

The "normal" refers to the present site of the instruments. Standard period for normals is 1941-70. No normals are available for stations with only short records.

*Indicates that the sunshine recorder is not located at the station but is in the near vicinity.

A rain day is a day with rainfall equal to or greater than 0.1 mm.

Where the extremes of temperature and rainfall have occurred more than once during the month, the date of the first occurrence is given.

NOTES ON THE WEATHER FOR APRIL 1976

General—During April barometric pressures were higher than usual over and to the south of the South Island but rather low to the north. There was an unusually high frequency of easterly winds, causing cloudy, wet conditions in eastern and some northern districts of the North Island. On the other hand, the dry weather which had affected a considerable area of Otago and Southland since the beginning of the year persisted in April, affecting also parts of South Canterbury. In these areas conditions were much too dry, and the outlook for winter feed was very poor; many farmers spoke of a serious drought. The rain on the last two days in these areas was considered by some to be "too little and too late". However, elsewhere, especially in the North Island, growth was reported to be good.

Rainfall—Rainfall was below normal in the South Island except in parts of Nelson and Marlborough. The deficiency amounted to 25-50 percent in most areas, but it was more than 50 percent over Otago and Southland. Rainfall was also below normal in southern and some western districts of the North Island and in Auckland and parts of Waikato.

It was more than 50 percent wetter than normal east of a line from Kawerau to Napier, and also over a considerable part of Northland. The greatest excess was recorded from Opotiki and Gisborne eastward, where totals were more than double the normal value.

Over the greater part of Otago the rainfall from 14 February to 28 April, a period of 75 days, has been very low, ranging from 10 to 30 mm.

Milford Sound, which had very little rain for most of the month, received no less than 408 mm over the 5 days 25-29 April.

Temperatures—From Tokoroa and Tauranga northward and also on the West Coast temperatures were above normal by $\frac{1}{2}$ to 1°C. Elsewhere they were close to normal.

East of the ranges in the South Island the warmest days were the 3rd, 7th, 26th and 29th; while in Otago and Southland the coldest day was the 30th.

Sunshine—In Northland and east of the North Island ranges sunshine was below normal by up to 55 hours. Whangarei received only 100 hours and Gisborne 112. However, the southern half of the South Island was favoured with up to 40 hours above normal sunshine.

WEATHER SEQUENCE

At the beginning of April a ridge of high pressure extended over the South Island from an anticyclone over the South Tasman Sea, while a depression near the Chatham Islands was moving away. In the cool southerlies showers were reported in eastern districts of the North Island. On the 2nd the anticyclone covered the whole country and extended also over most of the Tasman Sea and well to the east of New Zealand, bringing generally fine weather. During the next two days pressures remained high over most of the country but a weak trough of low pressure brought rain mainly to the West Coast, with scattered showers also in parts of the North Island. Temperatures were warm in eastern districts of the South Island on the 3rd.

From the 5th to the 7th an anticyclone initially over New Zealand moved eastward. On the 5th pressures were low to the north and isolated showers were reported in Northland in the easterlies. The following two days were mainly fine with warm temperatures over the South Island in the northerlies, as a depression approached slowly over the North Tasman Sea. However, isolated showers were still reported in Northland. By the 8th the depression origin-

ally to the north of the country was moving on to Northland, while another centre was almost stationary over the North Tasman Sea. The first of these two depressions crossed the North Island during this and the following day. Rain was fairly general except over the southern half of the South Island and flooding was reported in parts of Nelson. Strong gales buffeted Northland and Auckland. Temperatures were generally warm on the 8th but became colder in the south on the 9th.

From the 10th to the 18th an anticyclone initially centred over Tasmania moved slowly across the Tasman Sea and the South Island, then eastward to the Chatham Islands. This was a period of settled weather over the South Island and most western and southern districts of the North Island with little or no rain. From the 10th to the 14th a depression initially to the northwest moved slowly northeastward and then became stationary near Norfolk Island. On the first two of these days considerable rain was reported in the easterlies in eastern and northern districts of the North Island. A heavy downpour caused some flooding in Auckland. During the next three days scattered showers still affected Northland and the Gisborne district. On the 15th and 16th the weather was mainly fair. However, during the next two days a small depression was almost stationary over Northland, and rain affected most northern and eastern districts of the North Island.

During the 19th and 20th the anticyclone was still moving away to the east of the Chatham Islands while a complex depression to the north moved slowly eastward and later southward. At the same time a very weak trough moved northeastward over the South Island with pressures rising rapidly behind it. Some further showers were reported in northern and eastern districts of the North Island, but in the South Island dry weather persisted. However, temperatures became cooler on the 20th. During the next two days the depression moved southeastward off the east coast of the North Island. Only scattered showers were reported, mainly in the North Island, but temperatures remained cool. On the 23rd a shallow depression covered the South Island but still brought no rain there except in Nelson, Marlborough and North Canterbury. However, rain did affect most western districts of the North Island. As the depression moved northeastward on the 24th showers again affected eastern and northern districts of the North Island while some showers were also reported on the Southland coast.

From the 25th to the 28th an anticyclone initially over the North Tasman Sea moved on to the North Island while a complex trough was almost stationary across the south of the South Island. Very heavy rain was reported in Fiordland, with considerable falls also over most remaining parts of the West Coast. Rain also extended at times to parts of western Southland, Central Otago and the Canterbury high country, while showers were reported in parts of the North Island. However, on the Canterbury Plains and in coastal Otago the weather remained dry, and also very warm on the 26th.

During the last two days of the month the trough which had been stationary in the south moved northeastward over the country, associated with a small but developing depression. At the same time a depression derived from a tropical storm off the Queensland coast moved rapidly southeastward and was over Northland by the morning of the 30th, causing strong gales there. As the two systems merged over the North Island rain became general with considerable falls in Bay of Plenty. Temperatures were once again very warm in Canterbury and Otago on the 29th but a cold change commenced in Otago on the 30th with southerlies.

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