CLIMATOLOGICAL TABLE—continued Summary of the Records of Temperature, Rainfall, and Sunshine for September 1953—continued

	Height of Station Above M.S.L.	Air Temperatures in Degrees (Fahrenheit)								Rainfall in Inches					
Station		Means of		Mean		Absolute Maximum and Minimum					No.		Maximum Fall		Bright Sun-
		A Max.	B Min.	of A and B	Difference From Normal	Maximum	Date	Minimum	Date	Total Fall	of Rain Days	Difference From Normal	Amount	Date	shine
	Ft.	°F.	°F.	°F.		°F.		°F.		In.			In.		TT
Darfield	640	61.8	36.6	49.2	$+2 \cdot 2$	72.6	2	25.7	26	1.83	10	-0.93	0.61	12	Hrs
Hanamand	94	58.6	37.5	48.0	+2.2	70.5	9	$\frac{26}{26 \cdot 1}$	18	1.70	8	-0.99			aio e
Ohmintahaanah	22	60.8	38.7	49.8	+1.1	$70.5 \\ 74.2$	9	$\frac{20 \cdot 1}{28 \cdot 9}$	18	1.40	9	-0.66	$0.56 \\ 0.55$	29 30	219 - 9
137:	74	59.6	38.4	49.8	(+0.2)	71.5	9	25.8	13	1.40	9	(-0.41)	$0.58 \\ 0.58$	30 29	
D. J. L. M. (1	1,217	$59.0 \\ 59.7$	40.1	49.0	+2.9		21, 22	29.3	30	$\frac{1.49}{2.14}$	13	(-0.41)			219.9
A 1	150	60.2	41.8	51.0	$+2.9 \\ +0.6$	71.8	22	33.0	30	2.14	13	(-0.94)	$0.71 \\ 0.63$	$\frac{25}{29}$	222.0
T. de a salar	36	59.7	36.7	48.2	$^{+0.6}_{+0.7}$	71.0	22	25.4	18	1.38	10	-0.52	0.60		225 -4
Olle TTerresidence	2,510	$59.7 \\ 51.7$	33.0	42.4	-0.1	$65 \cdot 4$	21	24.0	21	12.79	13	$-0.32 \\ -0.67$		$\frac{29}{9}$	
Winchman	525	59 · 1	36.1	47.6	$(+1\cdot1)$	$72 \cdot 3$	9	22.0	$\frac{21}{26}$	1.42	9		3.50		135
11 /	15	$55 \cdot 3$	39.8	47.6	(-0.6)	62.0	1	31.0			19	(-0.94)	0.52	25	1:0
A alla la santa a a	323	63.0	39.8	50.0		73.4	9		14, 28	11.37	19	(+0.62)	1.68	9	150 -
T3- 1-11	$\frac{323}{1,004}$	61.1	31.3	46.2	$+2 \cdot 1$	72.0		$27 \cdot 4 \\ 21 \cdot 0$	18	$1.59 \\ 1.29$		-1.03	0.61	25	217
m'	56	60.4	38.1	49.2	+1.1		2 9		26 26		8	-1.37	0.67	25	201
Adoin	200				$+1\cdot3$	$73 \cdot 1$	1	29.8		1.40	8	-0.55	0.49	25	204 . 9
Tara Hills, Omarama	1.600	• • •	• • •			• •									
MC1C 1 C 1	20	$53 \cdot 7$	39.0	46.4	-0.1	$59 \cdot 2$	21	31.9	26	24.37	19	14.57	1 00		
117-1	200	$61 \cdot 1$	38.1	49.6	$-0.1 \\ +1.1$	$73 \cdot 0$	9	29.0	26	0.74	7	$+4.57 \\ -1.51$	$\frac{4 \cdot 86}{0 \cdot 21}$	6	195.9
D 1-4 A C . 1 1	1.144	$57 \cdot 3$	35.5	46.4		$64 \cdot 2$	20	$\frac{23.0}{23.5}$	26	2.11	9	1.91	$0.21 \\ 0.83$	6	195.5
Omeanatem	1,144	$57.3 \\ 55.2$	36.6	45.9	-0.2	63.6	20	$\frac{23 \cdot 3}{27 \cdot 7}$	26	$\frac{2 \cdot 11}{2 \cdot 67}$	9		0.83	6	150
d . II	720	$59 \cdot 2$	36.6	47.9	(+1.8)	67.9	20	22.3	26 26	0.66	• • • • • • • • • • • • • • • • • • • •	+0.01			170 · (
Ombin	1.000	58.9	32.4	45.6	+0.3	68.9	21 20	18.0	26 26	0.82	8 10	(-0.45)	0.31	9	
Danie a alamant.	500	60.6	33.9	47.2	(+0.8)	69.8	20	$\frac{18.0}{21.4}$	26 26	0.82	6	$-0.32 \ (-0.14)$	0.12 0.22	6	
177	1.550	55 · 3	34.0	44.6	$\left[\begin{array}{c} (\pm 0.3) \\ \pm 0.3 \end{array}\right]$	66.4	21	20.0	26 25	$0.09 \\ 0.32$	2	-0.14)	$0.22 \\ 0.22$	6 6	201 - 1
A 1	520	60.6	$35 \cdot 3$	48.0	+0.9	70.1	20	23 · 1	26	$0.52 \\ 0.53$	$\frac{2}{8}$	-0.30 -0.29	$0.722 \\ 0.13$	6	201.1
D 1 1 TT 1	350	60.8	36.5	48.6		70.1	9	$\frac{26 \cdot 1}{26 \cdot 8}$	30	1.38	14	$^{-0.29}_{+0.29}$	$0.13 \\ 0.22$	29	1
MULD	1,252	57.9	36.0	47.0		67.0	8	16.0	30	1.70	10		$0.22 \\ 0.44$	29 7	
Moa Flat, West Otago	$1,252 \\ 1,345$	53.5	34.8	44.2		64.6	20	22.0	30	1.70	12	-0.08	0.44		
	$\frac{1,343}{2,448}$	48.7	28.8	38.8	-0.8	58.5	20, 21	16.0	30	1.01	11	-0.08 - 0.16	$0.44 \\ 0.29$	29 23	· · ·
Manorburn Dam	80	59.2	36.8	48.0	$^{-0.8}_{+0.3}$	$72 \cdot 2$	$\frac{20,21}{2.20}$	25.5	30	1.01	11	$-0.16 \\ -0.46$	$0.29 \\ 0.29$		100
Musselburgh, Dunedin	5	59.2	39.5	49.2	-0.1	70.0	$\frac{2,20}{20,21}$	$\frac{29 \cdot 5}{31 \cdot 8}$	30 30	1.47	$\frac{11}{13}$	-0.46	0.40	$\frac{23}{6}$	186 · 0
	245	57.7	35.9	46.8	$-0.1 \\ -0.5$	70.0	20, 21	$\frac{31.8}{22.0}$	30	3.19	13	$\begin{array}{c c} -0.40 \\ +0.73 \end{array}$	$0.40 \\ 0.70$	29	t
C	240	57.8	35.9	46.8	(-0.8)	69.0	20	23.5	30	2.83	14	(+0.73 (+0.37)	0.70	29 29	159 -
Ο11	180	56.0	36.6	46.3	(+0.0)	66.0	20	$\frac{23 \cdot 3}{27 \cdot 3}$	12	4.60	11		0.91	$\frac{29}{28}$	
D.1.11 TT:11.	150	56.1	35.9	46.0	(+0.0)	67.5	20	$\frac{27.3}{26.0}$	30	3.93	13	(+1.58) (+0.99)	$0.91 \\ 0.80$	28 28	
T	8	55.5	39.1	47.3	+0.2	68.1	20	$25.0 \\ 25.1$	30 30	4.36	19	(+0.99)	0.80	$\frac{28}{28}$	• • •
7 777 41 0 11	0	55.0	37.3	46.2	(+0.5)	66.0	20	25.1	30	4.43	18		0.68	$\frac{28}{24}$	120 - 3
Invercargill Airfield	U	99.0	91.9	40.7	(40.9)	90.0	20	29.1	: 5∪	4.49	10	(+1.21)	0.09	24	120.
					LATE	RETU	JRN								
Adair, August 1953	200	50·7 I	37.2	44.0	(+0.1)+	64.0	8 1	31.0	1 :	$2 \cdot 84$	10	$(+1\cdot 22)$	0.95 +	13	

Note.—At stations where departures from normal are in parentheses, the temperature record has been maintained for less than ten years, the rainfall record for less than twenty years. Rainfall normals have been revised and now refer to the standard period 1921–50. Where observations are not available for the whole period, or where the site of the rain-gauge has been changed, the normals are partly interpolated

NOTES ON THE WEATHER FOR SEPTEMBER 1953

General.—Westerly conditions predominated, especially in the first half of the month, causing much unsettled weather in Westland and Southland. Eastern districts of the South Island were favoured with mild, sunny weather until the last quarter, which brought two brief, but very cold, southerly changes. Heavy snow in the back country killed large numbers of lambs, especially in Southland and West Otago, while orchardists in Central Otago will be heavy losers after the numerally severe late freets which coursed at that times.

West Otago, while orenardists in Central Otago will be neavy losers after the unusually severe late frosts which occurred at that time. In the North Island conditions were generally favourable, the drier weather in the Auckland Province being very welcome after the high rainfall of the previous months. In Hawke's Bay excellent lambing conditions prevailed but pasture growth was somewhat retarded by the low rainfall.

Rainfall.—Rainfall was appreciably below normal over the northern half of the North Island and in northern and eastern districts of the South Island north of Dunedin. The deficiency was most pronounced in Northland, Hawke's Bay, and North Otago. Elsewhere rainfall was close to or slightly above normal. There were two periods of considerable thunderstorm activity in western districts from Westland to Taranaki, the first on the 3rd, the second on the night of the 7th and the morning of the 8th.

Temperature.—The whole of the North Island and the greater part of Canterbury were warmer than usual by more than a degree; in fact, in the far north and in Hawke's Bay the departure exceeded two degrees. Over the remainder of the South Island temperatures were near normal.

Sunshine.—Sunshine was slightly below normal north of the Waikato, and in Nelson, Westland, and coastal Southland. Most other districts had appreciably more sunshine than usual, and Canterbury was favoured specially with a surplus of 40-60 hours. There has not been a sunnier September in Canterbury for over twenty-five years.

Weather Sequence.—On the 1st a small depression west of Northland moved southward and caused general rain, except in eastern districts south of Christchurch. For the next nine days westerly conditions prevailed, with unsettled weather on the West Coast. For the far north and the east coast of the North Island this was a spell of fine weather, while in Marlborough and Canterbury

there was rain only on the 7th. In the remaining districts of both Islands light rain fell on about half of these days. Hawke's Bay and Southland reported minor damage from gales on the 10th.

The westerly pattern broke down on the 11th and 12th as a depression from the North Tasman Sea passed through Cook Strait. The weather cleared temporarily south of Greymouth, but rain became general from Greymouth and Christchurch northward. Some considerable falls occurred over the Wellington Province.

A cold, showery, south-westerly change swept over the country on the 13th. For the next two days showers were frequent on the West Coast, and they also persisted about Foveaux Strait. Light showers also occurred in western districts of the North Island. In eastern districts the weather cleared temporarily, but a few further showers were reported on the 16th.

By the 17th an anticyclone covered the eastern Tasman Sea and the South Island. For the greater part of the country there followed a spell of from four to six days of clear, frosty weather. On the east coast of the North Island, however, rain persisted on the 17th and 18th. In Northland the weather remained rather showery over the whole of the period. In Westland it began to deteriorate on the 22nd in advance of a trough of low pressure approaching from the Tasman Sea. With the slow passage of the trough over the country during the next few days rain was general, except in eastern districts north of Oamaru. However, the latter areas received considerable rain as a result of a cold southerly change on the 25th, while skies cleared temporarily in many western districts. Snow fell on the high country of the South Island and on low levels in Southland, Otago, and Canterbury.

From the 26th to the 29th a weak ridge of high pressure extended on to the country from the west, but deep depressions passed to the south. In Southland there were showery periods with westerly winds at times reaching strong gale force. In Westland, too, frequent showers occurred, but elsewhere the weather was mainly fair. On the 29th and 30th a cold south-westerly change swept over the country, bringing further snow to eastern districts of the South Island. Falls were heaviest in Southland and West Otago. Other parts of the country reported showery conditions, but the weather cleared generally late on the 30th.

R. G. SIMMERS, Acting Director.

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