

Government Meteorological Observatory.

METEOROLOGICAL Observations at Kelburn, Wellington, for the Month of July, 1942. Observations taken at 9 a.m.

Altitude of Observatory, 415 ft.

Date.	Pressure in Millibars, at Sea-level and Standard Gravity.	Temperature (° F.) from Observations at 9 a.m.							Wind.			Rainfall in Points: (100 Points = 1 Inch).	Bright Sunshine: Hours and Tenths.	Weather (Symbols) at 9 a.m.
		In Screen.						Minimum on Grass.	Beaufort Scale.		Anemometer.			
		At 9 a.m.			Maximum.	Minimum.	Direction.		Force.	Miles Run in 24 Hours.				
		Dry.	Wet.	Relative Humidity, per Cent.										
1	1013.4	54.8	53.8	93	58.8	51.4	48.1	NNW	4	312	28	0.0	o	
2	1008.5	55.6	55.3	98	57.1	53.3	52.1	NW	3	112	3	0.4	o	
3	1006.3	55.9	53.9	87	58.3	52.8	53.3	NW	6	435	..	1.3	oq	
4	1015.7	53.8	52.6	90	57.4	48.8	45.9	NW	3	264	72	0.0	o	
5	1010.2	56.0	55.0	93	56.9	50.2	50.2	NW	6	364	4	2.2	o	
6	1007.6	52.9	50.4	83	57.8	50.6	48.4	NNW	4	438	..	6.7	c	
7	1014.9	51.3	47.3	72	53.5	46.1	39.7	SSW	2	236	41	2.6	bc	
8	1026.0	43.0	41.2	85	45.9	40.7	39.8	S	5	141	7	2.7	bc	
9	1031.7	42.4	40.4	83	51.1	36.1	29.7	NNE	2	114	3	4.7	c	
10	1026.6	48.7	48.6	99	51.8	41.3	39.8	NNE	3	248	2	0.0	od	
11	1022.1	51.8	49.2	82	54.9	47.0	33.8	NW	7	208	1	0.0	oq	
12	1013.2	54.9	53.7	92	56.9	51.0	51.8	NW	7	541	289	0.0	oq	
13	1011.8	46.6	46.4	98	47.0	45.8	45.8	S	4	303	271	0.0	or	
14	1003.6	43.6	43.1	96	51.2	42.2	43.0	S	4	262	14	0.4	or	
15	1006.7	46.8	45.1	87	47.2	45.0	36.2	S	4	115	41	0.2	oq	
16	1021.8	41.0	39.0	82	45.0	34.4	31.8	SSW	7	239	3	2.5	opq	
17	1026.0	42.7	40.5	81	49.7	35.2	29.8	NE	3	169	39	1.2	e	
18	1007.9	48.0	47.4	95	53.2	41.8	42.3	N	7	312	53	3.8	orq	
19	1020.8	43.2	42.4	93	47.9	41.2	37.2	S	2	254	..	5.1	c	
20	1023.8	41.7	39.1	78	53.7	37.1	29.8	NW	1	21	28	4.3	ex	
21	1021.7	47.7	47.4	98	53.1	41.0	41.8	NNE	2	41	57	0.0	or	
22	1014.6	52.2	50.7	89	58.9	46.9	47.8	NNW	4	308	..	8.9	b	
23	1016.7	50.3	47.3	78	59.7	44.1	40.7	N	3	169	..	8.1	b	
24	1021.2	46.3	41.8	65	48.9	45.8	41.8	SSE	5	220	5	0.3	oq	
25	1017.0	43.2	42.0	89	44.1	41.0	40.4	SSE	5	304	14	0.0	oir	
26	1012.1	42.7	40.8	84	43.5	40.5	40.0	S	4	290	4	0.3	o	
27	1013.6	41.2	39.1	81	44.7	39.3	37.8	S	2	167	..	1.3	o	
28	1014.6	43.4	40.4	75	45.2	39.9	35.8	S	3	89	17	0.0	ojp	
29	1007.6	43.2	42.8	96	46.2	41.0	40.1	SSE	4	150	18	0.4	op	
30	1007.6	43.0	38.9	66	47.0	38.7	37.8	SSW	4	259	..	5.4	bc	
31	1010.0	43.4	38.4	59	45.7	37.9	31.8	SW	5	245	Trace	8.1	oq	
Means, &c. ..	1015.3	47.5	45.6	86	51.4	43.5	40.8	..	4.0	236	1014	70.9	..	

Mean earth temperature at 1 ft., 46.2°; and at 3 ft., 49.9°. Number of rain days, 23. The total rainfall, which was 108 per cent. above normal, was the highest July total since 1892. Sunshine was only 24 per cent. of the possible, and it was the least sunny July since 1917. Mean dew-point at 9 a.m. was 43.4°, and mean vapour pressure 9.5 mb.

NOTE.—Fresh snow fell on the Tararua and also on the Orongorongo and Wainui ranges. Hail fell on three occasions and there were three frosts. Lightning was observed on the evening of the 6th.

DIRECTION OF WIND.

Gale (force 8 or more)	Forces 4 to 7.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Calm.
..	19	5	2½	..	1½	11	2½	..	8½	..

NOTES ON THE WEATHER DURING JULY, 1942.

General Notes.—July was a month of rapid changes in the meteorological situations. For a winter month conditions were not severe, but an excess of dull, wet weather made it unpleasant in central New Zealand. Stock are wintering well, with plenty of green feed in most districts. The cold spell towards the end of the month, however, gave a temporary check to pastures. Autumn-sown wheat is reported to be making good growth.

Rainfall.—Rains were well spread over the month and totals were, in most cases, above average. The drier areas comprised the Hauraki Plains, southern Hawke's Bay, and the plains south of Christchurch. The greatest rainfall surpluses occurred in southern Taranaki, Wellington, Marlborough, and the ranges of South Nelson. The continuous rains of the 13th and 14th caused flooding in the Manawatu, Wairarapa, West Coast, and Marlborough.

Temperatures were comparatively mild during the early part of the month, but were much colder towards the close. The means were above normal by slight amounts in the South Island but by 2° F. in eastern districts of the North Island. The chief periods of snowfall were centred at the 14th and 30th. Frosts were severe in some localities, but were less intensive and widespread than usual.

Sunshine.—While the duration of bright sunshine was better than average in the southern half of the South Island, elsewhere figures were poorer, there being a marked lack of sunshine in Taranaki, Wellington, and Nelson.

Weather Sequence.—During the first two days a depression moved south-eastward over the North Island, causing strong northerly winds with considerable rain, which was heaviest in the far north. Between the 3rd and 6th the situation was of the westerly type, with gales at times about Cook Strait. In and west of the ranges there were heavy showers, but little rain fell to the east until the 7th, when winds turned to the south-west ahead of an anticyclone. This was centrally over New Zealand on the 8th, when fine weather was general.

On the 9th and 10th there was scattered drizzle from a weak trough, but a sharper one on the 11th brought heavier rain, especially in Westland. This trough was retarded when it reached Wellington, as a centre developed in the west. Northerly gales were experienced in the north and south-easterly about Cook Strait. In central New Zealand rain fell steadily and gave rise to flooding, which was severest in the Manawatu region.

Late on the 14th a cold front began its passage over the country, the following squally south-westerlies bringing snow to some low levels in the South Island and considerable coatings to the northern ranges. Showers became less frequent during the 16th and skies cleared, making widespread sharp frosts possible.

Conditions deteriorated on the 18th, when a deep depression from the South Tasman Sea caused heavy rain on the west coast south of New Plymouth. A weak anticyclone brought a rapid but brief improvement. As a result of complex disturbances in the next low-pressure trough rain fell at times in western and central districts on the 21st and 22nd. On the following two days an active depression moved from the north close to the eastern coast of Auckland Province. Widespread rain accompanied the depression, the heaviest falls being near East Cape. Pressure meanwhile remained relatively high in the far south. A further northern disturbance on the 28th and 29th gave general rain over the North Island, where cold south-easterlies brought snow to the hills. On the final days squally southerly winds prevailed, with showers of rain and hail or sleet on parts of the east coast.

M. A. F. BARNETT, Director.