The Corangamite region covers around 1.5 million hectares, of which 58% is under agricultural production. The region supports a diverse mix of agricultural enterprises, including livestock (sheep, cattle and poultry), dairy, wool and eggs. Nurseries and horticulture are also major industries. The region contributed around $1.47 billion to the Australian economy in 2017–18.

In the last 30 years in Corangamite

- Annual rainfall has been relatively stable
- Dry years have occurred 12 times and wet years nine times
- Rainfall has decreased in the autumn months
- Rainfall has been reliable year round
- The autumn break has been occurring one to two months later than the previous 30-year period
- There have been more frosts and they have been occurring later
- There have been more hot days, with more consecutive days above 35 °C

Corangamite region at a glance

The Corangamite region covers around 1.5 million hectares, of which 58% is under agricultural production. The region supports a diverse mix of agricultural enterprises, including livestock (sheep, cattle and poultry), dairy, wool and eggs. Nurseries and horticulture are also major industries. The region contributed around $1.47 billion to the Australian economy in 2017–18.

A guide to weather and climate in the Corangamite region

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.
Annual rainfall in the Corangamite region has been relatively stable

Annual rainfall in the Corangamite region has been relatively stable, decreasing by around 40 mm (-5%) from about 760 mm to about 720 mm 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 Cape Otway and Lismore. Although there has been a decrease in annual rainfall in the past 30 years, it is within the range of natural variability. In the past 30 years (1989–2018), dry years (lowest 30%) have occurred 12 times and wet years (highest 30%) have occurred nine times, while the remaining years were in the average range. Note the Millennium drought accounted for eight of these dry years in the recent period. During the previous 30-year period (1959–1988), dry years occurred eight times and wet years occurred 11 times.

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


Corangamite rainfall is reliable year round

Rainfall reliability maps for the past 30 years (1989–2018) show throughout the year the region’s rainfall has been reliable (blue areas). Winter is the most reliable season, with usually about 50 mm difference from one year to the next. Rainfall is less reliable in the northern half of the region in summer and in the east around Geelong during autumn (beige areas).
There has been a decrease in rainfall in the autumn months

Rainfall in the autumn months decreased at Lismore and Cape Otway between 1989–2018 (orange bars) compared with 1959–1988 (blue bars). This pattern of drier autumns was consistent across the region. Over the past 30 years, winter rainfall (May to November inclusive) for Ballarat was 417 mm, 48 mm lower than the 465 mm average for the previous 30-year period (1959–1988). For Lismore, winter rainfall decreased by 19 mm over the same period, from 429 mm to 410 mm. Over the same 30-year periods, summer rainfall (December to April inclusive) decreased by 15 mm at Ballarat, from 226 mm to 211 mm. At Lismore, summer rainfall also decreased by 15 mm, from 218 mm to 203 mm.


The autumn break is occurring later

In the Corangamite region, the autumn break can be defined as at least 25 mm of rainfall over three days, around the start of the winter cropping season. The map shows that over the past 30 years on average, the break occurred in early May along the south coast (blue to green areas), and not until late June or July through the central parts of the region (light green to yellow areas). The Otway Ranges produce a shadow to their north east, with lower average rainfall and a later autumn break. In some years, the autumn break may not happen (grey area) between the ranges and the western side of Port Phillip Bay. Across most of the northern and central part of the region, north of the Ranges over the last 30 years (1989–2018), the 25 mm autumn break has been occurring one to two months later than it did in the previous 30-year period (1959–1988). However there has been little change to the timing of smaller rainfall events (e.g. 15 mm).
**Frost**

Later and more frequent frosts

The number of potential frosts has increased at Ballarat between 1989–2018 (orange bars) compared with 1959–1988 (blue bars). Frost frequency increased in winter and spring, with an average of 13 more nights with the potential for frost between 1989–2018 compared to 1959–1988. Ballarat’s frost risk typically ended by the middle of November. The average date of last frost at Ballarat was nearly two weeks later in 1989–2018 compared to 1959–1988. More frosty nights have tended to occur through dry winter and spring periods, when soil moisture is low and cloud cover infrequent. On average, Ballarat had two more frost nights in the spring following a dry winter than in a spring following a wet winter. Long-term high quality frost records were only available for Ballarat in this region.

**Temperature**

The number of hot days in Corangamite has been relatively stable

The chart shows the annual number of days above 35 °C (red bars) for Cape Otway. Cape Otway experienced an average of three days per year above 35 °C between 1989–2018, compared to an average of two days per year above 35 °C between 1959–1988. Since 1989, temperatures of 41 °C or higher have been recorded for Cape Otway four times, in 1997, 2006, 2007 and 2009. In the previous 30-year period, from 1959-1988, Cape Otway recorded three runs of four or more days above 41 °C, in 1959, 1960 and 1974. Instances of consecutive days above 30 °C have decreased in the past 30 years. In 2014, Cape Otway experienced a run of five days in a row above 35 °C, the only run of four or more days in the past 30 years. In the previous 30-year period, from 1959-1988, Cape Otway recorded three runs of four or more days above 30 °C, in 1959, 1960 and 1974. Long-term high quality temperature records were only available for Ballarat and Cape Otway in this region.