

WEATHER NOTES FOR JUNE 1980

General—Throughout New Zealand June was generally wetter and milder than usual. This was the third consecutive month with mean monthly pressures above normal. Pressures were especially high to the south and east. There was a greater frequency than usual of easterly winds.

Grass growth was good at the beginning of the month in most districts, but severe frosts during the latter half of the month retarded growth significantly. The majority of farmers reported that stock condition had remained good. Some heavy stock losses were reported in Otago at the beginning of the month, when heavy rain caused major flooding of the Taieri Plains area.

Rainfall—The only areas with below normal rainfall were parts of Auckland, Bay of Plenty, Wanganui, Manawatu, Wairarapa, the West Coast, and Southland. In Wanganui and Manawatu some areas had less than 50 percent of their usual June rainfall. The wettest areas were Poverty Bay, northern Hawke's Bay, Nelson, Marlborough, southern Canterbury, and Otago. In the latter provinces some stations recorded more than 250 percent of the average rainfall.

During the early morning of the 4th heavy rain began to fall in southern Canterbury, Otago and parts of Southland, and this resulted in major flooding of the Taieri Plain between Mosgiel and Henley, and also near the mouth of the Clutha River. At Outram the Taieri River breached its banks, and approximately 2000 people were evacuated from their homes on the Taieri Plains. At one stage during the peak of the flooding 700 dairy cows were herded onto the flood free main highway at Henley. Flood waters cut most of the state highways and minor roads in the area, and Momona Airport was closed when the runway and buildings became flooded. At Musselburgh (Dunedin) 119 mm of rain were recorded during the period from 9 a.m. on the 4th to 9 a.m. on the 5th, this being the highest one day fall in any month since April 1923 (229 mm). At Islay Downs, Glendale, and Ross Creek more than 120 mm were measured during the same period.

Widespread heavy rain during the afternoon of the 11th caused flooding in Wellington and New Plymouth. Worst affected were the central business area in New Plymouth, and two suburbs to the south and west of the city. At Brooklands Park (New Plymouth) more than 70 mm were recorded between 9 a.m. on the 11th and 9 a.m. on the 12th, and the following stations also recorded heavy falls; Inglewood (89 mm), Omata (79 mm), and Stratford Power Station (92 mm).

Temperatures—Generally, temperatures were warmer than usual by approximately 0.5°C apart from some areas in Northland, Hawke's Bay, the West Coast, Canterbury, Otago, and Southland which were below normal by the same amount. Both day time and night time temperatures were cooler than usual in the south of the South Island.

During a warm spell from the 2nd to the 7th inclusive daily maximum temperatures were 2.0°C to 5.0°C above average.

Sunshine—Sunshine hours were near normal over most of New Zealand. The largest deficits were in Taupo (25 hours), Gisborne (35 hours), and Blenheim (35 hours). At Invercargill the highest June total since 1974 was recorded and with 91 hours it was the third highest in June since 1946 (103 hours) at this station.

WEATHER SEQUENCE FOR JUNE 1980

On the 1st the depression that had formed in the Tasman Sea at the end of May, began to move eastwards onto the South Island. The depression and associated cold front crossed the country on the 2nd, bringing heavy rain to the West Coast and moderate rain to western districts of both Islands. The only areas without rain were parts of

Hawke's Bay and Wairarapa. Early on the 3rd a depression formed within a trough of low pressure in the north Tasman Sea, and by the morning of the 4th had deepened and moved southwards towards the South Island. By the afternoon of the 4th the situation had become complex as the depression moved slowly eastwards and continued to deepen. Heavy rain fell in Otago, Southland, Canterbury, Nelson, Marlborough, parts of Taranaki, and Bay of Plenty. The heaviest falls were recorded in South Canterbury, Otago, and Southland where 24-hour falls to 9 a.m. on the 5th were in the range 50 mm to more than 100 mm. Most of New Zealand had moderate to heavy rain apart from some areas in Hawke's Bay and Northland.

A further depression developed to the west of the South Island on the 5th, and this had moved across the country by the morning of the 7th. Heavy rain was reported in inland Otago in the 24 hours up to 9 a.m. on the 6th, some stations measuring more than 50 mm in this period. No rain was reported in Hawke's Bay and Wairarapa, and mainly light falls throughout the North Island. On the 8th a ridge of high pressure extended onto New Zealand from an anticyclone in the Tasman Sea. The ridge persisted until the afternoon of the 9th, but then weakened rapidly as a trough of low pressure moved onto the South Island. Very heavy rain was recorded in Fiordland and Westland as the trough moved north-east across the country. In the 24 hours up to 9 a.m. on the 11th more than 100 mm were recorded in parts of Westland. As the trough continued to move north heavy rain was also reported to have fallen in Wellington, southern Wairarapa, Manawatu, Wanganui, and Taranaki. Some of these districts having 24-hour falls in excess of 50 mm. Temperatures were warmer than usual in most districts during the first 11 days of the month.

By the morning of the 12th the trough had moved to the east of New Zealand and was replaced by a weak ridge of high pressure. Small disturbances in a cold southerly airstream over New Zealand brought showery conditions to most districts on the 13th and 14th. The ridge of high pressure and associated anticyclone had moved onto the country by the 15th and this brought fine weather to most areas of New Zealand, apart from some places to the east of the main ranges where light showers were reported. Early on the 18th a depression had formed in the north Tasman Sea and had begun to move southeast towards the North Island. On the 20th the anticyclone was lying to the east of the country, and the depression moved onto Northland during the afternoon. As the depression moved southeast moderate to heavy rain was reported in Northland (where 24-hour falls of 70 mm were measured), Auckland, Bay of Plenty, Poverty Bay, Hawke's Bay, and northern Wairarapa.

Conditions were fine throughout the South Island.

A ridge of high pressure had moved onto New Zealand by the morning of the 23rd, but a cold front associated with a depression moving to the south of the country was approaching the South Island. As the front moved northwards across the country light rain was reported in most districts. On the 24th an anticyclone had become established over the country and this brought fine weather until the 28th. A depression that had developed near Tasmania on the 26th had moved east, and by the 29th was lying in the south Tasman Sea and progressing towards the South Island. A cold front ahead of this depression had moved onto New Zealand by the morning of the 29th and this brought heavy rain to Fiordland, Westland, Nelson, Bay of Plenty, Auckland, and Northland. In the latter three districts 24-hour falls of between 50 mm and 100 mm were reported, but in eastern districts of both islands there were mainly light showers. Temperatures were cooler than usual throughout New Zealand from the 25th until the end of the month.

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