

CLIMATOLOGICAL TABLE—Summary of the Records of Temperature, Rainfall, and Sunshine for September 1977—continued
LATE RETURNS AND CORRECTIONS—continued

Station	Height of Station Above M.S.L.	Air Temperatures in Degrees (Celsius)								Rainfall (in millimetres)					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	
Otira Substation, August 1977	383	°C	°C	°C	°C	°C				mm		mm	mm	Hrs	
Stephens Island, August 1977	187	11.2	1.3	6.3		17.0	23	-2.5	2	99	11	-292	32	15	
Molesworth, August 1977	893	10.8	7.4	9.1		13.2	28	4.5	4	90	11	+16	47	8	
Craigieburn Forest, August 1977	914	8.9	-1.4	3.8	+0.7	15.5	13	-5.9	4	35	10	-89	10	8	
Otiake Farm, July 1977	183	9.5	1.7	5.6		14.0	12	-4.5	15	36	14		8	25	
Otiake Farm, August 1977	183	11.7	-0.1	5.8		17.7	12	-3.5	22	1	1		1	28	
Tara Hills, Otago, August 1977	488	10.2	-2.1	4.1	+0.4	16.2	12	-6.5	4	2	3	-28	1	28	
Ranfurly, August 1977	427	10.3	-2.6	3.9		15.0	12	-6.2	4	2	4		1	28	
Taieri, Invermay, August 1977	30	12.2	1.0	6.6		19.7	12	-2.2	4	23	9		11	29	
Moa Flat, August 1977	410	10.1	0.7	5.4	+0.5	15.5	12	-4.4	5	12	5	-24	7	28	
Otautau, August 1977	55	12.0	0.1	6.1	+0.1	19.2	27			17	9	-59	9	28	
Stewart Island, August 1977	3	10.9	2.3	6.6		17.1	13	-1.5	2	33	19		6	7	
Campbell Island, April 1977	15	9.6	4.6	7.1	+0.0	12.7	3	-3.3	10	145	26	+23	26	29	
Campbell Island, May 1977	15	7.8	2.5	5.2	-0.9	11.3	13	-4.1	31	67	23	-73	11	17	
Campbell Island, June 1977	15	6.4	1.9	4.2	-0.6	8.9	2	-2.1	24	111	26	-19	12	29	
Campbell Island, July 1977	15	6.5	2.2	4.4	-0.2	8.5	14	-1.6	2	37	28	-70	5	15	
Campbell Island, August 1977	15	7.9	4.3	6.1	+1.1	10.5	12	-1.8	31	86	27	-23	15	13	
Totokoitu, Rarotonga, August 1977	9	23.8	18.3	21.1		26.7	26	15.3	3	153	15		55	27	
Scott Base, Antarctica, February 1977	16	-9.6	-17.0	-13.3	-2.7	0.2	2	-25.0	28						
Scott Base, Antarctica, March 1977	16	-17.5	-29.2	-23.4	-3.2	-4.8	30	-43.0	26						
Scott Base, Antarctica, April 1977	16	-20.5	-31.4	-26.0	-1.7	-8.4	2	-43.2	30						
Scott Base, Antarctica, May 1977	16	-18.7	-33.0	-25.9	+2.5	-5.2	26	-45.2	7						
Scott Base, Antarctica, June 1977	16	-21.5	-33.6	-27.6	-1.4	-11.0	11	-45.1	21						
Scott Base, Antarctica, July 1977	16	-19.2	-31.5	-25.4	+4.4	-6.4	26	-44.6	17						
Scott Base, Antarctica, August 1977	16	-21.1	-33.0	-27.1	+4.1	-7.8	9	-46.7	18						

The "normal" refers to the present site of the instruments.

Standard period for normals is 1941-1970.

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 SEPTEMBER 1977

General—During September pressures were unusually low over the whole of New Zealand, and for the third month in succession higher than normal to the south of the country. There was a higher frequency than normal of winds from a southerly quarter. Over most of the country this was the coldest September for many years. The majority of the country east of the main ranges experienced cloudy wet conditions throughout the month, the only areas having rainfalls totals significantly below normal being the northern half of the North Island and the West Coast. Continuing cold southerly winds and rain at the beginning of the month, added to the stock and lamb losses experienced in the Wairarapa at the end of August. Heavy rain caused many large land slips and extensive road scouring; many farms were affected by large-scale erosion. Cold temperatures and lack of sunshine reduced grass growth considerably over most of the country, and many farmers reported that stock condition was seriously affected by the cold, wet conditions. Many cows died of starvation in the Wairarapa, and milk production was down by 30 percent.

Rainfall—Northland, Waikato, and Bay of Plenty had rainfall totals of between 20 and 30 percent below normal. The Nelson, Marlborough, Buller, Westland, and Fiordland regions were below normal by as much as 50 percent in some areas. The greatest falls during the month were recorded in Poverty Bay, Hawke's Bay, Wairarapa, Wellington, and Canterbury. A number of rainfall stations in southern Wairarapa recorded monthly totals of more than 200 percent above normal and many others were more than 150 percent above. At Waingawa (Masterton) 14 mm was recorded in 2 hours on the 19th, and during a 48 hour period from the 18th to the 20th more than 84 mm was recorded.

Temperatures—The predominance of cold southerly winds during the month was reflected in the below normal temperatures throughout the whole country. Many stations in both Islands recorded mean temperatures below normal by more than 2.0°C, and the majority of the country being below normal by more than 1.5°C. At Kelburn (Wellington) the mean temperature of 8.3°C was the lowest ever recorded for the month of September. The longest cold spell was from the 5th to the 11th.

Sunshine—Sunshine hours were near to or above normal in the northern half of the North Island and on the West Coast, elsewhere they were below normal. Hokitika recorded nearly 40 hours more than normal, but stations at Waipukurau, Dannevirke, and Wain-gawa were below by at least 40 hours. Many stations in the southern half of the North Island and Canterbury were below normal by 30 hours.

Weather Sequence: September 1977—A small depression formed on a front which had been approaching the North Island at the end of August. On the 1st of September there were two low pressure centres, one to the south of the country and the other over central New Zealand. Rain was recorded over most of the North Island and the West Coast. Temperatures were cold in the South Island and the southern half of the North Island. Pressures remained low over the whole of the country until early on the 4th, when the depression began to move slowly south-east. During this period rain was reported in both Islands, heavy falls being recorded in Westland, Buller and the Wellington region. On the 4th a depression in the north Tasman Sea was moving slowly towards the North Island and the warm front associated with this depression moved onto North-land. Heavy rain was recorded in Northland, Auckland, and Coromandel as this system crossed the country on 4th and 5th. A