



nab

# **In Focus: Australian wheat production outlook**

June 2016

## Contents

Australian production forecasts	3
Planting conditions	4
Seasonal weather outlook	5
Appendix I: NAB wheat yield methodology	6
Appendix II: Monthly rainfall patterns	8

## Contacts

Phin Ziebell  
Economist – Agribusiness  
+61 (0) 475 940 662

Alan Oster  
Chief Economist  
+61 3 8634 2927

Khan Horne  
General Manager  
NAB Agribusiness

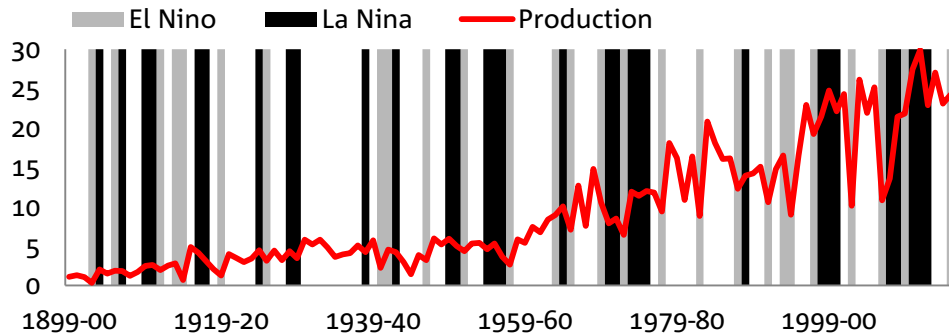
Riki Polygenis  
Head of Australian Economics  
+61 3 8697 9534

Kristin Kenny  
Senior Consultant  
+61 (0) 439 255 981

# Australian production forecasts

## Australian wheat production

Million tonnes per annum



## 2016-17 NAB Australian wheat production forecasts

Million tonnes

	NSW	VIC	QLD	WA	SA	TAS	AUS
Central case	7.4	3.1	1.3	9.5	4.6	<0.1	26.1
High case	7.7	3.3	1.4	9.8	4.8	<0.1	27.1
La Niña	7.8	3.2	1.4	9.6	4.7	<0.1	26.8

## 2016-17 NAB Australian wheat yield forecasts

Tonnes/hectare

	NSW	VIC	QLD	WA	SA	TAS	AUS
Central case	2.3	2.1	1.9	1.9	2.3	4.4	2.1
High case	2.4	2.2	2.0	1.9	2.4	4.3	2.2
La Niña	2.4	2.2	2.0	1.9	2.4	4.4	2.1

This report presents our initial estimates for Australian wheat production for the 2016-17 season. Overall, we have a generally positive outlook for production, based on good to excellent planting rainfall combined with the Bureau of Meteorology's outlook for above average winter rainfall in major cropping areas.

Our central case estimate for the 2016-17 Australian wheat crop is 26.1 million tonnes, based on rainfall to date and average rainfall in major cropping areas for the rest of the season. This would represent a 10.7% increase in production on last season. Our high case estimate, based on 20% above average winter rainfall, points to a national harvest of 27.1 million tonnes.

The Bureau of Meteorology currently puts the chance of a La Niña event this year at 50%. La Niña is generally associated with above average rainfall in eastern and northern Australia and often higher Australian wheat production. Our estimate of production in a La Niña event is 26.8 million tonnes, based on rainfall levels during La Niña events going back to 1900. This result is lower than our high case as typical La Niña rainfall levels tend to be between average and 20% above average rainfall.

The outlook is not without risks. If rainfall disappoints there is likely to be some downside to these forecasts. Conversely very high winter rainfall levels could lead to waterlogging in some areas. If we see a strong La Niña, there is likely to be above average spring rain. This could cause crop downgrades if there are large downpours late in the season (as occurred during the last La Niña event).

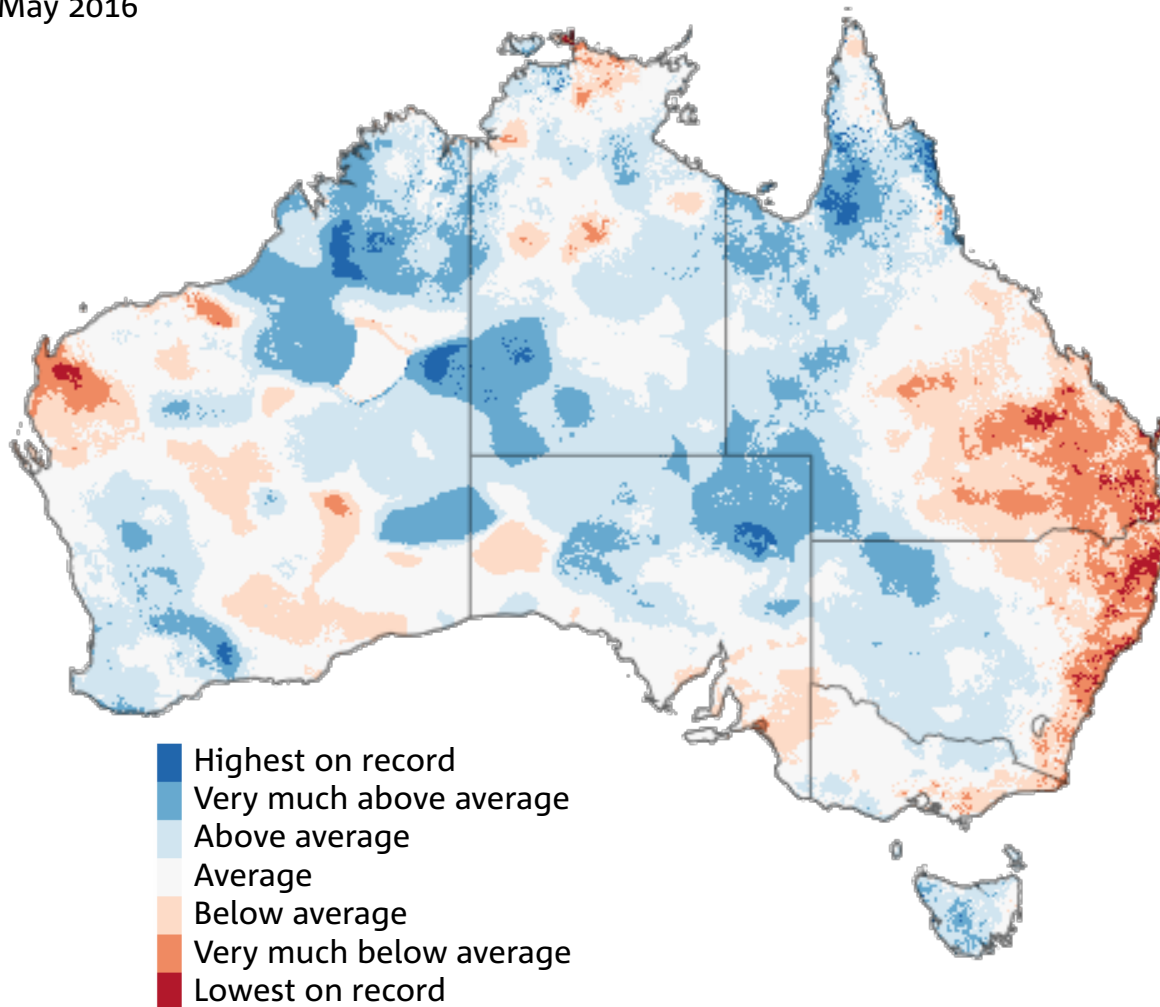
This report does not consider wheat prices. For more information on our wheat price outlook, see the [NAB Rural Commodities Wrap](#).

Source: Bureau of Meteorology, ABARES, Australian Bureau of Statistics and NAB Group Economics

# Planting conditions

## Relative root zone soil moisture

26 May 2016



Source: Bureau of Meteorology

Eastern Australia saw a generally very dry start to the year, remaining very dry until soaking rains were seen across most areas in May. There was considerable nervousness early in the season, but the May rain has boosted expectations for a decent season in the east.

Root zone soil moisture is currently average to above average across most wheat regions of Victoria and New South Wales, although conditions are less favourable in northern New South Wales and Queensland. South Australia presents a somewhat mixed picture, with below average moisture in the south east but closer to average soil moisture on the Eyre Peninsula.

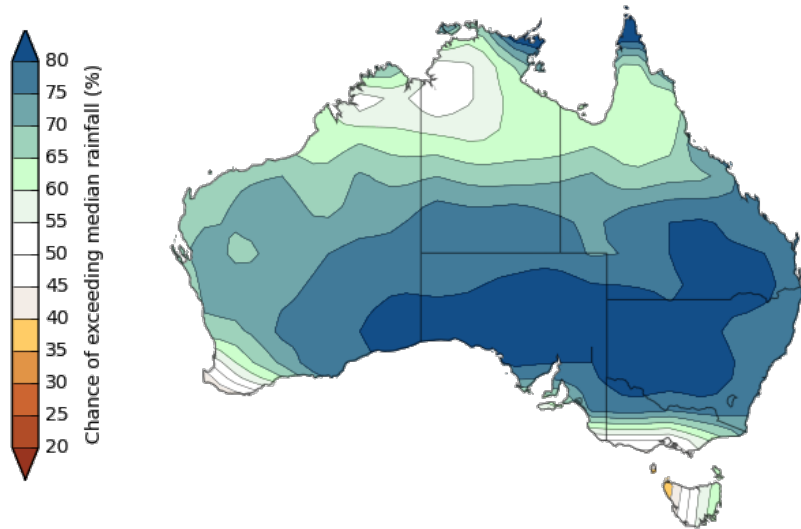
Western Australia has enjoyed one of the best starts to the season in many years. Current estimates of root zone soil moisture across the wheatbelt are average to very much above average.

Further information on rainfall patterns is available in [Appendix II](#).

# Seasonal weather outlook

## Three month rainfall outlook

June to August 2016

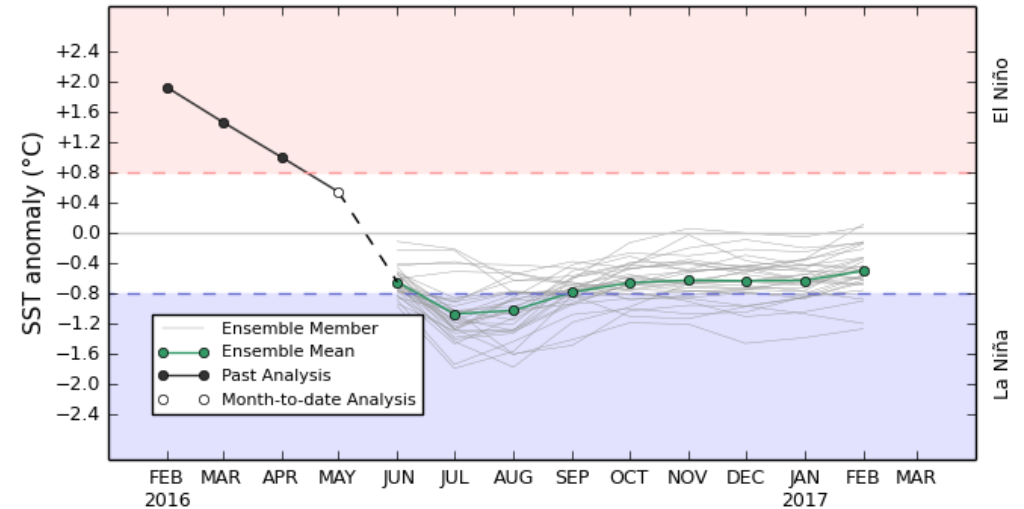


The Bureau of Meteorology (BoM) three month rainfall outlook to August forecasts generally above average to well above average rainfall over winter, although parts of Tasmania could see below average falls.

This outlook points to good growing conditions over winter, although the very strong rainfall outlook across New South Wales, southern Queensland and the upper Eyre Peninsula in South Australia presents the risk of waterlogging.

## BoM POAMA model long-range El Niño outlook

Monthly mean NINO 3.4 – 22 May 2016



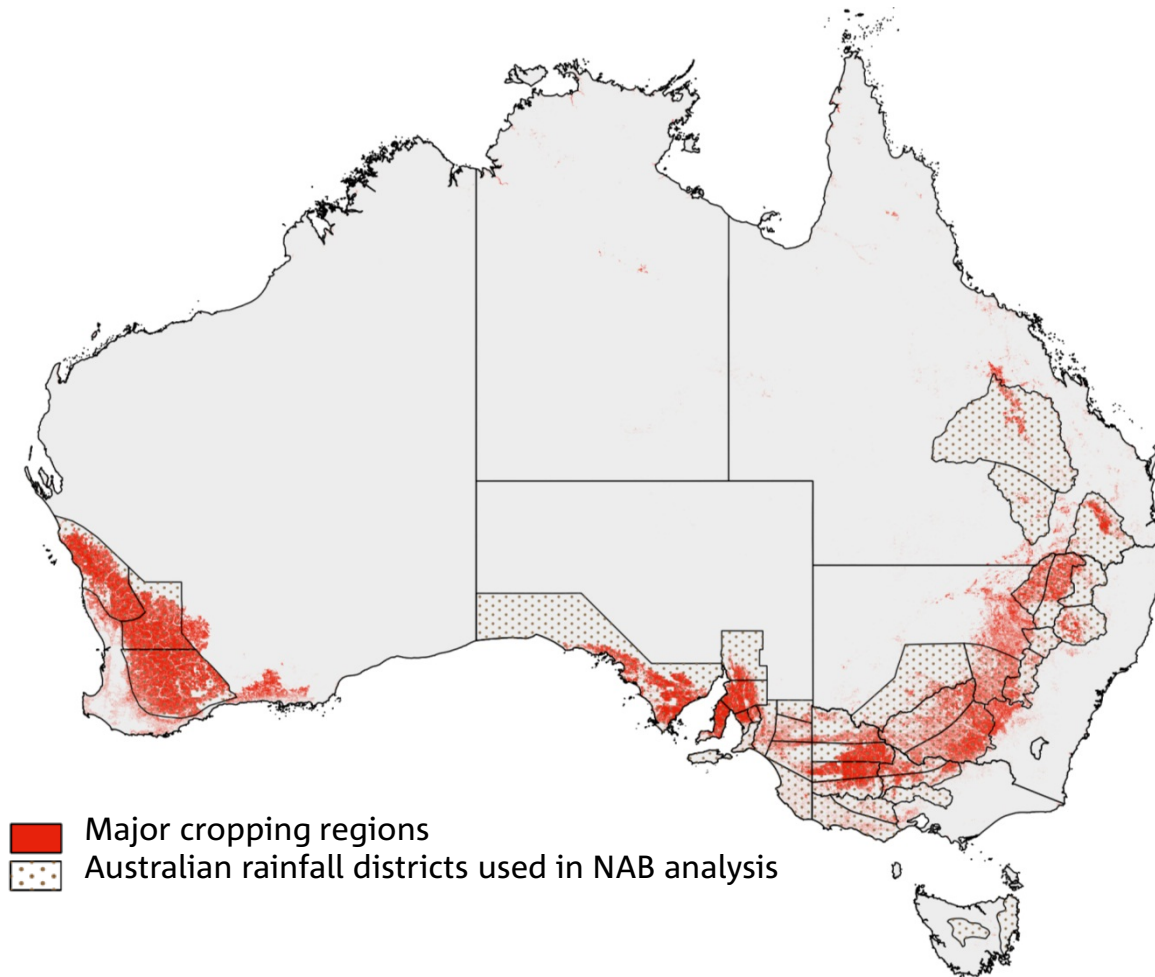
The winter outlook is underpinned by BoM's long range outlook for El Niño. With the 2015-16 El Niño event now over, six of BoM's eight international climate models point to La Niña forming over winter.

The BoM ENSO Outlook is on La Niña watch, placing the odds of La Niña developing at around 50%. However, the BoM notes that the outlook accuracy for this time of year is relatively low. Nonetheless, the return of neutral conditions is very welcome news for wheat growers.

Source: Bureau of Meteorology

# Appendix I: NAB wheat yield methodology

## Major cropping areas and rainfall districts included in rainfall analysis



Our outlook for wheat production is based on analysis of district level seasonal rainfall (from April to September each year) and state level wheat yields from 1900-01 to 2015-16.

We present three scenarios for the coming season based on varying rainfall estimates for the remainder of the season, combined with actual rainfall to date. Our central case is based on average rainfall for the remainder of the season, while our high case is based on 20% above average rainfall over the winter. We also include a La Niña scenario, based on rainfall during La Niña events since Federation.

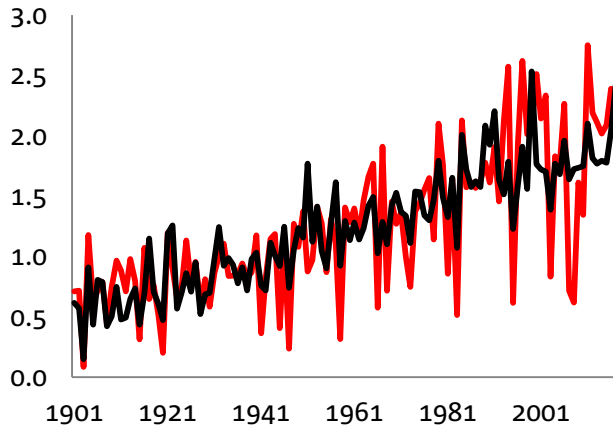
The forecasts are based on an OLS regression of rainfall and yields with a time trend to account for technological changes and improved crop management over time. Our forecasts are adjusted to address some underestimation of yields in the fitted results since the millennium drought, particularly for Western Australia.

Source: Bureau of Meteorology, Geoscience Australia and NAB Group Economics.  
Note: rainfall district 51 not shown on map but included in NAB analysis

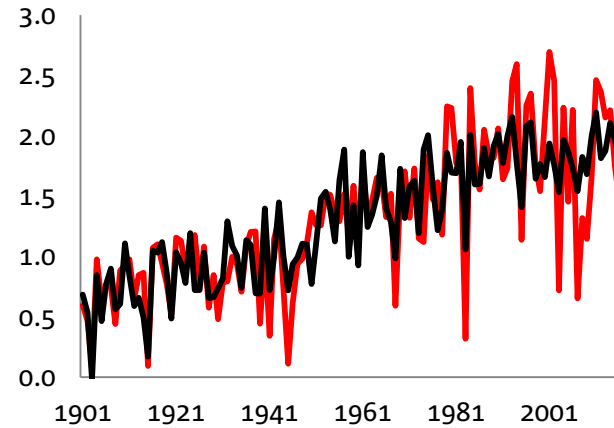
# Appendix I: NAB wheat yield methodology – state wheat yields

— Actual — Fitted

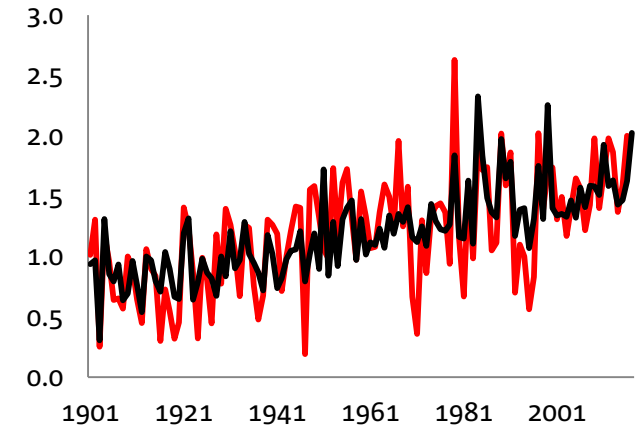
### New South Wales



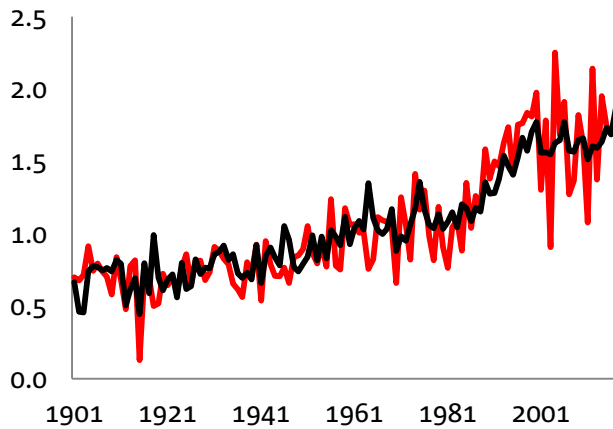
### Victoria



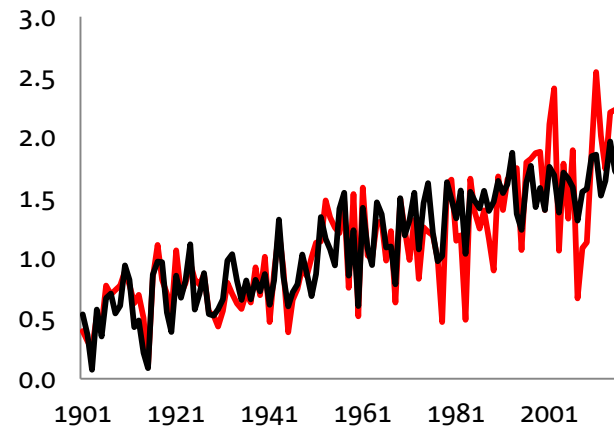
### Queensland



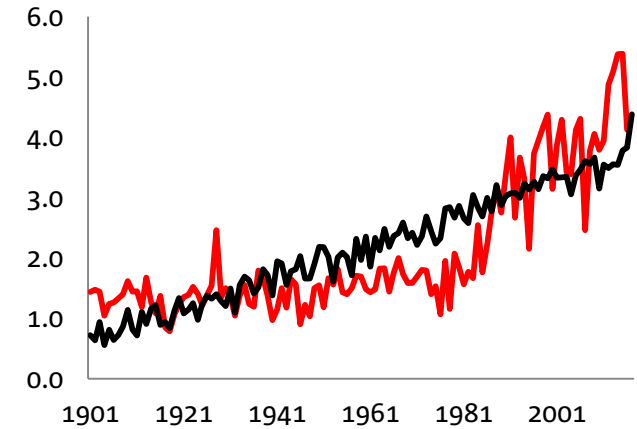
### Western Australia



### South Australia



### Tasmania

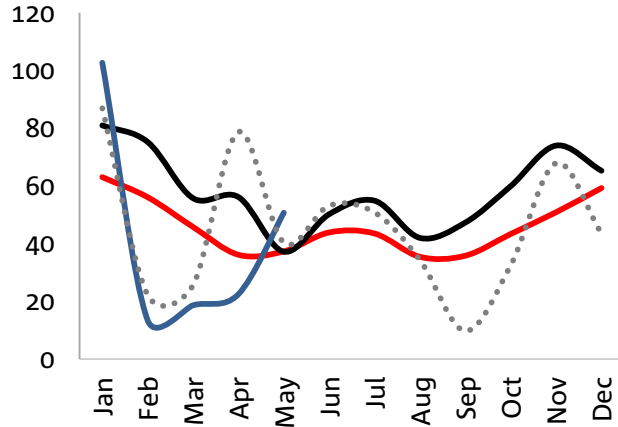


Source: Bureau of Meteorology, ABARES, Australian Bureau of Statistics and NAB Group Economics

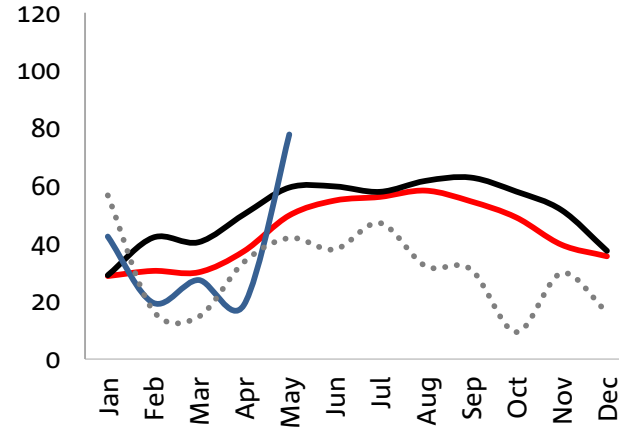
# Appendix II: Monthly rainfall patterns in wheat growing regions (mm monthly)

— Long run average 1900-01 to 2013-14    — La Niña years    — 2016 YTD    ..... 2015

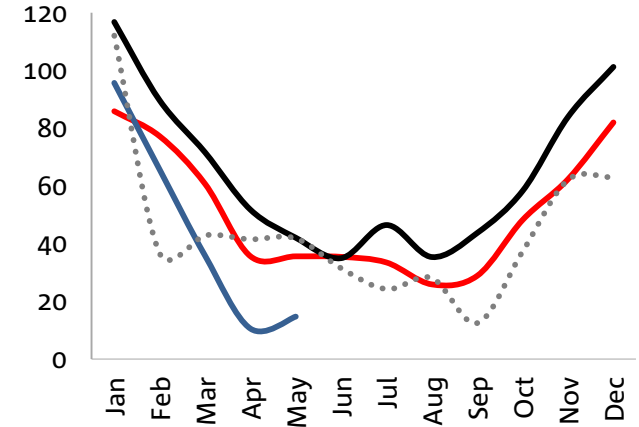
## New South Wales



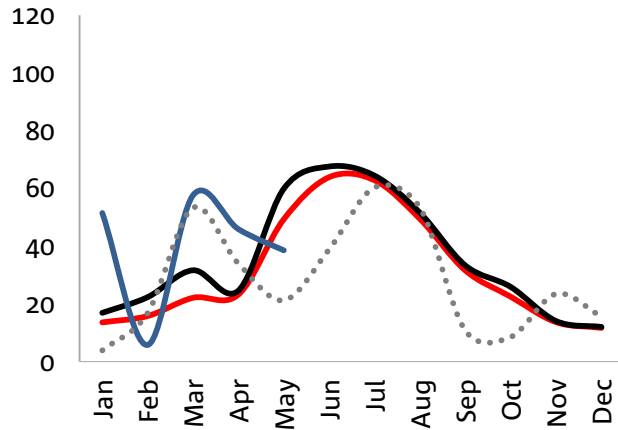
## Victoria



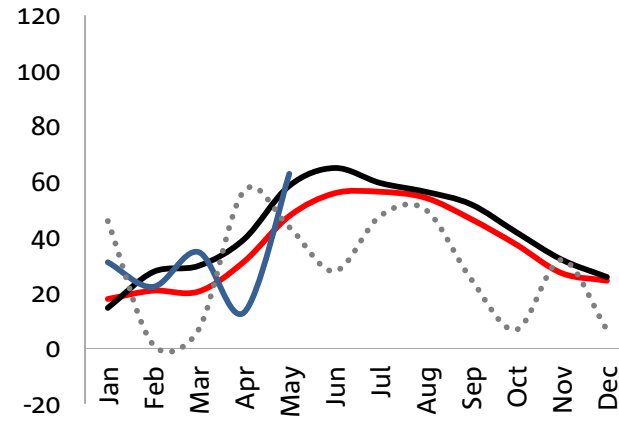
## Queensland



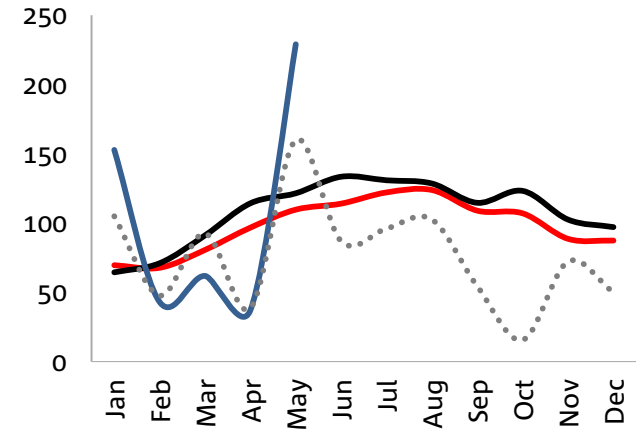
## Western Australia



## South Australia



## Tasmania



Source: Bureau of Meteorology and NAB Group Economics



### Group Economics

Alan Oster  
Group Chief Economist  
+61 3 8634 2927

Jacqui Brand  
Personal Assistant  
+61 3 8634 2181

### Australian Economics and Commodities

Riki Polygenis  
Head of Australian Economics  
+(61 3) 8697 9534

James Glenn  
Senior Economist – Australia  
+(61 4)55 052 519

Vyanne Lai  
Economist – Australia  
+(61 3) 8634 0198

Amy Li  
Economist – Australia  
+(61 3) 8634 1563

Phin Ziebell  
Economist – Agribusiness  
+(61) 475 940 662

### Behavioural & Industry Economics

Dean Pearson  
Head of Behavioural & Industry Economics  
+(61 3) 8634 2331

Robert De lure  
Senior Economist – Behavioural & Industry Economics  
+(61 3) 8634 4611

Brien McDonald  
Senior Economist – Behavioural & Industry Economics  
+(61 3) 8634 3837

Steven Wu  
Economist – Behavioural & Industry Economics  
+(613) 9208 2929

### International Economics

Tom Taylor  
Head of Economics, International  
+61 3 8634 1883

Tony Kelly  
Senior Economist – International  
+(61 3) 9208 5049

Gerard Burg  
Senior Economist – Asia  
+(61 3) 8634 2788

John Sharma  
Economist – Sovereign Risk  
+(61 3) 8634 4514

### Global Markets Research

Peter Jolly  
Global Head of Research  
+61 2 9237 1406

### Australia

**Economics**  
Ivan Colhoun  
Chief Economist, Markets  
+61 2 9237 1836

David de Garis  
Senior Economist  
+61 3 8641 3045

Tapas Strickland  
Economist  
+61 2 9237 1980

### FX Strategy

Ray Attrill  
Global Co-Head of FX Strategy  
+61 2 9237 1848

Rodrigo Catril  
Currency Strategist  
+61 2 9293 7109

### Interest Rate Strategy

Skye Masters  
Head of Interest Rate Strategy  
+61 2 9295 1196

Alex Stanley  
Senior Interest Rate Strategist  
+61 2 9237 8154

### Credit Research

Michael Bush  
Head of Credit Research  
+61 3 8641 0575

Simon Fletcher  
Senior Credit Analyst – FI  
+61 29237 1076

Andrew Jones  
Credit Analyst  
+61 3 8641 0978

### Distribution

Barbara Leong  
Research Production Manager  
+61 2 9237 8151

### New Zealand

Stephen Toplis  
Head of Research, NZ  
+64 4 474 6905

Craig Ebert  
Senior Economist  
+64 4 474 6799

Doug Steel  
Markets Economist  
+64 4 474 6923

Kymerly Martin  
Senior Market Strategist  
+64 4 924 7654

Jason Wong  
Currency Strategist  
+64 4 924 7652

Yvonne Liew  
Publications & Web Administrator  
+64 4 474 9771

### Asia

Christy Tan  
Head of Markets Strategy/Research, Asia,  
+ 852 2822 5350

Julian Wee  
Senior Markets Strategist, Asia  
+656632 8055

### UK/Europe

Nick Parsons  
Head of Research, UK/Europe,  
and Global Co-Head of FX Strategy  
+ 44207710 2993

Gavin Friend  
Senior Markets Strategist  
+44 207 710 2155

Derek Allassani  
Research Production Manager  
+44 207 710 1532

### Important Notice

This document has been prepared by National Australia Bank Limited ABN 12 004 044 937 AFSL 230686 ("NAB"). Any advice contained in this document has been prepared without taking into account your objectives, financial situation or needs. Before acting on any advice in this document, NAB recommends that you consider whether the advice is appropriate for your circumstances. NAB recommends that you obtain and consider the relevant Product Disclosure Statement or other disclosure document, before making any decision about a product including whether to acquire or to continue to hold it. Please click [here](#) to view our disclaimer and terms of use.

