## THE WEATHER IN NEW ZEALAND IN NOVEMBER 1984

General—November was a mild month, and a little wetter than usual in many places.

There were more north-westerly winds than normal in both the north and south of the country this month, with a corresponding decrease in the frequency of south-westerlies in the north and winds from an easterly quarter in the south. There were slightly more strong winds than usual this month. Gales in the Wellington region caused disruptions to air transport and power supplies on the 23rd. Two houses lost roofs and there were many reports of minor damage.

Farmers in the North Island reported that stock were generally in excellent condition, although very dry conditions are beginning to develop in southern Hawkes Bay and parts of Wairarapa. Fly strike was a problem in many areas. Conditions were also very good in the South Island, although parts of South Canterbury and North Otago were very dry and there were some feed problems locally.

Many observers reported that native shrubs and trees were flowering early and prolifically, with cabbage trees and flax frequently specified.

A severe hailstorm in north-west Auckland on the 4th caused serious damage to orchards, vineyards and glasshouses. Individual farms sustained up to \$50,000 damage to glasshouses and equipment, with total damage estimated at several million dollars. Damaging hailstorms occurred on the same day in Manawatu, causing damage to horticultural crops.

Rainfall—Eastern parts of Northland and north Auckland, Bay of Plenty, some central areas and the Wellington region were drier than usual while most of the rest of the North Island had between normal and 160 percent of normal rainfall. Nelson, Blenheim, Marlborough, Southland and isolated areas of South Westland had between normal and half normal rainfall. The rest of the South Island had up to 180 percent of the usual November rainfall.

Prolonged moderate to heavy rainfall in inland areas and the ranges of northern and central Westland during the 21st to 23rd caused extensive flooding in some low lying coastal areas when rivers and streams overtopped their banks. Much of the commercial area and low-lying residential areas of Greymouth were flooded when the Grey River broke its banks. Among the heavier 72-hour falls recorded between the 21st and 23rd were: Inchbonnie, 415 mm; Lake Kaniere, 296 mm; Kowhitirangi, 237 mm.

Temperature—November was a very mild month, with mean temperatures between 1°C and 2.5°C above average over the whole country, except Westland and Fiordland which were up to 1°C above average. For many parts of the country this was the warmest November since 1972. Maximum temperatures were generally very high, reaching 20°C or more on half the days this month at many stations. For example, in Gisborne there were 26 days with temperatures of 20°C or above of which 10 reached 25°C or more.

Corresponding figures (i.e. days when the maximum reached 20°C or above and the number of those above 25°C) for some other stations were: Blenheim 23, 5; Masterton 23, 2; Hororata 21, 6; Alexandra 20, 10; Napier 20, 6.

There were only two short periods of cool weather this month. Temperatures were 2°-6° below average between the 16th and 19th. The 18th was generally very cold, especially in sheltered and inland areas of the South Island where widespread frosts occurred.

Temperatures were also very cool on the 26th and 27th.

Sunshine—Sunshine hours were average or below average over the North Island apart from some eastern areas which were a little sunnier than usual. In the South Island, Nelson and some southern and eastern areas had average or slightly above average sunshine, otherwise the South Island was also cloudier than usual this month. Among those stations with the greatest departures this month were: Timaru (+24 hours), Gisborne (+22 hours), Nelson (+21 hours), Kaikoura (-41 hours), New Plymouth (-31 hours) and Auckland (-30 hours).

# THE WEATHER SEQUENCE, NOVEMBER 1984

#### 1-7 November

Although an extensive high pressure system over the country brought generally fine weather on the 1st a cold front to the west caused showers in the north of the North Island. By the 2nd a small depression had developed on this front and heavy showers fell in the north and west of the North Island on the 2nd and these spread southwards over the North Island and north of the South Island on the 3rd.

By the 4th the rain was confined to central areas of the North Island as the depression crossed the country. The rain had cleared by the 5th although a front to the south brought showers to southern and western areas of the South Island. A belt of high pressure had become established over the country by the 6th and apart from light showers in parts of Northland the weather was generally fine and mild on the 6th and 7th.

### 8-14 November

The high pressure belt continued to cover the country. The weather was fine and settled in most areas between the 8th and 11th, although a warm front passing to the north brought rain to parts of Northland on the 8th and 9th. Temperatures were very mild at times. Showers fell in parts of Southland and Westland on the 12th as a front passed to the south, but the northerly flow which still covered the country meant temperatures remained very warm. There was further rain in southern and western areas of the South Island and isolated areas of the North Island as a cold front developed between the high pressure belt over New Zealand and an anticylone over Australia.

Temperatures continued to be warm.

#### 15-21 November

The cold front moved onto the country during the 15th and rain became widespread apart from eastern areas of both Islands. Temperatures remained mild. Rain continued in most areas on the 16th, but by the 17th had cleared apart from the south and west of the South Island, and some very light falls in western areas of the North Island. A strong south-westerly flow developed over the country on the 18th.

Temperatures were cool and there were showers in many areas on the 18th and 19th as a front within the flow crossed the country. By the 20th an anticyclone extended over the north of the country, with a south-westerly flow remaining to the south. Apart from continuing showers in south Westland and Fiordland the weather was fine. During the 21st a cold front moved onto the south of the South Island, bringing rain to southern and western areas.

# 22-30 November

A strong north-westerly flow associated with a deep depression near MacQuarie Island covered the South Island on the 22nd. A front within this flow brought rain to much of the South Island on the 22nd, with very heavy falls in Westland and Fiordland. Temperatures were very mild, especially in eastern areas. Rain spread to the south of the North Island on the 23rd as the front began to cross the country.

There was further rain from Taranaki southwards on the 24th although falls were very light in eastern areas of the South Island. By the 26th the rain had cleared south of Manawatu and heavy rain was falling from Hawkes Bay northward as the front continued to move north-eastwards. It lay off the east coast by the 27th and an extensive anticyclone with centres east and west of the South Island brought generally fine weather, although showers persisted in northern and eastern areas of the North Island.

The weather became generally mild and settled until the 29th, when a cold front began to move onto the South of the South Island and rain fell in Fiordland and Westland on the 29th, when a cold front began to move onto the South of the South Island and rain fell in Fiordland and Westland on the 29th and 30th, with light falls in some western areas of the North Island and about Cook Strait on the 30th.

J. S. HICKMAN, Director.