

THE WEATHER IN NEW ZEALAND IN DECEMBER 1984

General—December was generally a remarkably warm, but often cloudy month.

North-easterly winds were more frequent than usual, with winds from this quarter being the second highest for December in both Auckland and Invercargill since recording began in 1956. There were fewer winds from southerly directions than usual in Auckland and fewer westerlies, especially north-westerly, in Invercargill.

Gale force winds on the 19th felled many trees, caused widespread powercuts and some losses of cut hay in Canterbury and north Otago.

Pressures were lower than usual this month especially in the north and west.

Most farmers report good grass growth due to the mild generally wet conditions this month, although the wet weather has caused delays in haymaking in Northland, Westland and Southland.

Stock are looking well, but the incidence of fly-strike has increased in the North Island with the mild humid weather and has become a problem in parts of Hawkes Bay, Wairarapa and Bay of Plenty. Facial eczema has begun to show in some central areas of the North Island.

A notable feature of the weather this month was the high number of electrical storms—these were recorded in some part of the country on all but 3 days, and parts of Northland and Westland had up to 10 such storms this month. There was a particularly severe storm in the Auckland-Hamilton area on the 16th during which a linesman was killed at Te Awamutu, and two people hospitalised after being struck in Otorohanga and Puketaha.

The accompanying heavy rain caused floods in Auckland City resulting in \$500,000 damage.

Rainfall—The only areas to record average or below average rainfall this month were isolated areas around Kaitaia, southern and eastern areas of the North Island and parts of South Canterbury and Otago. Parts of Gisborne and Wairarapa were very dry, with stations recording between 40 and 60 percent of normal rainfall. The rest of the country had more rainfall than usual. The north and west of the South Island were particularly wet.

Much of Nelson, Marlborough and Westland had over 200 percent of normal rainfall while parts of south Westland had 300 percent or more. Among some of the higher totals for the month in this area (with percentage of normal in brackets) were: Franz Josef 1373 mm (325%), Fox Glacier 1079 mm (276%), Haast Pass 934 mm (287%) and Bruce Bay 762 mm (260%).

Temperature—December was warmer than usual everywhere except in the high country of the South Island and Central Otago. These areas had between average and 1.0°C below average temperatures.

Other areas of the South Island were up to 1.5°C above average. Temperatures in the North Island were uniformly very high, ranging between 1.5°C and 3.0°C above average. Central and eastern areas were warmest with many stations recording mean daily temperatures 2° to 3.0° above average and new mean daily temperature records were established at many sites.

Among these (with year record started in brackets) were: Gisborne (1937), Kaitaia (1941), Taupo (1949) and Paraparaumu (1953). Many other stations recorded this as their second warmest December, with, for example, Napier recording its hottest December since 1877 (records began in 1868) and Te Aroha its hottest since 1939 (records began in 1888).

Sunshine—Most of the North Island had average or above average sunshine this month with central and southern areas recording 20 to 40 hours more sunshine than usual. The South Island was cloudier than usual, especially in northern and southern areas, which had 40 to 60 hours less sunshine than usual.

Both Blenheim and Dunedin recorded their second lowest sunshine totals for December since recording began in 1930 and 1933 respectively.

Among those stations recording the greatest departures this month were: Ruakura (+35 hours), Wellington (+24 hours) and Auckland (+19 hours), Dunedin Airport (-58 hours), Blenheim (-43 hours) and Invercargill (-32 hours).

THE WEATHER SEQUENCE, DECEMBER 1984

1-7 December

A belt of high pressure covered New Zealand on the 1st. A weak front lay across the centre of the country, but apart from showers in Northland and some central North Island areas the weather during the 1st and 2nd was generally fine, though cool in the South Island. During the 3rd a trough began to approach the South Island and a small depression developed near Lord Howe Island.

Although fine, mild weather prevailed in most districts there were showers in parts of Northland, Fiordland and some eastern areas of the North Island. Rain fell over the South Island on the 4th, with some heavy falls in southern and western areas, and there were showers in some southern and western areas of the North Island. The rain became widespread and there were moderate to heavy falls in all areas between the 5th and 7th as the trough began to cross the country.

8-14 December

The trough still covered the country on the 8th, bringing further rain to southern and western areas of the South Island and north and west of the North Island. Meanwhile an anticyclone centred south-east of Tasmania extended a ridge to the south of the country. By the 9th the weather was generally clear, although showers continued in isolated areas and rain fell in Northland.

A combination of the south-easterly flow associated with the anticyclone, now centred near MacQuarie Island and a small depression west of Northland brought rain to all areas except central and eastern areas of the North Island and south of the South Island on the 10th. The depression moved south and deepened on the 11th and an associated cold front brought rain to all areas.

The front passed during the 12th and only isolated showers remained, but there was further heavy rain in many areas on the 13th and 14th as a complex frontal system quickly crossed the Tasman to lie over New Zealand on the 14th.

15-21 December

There were further showers over the South Island except eastern areas and in isolated areas of the North Island on the 15th as small fronts continued to cross the country. As these moved eastwards a complex trough began to move onto the country.

Rain fell in most districts, with heavy falls in the north and west of the South Island and central districts of the North Island on the 16th and the south and west of the South Island on the 17th. By the 18th the trough lay to the east and a disturbed westerly flow crossed the country.

There were showers in southern and western districts on the 18th and heavy rain in these areas on the 19th and 20th as fronts crossed the country within the flow. Rain became heavy in the north of the North Island and south and west of the South Island as a second trough began to move onto the country on the 21st.

22-31 December

Rain continued to fall in most areas on the 22nd, but by the 23rd had largely cleared, although showers continued in some southern areas and about East Cape. An anticyclone centred in the Tasman Sea began to move onto the country on the 24th.

Fine mild conditions prevailed on the 24th and 25th apart from continuing showers in Fiordland. A deep depression began to form east of Tasmania on the 26th and an associated front brought rain to the south of the country.

An anticyclone developed south-west of New Zealand and extended a ridge north-eastwards on the 27th. The weather was generally fine and mild until the end of the month although the south-easterly flow associated with the anticyclone to the south brought rain to eastern areas of both Islands at times.

J. S. HICKMAN, Director.