Australian Government
Bureau of Rural Sciences

Australian climate and agricultural monthly update

March 2010





Extract from *Australian climate and agricultural monthly update – February 2010* information accurate at date of publishing.

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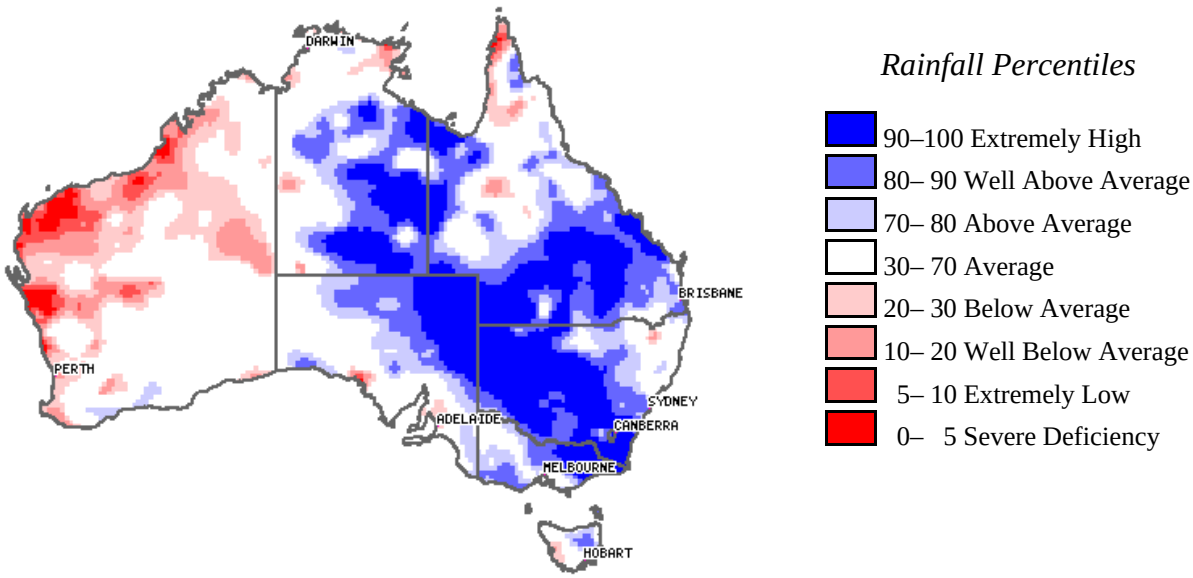
1.0 Climate

1.1 Rainfall

Rainfall over the last month (February 2010)



Rainfall percentiles for February 2010

Rainfall for Australia during February 2010 was 20 per cent above the long-term average (thirtieth highest of 111 years).

All states of mainland Australia, except for Western Australia, exceeded their February average rainfall. New South Wales, Victoria and South Australia each received around double their respective long-term averages for February. New South Wales experienced its wettest February since 1976 (115 per cent above average). Queensland and the Northern Territory recorded 49 per cent and 20 per cent above average rainfall, respectively.

The Murray-Darling Basin recorded its highest rainfall in February since 1994 (138 per cent above average).

Well above average rainfall was received across eastern Victoria and much of New South Wales. Much of this rain fell around the middle of the month because of the presence of a deep trough over the area.

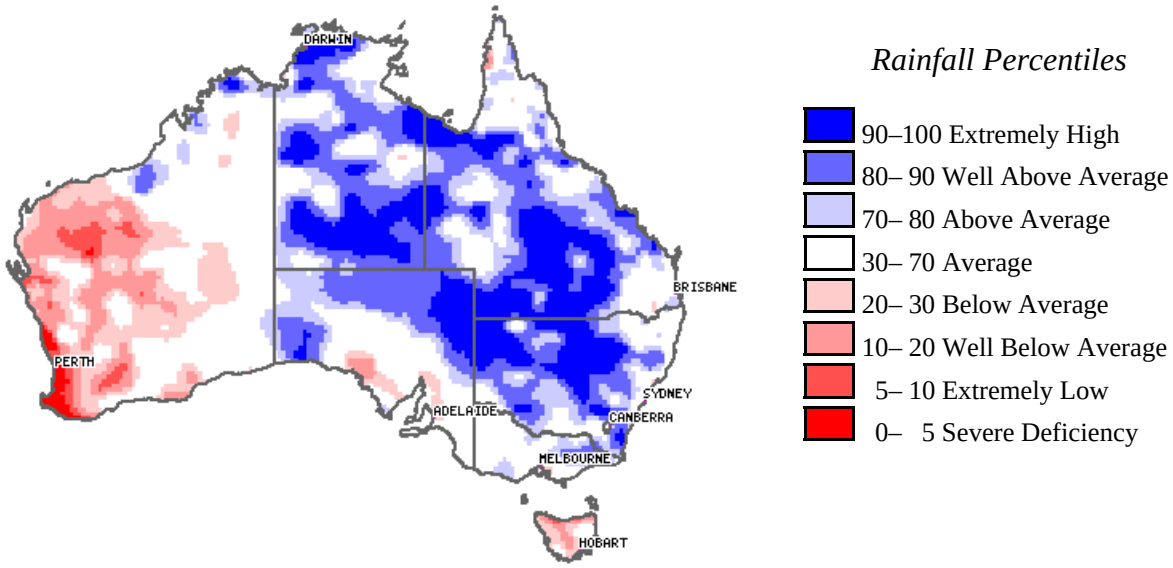
Above average rainfall was recorded across most of the Northern Territory, the far north-east of South Australia and in western and southern Queensland. Much of this rain fell towards the end of the month as a result of a monsoonal low.

Rainfall across the eastern and central states is expected to provide favourable production opportunities for both livestock and crop producers leading into the autumn production period.

Below average rainfall was recorded across areas of Western Australia and the northern parts of the Northern Territory and Queensland, southern Tasmania and in some agricultural areas of South Australia.

Spatial rainfall analyses are based on historical monthly rainfall data provided by the Bureau of Meteorology. For further information on rainfall data and the interpretation of percentile analyses go to http://www.bom.gov.au/climate/austmaps/

Ongoing or emerging rainfall situations



Rainfall percentiles for the last three months
December 2009 – February 2010

Rainfall received during summer 2009–10 (December to February) was well above average across north-eastern South Australia and most of the Northern Territory, Queensland and New South Wales.

Above average rainfall in February 2010 has cleared short-term rainfall deficiencies in eastern Victoria, as well as in south-eastern areas of New South Wales and Queensland.

Above average rainfall over the summer across the Murray-Darling Basin has improved conditions for irrigators and provided valuable inflows.

Below average rainfall in February 2010 across the west of the country strengthened rainfall deficiencies in the western and central parts of Western Australia. Rainfall deficiencies persisted over summer 2009–10 in western Tasmania and some agricultural areas of South Australia.

Ongoing rainfall deficiencies across livestock and cropping areas are likely to affect production opportunities leading into autumn.

1.2 Temperature

Mean maximum temperature

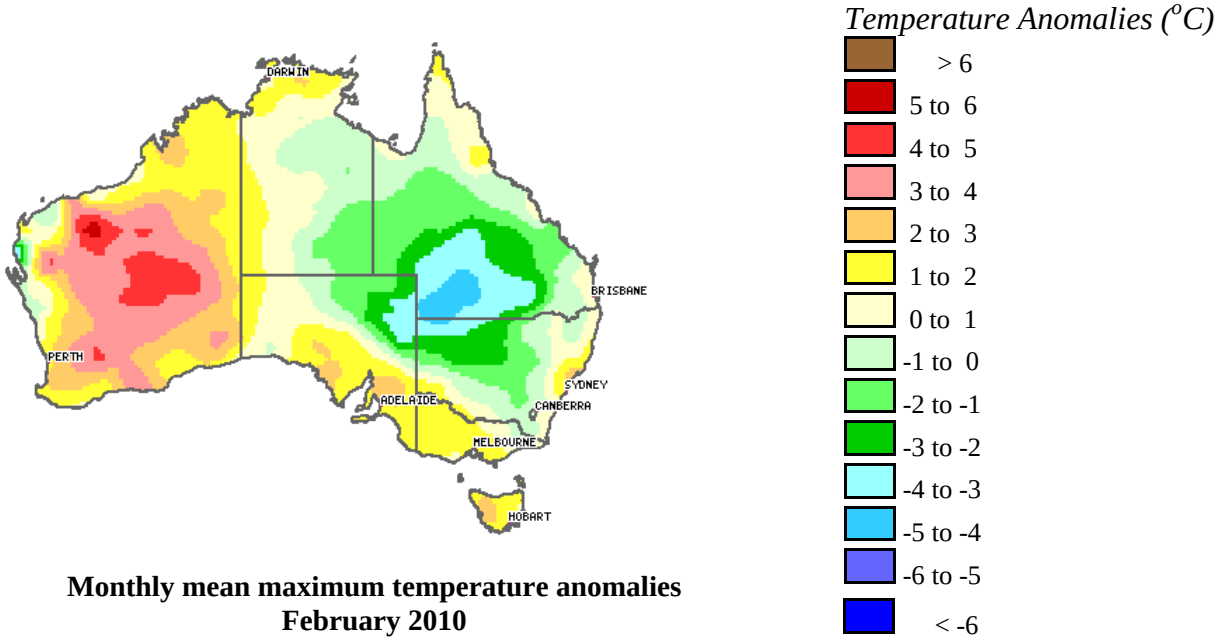
The maximum temperature in February 2010 for Australia was 0.37°C above average (fifteenth highest of 61 years). Maxima were above average in Tasmania, across most of Victoria and Western Australia, southern South Australia and in the far north of the Northern Territory and Queensland.

The remainder of the country experienced cooler than average February maxima.

Notable anomalies included maxima between 3°C and 5°C above average for much of inland Western Australia and between 2°C and 5°C below average for a large part of the eastern interior.

Higher daytime temperatures, combined with rainfall deficiencies across agricultural areas of Western Australia and southern Australia, could affect livestock producers leading into autumn.

Cooler weather across agricultural areas in the eastern states will have enhanced soil moisture profiles leading into autumn sowing and help maintain pasture growth and quality.



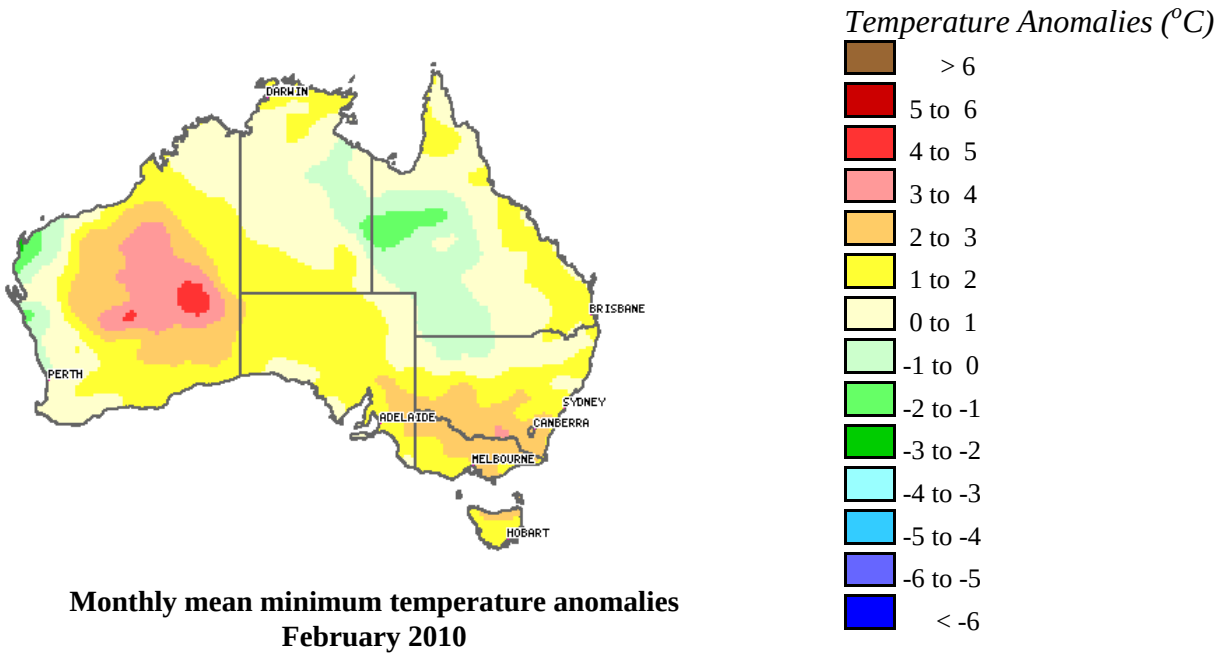
Monthly mean maximum temperature anomalies
February 2010

Mean minimum temperature

Overnight minimum temperatures in February 2010 for Australia were well above the February long-term average, with an anomaly of +1.03°C (fifth highest of 61 years). Minima of at least 1°C above average were recorded over most of southern and western parts of Australia.

Notable anomalies include up to 5°C above average in parts of inland Western Australia and up to 3°C above average in southern New South Wales and northern Victoria.

Areas with below average minima (0–2°C below average) included part of the Western Australia coastline and a large area in the north-eastern interior of the continent.



Monthly mean minimum temperature anomalies
February 2010

Spatial temperature analyses are based on historical monthly temperature data provided by the Bureau of Meteorology. These temperature anomaly maps show the departure of the maximum and the minimum temperature from the long-term average. Temperature anomalies are calculated with respect to the reference period 1961 to 1990. For further information on temperature anomalies go to: http://www.bom.gov.au/climate/austmaps/

1.3 Climate outlook

El Niño Southern Oscillation (ENSO)

The central Pacific Ocean temperatures had warmed during the past fortnight, according to the Bureau of Meteorology's announcement on 3 March 2010. This has slowed the decay of the current El Niño event. The Southern Oscillation Index increased during the past week, remaining at negative values typical of an El Niño (currently at -16). However, autumn is typically a transitional period for the El Niño–Southern Oscillation and models suggest a return to neutral ocean temperature levels and decay of the El Niño by winter.

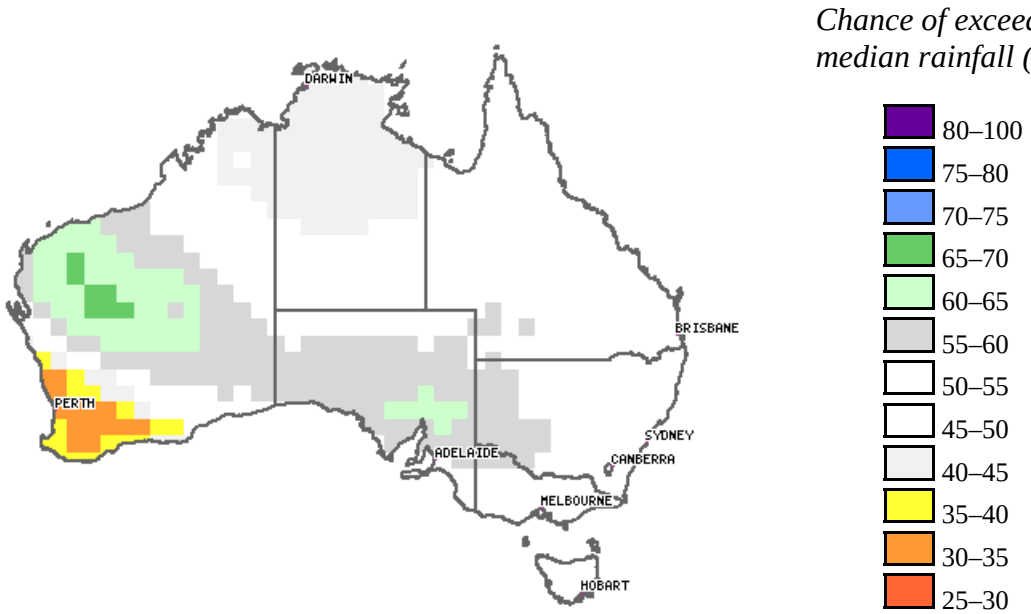
For further information on the Bureau of Meteorology interpretation of the El Niño–Southern Oscillation, go to http://www.bom.gov.au/climate/enso/

Rainfall outlook

Across the south-west of Western Australia there is 30 to 40 per cent chance of exceeding the median rainfall during autumn 2010 (March to May). Drier conditions during autumn could affect sowing programs for winter cereals and autumn pasture growth in these agricultural areas.

In contrast, there is an increased chance of above average rainfall across north-west of Western Australia to the Spencer Gulf in South Australia. Increased autumn rainfall in these areas may improve conditions for livestock and crop production.

Across the rest of the country there is an equal chance of receiving either above or below the median rainfall between March and May 2010.



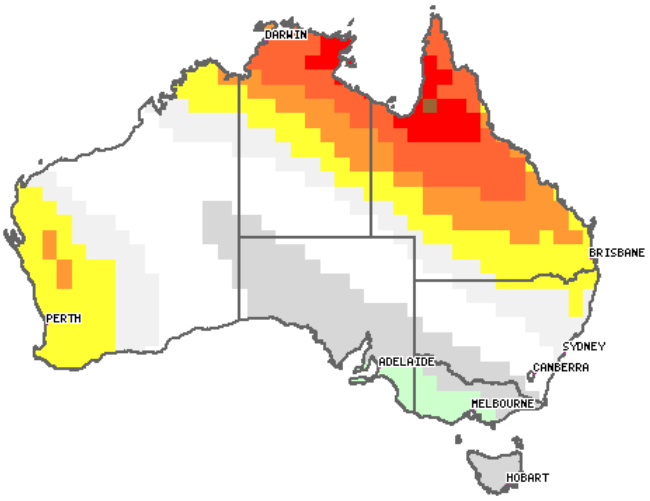
The chance of exceeding median rainfall March to May 2010

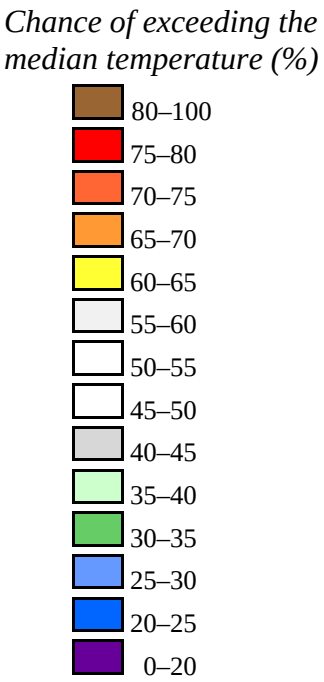
Temperature outlook

There is a high chance (60 to 80 per cent) of warmer day time temperatures across north-eastern Australia during autumn 2010. Higher chances (60 to 70 per cent) of warmer days are also likely in the western parts of Western Australia. In contrast, there is a 35 to 40 per cent chance of cooler than normal days across southern Victoria and south-eastern South Australia.

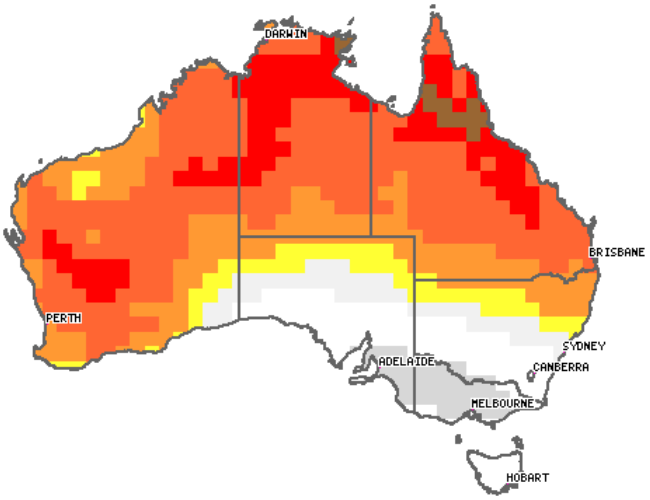
Minimum temperatures during March to May 2010 are likely to be above average (60 to 80 per cent chance) across most of Australia.

Above average minimum temperatures during autumn may help to sustain warm season pasture crops growth, providing further opportunities for livestock production.





The chance of exceeding median maximum temperatures March to May 2010



The chance of exceeding median minimum temperatures March to May 2010

The Bureau of Meteorology provides seasonal outlooks that are statements about the probability of wetter or drier than average weather over a three month period. The outlooks are based on the statistics of chance (the odds) taken from Australian rainfall, temperature and sea surface temperature records for the tropical Pacific and Indian Oceans. They are not categorical predictions about future rainfall and they do not indicate the expected rainfall amount for the three month outlook period.

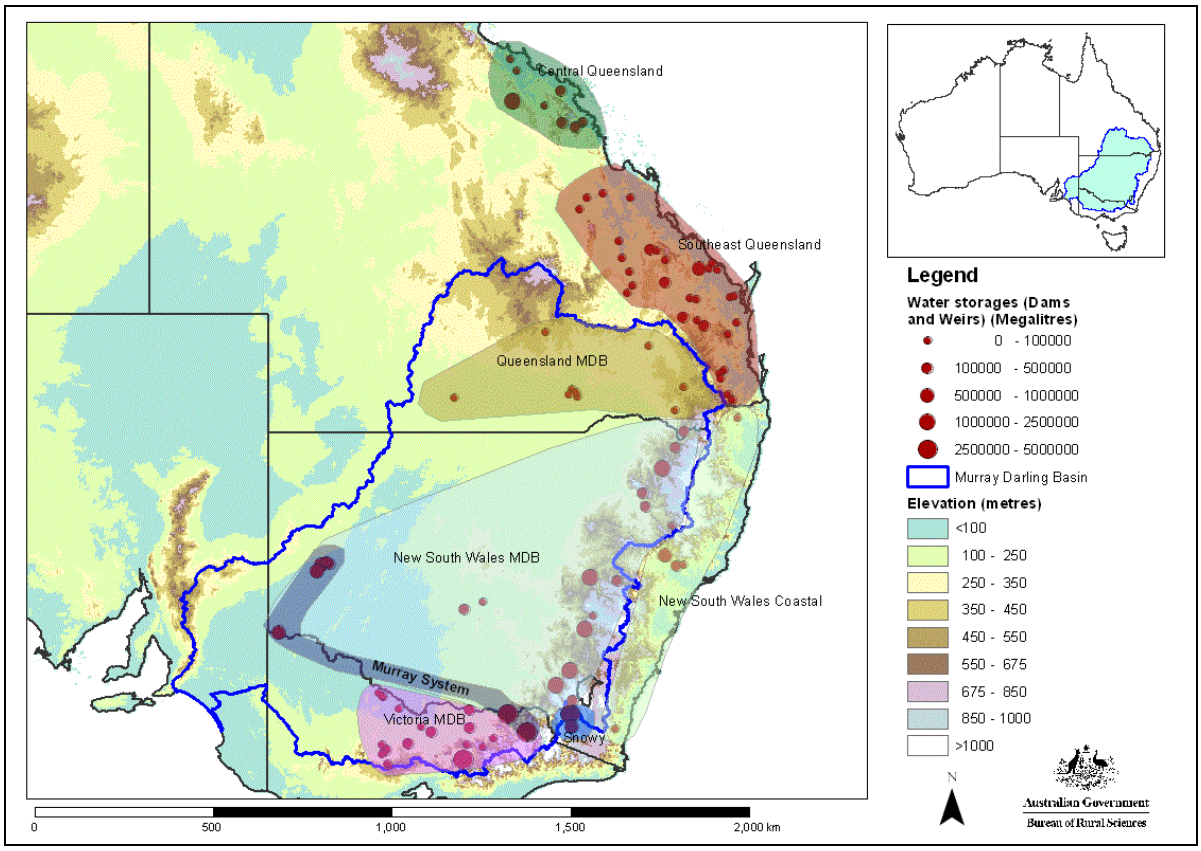
For further information on Bureau of Meteorology seasonal outlooks, go to:
http://www.bom.gov.au/climate/ahead/

2.0 Water

2.1 Water storages

Water storage changes for February 2010 and the previous 12 months are summarised in the table and graphs below (current at 4 March 2010).

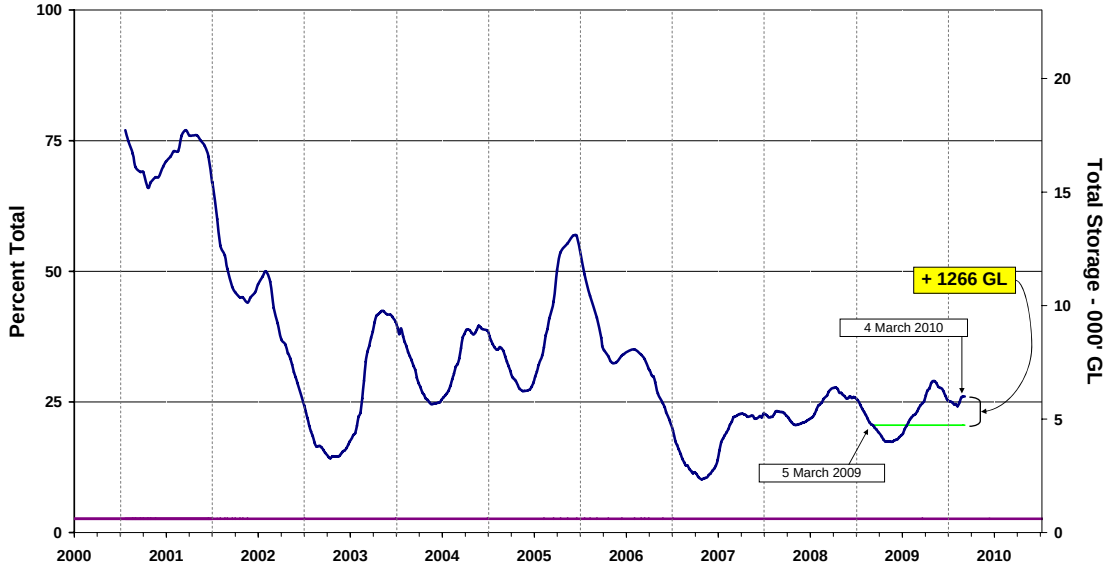
Region	Total capacity (GL)	Current volume (GL)	Current volume (%)	Monthly change (GL)	Monthly change (%)	Annual change (GL)
Murray-Darling Basin (MDB)	23 020	5 995	26	+427	+2	+1266
Snowy Scheme	5 744	1 685	29	-146	-3	+313
Murray-Darling Basin Authority (MDBA)	7 621	1 941	23	+73	+1	+796
Queensland MDB	185	118	64	+35	+19	-8
Central Queensland	3 155	2 979	94	+138	+4	-96
South-east Queensland	3 517	2 529	72	+798	+23	+362
New South Wales MDB	13 884	3 315	24	+450	+3	+517
Coastal New South Wales	1 073	779	73	+4	+0.3	+40
Victoria MDB	8 903	2 551	29	-59	-1	+755



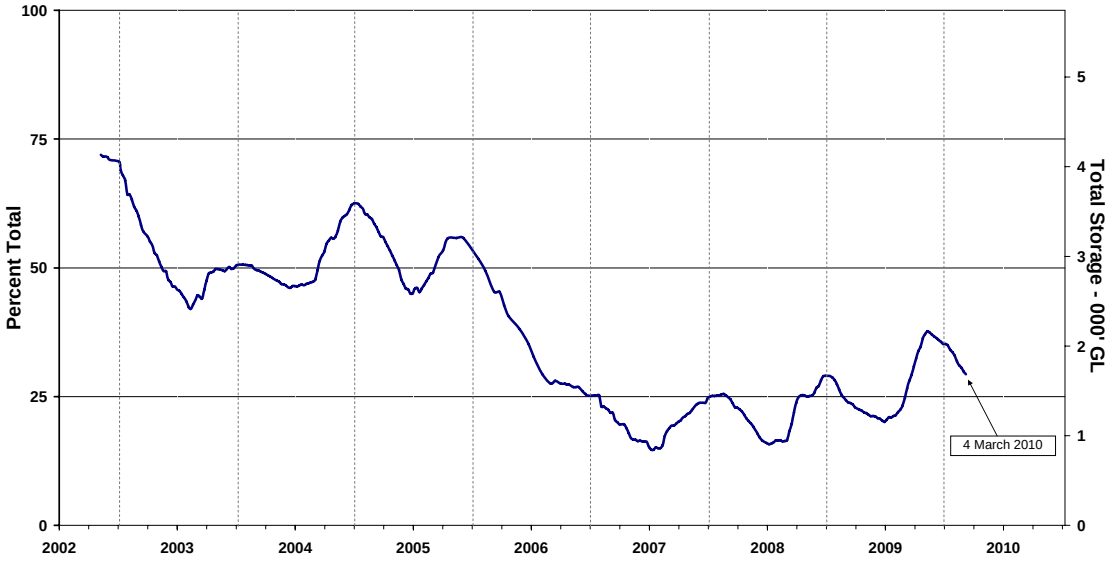
Water storages in Queensland, New South Wales and Victoria

Note: the blue line indicates the extent of the Murray-Darling Basin.
The shaded areas denote the coverage of the individual reporting regions.

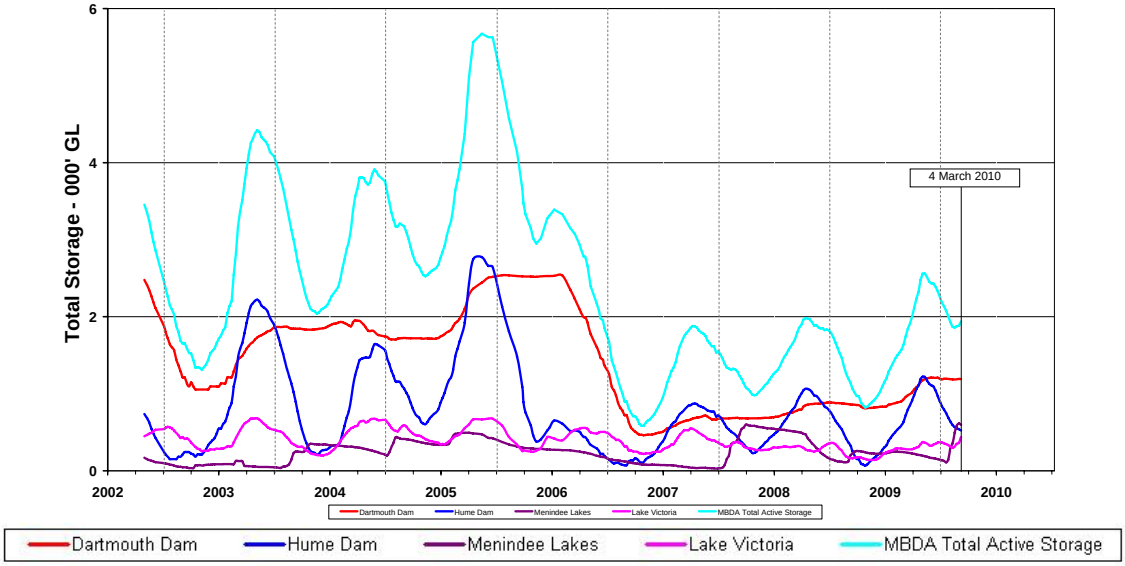
MDB (New South Wales, Victoria and Queensland)



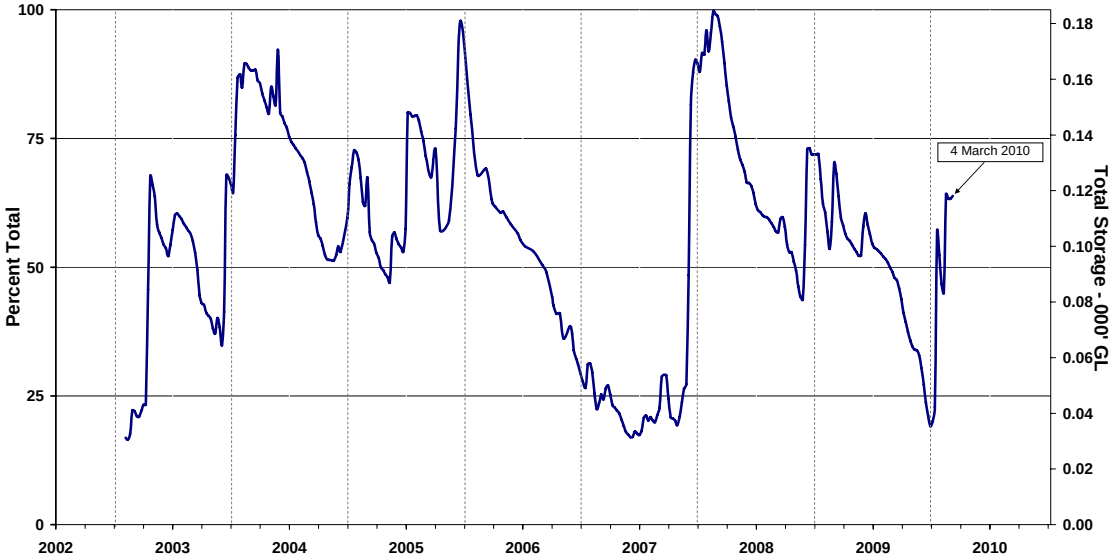
Snowy Scheme



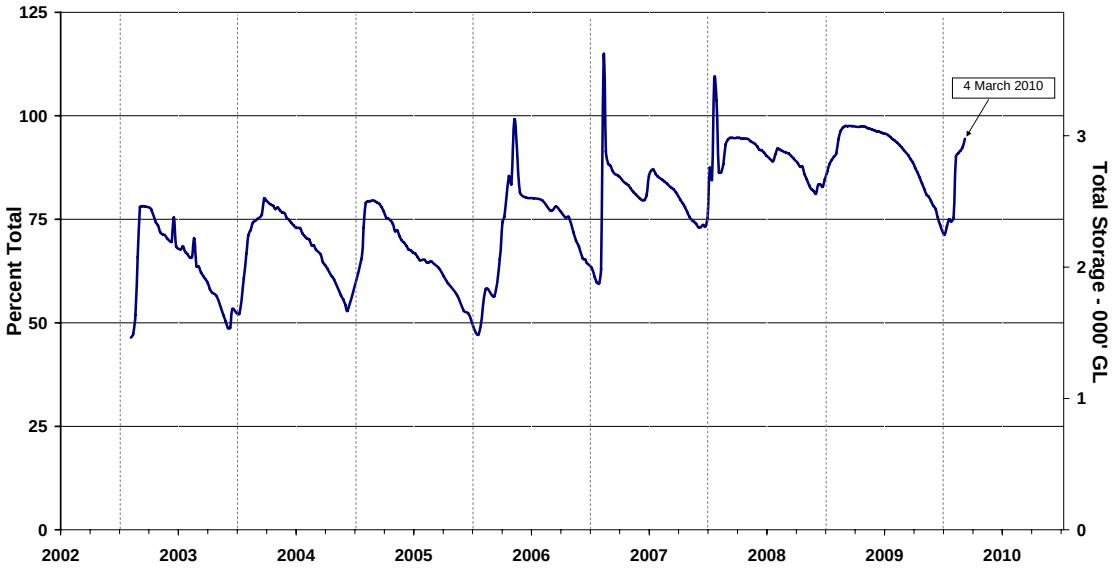
MDBA



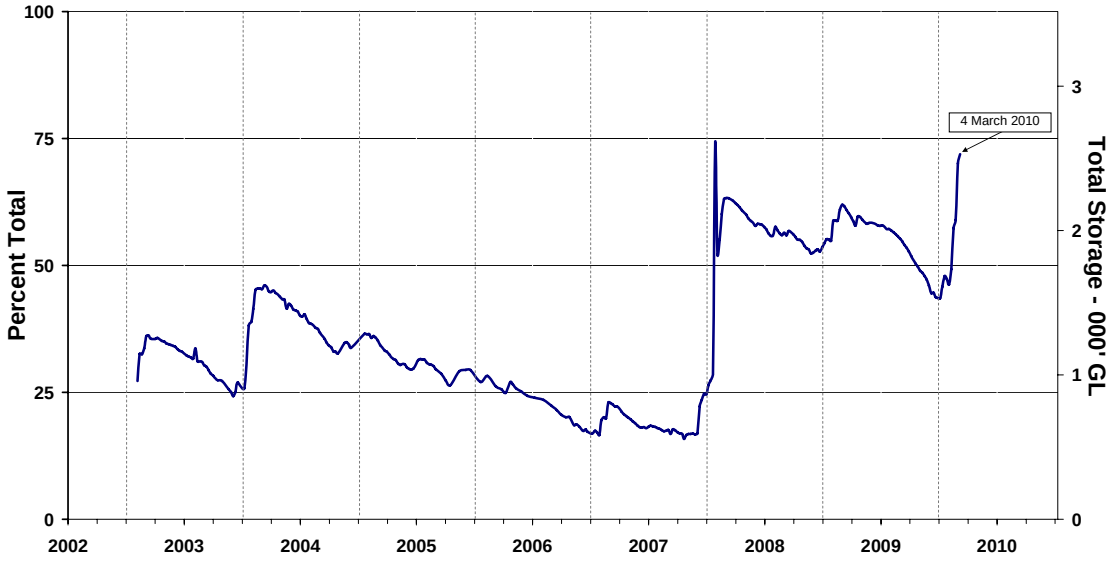
Queensland MDB



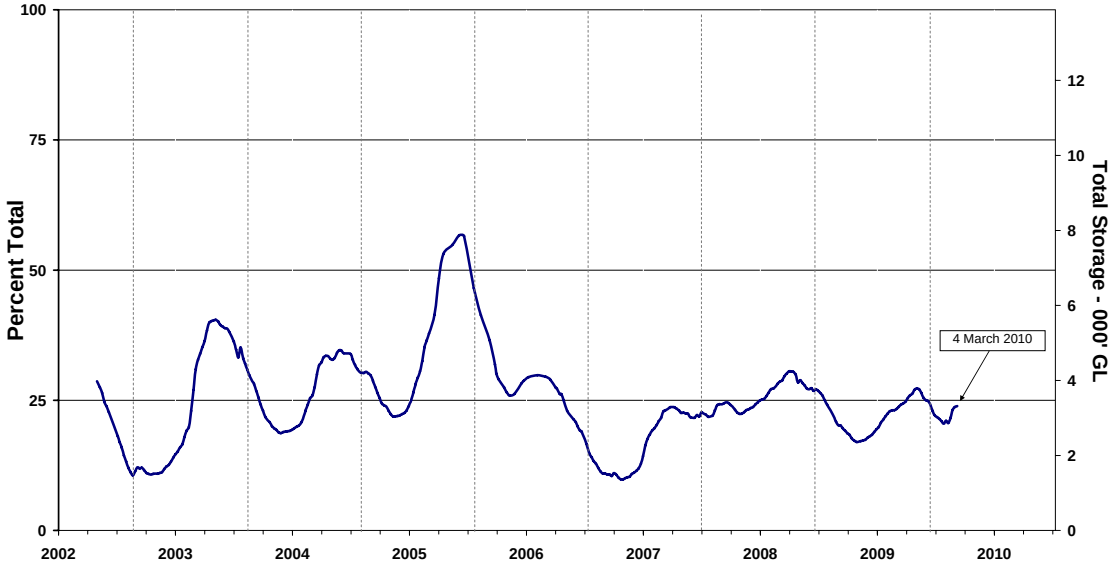
Central Queensland



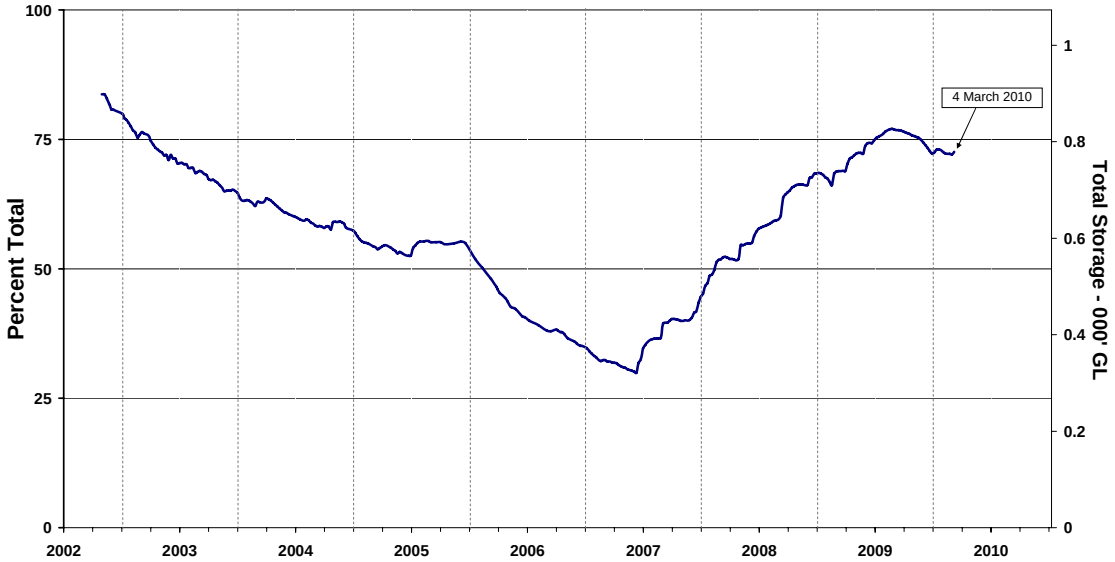
South-east Queensland



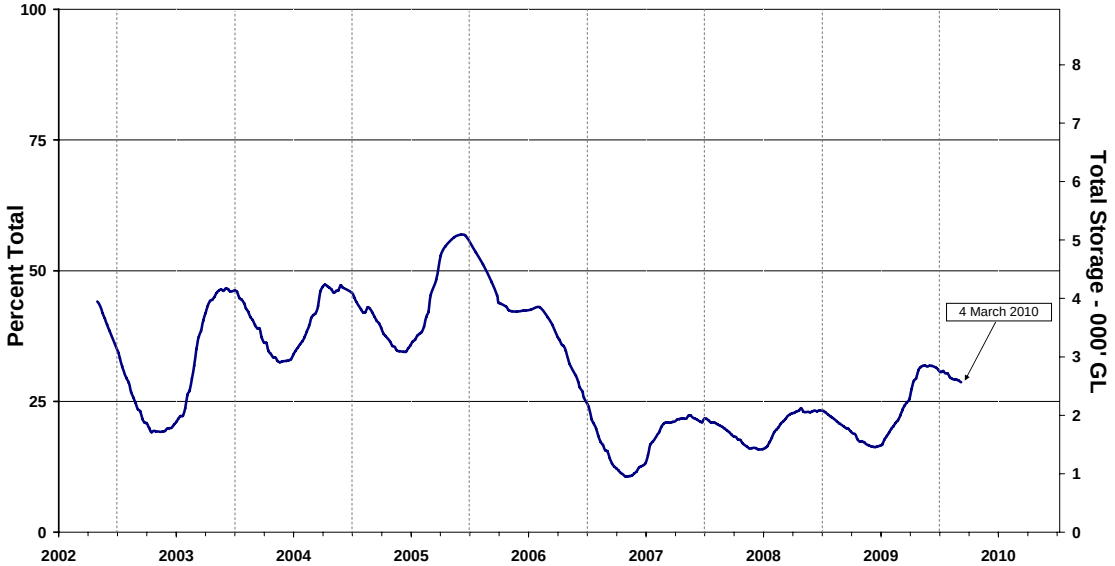
New South Wales MDB



Coastal New South Wales



Victoria MDB



For further information on water storages, go to:

- Snowy Scheme:
  http://www.snowyhydro.com.au/lakeLevels.asp?pageID=360&parentID=6
- Queensland:
  http://www.sunwater.com.au/pdf/water/CurrentStorageSummary.pdf
- New South Wales:
  http://www.waterinfo.nsw.gov.au/
- Northern Victoria:
  http://www.g-mwater.com.au/water-resources/storage-levels/
- Murray-Darling Basin Authority:
  http://www.mdba.gov.au/

2.2 Water allocations

The water allocations and changes over the past month for all licence holders in New South Wales, Victoria and South Australia water systems are summarised in the following table.

	Closing allocations 2008–09 (%)	Increase from 1 February 2010 (%)	Allocations 1 March 2010 (%)
NSW Murray Valley*			
High security	95	-	97
General security	9	+7	20
NSW Murrumbidgee Valley*			
High security	95	-	95
General security	21	+6	24
NSW Lower Darling*			
High security	100	-	100
General security	50	-	100
NSW Macquarie Valley			
High security	100	-	100
General security	10	-	0
NSW Hunter Valley			
High security	100	-	100
General security	100	-	100
NSW Lachlan Valley*			
High security	30	-	10
General security	0	-	0
NSW Border Rivers			
High security	100	-	100
General security	0	+4.4	4.4
NSW Peel Valley			
High security	100	-	100
General security	80	-	100
Victoria Murray Valley			
High reliability	35	+3	66
Victoria Goulburn			
High reliability	33	+4	60
Victoria Campaspe and Loddon			
High reliability	0	-	0
Victoria Bullarook			
High reliability	0	+4	15
Victoria Broken			
High reliability	0	+5	6
South Australia Murray Valley			
High security	18	+7	55

* Water sharing plans remain suspended in NSW for Murray-Lower Darling, Murrumbidgee and Lachlan River valleys.

For further information on water announcements, go to:

- New South Wales Office of Water, Department of Environment, Climate Change and Water
  http://www.water.nsw.gov.au/About-Us/Media-Releases/default.aspx ,
  http://www.water.nsw.gov.au/Water-Management/Water-availability/Available-water-determinations/default.aspx and
  http://wma.naturalresources.nsw.gov.au/wma/DeterminationSearch.jsp?selectedRegister=Determination
- Goulburn-Murray Water
  http://www.g-mwater.com.au/news/media-releases/
- South Australian Department of Water, Land and Biodiversity Conservation
  http://www.dwlbc.sa.gov.au/media.html
- Murray-Darling Basin Authority
  http://www.mdba.gov.au/

3.0 Production

3.1 Crops

Australia

Despite higher than average rainfall in January and February 2010, summer crop production is forecast to fall to around 2.4 million tonnes, which is 36 per cent less than the previous year and will be the lowest summer crop total since 2006–07. Overall, summer crop plantings are forecast to fall by 27 per cent to around 845 000 hectares in 2009–10.
http://www.abare.gov.au/corporate/media/2010_releases/16feb_10.html

Based on soil water conditions and the seasonal rainfall outlook at the end of February 2010, the forecast median yield for north-eastern Australia's sorghum-cropping region is 2.55 tonnes per hectare, which is above the long-term median of 2.33 tonnes per hectare. There is some regional variation in the outlook. If the current wet conditions prevail throughout the final stages of the cropping season, the risk of pests, diseases and harvesting problems will increase, especially for late sown crops

(Seasonal Crop Outlook Sorghum – March 2010, The State of Queensland, Department of Employment, Economic Development and Innovation). http://www.dpi.qld.gov.au/fieldcrops/

Queensland

Following dry winter and spring over Queensland's summer cropping regions, which resulted in little spring planting, heavy rainfall in late December/early January allowed some additional summer crop plantings to occur and increased the yield potential of summer crops.
http://www.abare.gov.au/publications_html/cr/cr_10/cr10_feb.pdf

Harvesting has already commenced or finished for very early planted crops in some areas of the southern Queensland sorghum-cropping region. Close to the end of the summer cropping season, this region has yield expectation of 2.38 tonnes per hectare, which is close to the long-term yield expectation of 2.45 tonnes per hectare. The central Queensland sorghum-cropping region is showing yield expectation of 2.20 tonnes per hectare, which is above the long-term median of 2.00 tonnes per hectare for that region.

(Seasonal Crop Outlook Sorghum – March 2010, The State of Queensland, Department of Employment, Economic Development and Innovation). http://www.dpi.qld.gov.au/fieldcrops/

New South Wales

Total summer crop production in New South Wales is forecast to fall by 26 per cent to 1.1 million tonnes in 2009–10. For rice, there was some improvement in the availability of irrigation water at the time of planting, leading to an increase in area. The area planted to grain sorghum is estimated to have declined by 48 per cent in 2009–10 to 120 000 hectares. Rainfall towards the end of December benefited many earlier sown crops and boosted yield potential. However, the rain arrived too late to encourage any significant increase in grain sorghum plantings. Grain sorghum production is forecast to be 393 000 tonnes, which is 59 per cent less than in 2008–09.
http://www.abare.gov.au/publications_html/cr/cr_10/cr10_feb.pdf

Close to the end of the summer cropping season, the northern New South Wales sorghum-cropping region has median yield expectation of 3.41 t/ha, which is well above the long-term yield median expectation of 2.82 tonnes per hectare.
(Seasonal Crop Outlook Sorghum – March 2010, The State of Queensland, Department of Employment, Economic Development and Innovation). http://www.dpi.qld.gov.au/fieldcrops/

A preliminary estimate for the Valencia and mid-season orange varieties across Riverina indicates a yield reduction of approximately 20 per cent and a drop of Navel production by 15 per cent in 2010–2011 compared to last year. www.freshplaza.com,

South Australia

Harvest was completed during January-February with the overall state crop yield estimated to be around 25 per cent above the 10-year average.
http://www.pir.sa.gov.au/__data/assets/pdf_file/0007/126988/Mar10cpr.pdf

Victoria

In the Mallee region, growers are reporting that yields of early varieties of table grapes have declined because of damage caused by the November 2009 heatwave. Navel orange production will be very low with many trees having as few as three to four fruit. Valencia orange production is low and much of the fruit is going towards juicing. In the northern irrigation region, most of the summer crops are growing well. Packham pears are being harvested much earlier than usual. The Williams pear production has declined, which may be a result of the hot conditions during late 2009.
http:/www.dpi.vic.gov.au/DPI/nrenfa.nsf/LinkView/349A374409C8D305CA2576C600009396987715D08D0205F9CA2573E100030E40/$file/_DSC%20#96 Feb 2010.pdf /_

3.2 Livestock

Beef cattle

February 2010 market throughput of beef cattle increased by 14.6 per cent compared to February 2009, although it was 5 per cent below the five-year average. The increase in rainfall over the eastern states and the associated improvement in seasonal conditions during February have contributed to the decline in cattle supply compared to the five-year average. The price of cattle continues to rise as a result of producers restocking their herds and taking advantage of available feed.

http://www.mla.com.au/TopicHierarchy/News/MarketNews/2010/Cattle+market+wrap.htm

Sheep and lambs

The supply of lambs in Australian saleyards declined, resulting in lamb slaughter falling in all states. Lamb slaughter in February dropped by 17 per cent year-on-year and 15 per cent below the five-year average.

http://www.mla.com.au/TopicHierarchy/News/MarketNews/2010/Lamb+and+sheep+market+wrap.htm

For further information on crops and livestock, go to:

- Australian Bureau of Statistics:
  http://www.abs.gov.au/
- Australian Bureau of Agricultural and Resource Economics:
  http://abareconomics.com/
- Meat and Livestock Australia:
  http://www.mla.com.au/
- Department of Agriculture and Food Western Australia:
  http://www.agric.wa.gov.au/
- New South Wales Department of Primary Industries:
  http://www.dpi.nsw.gov.au/aboutus/news/
  http://www.dpi.nsw.gov.au/aboutus/resources/periodicals/newsletters/grains-report-nsw
- Primary Industries and Resources South Australia:
  http://www.pir.sa.gov.au/grains/cpr/
- Queensland Drought Monitor
  http://www.longpaddock.qld.gov.au/QueenslandDroughtMonitor/

- The Land Farmonline:
  http://theland.farmonline.com.au/
- Victorian Department of Primary Industries:
  http://www.dpi.vic.gov.au