

THE WEATHER IN NEW ZEALAND, DECEMBER 1981

General—December was warm but cloudy and dull over most of the country.

Farmers in drier areas reported good hay crops while in areas receiving adequate rainfalls this month grass growth was exceptional and stock health was reported as good. There were some reports of facial eczema in central areas of the North Island and fly strike caused problems in many areas.

Thunderstorms were frequent this month with widespread reports of thunderstorms on the 1st, 23rd and 24th in the North Island and 6th, 8th and 10th in the South Island. Several sheep were killed by lightning near Balclutha on the 2nd.

Pressures were higher than normal over the whole country but particularly in the north-east. North-west winds predominated over New Zealand.

Rainfall—Rainfalls were below normal over most of the North Island and in the north and north-east of the South Island. For the rest of the South Island and Waikato and Wairarapa in the North Island rainfalls were up to 150 percent of normal and 170 percent of normal in Southland.

Eastern areas of both islands were very dry. Some areas around Gisborne had less than 10 percent of their normal December rainfall, and Gisborne Airport had only 5 mm of rain for the month. This is the lowest December rainfall total recorded at Gisborne since the station opened in 1937, the previous lowest being 8 mm in 1957. The Kaikoura and Canterbury coasts received less than half their normal December rainfall, and parts of Auckland and Northland were also very dry. Heavy showers, often associated with thunderstorms, contributed to the high rainfalls in Southland this month.

Temperatures—Temperatures were above normal by an average of 1.5°C in the North Island and 2.0°C in the South Island. Mean minimum temperatures were nearly 2.5°C above average for the whole country. For many stations this was the second warmest December on record, mean temperatures this month being exceeded only by the record December temperatures of 1974.

Some high temperatures were recorded in southern and eastern districts of the South Island on the 19th and 20th, with temperatures above 30°C recorded at Alexandra on the 19th and Christchurch and Hororata on the 20th. Temperatures were warm between the 24th and 30th with mean temperatures generally 3° to 6° higher than average over the whole country during this period.

Sunshine—Sunshine totals were low for December, particularly in western areas of both islands, central North Island and Southland, these districts having between 70 percent and 80 percent of normal sunshine. Hokitika had its least sunny December since 1964 when recording began at the current site and its second lowest since 1930 using records from an earlier site. Invercargill had its lowest December sunshine since 1959 and its second lowest for December since the station opened in 1932. Among those stations recording large deficits this month were: Taupo (55 hours), New Plymouth (48 hours) Paraparaumu (63 hours), Hokitika (60 hours) and Invercargill (41 hours).

THE WEATHER SEQUENCE, DECEMBER 1981

1st–7th December

A depression lay to the west of New Zealand at the beginning of December. It moved south-eastwards during the first 4 days of the month and its associated frontal system crossed the country during

the 2nd. Rain fell in most districts on the 1st, with heavy falls in south-western and some northern areas. By the 3rd, the rain had cleared apart from light falls in Fiordland, Southland and Central Otago, and an anticyclone to the west of the North Island brought fine weather to all other areas on the 3rd and 4th. A depression developed in the Tasman Sea on the 4th and by the 5th lay off the West Coast of the South Island. This moved across the country during the 5th and 6th and was followed by further cold fronts within a broad, complex trough covering the Tasman Sea. Apart from some eastern coastal areas rain was widespread and heavy falls were recorded in Westland and Fiordland.

8th–14th December.

Following the trough, which crossed the country at the end of the first week, a strong westerly flow developed across the country. Fronts within this flow brought showers to many districts between the 8th and 10th. An anticyclone centred close to Lord Howe Island on the 11th, moved eastward onto the country and brought fine, warm weather to all districts apart from south Westland and Fiordland, which had some showers. Fine weather continued to the end of this week although a cold front crossing the country on the 13th brought heavy rain and cool temperatures to western and southern parts of the South Island.

15–21st December.

The anticyclone which brought fine weather during the second week had moved away to the east by the 15th, but a belt of high pressure lay over northern New Zealand and the north Tasman Sea. On the 16th a centre of high pressure developed over the north of the North Island and this brought fine weather to most North Island and northern South Island districts. A cold front crossed the South Island during this period and rain fell in southern and western districts on the 16th. Rain became more widespread on the 17th and 18th with the passage of a second cold front. An anticyclone developed in the south Tasman Sea below the front on the 18th and moved across New Zealand to lie near Chatham island on the 20th. Fine, mild weather prevailed over most of the country. A cold front lay off the West Coast on the 20th and heavy rain fell in Westland and Fiordland on the 20th, spreading north to central areas as the front crossed the country during the 21st.

22nd–31st December.

The weather between the 22nd and 24th was dominated by a series of weak cold fronts, which brought rain to most areas as they crossed the country. By the 24th a ridge of high pressure associated with an anticyclone to the east covered New Zealand and the weather became fine and mild in most areas. Dry, mild weather continued during the next 4 days as this ridge intensified into an anticyclone. A cold front associated with a depression in the Tasman Sea brought light rain to Westland, Fiordland and parts of Central Otago on the 29th. Most other districts had some rain on the 30th or 31st as this front moved onto the country. Some heavy falls were recorded in northern and central North Island districts on the 31st. Temperatures were warm throughout the last 10 days of the month.

(N.Z. Met.S. Pub. 107)

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