

Government Meteorological Observatory.

METEOROLOGICAL Observations at Kelburn, Wellington, for the Month of December, 1938. Observations taken at 9 a.m.

Altitude of Observatory, 415 ft.

Date.	Pressure, in Inches, 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.				
		Dry.	Wet.	Humidity.						Dry.			
1	30.077	60.7	57.3	80	69.5	55.9	55.0	NNW	4	137	2	2.0	o
2	29.909	69.5	64.2	73	70.8	57.8	57.0	NNW	4	202	61	2.6	o
3	29.554	59.0	58.6	98	64.7	57.4	58.4	NW	5	275	4	7.7	o
4	29.495	53.8	51.2	83	56.3	48.3	46.9	N	2	319	182	0.0	or
5	29.486	50.8	47.6	78	59.8	48.1	46.7	S	7	365	15	7.4	oir
6	29.439	59.8	56.8	82	67.0	45.8	39.6	NW	4	233	Trace	7.8	b
7	29.714	55.4	50.4	68	61.4	49.7	47.8	SSE	3	211	115	6.4	o
8	29.371	61.4	61.1	98	65.0	49.1	48.9	NNW	8	204	..	9.2	oir
9	29.498	57.6	55.0	84	59.4	54.5	52.8	NW	6	512	..	4.5	oq
10	29.563	59.2	53.6	67	62.6	51.8	47.0	NW	6	414	Trace	11.5	b
11	29.607	58.6	56.4	87	62.5	53.7	49.1	NW	7	428	122	0.7	o
12	29.516	61.5	55.0	64	67.2	52.9	48.1	NNW	5	437	..	12.0	bc
13	29.723	63.1	58.0	71	65.7	53.5	48.7	NW	5	310	..	8.3	c
14	29.548	63.3	59.1	77	65.0	55.4	53.2	NW	5	213	..	9.7	bc
15	29.714	61.3	55.4	67	64.2	54.4	51.7	NW	5	453	23	13.8	b
16	29.663	59.3	55.9	80	62.9	48.2	47.4	NW	6	394	18	6.1	b
17	29.619	52.7	49.8	81	56.4	46.2	44.7	SE	3	251	17	7.4	oip
18	29.649	55.8	51.6	74	59.8	45.1	38.3	NW	7	221	..	1.0	o
19	29.805	57.0	52.4	71	66.0	50.9	45.8	ENE	1	193	39	3.2	o
20	29.265	50.9	50.7	99	56.2	45.8	42.1	S	3	159	44	0.3	oir
21	29.545	56.2	54.1	80	63.9	46.1	42.4	NW	3	101	..	10.1	c
22	29.513	60.4	51.8	51	65.5	52.9	48.7	WNW	3	275	Trace	6.9	bey
23	29.672	51.1	48.6	83	56.4	46.9	40.6	S	5	150	Trace	1.5	oip
24	29.755	56.4	51.8	71	61.5	44.1	36.4	NW	4	172	41	8.4	c
25	29.377	61.5	58.4	87	65.0	51.2	47.6	NW	6	378	46	6.0	o
26	29.590	54.2	51.3	81	58.2	46.1	45.4	S	5	310	5	4.8	o
27	30.056	53.8	51.5	86	59.5	50.7	47.7	S	3	283	..	5.3	oir
28	30.142	57.3	53.7	77	62.6	44.1	35.4	NNE	4	109	Trace	6.5	o
29	29.805	60.4	58.2	86	63.9	55.2	53.5	NW	7	298	..	3.2	o
30	29.891	62.8	52.4	45	67.0	53.6	48.2	WSW	4	379	..	14.1	by
31	29.900	58.6	54.0	78	62.7	47.3	38.8	NNE	6	138	7	8.8	bc
Means, &c.	29.660	58.2	54.4	78	62.9	50.4	46.9	..	4.7	275	741	197.2	..

Mean earth temperature at 1 ft., 61.7°; and at 3 ft., 62.0°. Number of rain days, 16. Total rainfall, 153 per cent. above normal, being the wettest December since 1928. Sunshine, 41 per cent. of the possible. Mean dew-point at 9 a.m., 42.7°; mean vapour pressure, 0.273 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.
1	22	4	1½	½	1½	5½	½	1	16½	..

NOTE.—Gales occurred on four occasions, that of the 5th being particularly strong. Thunderstorms were frequent, one on the morning of the 8th continuing for nearly five hours. Hail was recorded on the 8th, also.

NOTES ON THE WEATHER FOR DECEMBER, 1938.

General.—In the final few days of the month settled conditions obtained in the northern half of the North Island, but otherwise December was a most unseasonable month with much cold, wet weather, and persistent strong winds in many places. The exceptionally frequent rains have seriously interfered with haymaking, while shearing and cultivation operations, especially in the higher country, are well behind schedule. Although the strong winds have caused some drying up in the Hawke's Bay area, pasture growth has, on the whole, been well maintained, in some places almost too abundant, and stock are in good condition. Lambs, however, although growing are not fattening as well as usual. The continuation of cold, damp weather has retarded crops, gardens, and shrubs, and blights are making their appearance. Compared with recent years, however, the white butterfly and other insect pests are present in much reduced numbers.

Rainfall.—With the exception of small areas at the tip of the Auckland Peninsula and in the neighbourhood of Gisborne, rainfall everywhere was well above the normal, great numbers of places having had double or more than double the average fall, while in most of the southern half of the South Island and also in parts of the central portion of the North Island, it was the wettest December on record. Although the monthly aggregates were high, individual falls were not, on the whole, excessive, the chief characteristic of the month being the unusually great number of wet days. The only very heavy falls over extended areas, causing floods, were those which occurred in Otago and Canterbury on the 3rd and 4th and in the Taumarunui district on the following week-end. Several cloudbursts in widely scattered places in the South Island also resulted in local flooding.

Temperatures.—In marked contrast with the previous December and also with November, 1938, temperatures were below normal over the entire country and considerably below it over most districts. In Hawke's Bay and Southland the departures were small but elsewhere they were mostly close to, or in excess of, 2 degrees. At Hanmer Springs it was the coldest December since records began in 1906, the mean temperature of 52.8° being 4.7° below the average. At New Plymouth, also, it was the coldest on record, and one of the coldest in the Waikato. Night temperatures were generally low, frosts being by no means rare in some districts, even of the North Island. Snow was relatively frequent in the Southern Alps, while at Mount Egmont there were falls on four successive weeks, the usual number in December being only one or two.

Sunshine.—Considering the amount of rain experienced, the sunshine totals were not as low as might have been expected. In fact, Lincoln, with 243.5 hours was well above the average. Everywhere else, however, with the exception of Rotorua, the amount recorded was well below normal, the largest deficit being 35.4 hours at Wellington.

Thunderstorms.—The month was one of unusually frequent thunderstorms. From reports received so far, the only days on which none occurred were the 1st, 2nd, 5th, 10th, 13th, 28th, and 30th. The storms were of two distinct types. One gave widespread and prolonged thunder and lightning but little, if any, hail, while the other was the more typical hailstorm. Two cases of the first type occurred: on the night and early morning of the 7th to 8th, where practically everywhere east of the ranges between Hokitika and New Plymouth had severe electrical disturbances lasting over six hours in some places, and again in central districts on the night of the 15th to 16th. Relatively little of the hail type occurred in the North Island but has caused considerable damage to crops, gardens, and orchards in Canterbury and Otago.

Pressure Systems.—Except in the last week in the month the anticyclones which moved eastward off Australia, took a relatively northerly course when over the Tasman Sea, and families of depressions moving along their southern boundaries gave an unusual amount of westerly and south-westerly weather in the Dominion. In the southern half of the North Island, in particular, strong winds were very persistent.

The first series of depressions passed between the 2nd and 5th giving general rain with many heavy falls, followed on the latter day by severe southerly gales.