

Government Meteorological Observatory.

METEOROLOGICAL Observations taken at Kelburn, Wellington, for the Month of July, 1940. Observations made 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 Tenth.	Weather (Symbols) at 9 a.m.
		In Screen.					Minimum on Grass.	Beaufort Scale.		Anemometer.			
		At 9 a.m.			Maximum.	Minimum.		Direction.	Force.				
		Dry.	Wet.	Humidity.									
1	1021.6	43.8	41.0	77	46.0	37.8	35.4	S	5	307	..	3.2	o
2	1023.4	45.0	42.0	76	51.7	36.5	29.0	NNE	2	146	1	6.2	b
3	1014.1	47.2	46.5	94	51.2	43.5	44.8	NNE	3	314	4	0.0	oir
4	1012.3	48.0	46.0	85	52.9	45.2	39.6	ESE	2	86	74	0.5	o
5	1014.8	46.5	46.2	98	49.2	42.7	41.0	S	4	250	12	0.0	or
6	1016.6	47.0	44.0	77	49.5	43.8	42.6	SSE	5	234	27	0.9	oir
7	1019.2	42.4	38.9	70	45.5	38.1	36.8	SSE	6	300	30	2.5	op
8	1023.1	43.3	41.7	86	45.9	38.1	36.0	S	5	336	..	1.3	o
9	1026.4	44.0	42.0	84	47.9	39.2	35.7	SSW	2	141	..	4.7	o
10	1025.4	41.2	40.0	88	51.3	38.0	30.2	Calm	..	57	..	6.4	bef
11	1020.8	48.7	44.3	68	51.5	40.0	37.2	NW	5	152	6	0.8	bc
12	1007.2	48.0	46.8	91	54.4	45.5	43.0	N	3	161	30	0.7	oir
13	1002.7	48.3	47.6	94	55.3	44.3	43.3	NW	4	242	..	2.7	bc
14	1013.7	45.7	44.7	92	54.0	41.8	32.1	Calm	..	150	1	4.3	bwz
15	1022.2	48.5	46.8	89	52.3	44.5	29.5	SSE	3	47	..	7.0	bez
16	1020.4	41.8	41.0	90	49.5	39.0	33.7	Calm	..	62	..	0.0	oz
17	1018.9	48.0	45.5	81	51.2	41.0	36.3	E	1	16	..	0.4	b
18	1025.7	46.7	43.1	73	53.5	39.7	29.4	Calm	..	71	..	8.6	bjf
19	1027.4	46.4	43.4	77	55.9	38.1	29.5	Calm	..	25	..	8.8	bz
20	1024.7	47.8	45.0	79	55.9	38.9	29.2	N	1	50	..	8.5	bez
21	1024.0	48.8	46.8	85	54.8	44.2	39.5	NNW	3	103	Trace	4.7	o
22	1022.5	50.3	49.3	93	54.9	45.0	40.5	N	3	101	34	0.5	ou
23	1029.2	43.1	42.2	92	54.7	37.8	30.5	Calm	..	123	..	8.3	bz
24	1030.0	40.2	40.0	98	52.0	34.0	28.5	Calm	..	14	..	8.6	bf
25	1019.8	49.2	46.2	78	54.0	37.8	28.0	ESE	4	37	3	2.7	o
26	1007.4	52.3	49.7	82	56.4	46.8	44.8	SSE	2	128	26	0.1	oir
27	1018.2	45.3	45.0	98	46.3	45.3	43.2	SSW	6	225	5	0.0	or
28	1030.7	45.4	43.1	81	55.0	37.1	29.3	Calm	..	220	Trace	8.3	bz
29	1031.6	45.9	44.3	88	50.0	40.6	35.9	NNW	2	102	..	2.2	c
30	1028.4	47.7	45.9	87	51.6	43.6	38.9	NNW	3	133	..	2.8	c
31	1027.0	50.2	47.2	78	54.5	46.3	45.4	NNE	4	178	Trace	6.5	c
Means, &c.	1020.9	46.3	44.4	85	51.9	41.1	36.1	..	2.5	146	253	112.2	..

Mean earth temperature at 1 ft., 45.0°; and at 3 ft., 47.6°. Number of rain days, 13. Total rainfall, 48 per cent. below normal. Sunshine, 38 per cent. of the possible. Mean dewpoint at 9 a.m., 41.9°; mean vapour pressure, 0.265 in.

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.
..	10	6	1½	2	3	6	1	..	3½	8

NOTE.—A remarkably pleasant winter month. Heavy hail fell on the 7th. Two fogs occurred at Kelburn, on the 10th and 24th; the latter was very dense and shipping was delayed. Snow fell on the Orongorongos on the 1st and on the Wainui Ranges on the 10th.

NOTES ON THE WEATHER FOR JULY, 1940.

General Notes.—July was a splendid winter month for most of the country. One of the chief features was the absence of strong winds which made the frequent clear days feel milder than they really were, for frosty nights kept temperatures down to normal level. Easterly weather gave some dull, wet spells, especially in eastern districts of the North Island, but otherwise rainfall was unusually light. Such weather has made no heavy call on supplementary fodder and there is practically no winter-feed problem this year. Already there is spring growth in pastures and many plants show abnormal development for the time of year. Autumn-sown wheat has had a good start and further cultivation for spring-sown crops has been carried out without hindrance. Conditions have been ideal for lambing and calving and favourable to the health of stock generally.

Rainfall.—As already indicated the month was very dry generally. The exceptions were in the Whangarei - Bay of Islands region and also in coastal areas from Hawke's Bay to East Cape. Central and western districts of the North Island as well as the major portion of the South Island had less than half the normal amount of rain and many places in the interior of the latter less than a quarter. Several stations established new records, and in Southland there has been some shortage of tank-water.

Temperatures departed very little from normal, being somewhat above in the south and tending slightly below in the north. Nights were cool, with widespread and frequent frosts, which were not unusually sharp. However, on one or two occasions record frosts were reported in South Auckland. There is less snow than usual on the ranges.

Sunshine was in excess at most stations, a majority of records being 20 hours above the average.

Weather Sequence.—The weather was improving at the beginning of the month as cold southerly winds gradually decreased, but an anticyclone was moving northwards while a depression reached southern New Zealand on the 2nd. Rain developed in the west and south of the South Island and later spread to most districts. The depression became stationary to the east of New Zealand, a centre being located until the 8th in the Bay of Plenty region. Consequently, moderate southerlies prevailed giving dull conditions south of East Cape with rain and drizzle along the coast, but elsewhere the weather was clear. A freshening of the winds occurred on the 6th in and about the Cook Strait region and the weather changed to a showery type, with hail and snow, mainly in eastern districts and especially about the Poverty Bay area. Clear anticyclonic weather prevailed from the 9th to the 11th.

An extensive disturbance, with lowest pressures to the south, approached from the west and was over the Dominion on the 12th and 13th, when rain fell in most districts with moderate totals in Westland and central provinces. Pressure then rose over New Zealand and an anticyclone intensified near Chatham Islands, causing a predominance of north-easterly winds. An almost stationary disturbance developed in the north on the 16th, so that over the Auckland Province easterly winds increased, bringing unsettled conditions with rain which extended at times to beyond Hawke's Bay.

A weak disturbance gave some scattered rain on the 21st and 22nd and thereafter pressure became relatively uniform over the Tasman Sea and New Zealand. Morning fogs became rather more widespread at this period. North of New Zealand during the 23rd a cyclonic centre developed causing strong easterly winds once more over the Auckland Province, with some gales. Rain extended from the north over most of the North Island and some of the South, falls being heaviest on the east coast of the former. The cyclone moved off to the north-east on the 28th, when the extension of an anticyclone over the country brought a general improvement. Rain, however, developed in the west coast of the South Island on the last day of the month.