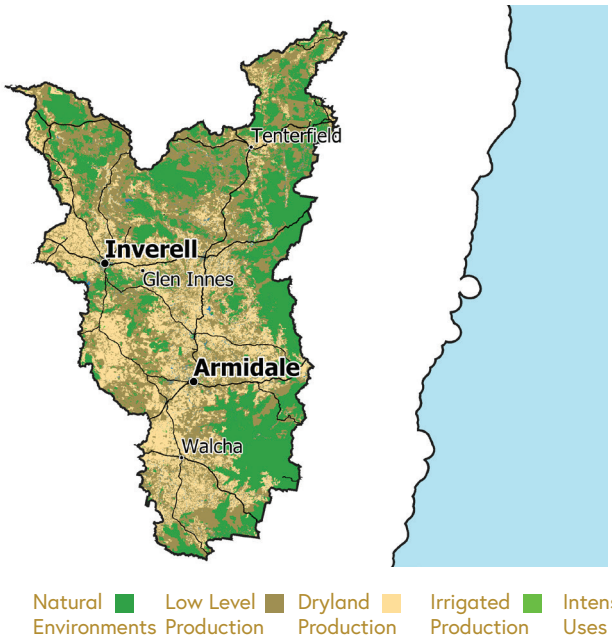
Weather with you

The last 30 years in the Northern Tablelands

- Annual rainfall has been relatively stable
- There has been a decrease in rainfall in the autumn and spring months
- Summer rainfall has been reliable; winter has been unreliable
- Dry years have occurred seven times and wet years eight times
- Three-monthly rainfall averages leading into spring have decreased
- There has been little change in frost frequency and timing
- There have been more hot days, with more consecutive days above 30 °C



The Northern Tablelands at a glance

The Northern Tablelands region covers 3.12 million hectares, of which 68% is under agricultural production. The region predominantly produces beef, sheep and wool.
Significant smaller industries include forestry, apples and stone fruit, potatoes, glasshouse tomatoes, dairy farms, alpacas and cool climate wineries. The region contributed around $656 million to the Australian economy in 2017–18.

A guide to weather and climate in the Northern Tablelands

Primary producers make decisions using their knowledge and expectations of regional weather patterns. The purpose of this guide is to provide an insight into the region's climate and an understanding of changes that have occurred through recent periods. This information can potentially assist primary producers and rural communities make better informed decisions for their business and livelihoods. This guide is part of a series of guides produced for every Natural Resource Management area around Australia.

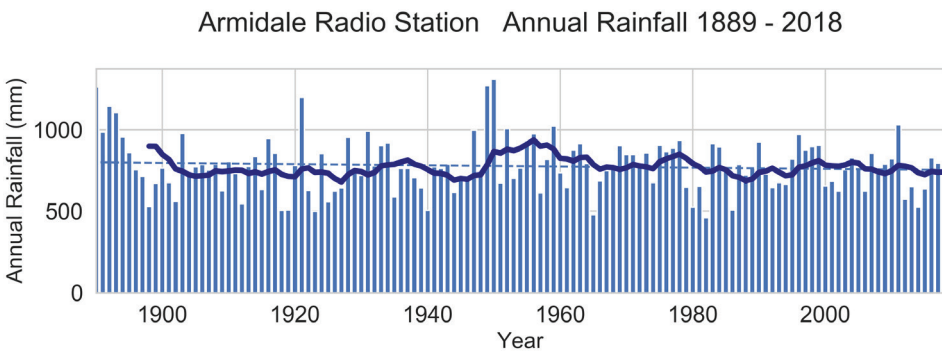
A climate guide for agriculture
Northern Tablelands, New South Wales

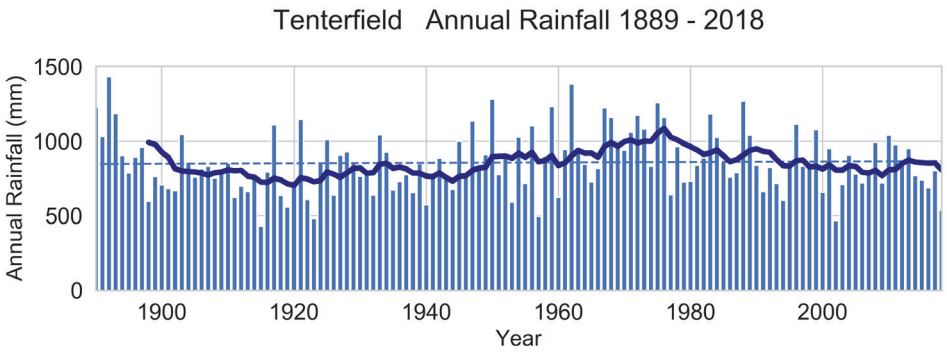
Annual Rainfall

Annual rainfall in the Northern Tablelands has been relatively stable

Annual rainfall in the Northern Tablelands has been relatively stable, decreasing by 34 mm from 890 mm to 856 mm (3%) over the past 30 years (1989–2018) when compared to the previous 30 years (1959–1988). The charts show annual rainfall (blue bars), with a 10-year running average (solid blue line) for Armidale and Tenterfield. Although the average annual rainfall has remained unchanged, it still fluctuates from year to year with natural variability.

In the past 30 years (1989–2018), dry years have occurred seven times and wet years have occurred eight times, while the remaining years were in the average range. Note the Millennium drought accounted for three of these dry years in the recent period. During the previous 30-year period (1959–1988), dry years occurred seven times and wet years occurred 12 times.



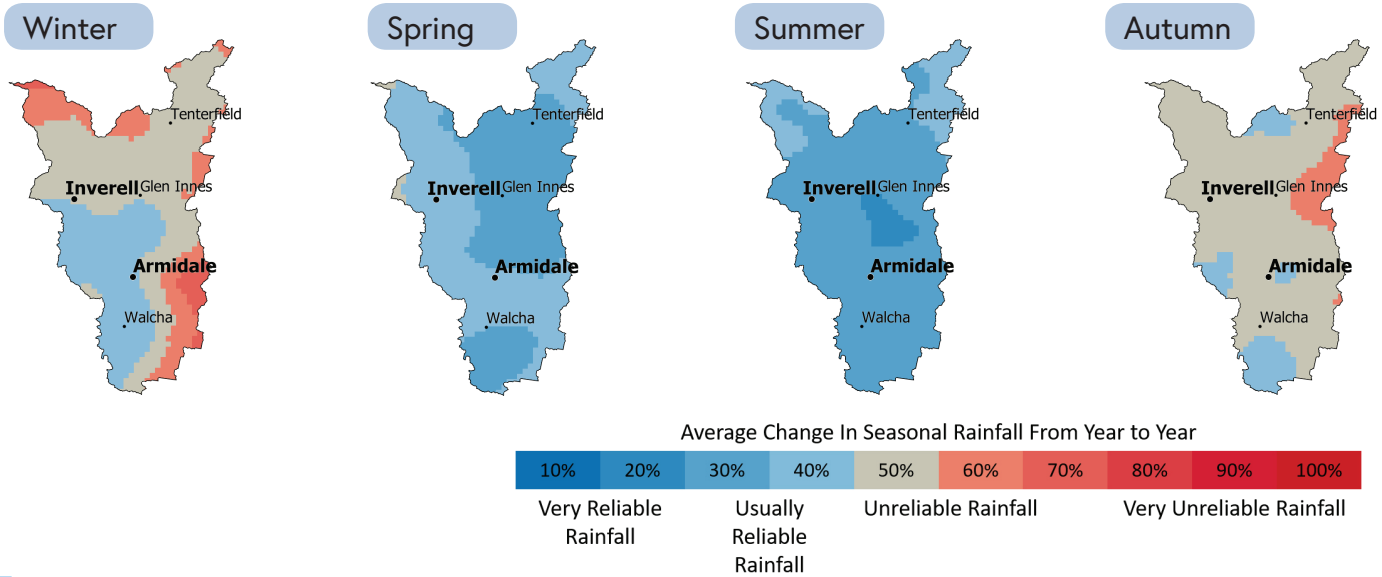


For more information on future projections, visit the Climate Change in Australia website
> www.climatechangeinaustralia.gov.au

Want to know more about the guides? Try Frequently Asked Questions at
> www.bom.gov.au/climate/climate-guides/

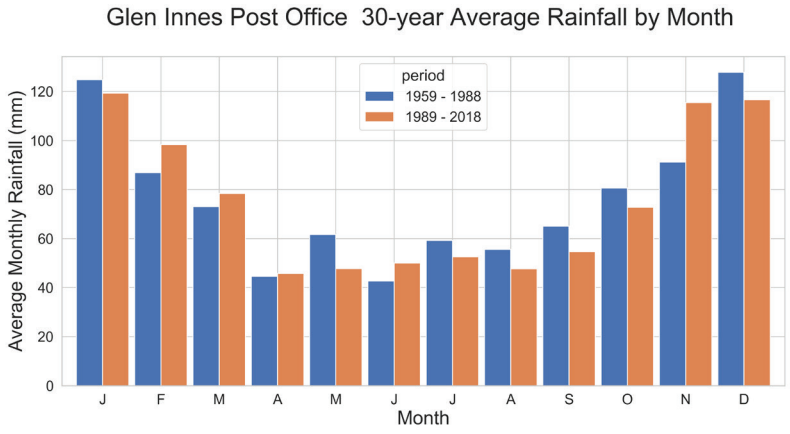
Northern Tablelands summer rainfall is reliable; winter is unreliable

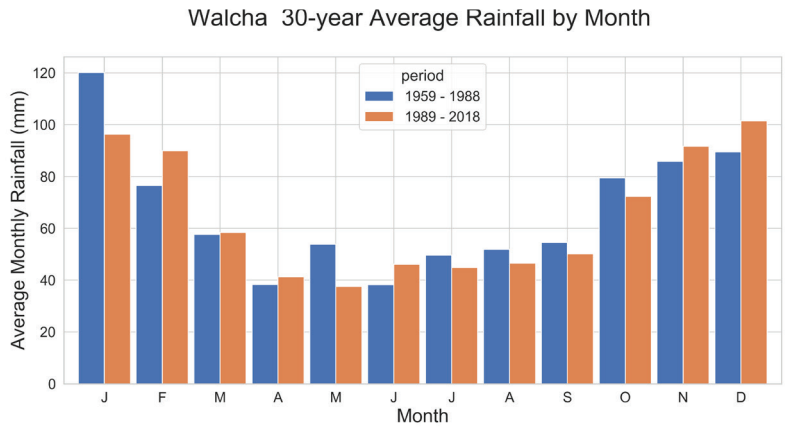
Rainfall reliability maps for the past 30 years (1989–2018) show summer rainfall has been moderately reliable across the region (blue areas), with usually only about 90 mm difference from one year to the next. This is in contrast to autumn rainfall, which has been less reliable (beige areas). Winter rainfall has been unreliable in the north and east of the region (beige and red areas), and although there have been some wet winters in the past 30 years, winter rainfall in these areas has not been reliable from year to year.



There has been a decrease in rainfall in the winter and spring months

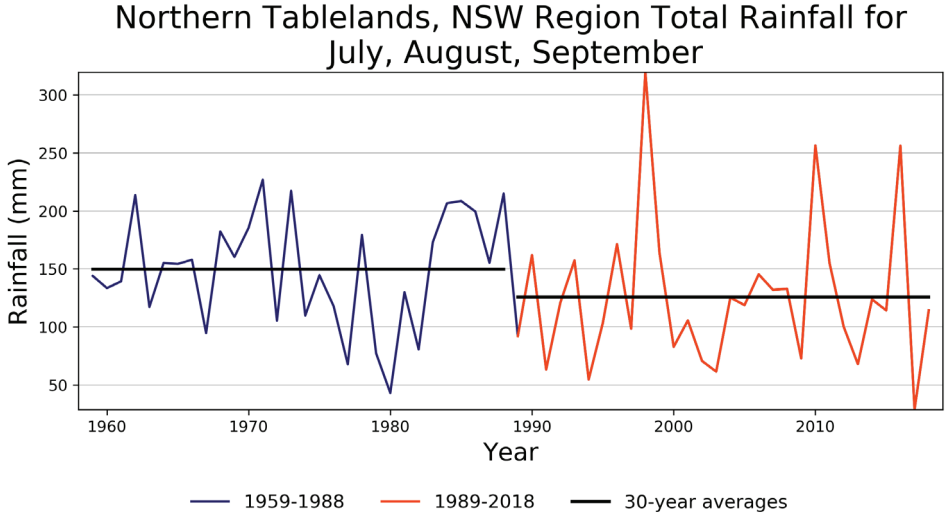
Monthly average rainfall charts for Glen Innes and Walcha show decreases in rainfall mainly in the winter and spring months. The orange bars represent the period 1989–2018, while the blue bars represent the previous 30-year period, 1959–1988.
Over the past 30 years, winter growing season rainfall (April to October inclusive) for Glen Innes was 371 mm; 38 mm lower than the 409 mm average for the previous 30-year period (1959–1988). For Walcha, growing season rainfall has declined 27 mm over the same period, from 366 mm to 339 mm.





For more information on the latest observations and science behind these changes, refer to the State of the Climate Report
> www.bom.gov.au/state-of-the-climate/

Three-monthly rainfall averages leading into spring have decreased



In the Northern Tablelands, stored soil moisture is a major consideration in summer cropping decisions. Soil moisture levels are largely driven by how much rainfall has been received in the three months leading into spring. The chart shows three-monthly rainfall averages for 1959–1988 (blue line) and 1989–2018 (orange line). While there was considerable variability, overall three-monthly rainfall averages leading into spring have decreased in the past 30 years, from 150 mm in 1959–1988, to 126 mm in 1989–2018.

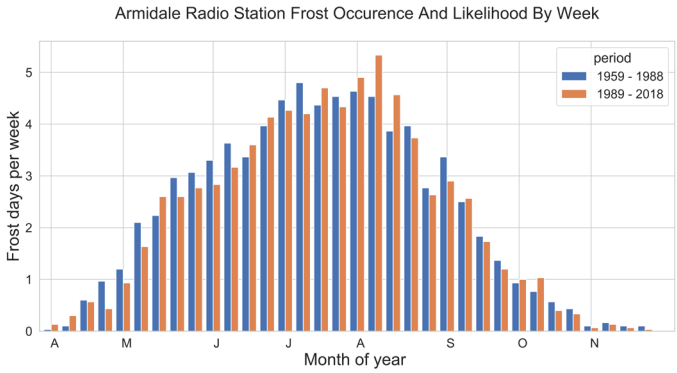
Frost

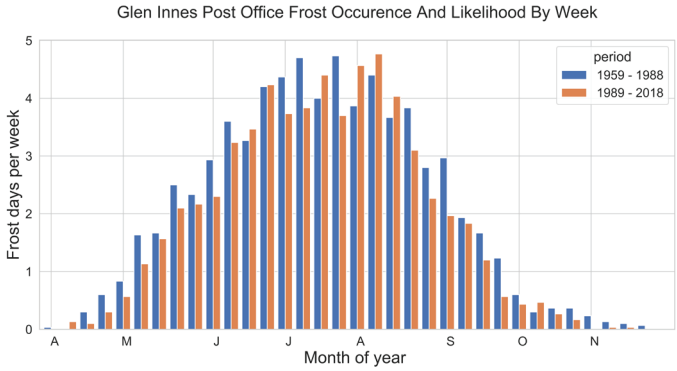
There has been little change in frost frequency and timing

There has been little change in the number of potential frosts at Armidale and a small decrease at Glen Innes between 1989–2018 (orange bars) compared with 1959–1988 (blue bars). Frost frequency at Glen Innes decreased slightly in spring, with an average of three fewer spring nights with the potential for frost between 1989–2018 compared to 1959–1988. The average number of potential frost nights at Armidale did not change between the two periods.

Over the last 30 years, Glen Innes's frost risk has typically ended by the second week of October, about two weeks earlier than the 1959–1988 average. Whereas Armidale's frost risk usually ends about the 20th of October and has not changed between the two periods. Both locations have seen potential frost nights as late as the last week of November. More frosty nights have tended to occur through dry winter and spring periods, when soil moisture is low and cloud cover infrequent.

On average, the region has had around 5 more total frost nights during a dry winter and spring than during wetter seasons. However, when comparing just spring frosts, the difference from wet to dry years was small.



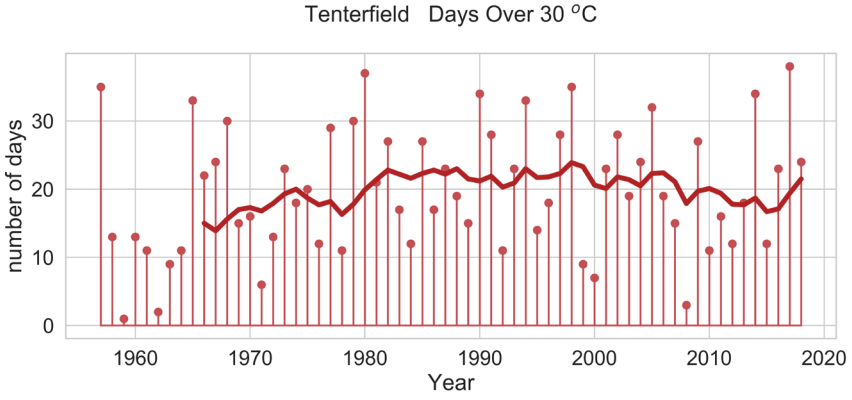


Temperature

Northern Tablelands have experienced more hot days in the past 30 years

The chart shows the annual number of days above 30 °C (red bars), with a 10-year running average (solid red line) for Tenterfield. Tenterfield experienced an average of 21 days per year above 30 °C between 1989–2018, compared to an average of 18 days per year above 30 °C between 1959–1988. Temperatures above 38 °C have been recorded for Tenterfield three times since records began at the site, these were once in 1994 and twice in 2017.

Instances of consecutive days above 30 °C have also been more frequent in the past 30 years compared to the previous 30 years. In 1990, 1994, 2005 and 2017, Tenterfield experienced periods of 10 or more days in a row above 30 °C. A run of 10 or more days above 30 °C at Tenterfield had not happened prior to 1990. Locations in the region with longer records, such as Inverell, show that the runs of 10 or more days above 30 °C have happened before, mostly in the late 1930s.



Regional Weather and Climate Guides are produced as a partnership between Bureau of Meteorology, CSIRO and FarmLink