USDA Foreign Agricultural Service
GAIN Report
Global Agricultural Information Network



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**Date:** 3/21/2013
**GAIN Report Number:** AS1305

# Australia

**Post:** Canberra

# A land of droughts and flooding rains – Summer 2013 in Australia

**Report Categories:**
Agricultural Situation
Climate Change/Global Warming/Food Security

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## Report Highlights

The summer of 2012-13 has once again demonstrated the extremes of mother nature in Australia. From drought and bushfires to cyclones and floods, severe weather events have caused significant damage to crops, livestock and agricultural infrastructure. The recovery effort is now underway with total damage estimates in the hundreds of millions of dollars.

## Extreme Temperatures

The 2012/13 summer has been confirmed as the hottest on record in Australia with new temperature extremes reached in every state and territory. Beginning during the southern hemisphere spring temperatures rose quickly and were accompanied by lower than average rainfall. The late onset of the monsoon season for Northern Australia compounded these conditions which increased the average Australian maximum temperature for September to December 2012 by 1.6°C (35F). The most extreme heat occurred between January 12 and 13, 2013 with many areas recording temperatures in excess of 48°C (118F) while Sydney recorded a new temperature high of 45.8°C (114F).

These conditions have continued in the southern hemisphere fall with another heat-wave affecting south-eastern Australia during the first two weeks of March. Many parts of South Australia, Victoria and Tasmania experienced multiple days of temperatures up to 10°C (50F) above average and nights up to 6°C (43F) above average minimums.

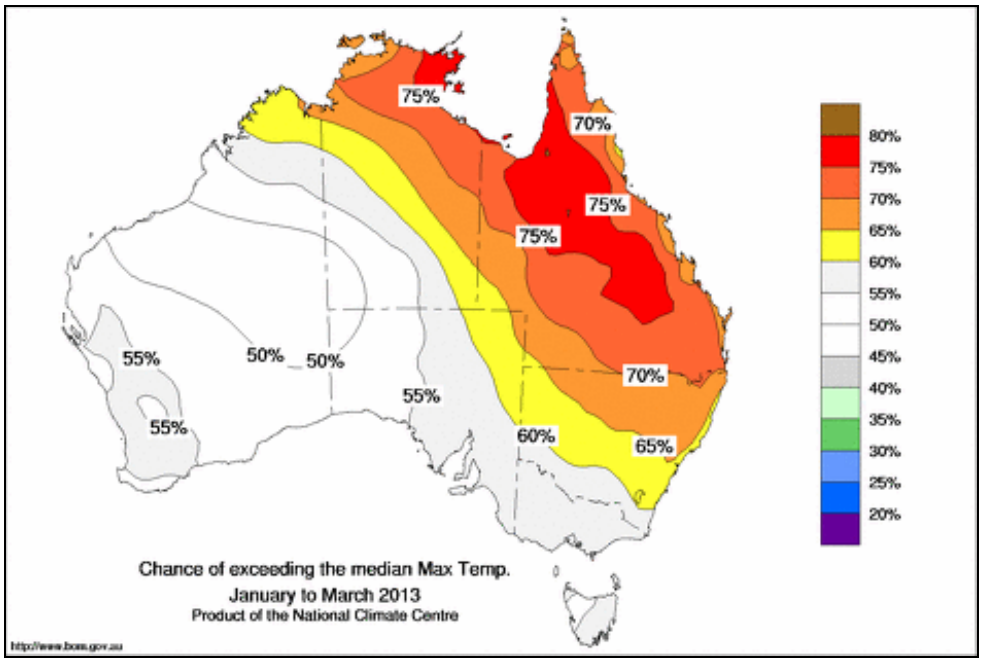


**Figure 1 Change of exceeding median maximum temperatures between January and March 2013 (Australian Bureau of Meteorology)**

## Bushfires

Record high temperatures and far below average rainfall combined to create ideal bushfire conditions across most of Australia in between December 2012 and January 2013. In the Gulf country of Northern Queensland large bushfires in December are estimated to have burnt 2 million hectares of grazing country. While the number of cattle which perished as a direct result of the fires is difficult to estimate, the greater problem is providing feed for surviving stock in areas which have been completely denuded of pasture.

In Tasmania record high temperatures in early January caused a number of large bushfires which destroyed at least 100 homes and businesses. Over 20,000 hectares of forest were destroyed and preliminary estimates are that at least 10,000 sheep were killed or humanely destroyed as a result of the fire. A small area of unharvested wheat was also destroyed. Aquaculture was also affected with up to $4 million dollars worth of abalone lost when pumps were destroyed and several oyster businesses lost all their packing sheds and equipment.

In Victoria and South Australia the majority of wheat and barley crops were harvested before fires began however there were also livestock losses in these states. In Victoria there were concerns about smoke taint in vineyards although these now appear to be minor.

The major stock losses due to fire were suffered in the central west of New South Wales, centered on the town of Coonabarabran. This fire also severely damaged the Siding Spring Observatory which is an important component of Australian Astronomy. The fire burnt over 50,000 hectares of national park and farmland. Estimates of sheep and cattle losses run into the thousands.

## Tropical Cyclone Oswald

Tropical Cyclone Oswald formed in the Gulf of Carpentaria on January 21st, 2013. Over the next 8 days the storm moved east and then south along the east coast of Australia bringing severe flooding and wind damage to large areas of Queensland and northern New South Wales. Many areas broke new rainfall records including Rockhampton which recorded over 400mm in 24 hours and parts of the Gold Coast hinterland which recorded an astonishing 744mm in 24 hours. As of the 29th of January four people had been confirmed dead as a result of the cyclone. Initial estimates put the total cost of the damage at over US$132 million although this is likely to rise as more accurate assessments are made.

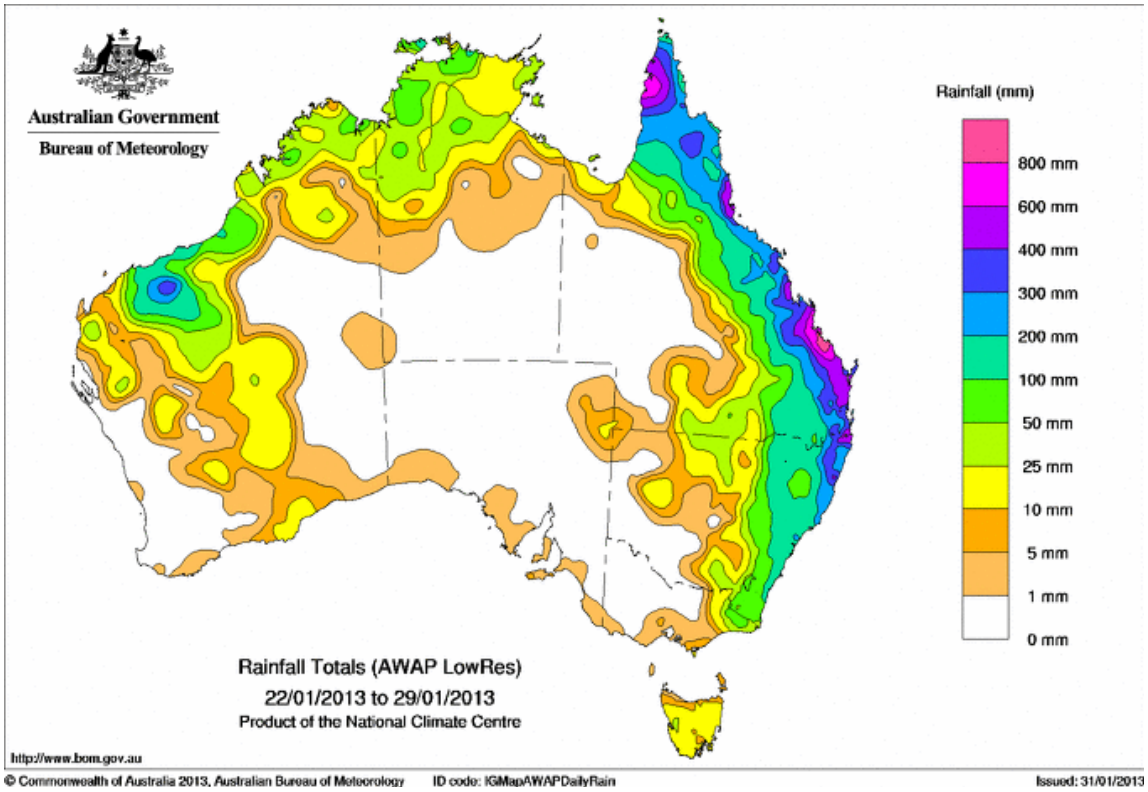


Figure 2 Rainfall totals for the period January 22-29, 2013

The heavy rainfall and flooding affected a large area of agricultural production including sugarcane, citrus, grain and horticulture crops as well as several large dairies and hog farms. One of the worst affected areas was the North Burnett which is a major producer of citrus, sugarcane and macadamia nuts. The area supplies 80 per cent of Australian lemons and 60 per cent of Australian mandarins. Prior to the cyclone both crops were looking extremely good and while harvesting of lemons was delayed, total crop losses are only expected to be in the order of 10-15 per cent. Harvesting of Mandarins is not due to begin until March and should proceed as normal dependent on the availability of replacement infrastructure.

The combination of extremely low rainfall in the months preceding the cyclone which left many paddocks bare and the extreme rainfall events which occurred over very short time frames has caused severe erosion across many properties. In the southern parts of Central Queensland the majority of sorghum crops have been severely affected and it is unlikely that replanting will occur.

The cyclone also caused major disruptions to the transport and supply of agricultural products as a result of the closure of several major transport routes including the main north-south highway and railway line and the closure of several airports. Extensive damage to major highways and local roads will restrict transport options for many months.

As a result of the weather total cattle processing was down by 31 percent for the week ending Friday February 1st, 2013 from the previous week. Cattle sales were also affected. These declines will be relatively short-lived as processing plants will make up numbers once transport lines are fully operational.

Despite heavy rain in eastern parts of QLD and NSW large areas further to the west have received much lower than average rainfall for the summer. In December over 50 per cent of New South Wales was considered to be in a 'marginal' condition with some areas now likely to be drought declared. In Western Queensland Individually Droughted Property (IDP) assessments were being made during the week beginning February 4th. The map below shows the variation in rainfall during January with records at both extremes.

The preliminary March to May outlook is for higher than normal rainfall across cropping areas of South Australia, western New South Wales, south-west QLD and some areas of Western Australia. Tasmania, Victoria and the majority of the Western Australian wheat belt are expected to remain drier than normal however model accuracy is low at this point and forecasts are likely to change.