorghum b	695	767	389	602	3.06	3.51	3.16	2.83	2 184	2 692	1 228	1 707
Maize	63	65	59	63	5.35	5.82	5.55	5.43	338	376	327	342
Canola	1 277	1 693	1 394	1 642	1.08	1.09	1.37	1.36	1 392	1 844	1 910	2 229
Sunflower	45	52	27	33	1.28	1.07	1.54	1.21	57	55	41	40
Cottonseed c	183	164	208	408	2.74	2.84	2.63	2.26	486	466	547	923
– lint	183	164	208	408	1.97	2.01	1.86	1.60	349	329	387	653
Rice	30	8	19	67	9.03	8.18	10.84	9.09	291	65	206	611
Lupins d	672	577	483	564	1.12	1.23	1.27	1.09	748	708	614	617
Field peas d	325	300	285	279	0.98	0.79	1.25	1.32	317	238	356	369
Chickpeas d	285	338	363	515	1.10	1.31	1.23	1.54	316	443	445	792
Faba beans d	151	125	129	145	1.23	1.08	1.68	1.76	185	135	217	256
Lentils d	147	117	104	159	0.95	0.55	1.38	1.45	133	64	143	230

a Based on data from ABS, *Principal Agricultural Commodities,* cat. no. 7111.0, 5 years to 2009–10; ABS, *Agricultural Commodities, Australia,* cat. no. 7121.0; Pulse Australia. **b** Area harvested for grain.
c Cottonseed area is estimated harvested area. **d** *Source:* Pulse Australia. **s** ABARE–BRS estimate. **f** ABARE–BRS forecast.
Note: The crop year refers to crops planted during the 12 months to 31 March. Winter crops are generally both sown and harvested within the nominated 12 month period. Slight discrepancies may appear between table 1 and tables 2 and 3 as a result of the inclusion of the Australian Capital Territory and Northern Territory in the Australian totals. Area and production estimates are from the sources detailed in footnotes to tables 2 and 3. Coverage is for all farms with an estimated value of agricultural operations of more than $5000.

2 State production – principal crops

at 14 September 2010

	New South Wales		Victoria		Queensland		Western Australia		South Australia		Tasmania	
	area	prod.	area	prod.	area	prod.	area	prod.	area	prod.	area	prod.
	'000 ha	kt	'000 ha	kt	'000 ha	kt	'000 ha	kt	'000 ha	kt	'000 ha	kt
Wheat												
2010–11 **f**	3 950	9 875	1 476	3 395	900	1 575	4 850	6 063	2 190	4 161	8	31
2009–10 **as**	4 000	5 050	1 550	3 177	1 100	1 200	4 980	8 248	2 150	3 951	8	31
2008–09	4 322	6 963	1 534	1 756	1 020	2 016	4 542	8 274	2 104	2 376	9	35
Five year average to 2009-10 **a**	3 896	5 021	1 452	2 143	841	1 233	4 514	7 313	2 117	2 784	8	29
Barley												
2010-11 **f**	1 020	2 448	853	2 005	106	191	990	1 683	1 100	2 420	8	25
2009-10 **s**	1 000	1 280	940	1 929	100	130	1 230	2 187	1 200	2 494	9	28
2008-09	977	1 449	1 136	1 461	92	173	1 559	3 007	1 240	1 877	11	29
Five year average to 2009-10 **a**	1 006	1 326	992	1 557	103	138	1 276	2 424	1 209	1 918	9	25
Oats b												
Five year average to 2009-10 **a**	390	284	160	305	15	5	270	506	80	136	4	8
Lupins c												
2010-11 **f**	87	107	27	35	0	0	391	390	60	84	0	0
2009-10 **s**	63	72	26	30	0	0	326	411	69	100	0	0
2008-09	44	37	36	18	0	0	444	600	53	52	0	0
Five year average to 2009-10 **a**	59	43	36	25	0	0	504	604	72	75	0	0
Canola												
2010-11 **f**	310	500	262	472	0	0	875	945	195	312	0	0
2009-10 **s**	240	243	234	402	0	0	745	975	175	290	0	0
2008-09	300	228	285	233	3	2	920	1 175	184	204	2	2
Five year average to 2009-10 **a**	265	184	217	234	2	1	622	782	171	191	1	1
Sorghum												
2010-11 **f**	175	578	1	1	425	1 127	1	1	0	0	0	0
2009-10 **s**	120	460	1	1	267	766	1	1	0	0	0	0
2008-09	227	919	2	1	538	1 771	0	1	0	0	0	0
Five year average to 2009-10 **a**	223	784	1	0	470	1 398	1	1	0	0	0	0
Cottonseed d												
2010-11 **f**	236	545	0	0	172	378	0	0	0	0	0	0
2009-10 **s**	124	362	0	0	84	185	0	0	0	0	0	0
2008-09	88	252	0	0	76	214	0	0	0	0	0	0
Five year average to 2009-10 **a**	115	325	0	0	68	161	0	0	0	0	0	0

a Based on data from ABS, *Principal Agricultural Commodities,* cat. no. 7111.0, 5 years to 2009–10; ABS, *Agricultural Commodities, Australia,* cat. no. 7121.0. **b** Area harvested for grain; current season estimates, by state, are no longer produced because of difficulties in obtaining consistent data at the state level. **c** Includes albus lupins. *Source:* Pulse Australia. **d** Cottonseed area is estimated harvested area.
s ABARE–BRS estimate. **f** ABARE–BRS forecast.
Note: Zero area or production estimates may appear as a result of rounding to the nearest whole number, if production or area estimates are less than 500 tonnes or 500 hectares.

3 State production – other major crops [a]

at 14 September 2010

	New South Wales		Victoria		Queensland		Western Australia		South Australia		Tasmania	
	area	prod.	area	prod.	area	prod.	area	prod.	area	prod.	area	prod.
	'000 ha	kt	'000 ha	kt	'000 ha	kt	'000 ha	kt	'000 ha	kt	'000 ha	kt
Field peas												
2010–11 **f**	51	66	45	54	0	0	65	85	118	165	0	0
2009–10 **as**	46	33	52	75	0	0	60	65	127	183	0	0
2008–09	29	16	68	25	0	0	81	82	121	114	0	1
Five year average to 2009–10 **a**	40	24	78	67	0	0	70	71	137	154	0	1
Maize												
2010–11 **f**	21	169	1	7	40	163	1	4	0	0	0	0
2009–10 **as**	20	172	1	6	37	146	1	4	0	0	0	0
2008–09	14	115	0	3	49	255	0	2	0	0	0	0
Five year average to 2009–10 **a**	20	164	1	8	41	164	1	3	0	0	0	0
Chickpeas												
2010–11 **f**	326	503	25	30	144	236	9	8	12	16	0	0
2009–10 **as**	213	269	21	19	114	139	2	3	14	16	0	0
2008–09	199	292	44	17	86	126	3	4	6	4	0	0
Five year average to 2009–10 **a**	173	199	30	18	73	90	2	2	6	6	0	0
Sunflowerseed												
2010–11 **f**	21	29	0	0	12	12	0	0	0	0	0	0
2009–10 **as**	19	31	0	0	8	10	0	0	0	0	0	0
2008–09	34	36	0	0	17	19	1	0	0	0	0	0
Five year average to 2009–10 **a**	34	43	0	0	11	14	0	0	0	0	0	0
Faba beans												
2010–11 **f**	40	85	45	63	3	5	3	5	55	99	0	0
2009–10 **as**	45	65	22	35	2	3	4	5	57	110	0	0
2008–09	29	35	36	27	0	0	2	4	58	68	0	0
Five year average to 2009–10 **a**	31	47	42	35	1	1	4	4	74	98	0	0
Lentils												
2010–11 **f**	1	0	75	105	0	0	0	0	83	125	0	0
2009–10 **as**	0	0	52	50	0	0	0	0	52	93	0	0
2008–09	0	0	71	25	0	0	0	0	45	39	0	0
Five year average to 2009–10 **a**	0	0	86	64	0	0	2	3	59	66	0	0

a *Source:* Pulse Australia. **b** Based on data from ABS, *Principal Agricultural Commodities,* cat. no. 7111.0; ABS, *Agricultural Commodities, Australia,* cat. no. 7121.0; Pulse Australia and ABARE–BRS estimates. **s** ABARE–BRS estimates. **f** ABARE–BRS forecast.

Note: Zero area or production estimates may appear as a result of rounding to the nearest whole number, if production or area estimates are less than 500 tonnes or 500 hectares.

4 Australian rainfall comparisons for principal cropping districts

	May			June			July			August		
	average a	2009	2010	average a	2009	2010	average a	2009	2010	average a	2009	2010 p
	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
Queensland												
Central Highlands (35)	32	21	**19**	30	29	**10**	26	0	**21**	21	1	**66**
Maranoa (43)	33	51	**19**	32	37	**12**	33	3	**41**	25	2	**53**
West Darling Downs (42)	36	92	**21**	34	36	**12**	34	6	**48**	25	3	**57**
East Darling Downs (41)	41	80	**36**	41	43	**14**	40	8	**58**	31	3	**80**
Moreton South Coast (40)	82	134	**47**	68	80	**16**	54	3	**38**	37	5	**80**
New South Wales												
North West Plains (W) (52)	37	63	**28**	35	30	**22**	36	13	**80**	27	4	**46**
North West Plains (E) (53)	43	59	**39**	41	32	**26**	42	18	**83**	33	5	**58**
North West Slopes (N) (54)	44	49	**60**	43	33	**39**	46	19	**93**	37	7	**66**
North West Slopes (S) (55)	48	23	**50**	50	49	**38**	53	31	**107**	46	10	**75**
Northern Tablelands (N) (56)	43	117	**68**	48	50	**43**	48	24	**92**	43	14	**84**
Central West Plains (S) (50)	39	20	**49**	39	70	**31**	36	24	**68**	36	10	**40**
Central West Plains (N) (51)	38	50	**34**	37	61	**29**	35	15	**78**	30	4	**39**
Central West Slopes (N) (64)	43	21	**43**	47	55	**32**	47	23	**98**	42	6	**63**
Central West Slopes (S) (65)	46	11	**57**	49	73	**30**	49	38	**86**	48	14	**76**
Central Tablelands (N) (62)	46	18	**61**	49	54	**37**	49	37	**91**	48	12	**76**
Central Tablelands (S) (63)	65	51	**62**	71	56	**41**	64	48	**82**	65	29	**89**
Riverina (W) (75)	34	12	**54**	33	66	**22**	31	20	**42**	31	15	**49**
Riverina (E) (74)	42	9	**63**	44	65	**24**	43	29	**46**	44	25	**64**
South West Slopes (N) (73)	49	11	**61**	54	70	**36**	56	52	**75**	55	27	**86**
South West Slopes (S) (72)	71	20	**69**	80	75	**57**	87	87	**84**	90	91	**146**
Southern Tablelands (GM)(70)	52	21	**103**	54	42	**28**	50	35	**51**	50	33	**65**
Victoria												
North Mallee (76)	30	20	**40**	28	42	**19**	30	29	**26**	31	21	**54**
South Mallee (77)	35	27	**35**	33	44	**21**	35	42	**31**	36	33	**74**
North Wimmera (78)	40	40	**30**	41	50	**25**	44	54	**39**	45	47	**90**
South Wimmera (79)	51	50	**33**	53	54	**48**	59	81	**59**	60	77	**104**
Lower North (80)	42	15	**50**	41	51	**30**	42	41	**39**	43	27	**90**
Upper North (81)	49	19	**48**	51	61	**50**	53	56	**54**	54	47	**105**
Lower North East (82)	72	27	**60**	83	84	**73**	91	99	**91**	91	95	**160**
Upper North East (83)	102	31	**69**	114	66	**89**	126	105	**80**	130	107	**165**
North Central (88)	68	22	**48**	72	59	**79**	79	74	**68**	82	75	**129**
Central Western (89)	57	43	**34**	57	48	**53**	64	79	**53**	70	92	**140**
Western Australia												
North Coast (8)	52	36	**37**	78	75	**26**	71	86	**50**	52	47	**55**
Central Coast (9)	110	43	**73**	167	139	**42**	164	139	**96**	123	116	**58**
Northern Central (10)	45	25	**30**	60	54	**21**	58	68	**41**	45	45	**28**
South Coast (9A)	115	60	**71**	153	175	**67**	155	125	**105**	123	91	**58**
South Central (10A)	53	20	**37**	69	78	**32**	67	55	**44**	54	47	**26**
South East (12)	27	8	**22**	31	29	**12**	26	25	**20**	22	16	**17**
South Australia												
Upper South East (25B)	45	22	**38**	46	43	**40**	49	73	**33**	52	53	**88**
Murray Mallee (25A)	30	13	**35**	30	33	**20**	31	31	**23**	33	23	**49**
Murray River (24)	33	14	**43**	33	43	**20**	35	41	**27**	36	28	**56**
East Central (23)	69	43	**61**	74	68	**58**	79	108	**50**	75	63	**106**
West Central (22)	49	42	**49**	58	97	**66**	60	96	**54**	55	56	**84**
Lower North (21)	46	19	**63**	49	78	**27**	52	49	**28**	52	37	**67**
Upper North (19)	32	16	**54**	34	40	**14**	36	30	**23**	36	24	**40**
Western (18)	36	16	**47**	42	49	**27**	45	48	**32**	41	22	**42**
Tasmania												
Northern (91)	97	71	**74**	105	106	**130**	126	184	**106**	119	266	**158**
Midlands (93)	42	23	**33**	44	115	**48**	47	51	**29**	50	149	**81**

a Average rainfall is the simple arithmetic average of rainfall over the period 1913 to 2010. **p** Preliminary.

Note: Numbers in parentheses indicate meteorological districts (see map on page iv).

Source: Bureau of Meteorology monthly district rainfall reports (various issues).

5 Australian supply and disposal of wheat, oilseeds and pulses [a]

	2005–06	2006–07	2007–08	2008–09	2009–10 s	2010–11 f
	kt	kt	kt	kt	kt	kt
Wheat						
Production	25 150	10 822	13 569	21 420	21 656	25 099
Domestic use **b**	6 623	7 416	6 511	7 294	6 713	6 770
– human and industrial	2 245	2 286	2 337	2 470	2 355	2 378
– feed **cd**	3 788	4 501	3 498	4 134	3 690	3 704
– seed	590	629	677	689	669	687
Exports	15 969	8 685	7 444	14 707	15 249	18 376
Change in stocks	2 558	–5 279	– 386	– 581	– 306	– 47
Canola						
Production	1 419	573	1 214	1 844	1 910	2 229
Apparent domestic use	525	592	692	660	701	690
– seed	5	6	8	7	8	8
– other	520	586	684	653	693	681
Exports	831	228	472	1 067	1 297	1 646
Pulses – major crops						
Production						
lupins	1 285	470	662	708	614	617
field peas	585	140	268	238	356	369
chickpeas	150	229	313	443	445	792
Apparent domestic use **c**						
lupins	551	437	665	499	350	348
field peas	214	114	189	123	238	267
chickpeas	9	20	22	24	31	34
Exports						
lupins	494	93	77	304	263	269
field peas	252	138	141	137	196	205
chickpeas	161	241	222	506	544	658

a Production, use and export data are on a marketing year basis: October–September for wheat; November–October for canola, peas and lupins. Production may not equal the sum of apparent domestic use and exports in any one year because of reductions or increases in stocks. **b** Some ABARE–BRS estimates have been revised based on additional industry information. ABARE–BRS is continuing to investigate data. **c** Calculated as a residual: production less exports less change in stocks. **d** Does not include imports. **s** ABARE–BRS estimate. **f** ABARE–BRS forecast.

Note: The export data refer to market year export periods, so are not comparable with financial year export figures published elsewhere.

Sources: Australian Bureau of Statistics; ABARE–BRS.

6 Australian supply and disposal of coarse grains [a]

	2005–06	2006–07	2007–08	2008–09	2009–10 s	2010–11 f
	kt	kt	kt	kt	kt	kt
Barley						
Production	9 482	4 257	7 160	7 997	8 098	8 771
Apparent domestic use	2 764	3 153	2 460	2 523	2 569	2 670
– seed	188	203	195	202	199	188
– other	2 576	2 950	2 265	2 321	2 370	2 482
Export	5 917	2 563	4 054	3 891	4 443	5 041
– feed barley	3 191	1 192	2 303	2 254	2 615	3 033
– malting barley	2 067	659	1 083	980	1 151	1 290
– malt (grain equivalent)	660	712	668	658	677	682
Oats						
Production	1 688	748	1 502	1 160	1 244	1 633
Apparent domestic use	1 497	713	1 322	999	1 064	1 372
– seed	48	59	42	44	45	45
– other	1 448	653	1 279	955	1 019	1 326
Export	191	35	181	161	233	261
Triticale [b]						
Production	830	199	450	363	545	646
Apparent domestic use	830	199	450	363	545	646
– seed	18	18	16	18	17	17
– other	812	181	434	345	529	629
Grain sorghum						
Production	1 929	1 283	3 790	2 692	1 228	1 705
Apparent domestic use	1 845	1 173	2 833	1 694	689	1 170
– seed	3	5	4	2	3	3
– other	1 841	1 168	2 829	1 692	686	1 167
Export [c]	83	110	957	998	459	537
Maize						
Production	362	239	387	376	327	342
Apparent domestic use	352	229	296	341	294	307
– seed	1	1	1	1	1	1
– other	351	227	294	339	293	306
Export [c]	10	11	92	36	34	35
Total coarse grains						
Production	14 291	6 726	13 289	12 587	11 442	13 098
Apparent domestic use	7 287	5 467	7 361	5 920	5 160	6 165
– seed	259	286	258	266	263	254
– other	7 029	5 180	7 101	5 652	4 897	5 911
Export	6 202	2 719	5 284	5 384	4 792	5 857

a Production, use and export data are on a marketing year basis: market years are November–October for barley, oats and triticale; March–February for sorghum and maize. The sum of domestic use and exports may differ from production as a result of changes in grain stock levels. **b** Excludes small quantities of triticale for export. **c** Exports reflect the volume of grain exported from the respective crops harvested. For example the volume of exports reported for sorghum in 2002–03, were actually shipped in the period March 2003 to February 2004. **s** ABARE–BRS estimate. **f** ABARE–BRS forecast.

Sources: Australian Bureau of Statistics; ABARE–BRS.

7 Australian grain prices [a]

	2008	2009				2010	
	Jul–Sep	Jan–Mar	Apr–Jun	Jul–Sep	Oct–Dec	Jan–Mar	Apr–Jun
	A$/t	A$/t	A$/t	A$/t	A$/t	A$/t	A$/t
Wheat							
Domestic							
feed – Sydney	286	271	277	265	235	233	215
International							
US no.2 hard red winter, fob Gulf [b]	363	371	340	258	240	230	217
Barley							
Domestic							
2 row feed – Sydney	252	240	241	250	218	216	201
Export [c]							
feed (bulk)	293	201	214	208	202	179	182
malting (bulk)	552	402	316	267	230	226	209
International							
feed – France Rouen [d]	239	230	208	178	170	158	155
Grain sorghum							
Domestic							
feed – Sydney	238	227	235	242	235	236	201
Export [c]	360	293	233	231	222	425	290
International							
US del. Gulf [b]	252	258	234	195	201	194	184
Oats							
Domestic							
feed – Sydney	233	238	257	247	212	205	200
Export [c]	396	369	310	278	242	241	229
International							
US heavy white, del. Portland [b]	304	298	253	201	169	171	175
Maize							
Domestic							
feed – Sydney	351	317	328	334	308	300	311
International							
US no.2 fob Gulf [b]	250	251	232	184	185	180	179
Oilseeds							
Domestic							
canola – del. Melbourne	580	547	546	485	414	415	414
sunflower – del. Melbourne	970	560	550	550	550	550	550
International							
soybeans – US cif Rotterdam [b]	560	592	605	542	482	460	453
Pulses							
Domestic							
lupins – del. Perth	261	245	na	247	216	214	199
chickpeas – del. Melbourne	458	400	446	457	434	426	421
field peas – del. Melbourne	426	431	417	386	303	288	276
Export [c]							
chickpeas	610	576	555	602	514	570	572
field peas	629	497	515	426	382	345	347

a Prices refer to bulk sales of grain delivered to Sydney region. Export prices for coarse grains are the average unit fob value of Australian exports recorded by the Australian Bureau of Statistics. Prices quoted only for months in which sizable export volumes were recorded. International prices are obtained from the Unicom Newswire service in US$ and converted to A$ using monthly average of daily exchange rates. **b** Average of daily offer prices made in US$, converted to A$ using monthly average of daily exchange rates. **c** Export unit values reflect the average price received for grain exported over the quarter, not current market prices. There can be a long lag time between when prices were negotiated by exporters and the physical export of product. **d** World feed barley indicator price as of this edition of the *Australian Crop Report*.

Note: Prices used in these calculations exclude the GST.

RESEARCH FUNDING ABARE–BRS relies on financial support from external organisations to complete its research program. As at the date of this publication, the following organisations had provided financial support for Bureau research in 2009–10 and 2010–11. We gratefully acknowledge this assistance.

AusAID

Austmine

Australian Competition and Consumer Commission

Australian Fisheries Management Authority

Australian Government Department of Climate Change

Australian Government Department of the Environment, Water, Heritage and the Arts

Australian Government Department of Innovation, Industry, Science and Research

Australian Government Department of Resources, Energy and Tourism

Australian Trade Commission (Austrade)

CRC Plant Biosecurity

CSIRO (Commonwealth Scientific and Industrial Research Organisation)

Dairy Australia

Department of Primary Industries, Victoria

DN Harris and Associates

European Commission

Fisheries Research and Development Corporation

Fisheries Resources Research Fund

Forest and Wood Products Australia

Grains Research and Development Corporation

Grape and Wine Research and Development Corporation

Horticulture Australia

International Food Policy Research Institute

Land and Water Australia

Meat and Livestock Australia

National Australia Bank

OECD

Queensland Department of Employment, Economic Development and Innovation

Rural Industries Research and Development Corporation

South Australian Department of Trade and Economic Development

The Treasury

Western Australian Department of State Development