

## Government Meteorological Observatory.

METEOROLOGICAL Observations at Kelburn, Wellington, for the Month of June, 1941. 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.		Run in 24 Hours.					
		Dry.	Wet.	Humidity.							Dry.				
1	1021.8	49.0	46.2	79	57.9	41.9			32.8		Calm	..	73	..	7.2
2	1022.6	46.4	46.0	97	58.0	38.9	31.0	Calm	..	15	..	8.2	bif		
3	1016.8	45.2	43.4	86	55.4	42.2	33.0	Calm	..	56	32	2.2	o		
4	1002.4	54.2	54.0	99	59.1	44.2	40.0	NW	2	24	41	0.0	oip		
5	999.3	42.1	41.2	92	44.5	41.1	41.0	S	7	234	35	0.0	orq		
6	1005.3	44.3	37.7	48	49.8	38.6	37.0	S	6	443	4	5.1	cjp		
7	1005.1	45.0	42.7	82	52.8	38.2	30.9	SE	2	92	Trace	1.3	bc		
8	999.2	52.0	45.2	54	53.0	44.0	40.0	WNW	4	182	2	6.3	c		
9	1012.7	41.2	40.4	93	53.0	37.0	28.0	Calm	..	33	6	4.8	b		
10	1003.4	53.0	51.0	86	58.9	40.6	33.6	NNE	5	157	67	0.3	oir		
11	989.9	54.3	53.9	97	53.8	52.0	50.8	NNW	4	370	..	4.9	o		
12	997.2	50.8	45.4	63	54.6	43.5	43.2	NW	4	293	46	6.6	bc		
13	989.5	49.4	45.9	75	50.4	45.0	45.0	NW	4	337	Trace	0.3	o		
14	989.6	47.1	43.1	70	52.8	44.1	41.3	WNW	4	318	..	6.7	bc		
15	998.9	49.9	45.1	66	53.9	46.5	42.8	NW	3	313	..	8.2	c		
16	1009.2	48.6	45.8	79	53.9	39.8	34.0	NNW	4	161	69	0.6	o		
17	1016.8	41.9	37.2	60	44.0	38.1	37.9	SSW	6	317	11	6.1	c		
18	1020.1	40.8	37.8	74	43.4	36.9	34.1	SSW	5	392	5	1.6	oph		
19	1013.3	41.5	37.4	65	45.6	37.1	32.1	SW	3	215	..	4.3	c		
20	1011.2	42.4	39.1	72	44.9	39.4	36.5	SSW	3	190	10	0.0	o		
21	1010.4	44.6	42.9	86	47.1	41.6	40.8	SW	2	185	Trace	0.1	o		
22	1013.7	45.3	42.9	81	48.0	42.0	38.1	SSW	2	142	..	2.7	o		
23	1011.9	35.1	34.1	90	45.9	32.3	25.4	Calm	..	46	..	1.1	o		
24	1000.5	45.8	41.8	69	53.9	34.2	25.9	NNW	5	73	21	6.3	b		
25	1003.6	40.9	38.9	82	51.9	37.5	32.7	Calm	..	199	3	3.1	o		
26	990.0	48.1	44.9	76	54.7	40.1	40.3	NNW	1	317	..	6.7	o		
27	998.5	40.0	36.9	72	51.2	36.1	32.0	WNW	1	170	15	6.5	b		
28	1010.9	43.9	39.1	62	44.9	39.2	35.9	SSE	6	228	2	0.0	cjp		
29	1019.2	41.6	39.4	81	45.8	38.7	38.0	S	4	300	5	2.4	c		
30	1021.4	43.1	42.1	91	45.7	40.9	39.4	SSW	6	266	18	0.1	or		
Means, &c.	1006.8	45.6	42.7	78	51.0	40.4	36.5	..	3.1	205	392	103.7	..		

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.
..	15	2½	½	..	1½	6	4½	1½	7½	6

Mean earth temperature at 1 ft., 46.2°; and at 3 ft., 50.3°. Number of rain days, 18. Total rainfall, 6 per cent. below normal. Sunshine, 38 per cent. of the possible. There were four days without any bright sunshine being registered. Mean dew-point at 9 a.m., 38.8°; mean vapour pressure, 6.0 mb.

NOTE.—Hail showers were experienced on four occasions. Three frosts were recorded at Kelburn, that of the 23rd being white. Snow fell on the Orongorongo and Wainui ranges several times, that on the 17th and 18th being low down. On the latter date snow fell also on the Korokoro range, the weather being bitterly cold and bleak. Two fogs were experienced.

## NOTES ON THE WEATHER FOR JUNE, 1941.

*General Notes.*—The past month was cold with temperatures more appropriate to July than to June, and for most places it was fairly wet. Wintry conditions are making a steady demand on hay, turnips, &c., which are now being fed out generally. In the North Island a few early lambs and calves have appeared, and stock generally are in good condition. Outdoor activities have been held up, and hard ground in the South Island has made ploughing impossible in some parts.

*Rainfall.*—Nearly all North Island stations exceeded their June rainfall average and, while excesses were generally not large, they ranged from 50 to 100 per cent. in Central Hawke's Bay. Further north in the Gisborne—East Cape area, however, there were slight deficiencies. Nelson, Westland, and Southland had moderate surpluses, but, with the exception of Banks Peninsula and its immediate neighbourhood, the rainfall over the remainder of the South Island was below normal, and especially so in central and northern Otago, where totals in several cases failed to reach half the average. A number of thunderstorms were experienced, the most noteworthy occurring between the 12th and 14th in the North Island.

*Temperatures.*—Mean temperatures were everywhere below normal, and while the departures were not much more than 1 degree in the Auckland Province they were at least 2 degrees elsewhere and exceeded 3 degrees in the centre of the South Island. On a few occasions only has June been colder, the feature of the past month being the persistence of cool conditions rather than the occurrence of extreme coldness. Frosts were frequently sharp and widespread. The ranges received a heavy mantle of snow and, at times, the foothills, too, were well covered.

*Sunshine.*—Sunshine figures tended to be above average, especially in Hawke's Bay, Nelson, Marlborough, and Westland.

*Weather Sequence.*—Fine anti-cyclonic weather prevailed at the opening of the month, but with the approach of a deep depression from near Lord Howe Island north-easterly winds freshened in the far north. There rain developed and became widespread on the 3rd and 4th, with some heavy falls in the North Island. Following the passage of this depression eastward, strong squally south-westerly winds set in on the 5th and reached gale force in many parts of the North Island and of the north-eastern portion of the South Island. There was a moderate fall of snow on the ranges. Scattered showers persisted, especially in the North Island, for a further two days, but conditions were improving as a high-pressure wedge covered New Zealand.

On the 10th a trough of low pressure moved on to New Zealand from the south-west and in advance of it gusty northerly winds increased to gale strength in many places, and there was considerable rain over the North Island and the north-western portion of the South. Thereafter westerly depressions kept conditions changeable with periods of showers mainly in western districts.

By the 14th the pressure gradient was more south-westerly and intensified as a weak anticyclone became centred over southern New Zealand on the 17th, while a deep low remained near Chatham Islands. Temperatures became still colder, hail and snow accompanying many of the showers. There were fine intervals, however, and conditions improved generally from the west.

On the 23rd a depression from the Central Tasman Sea reached the far north, where north-easterlies prevailed. Rain extended south to central districts of the North Island. As a cold outbreak advanced from the south, winds turned south-westerly generally, and changeable weather with showery periods was experienced in most districts.

A low-pressure centre deepened off the North Island on the 27th and crossed in a south-easterly direction the next day, producing extensive rain with some substantial falls in the Hawke's Bay region and heavy snow in the ranges. Meantime a weak anticyclone had extended on to the South Island where the weather cleared, and as the southerly winds over the North Island moderated fine weather became general.

M. A. F. BARNETT, Director.