

WEATHER NOTES FOR SEPTEMBER 1980

General—September in New Zealand was windier and milder than usual with an exceptionally high frequency of north-westerly winds. Consequently, western and southern areas of the country were considerably wetter than normal.

Farmers in the north of the country generally reported seasonal pasture growth, but in most other areas growth was poor. In the wettest areas stock and crop losses occurred, but in many eastern areas farmers were pleased by high lambing percentages.

During the early hours of the 10th, violent thunderstorms were reported in western North Island areas, and a tornado in north Taranaki caused extensive damage to farm buildings, power blackouts, and loss of stock.

Snow avalanches have been cutting the Milford to Te Anau highway since the middle of August, and a further five major ones were reported in September. There was an estimated drop of 25 to 35 percent in tourist traffic to these areas.

Rainfall—Rainfall was above the September normal in the far north and south of the country and in western areas. The Southern Alps, and the West Coast received more than 150 percent of average. Over the rest of New Zealand rainfall was below normal. In many eastern South Island districts, little or no rain fell during September, while in the east of the North Island rainfall was less than 30 percent of normal at many sites.

Kaikoura West reported no rainfall for September, this being the only month since 1889 when records began where no rain was measured. Lynnford (Canterbury) recorded less than 2 mm, this being the driest year since 1913 when recording started and the second ever driest for any month of the year. Other South Island east coast sites to report less than 5 mm of rain include, Christchurch Airport (1.5 mm), Hapuku (0.8 mm), Mikonui (nil), Conway Flat (0.5 mm), Dunsandel (3.8 mm), Windsor (2.5 mm), Lyttelton (nil), Duntroon (2.6 mm), and Coldstream (3.7 mm).

Elsewhere in the South Island 1065 mm fell at Otira giving it the wettest September since 1970, this figure having been exceeded only three times before since 1906. West Coast stations to exceed 800 mm for the month include Milford Sound (1010 mm), Paringa (884 mm), and Inchbonnie (881 mm). It was also the wettest September since 1970 at Lake Coleridge (129 mm), and at Nelson (121 mm). For some West Coast stations rain fell every day of the month, but for the majority of sites 26 to 28 raindays occurred. On the 25th heavy rain fell in Fiordland and spread up the West Coast on the 26th. Stations to record large falls include Whataroa (208 mm), Milford Sound (132 mm), Fox Glacier (123 mm), Ross (122 mm), Lake Kaniere (103 mm), and Kowhitirangi (100 mm). An exceptional fall occurred at Harihari which recorded 210 mm in the 24 hours from 9 a.m. on the 26th. A daily fall of this value occurs about once in 4 years. During this time surface flooding was reported on some farms.

Temperatures—Mean temperatures were slightly cooler than usual along the West Coast of the South Island, but were above average elsewhere. Many areas in the east of both islands were more than 1.5°C above the September normal.

Maximum temperatures in eastern South Island areas during the latter part of the month were on most days over 5°C warmer than normal. These departures were due to foehn heating in the strong westerly airflow. Consequently, night-time minima were also considerably above the average.

Sunshine—Sunshine hours were above average in the east of New Zealand and about Cook Strait. Elsewhere they were below average and in some areas the deficit was greater than 30 hours. The largest surpluses were recorded at Christchurch (41 hours), Gisborne (33 hours), and Timaru (31 hours). Largest deficits occurred at Hokitika (76 hours), Tauranga (58 hours), Westport (57 hours), and Invercargill (54 hours). At both Christchurch and Timaru, it was the sunniest September since 1958. It was the least sunny September at Hokitika since records were started in 1964; on 14 days, one hour or less of sunshine was recorded. Tauranga had the lowest September sunshine total since 1970 and the second lowest since records began in 1932.

WEATHER SEQUENCE FOR SEPTEMBER 1980

A cold front over the Tasman Sea had crossed New Zealand by the 2nd, and another moved over the country during the 3rd. Both fronts brought rain to most of the country with heavy falls of rain reported in Westland and Fiordland on the 1st, 2nd, and 3rd.

A trough of low pressure over the Tasman Sea moved slowly on to the country on the 5th, and persisted until the 8th. Rain fell in many districts during this time.

A disturbed westerly airflow behind the trough covered the Tasman Sea and New Zealand during the 8th, bringing showers chiefly to the west of both islands and to the south of the country. These westerly conditions lasted until the 24th. Mobile cold fronts with more widespread rain crossed New Zealand on the 8th, 10th, 13th, 15th, 16th, 19th, 20th, 21st, and 22nd. Heavy falls of rain in excess of 50 mm were recorded in parts of Westland and Fiordland on the 9th, 10th, 11th, 12th, 14th, 16th, 21st, and 22nd.

An anticyclone over Australia on the 23rd, moved onto the Tasman Sea on the 24th extending a ridge towards New Zealand, and mostly dry weather was reported. By the 25th the anticyclone lay north of the country and a cold front in the Tasman Sea was preceded by a moist north-west airflow, again bringing rain to the far south-west. The front moved on to New Zealand during the 26th, accompanied over much of the country by rain, and passed to the east by the 28th. Heavy falls of rain in excess of 100 mm were reported in parts of Westland, and Fiordland during the 25th and 26th.

From the 28th to the end of the month a disturbed westerly airflow became established over the country. A cold front in this flow affected southern districts on the 28th, bringing further heavy rain to Fiordland.

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