

CLIMATOLOGICAL TABLE—Summary of the Records of Temperature, Rainfall, and Sunshine for September 1966—continued

Station	Height of Station Above M.S.L.	Air Temperatures in Degrees (Fahrenheit)							Rainfall in Inches					Bright Sunshine	
		Means of		Mean of A and B	Difference From Normal	Absolute Maximum and Minimum				Total Fall	No. of Rain Days	Difference From Normal	Maximum Fall		
		A Max.	B Min.			Maximum	Date	Minimum	Date				Amount		Date
	Ft.	°F.	°F.	°F.	+0.6	°F.	°F.		In.			In.		Hrs.	
Taieri .. .. .	80	57.6	37.5	47.6	+0.6	68.3	19 26.1	1	0.56	4	-1.4	0.30	9	..	
Berwick Forest .. .. .	60	57.5	36.3	46.9	0.0	68.7	19 25.1	1	0.55	8	-1.5	0.20	9	..	
Dunedin Airport .. .. .	4	58.0	36.4	47.2	-0.1	68.8	19 24.4	1	0.48	6	-1.3	0.23	9	137	
Musselburgh, Dunedin .. .. .	5	55.8	42.1	49.0	+0.4	71.0	19 32.3	1	0.53	6	-1.7	0.30	9	145	
Oamaru .. .. .	..	56.4	39.4	47.9	..	68.5	19 30.0	3	0.19	4	..	0.09	12	163	
West Arm, Lake Manapouri .. .. .	590	52.6	38.7	45.6	+1.3	59.0	30 32.0	1, 11	4.89	18	..	1.30	23	..	
Queenstown .. .. .	1,080	55.7	36.6	46.2	-0.3	62.8	30 29.6	10	1.72	7	-0.9	0.80	16	158	
Mid Dome .. .. .	1,252	56.0	35.1	45.6	-0.4	66.4	7 25.1	5	1.10	10	-1.7	0.56	9	..	
Cromwell .. .. .	720	58.6	35.0	46.8	-0.9	66.1	29 23.2	1	0.13	2	-1.0	0.12	18	..	
Ophir .. .. .	1,000	59.2	32.0	45.6	+0.4	77.8	12 19.8	1	0.00	0	-0.9	..	..	..	
Moa Creek .. .. .	1,400	57.5	27.4	42.4	-0.7	64.0	30 16.0	1	0.09	3	-0.8	0.05	12	..	
Earnsclough .. .. .	500	60.3	31.2	45.7	-0.6	67.8	29 18.5	1	0.12	3	-0.8	0.09	12	..	
Alexandra .. .. .	461	59.7	35.9	47.8	+0.2	67.1	29 23.7	1	0.34	5	-0.5	0.23	12	186	
Roxburgh Hydro .. .. .	350	59.7	36.7	48.2	-0.2	66.8	22 29.0	1, 26	0.29	5	-1.0	0.10	12	..	
Moa Flat, West Otago .. .. .	1,345	54.0	36.4	45.2	-0.6	61.1	19 28.2	25	0.96	6	-1.1	0.39	24	..	
Lake Mahinerangi .. .. .	1,300	53.5	34.2	43.8	..	62.0	19 27.0	1	0.91	8	..	0.28	9	..	
Tapanui .. .. .	740	57.4	37.8	47.6	+0.8	65.8	21 30.0	7	0.73	6	-1.9	0.30	24	..	
Rankleburn Forest .. .. .	835	54.9	36.0	45.4	-0.4	65.8	22 29.8	25	0.91	7	..	0.35	24	..	
Otautau .. .. .	180	57.7	35.6	46.6	-0.1	79.0	30 27.0	1	1.50	7	-1.8	0.74	24	134	
Gore .. .. .	230	57.4	37.4	47.5	-0.2	66.5	22 30.8	1	0.80	6	-1.7	0.34	24	150	
Winton .. .. .	150	57.7	36.7	47.2	..	66.2	21 27.9	1	0.77	7	..	0.27	24	160	
Pebble Hills .. .. .	138	58.5	36.5	47.5	+0.4	67.0	21 26.0	1	0.76	7	-2.1	0.31	24	..	
Invercargill Airport .. .. .	1	56.2	36.8	46.5	+0.2	64.5	16 26.6	1	1.04	12	-1.3	0.39	24	156	
Milton .. .. .	60	57.3	36.4	46.8	..	67.8	19 26.1	1	0.76	7	-1.2	0.30	9	..	
Balclutha .. .. .	20	55.7	36.0	45.8	..	67.4	19 29.1	1	0.59	9	..	0.18	9	152	
Rarotonga .. .. .	15	76.5	64.5	70.5	-0.9	81.1	23 53.5	13	2.79	8	-1.7	2.00	17	189	
Raoul Island .. .. .	126	65.6	57.2	61.4	+0.1	70.7	7 50.7	1	6.86	17	+2.6	2.63	5	150	
Chatham Islands .. .. .	157	51.2	41.8	46.5	-1.7	56.9	24 34.5	4	1.63	16	-0.9	0.36	8	114	
Campbell Island .. .. .	49	46.6	37.9	42.3	..	52.9	22 28.8	25	3.80	22	..	0.64	16	54	
Scott Base, Antarctica .. .. .	45	..	..	-19.8	..	11.8	.. -63.6	..	..	..	..	..	..	..	

LATE RETURNS

Retaruke, July 1966 .. .. .	680	52.3	34.6	43.4	..	57.6	17 21.6	25	6.36	13	..	1.10	7, 16	..
Retaruke, Aug 1966 .. .. .	680	53.2	33.7	43.4	..	59.3	28 24.1	11	3.38	10	..	0.81	24	..
Waerenga-o-Kuri, Aug 1966 .. .. .	1,030	51.2	39.4	45.3	-1.5	58.8	25 31.3	23	3.91	19	-1.2	1.00	15	..
Greymouth, Aug 1966 .. .. .	13	55.2	40.7	48.0	..	59.1	16 34.7	20	4.95	9	..	1.26	13	170
ERRATA														
Levin, Aug 1966 .. .. .	100	..	..	..	..	..	..	..	..	..	..	..	..	147
Te Teko, Aug 1966 .. .. .	100	..	..	..	..	..	..	..	..	..	..	..	..	183

The "normal" refers to the present site of the instruments. The standard periods for normals are: for temperature 1931-60, for rainfall 1921-50, and for sunshine 1935-60. No normals are available for stations with only short records.

\*Sunshine recorder is not located at the station but is in the near vicinity.

NOTES ON THE WEATHER FOR SEPTEMBER 1966

**General:** There was an unusually high frequency of north-easterly winds in September, especially in the North Island. The month was marked by exceptionally dry weather in parts of Canterbury and Otago; and in parts of Otago feed was reported to be scarce. On the other hand it was much wetter than usual in Northland, and too wet for many farmers. Elsewhere it was a variable month for farming, with some complaints about growth being slow, particularly in the North Island.

**Rainfall:** Canterbury, Otago, and Southland received less than half the average rainfall; and it was particularly dry in South Canterbury, inland North Otago, and parts of Central Otago, with less than a tenth of the average value. Lake Waitaki received no rain at all. Parts of Otago have had rainfall below average every month from February. Musselburgh, Dunedin, received only 11.74 in. during this eight months, the lowest for many years.

For the greater part of the remainder of the country rainfall was also somewhat below average. However, it was wetter than usual in most northern and western districts of the North Island (except for western Waikato) and also in parts of Nelson and Marlborough. Rainfall was more than double the average value in two areas. The first extended from Whangarei nearly to Bay of Islands; and in this district some stations received 11 in. in the three days 4-6 September. The other was part of the area between Rotorua and Tauranga, where some places received 10 in. in the week 16-22 September, with local flooding.

**Temperatures:** Temperatures were close to average, except in Gisborne and parts of Hawkes Bay, where they were a degree below. The coldest spells were 10-11th; and, in the South Island, also 23-24th, with snow to low levels in Otago and Southland.

**Sunshine:** Sunshine was below average by up to 60 hours in eastern districts from Marlborough northward, also in the whole of Northland and in Nelson. Elsewhere it was close to average.

**Weather Sequence:** For the first three days of the month the weather was mainly fair during the passage of an anticyclone across the country and to the east. However, a few showers were reported, mainly in Northland and Auckland.

From the 4th to the 6th pressures remained high to the east, while a depression west of the North Island moved south-westward and a second centre, which formed to the north-east of Northland, moved slowly southward. The moist north-easterlies brought rain to northern districts of the North Island, also at times to North Taranaki and eastern districts as far south as Christchurch. Some heavy falls were reported in Northland, with flooding. There was a temporary improvement in most districts on the 7th, under the influence of a weak ridge of high pressure. However, conditions soon deteriorated again, with fairly general rain during the 8th and 9th as the depression which had been over the Tasman Sea passed through Cook Strait. The rain was heavy at times in North Taranaki.

As the depression moved away to the east on the 10th, winds changed to the south, with a few showers in eastern districts and about Cook Strait and the Southland coast. Settled weather soon prevailed for two days as an anticyclone moved on to the country from the Tasman Sea. However, from the 13th to the 17th, with the anticyclone centred to the east and pressures low again to the north, a second spell of easterly to north-easterly winds brought rain at times to eastern and northern districts of the North Island and to the West Coast.

The week from the 18th to the 24th was the most generally unsettled period of the month. A small depression crossed the North Island from the Tasman Sea, with its associated trough affecting most of the country; and a second trough associated with a depression far to the south soon followed. Rain was fairly general, except in eastern districts of the South Island south of Christchurch. During the 23rd and 24th, yet another trough crossed the country, with rain, except in Hawke's Bay. Snow was reported to low levels in Otago and Southland.

For the last six days of the month a large anticyclone moved slowly across the country. However, pressures remained low to the north, so that for northern districts there was a third spell of easterly to north-easterly winds, with frequent rain in Northland, extending at times also to Auckland and Gisborne.

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