

CLIMATOLOGICAL TABLE—Summary of the Records of Temperature, Rainfall, and Sunshine for September 1967—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. | °F. | °F. | °F. | °F. | In. | | | In. | | Hrs. | |
| Otematata .. | 920 | 56.8 | 35.3 | 46.0 | -1.6 | 69.0 | 27 | 21.0 | 12 | 0.32 | 8 | -1.0 | 0.13 | 14 | .. |
| Oamaru Aerodrome .. | 99 | 54.3 | 37.9 | 45.6 | .. | 68.0 | 30 | 28.3 | 12 | 0.42 | 7 | .. | 0.24 | 15 | .. |
| Tara Hills, Omarama .. | 1,600 | 53.5 | 33.9 | 43.7 | -0.3 | 64.4 | 27 | 19.0 | 12 | 0.45 | 6 | -1.1 | 0.38 | 24 | 163 |
| Lake Hawea .. | 1,147 | 54.0 | 38.3 | 46.1 | -0.5 | 62.0 | 24 | 25.7 | 12 | 0.89 | 10 | -1.9 | 0.32 | 30 | .. |
| Naseby Forest .. | 2,000 | 50.8 | 30.4 | 40.6 | -2.2 | 63.8 | 27 | 17.6 | 12 | 1.68 | 12 | +0.1 | 0.53 | 27 | .. |
| Herbert Forest .. | 200 | 55.6 | 31.8 | 43.7 | .. | 66.0 | 30 | 26.0 | 22, 23 | 1.09 | 10 | .. | 0.62 | 15 | .. |
| Cherry Farm, Waikouaiti .. | 21 | 53.2 | 37.3 | 45.2 | -0.9 | 68.2 | 30 | 26.0 | 12 | 2.32 | 17 | +0.7 | 0.66 | 15 | .. |
| Taieri .. | 80 | 54.7 | 37.0 | 45.8 | -1.2 | 69.8 | 27 | 27.9 | 13 | 3.52 | 15 | +1.5 | 0.42 | 24 | .. |
| Berwick Forest .. | 60 | 54.7 | 36.8 | 45.8 | -1.1 | 69.9 | 27 | 24.6 | 12 | 3.17 | 16 | +1.1 | 0.42 | 14 | .. |
| Dunedin Airport .. | 4 | 55.3 | 36.3 | 45.8 | -1.5 | 69.0 | 27 | 23.2 | 12 | 2.69 | 17 | +0.9 | 0.32 | 14, 15 | 120 |
| Oamaru .. | 99 | 54.7 | 41.0 | 47.9 | .. | 69.0 | 30 | 32.0 | 13, 14 | 0.56 | 8 | .. | 0.35 | 15 | 157 |
| Musselburgh, Dunedin .. | 5 | 52.6 | 40.9 | 46.7 | -1.9 | 66.0 | 30 | 29.2 | 12 | 3.65 | 16 | +1.5 | 0.51 | 15 | 115 |
| West Arm, Lake Manapouri .. | 590 | 51.1 | 38.7 | 44.9 | +2.9 | 58.8 | 26 | 27.5 | 12 | 7.41 | 19 | -5.6 | 2.08 | 16 | .. |
| Queenstown .. | 1,080 | 53.7 | 37.7 | 45.7 | -0.8 | 62.6 | 26 | 26.8 | 12 | 1.33 | 14 | -1.3 | 0.35 | 27 | 131 |
| Cromwell .. | 698 | 56.3 | 36.5 | 46.4 | -1.3 | 65.8 | 27 | 23.5 | 12 | 0.66 | 12 | -0.4 | 0.13 | 15, 18 | .. |
| Ophir .. | 1,000 | 55.2 | 33.2 | 44.2 | -1.0 | 66.5 | 27 | 18.4 | 12 | 0.80 | 9 | -0.3 | 0.24 | 27 | .. |
| Moa Creek .. | 1,400 | .. | 30.1 | .. | .. | .. | .. | 20.2 | 8 | 0.53 | .. | -0.4 | 0.20 | 14 | .. |
| Earnsclough .. | 500 | 57.5 | 33.2 | 45.4 | -1.1 | 68.0 | 17 | 18.5 | 12 | 0.66 | 9 | -0.2 | 0.14 | 15 | .. |
| Alexandra .. | 461 | 56.6 | 36.2 | 46.4 | -1.2 | 67.1 | 17 | 22.9 | 12 | 0.60 | 10 | -0.2 | 0.17 | 15 | 153 |
| Roxburgh Hydro .. | 350 | 56.5 | 36.5 | 46.5 | -1.9 | 65.5 | 30 | 23.0 | 12 | 0.86 | 13 | -0.4 | 0.24 | 15 | .. |
| Moa Flat, West Otago .. | 1,345 | 51.4 | 35.5 | 43.4 | -1.2 | 63.0 | 27 | 25.8 | 12 | 2.69 | 18 | -0.7 | 0.58 | 27 | .. |
| Lake Mahinerangi .. | 1,300 | 50.4 | 34.0 | 42.2 | .. | 63.3 | 27 | 19.0 | 12 | 3.44 | 18 | +0.6 | 0.54 | 24 | .. |
| Tapanui .. | 740 | 55.2 | 37.6 | 46.4 | -0.4 | 66.0 | 22, 27 | 27.5 | 12 | 2.74 | 16 | +0.1 | 0.57 | 27 | .. |
| Rankleburn Forest .. | 835 | 52.6 | 36.4 | 44.5 | -1.3 | 66.0 | 27 | 26.0 | 12 | 2.77 | 19 | .. | 0.62 | 24 | .. |
| Taieri Mouth .. | 50 | 51.9 | 37.6 | 44.7 | .. | 65.9 | 30 | 27.7 | 12 | 3.59 | 18 | .. | 0.62 | 4 | .. |
| Otautau .. | 180 | 54.0 | 38.0 | 46.0 | -0.5 | 63.0 | 20 | 24.0 | 12 | 2.30 | 18 | -1.0 | 0.40 | 9 | 123 |
| Gore .. | 235 | 54.9 | 37.6 | 46.8 | -0.9 | 65.5 | 17 | 27.7 | 12 | 2.69 | 16 | +0.2 | 0.59 | 27 | 123 |
| Winton .. | 145 | 54.5 | 39.1 | 46.8 | .. | 62.7 | 22 | 28.0 | 12 | 2.32 | 19 | .. | 0.50 | 27 | 129 |
| Pebble Hills .. | 150 | 56.4 | 37.4 | 46.9 | -0.2 | 67.0 | 22 | 26.0 | 12 | 2.75 | 17 | -0.2 | 0.41 | 27 | .. |
| Invercargill Airport .. | 1 | 54.1 | 37.6 | 45.8 | -0.5 | 62.8 | 22 | 24.2 | 12 | 2.22 | 21 | -1.1 | 0.42 | 27 | .. |
| Milton .. | 60 | 54.5 | 36.9 | 45.7 | .. | 68.9 | 27 | 24.0 | 12 | 4.20 | 17 | +2.0 | 0.73 | 26 | .. |
| Balclutha .. | 20 | 54.2 | 38.1 | 46.1 | .. | 67.0 | 27 | 26.4 | 12 | 3.45 | 17 | .. | 0.76 | 19 | 119 |
| Rarotonga .. | 15 | 78.3 | 69.1 | 73.7 | +2.3 | 82.1 | 14 | 60.1 | 1 | 1.29 | 10 | -3.2 | 0.42 | 29 | 185 |
| Raoul Island .. | 126 | 67.4 | 57.2 | 62.3 | +1.0 | 72.7 | 20 | 50.6 | 6 | 7.82 | 19 | +3.5 | 2.10 | 9 | 170 |
| Chatham Islands .. | 157 | 50.6 | 42.0 | 46.3 | -1.9 | 57.9 | 18 | 31.4 | 3 | 3.81 | 23 | +1.3 | 1.08 | 29 | 110 |
| Campbell Island .. | 49 | 45.9 | 36.0 | 40.9 | .. | 50.8 | 20 | 22.4 | 13 | 1.39 | 14 | .. | 0.38 | 30 | 72 |
| Scott Base, Antarctica .. | 45 | .. | .. | -18.0 | .. | 17.6 | 1 | -55.8 | 8 | .. | .. | .. | .. | .. | .. |

LATE RETURNS

| | | | | | | | | | | | | | | | |
|------------------------------|-----|------|------|------|----|------|----|------|----|-------|----|------|------|----|-----|
| Waihi, Aug, 1967 .. | 300 | .. | 43.2 | .. | .. | 70.0 | .. | 29.8 | .. | 12.45 | 20 | .. | 3.75 | 23 | 136 |
| Mangatu Forest, Aug, 1967 .. | 570 | 59.0 | 41.7 | 50.3 | .. | 70.0 | .. | 29.8 | .. | 3.92 | 14 | -1.5 | 0.84 | 23 | .. |
| Errata— | | | | | | | | | | | | | | | |
| Rangiora, Aug, 1967 .. | 150 | .. | .. | .. | .. | 71.8 | 11 | .. | .. | .. | .. | .. | .. | .. | .. |

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 1967

General: September was notable for the exceptionally cold weather during the first half of the month, with snow to low levels in many areas at times. Some lambs were lost in eastern districts of the North Island and in Otago and Southland. Temperatures were much milder during the second half of the month with good conditions for growth, except in parts of Canterbury and North Otago, where it was too dry.

Rainfall: In the South Island rainfall was mainly less than three-quarters of the average value. Over most of Canterbury, on the Kaikoura coast and in some inland areas of Marlborough, Nelson, and Buller it was less than half. The only part of the South Island with rainfall at least 50 percent above average was South Otago with part of Southland.

In the North Island rainfall was for the most part close to average. However, Taranaki, eastern Bay of Plenty, and parts of Manawatu and Wairarapa were at least 25 percent drier than usual; while parts of eastern Northland, Coromandel, and northern Hawke's Bay were appreciably wetter than usual.

Temperatures: Temperatures were 1-3 degrees below average in most eastern and inland districts from Dunedin to Gisborne, Taupo, and eastern Bay of Plenty. Elsewhere they were close to average.

The main snowfalls were 2-5 and 11-13 September. Parts of South Taranaki received their first snow for many years.

Sunshine: Sunshine was below average by up to 30 hours in Southland and parts of Otago, in eastern districts from Ashburton to Masterton, about Cook Strait, and in parts of Nelson.

Weather Sequence: On the 1st a small depression was situated west of Southland, with rain there and in most western districts. The depression moved rapidly to the east and deepened, while an anticyclone was centred to the south of Tasmania. On the 2nd a vigorous cold front crossed the country, bringing exceptionally cold temperatures and snow to low levels as far as the Gisborne district. Only eastern districts were affected, and the rain and snow cleared from many areas on the following day. A depression which had been over the North Tasman Sea moved to the east of Northland. On the 4th and 5th there were cold southerlies again with more general rain and some snow. In western and inland

districts of the South Island and parts of Hawke's Bay the weather remained fair. An anticyclone brought settled weather to most districts on the 6th and 7th, but temperatures remained cold.

The anticyclone moved away to the east, and during the next two days a depression from the North Tasman Sea crossed the North Island with rain there and in Nelson, Marlborough, and Buller. A second centre formed to the east and another cold front moved over the country on the 10th. Rain became fairly general, and snow was reported again as far north as the Napier-Taupo road. A ridge of high pressure brought an improvement over the South Island on the 11th. However, in the North Island the unsettled weather persisted, and the rain became heavier with the passage of a depression from the central Tasman Sea during the next two days.

On the 14th an anticyclone was centred to the north and the weather cleared over the North Island. A trough of low pressure now affected western and southern districts of the South Island; and rain persisted in these areas for two more days as a depression became stationary over the South Tasman Sea, but temperatures became warmer in the northerlies. The depression then moved southward, while the associated trough of low pressure moved slowly eastward over the country. From the 17th to the 19th rain spread to northern districts of the South Island and to most of the North Island, with some considerable falls in Taupo. A clearance occurred on the 20th under the influence of an anticyclone.

From the 21st to the 23rd a depression passed close to Northland, bringing rain to northern districts. On the following day the rain still persisted in Northland, while a cold front affected Southland. During the 25th and 26th, with an anticyclone to the north, a clearance occurred in these districts; but light rain was reported in some western areas. A trough of low pressure crossed the country during the next two days, bringing rain to most of the South Island and the southern half of the North Island.

The last two days of the month saw the onset of a period of westerly weather, with pressures low to the south. At the same time a small depression passed close to Northland. Rain was reported on the West Coast, in Southland, and in some northern districts of the North Island.

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