

Government Meteorological Observatory.

METEOROLOGICAL Observations at Kelburn, Wellington, for the Month of December, 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. | | | Maxi-mum. | Mini-mum. | | Direction. | Force. | | | | | |
| | | Dry. | Wet. | Relative Humidity, per Cent. | | | | | | | Dry. | | | |
| 1 | 1013.3 | 62.4 | 56.2 | 65 | 65.3 | 46.2 | 39.7 | NNE | 3 | 119 | .. | 12.4 | b | |
| 2 | 1014.2 | 58.0 | 54.6 | 79 | 65.4 | 54.0 | 50.7 | NW | 5 | 275 | .. | 8.3 | o | |
| 3 | 1012.9 | 63.7 | 58.8 | 73 | 70.7 | 56.5 | 51.0 | NNW | 5 | 385 | 101 | 9.3 | bc | |
| 4 | 1010.4 | 50.5 | 50.0 | 96 | 52.5 | 49.5 | 50.0 | S | 6 | 250 | 84 | 0.0 | oir | |
| 5 | 1012.3 | 52.5 | 50.3 | 85 | 61.0 | 46.7 | 46.8 | S | 3 | 279 | 36 | 0.3 | o | |
| 6 | 1012.1 | 60.9 | 57.2 | 79 | 63.8 | 48.8 | 51.0 | NNW | 6 | 219 | .. | 12.7 | bc | |
| 7 | 1019.3 | 60.0 | 55.4 | 73 | 62.5 | 52.4 | 47.5 | NNE | 4 | 330 | .. | 12.2 | bc | |
| 8 | 1014.8 | 61.2 | 57.2 | 77 | 63.7 | 53.6 | 51.7 | N | 5 | 227 | 19 | 5.8 | or | |
| 9 | 1009.5 | 49.2 | 48.9 | 98 | 57.4 | 48.2 | 50.0 | S | 4 | 367 | 29 | 0.9 | o | |
| 10 | 1019.9 | 56.7 | 52.5 | 74 | 61.0 | 40.8 | 32.5 | N | 4 | 134 | .. | 14.2 | c | |
| 11 | 1015.6 | 60.2 | 55.5 | 72 | 63.2 | 51.7 | 47.3 | NNW | 5 | 318 | Trace | 13.3 | b | |
| 12 | 1009.7 | 59.7 | 55.9 | 77 | 60.9 | 52.3 | 49.0 | N | 4 | 219 | .. | 1.3 | o | |
| 13 | 1009.2 | 59.9 | 55.3 | 73 | 67.6 | 50.2 | 45.6 | E | 2 | 112 | .. | 13.2 | b | |
| 14 | 1000.0 | 60.5 | 57.6 | 83 | 65.3 | 53.3 | 50.8 | NNW | 5 | 318 | 9 | 4.8 | o | |
| 15 | 1005.7 | 56.2 | 50.3 | 64 | 64.0 | 48.3 | 46.7 | S | 3 | 268 | .. | 12.4 | bc | |
| 16 | 1013.4 | 62.5 | 55.0 | 59 | 64.0 | 49.0 | 44.6 | SSW | 3 | 107 | .. | 13.8 | by | |
| 17 | 1018.5 | 61.1 | 55.0 | 66 | 63.0 | 49.4 | 44.0 | N | 4 | 124 | .. | 13.0 | b | |
| 18 | 1019.1 | 62.2 | 56.4 | 67 | 65.5 | 53.0 | 50.3 | N | 4 | 306 | Trace | 4.7 | o | |
| 19 | 1015.1 | 60.0 | 58.2 | 89 | 60.5 | 57.3 | 57.4 | NNW | 7 | 406 | .. | 0.0 | o | |
| 20 | 1023.8 | 57.6 | 55.6 | 95 | 69.0 | 54.9 | 54.8 | S | 2 | 309 | Trace | 0.4 | o | |
| 21 | 1016.2 | 61.5 | 60.0 | 91 | 66.1 | 56.5 | 56.0 | NNW | 4 | 269 | .. | 2.4 | om | |
| 22 | 1017.4 | 60.1 | 55.1 | 71 | 62.7 | 55.0 | 52.2 | S | 5 | 184 | 1 | 11.9 | c | |
| 23 | 1015.5 | 54.1 | 52.0 | 87 | 64.3 | 51.9 | 49.2 | NW | 1 | 87 | 8 | 5.1 | od | |
| 24 | 992.9 | 57.6 | 54.0 | 78 | 57.6 | 53.2 | 53.3 | S | 5 | 376 | Trace | 4.1 | op | |
| 25 | 1003.3 | 55.3 | 47.9 | 54 | 62.0 | 45.4 | 41.4 | SSW | 4 | 169 | .. | 6.4 | bey | |
| 26 | 1000.3 | 61.1 | 56.9 | 76 | 65.1 | 50.0 | 46.1 | NW | 6 | 152 | .. | 8.8 | bc | |
| 27 | 1008.7 | 59.8 | 54.9 | 71 | 67.9 | 53.3 | 47.2 | S | 4 | 238 | .. | 11.7 | b | |
| 28 | 1017.1 | 66.9 | 56.0 | 47 | 75.0 | 47.0 | 40.0 | N | 1 | 108 | .. | 13.8 | by | |
| 29 | 1013.1 | 61.5 | 57.7 | 78 | 66.3 | 56.7 | 52.3 | NNW | 5 | 162 | 10 | 2.1 | o | |
| 30 | 1016.7 | 63.0 | 57.6 | 70 | 72.0 | 52.5 | 49.6 | S | 4 | 334 | .. | 13.2 | b | |
| 31 | 1016.6 | 69.7 | 60.2 | 54 | 72.0 | 53.3 | 46.5 | E | 1 | 82 | Trace | 13.5 | by | |
| Means, &c. | 1012.5 | 59.5 | 55.1 | 75 | 64.4 | 51.3 | 48.2 | .. | 4.0 | 233 | 297 | 246.0 | .. | |

Mean earth temperature at 1 ft., 63.0°; and at 3 ft., 60.7°. Number of rain days, 9. Total rainfall was 6 per cent. below average and the sunshine 53 per cent. of the possible. Mean dew-point at 9 a.m. was 51.4°; mean vapour pressure, 12.8 mb.

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. |
|-------------------------|----------------|-----|------|----|------|----|------|----|------|-------|
| .. | 22 | 10½ | 1 | 2 | .. | 10 | 1 | .. | 6½ | .. |

NOTES ON THE WEATHER FOR DECEMBER, 1942.

General Notes.—December was cool with several windy spells. It was, in the main, a fairly good month, during which a considerable amount of harvesting was completed under favourable conditions. In parts of Hawke's Bay and Manawatu the dryness has been serious. The season has been kept backward in the more southern districts, where the effects of the wind and coldness have been most accentuated.

Rainfall.—Totals were above the December average in a belt extending from Northern Taranaki, through Taupo to Opatiki, also in and west of the Southern Alps, and over most of Canterbury. Over the remainder of the country the rainfall was deficient, especially so in Wanganui, Manawatu, Southern Hawke's Bay, and Gisborne districts. In the last two areas useful rains fell early in the month, but thereafter conditions were very dry.

Temperatures.—In contrast to the mild tendency since last July, the average temperature for New Zealand was appreciably below normal. In the South Island departures were often 2°-3° F., but towards the north-east of the North Island mean temperatures approached or slightly exceeded normal. Light frosts occurring in several districts on the 10th damaged garden growth.

Sunshine was below average in westerly areas from New Plymouth southwards, but over the remainder of the country values were rather better than average.

Weather Sequence.—At the beginning of the month an anticyclone was moving away to the north-east, while a cold front was approaching southern New Zealand. A low-pressure centre formed in the west and strong northerly winds gave place to strong southerlies, and rain became fairly widespread with some snow on the higher ranges. Conditions improved considerably by the 6th with an anticyclone building up west of the North Island. On the 7th and 8th easterlies were strong at times in the north, while westerlies prevailed elsewhere. Scattered drizzle and rain set in over the northern part of the North Island, but unsettled conditions became general and a cold southerly change occurred on the 9th.

An anticyclone extended on to central New Zealand on the 10th and 11th, fresh easterlies in the far north being accompanied by occasional fog or drizzle, but elsewhere westerlies prevailed giving mainly fair weather. On the 12th a trough to the north became more active and there was a period of fairly widespread rain, heaviest in the centre of the North Island, with over 6 in. recorded in the Rotorua area. On the 13th there was a temporary improvement, but a deterioration set in as a cold front crossing New Zealand brought a fresh south-westerly change with showers. An extensive anticyclone in the north gave mainly fair conditions for two days. By the 18th, with a depression developing off Westland, unsettled conditions with considerable rain spread over most of the South Island, flooding occurring in Westland. The anticyclone persisted in the north keeping the weather predominantly fair, but changeable south-westerly conditions were experienced in the south.

During the 24th a vigorous cold front crossed the country, there being considerable rain ahead of it in and west of the high country from Taranaki southwards and a change to strong south-westerlies behind, giving cold weather with occasional showers. Gales were experienced in many districts, but were strongest in Otago and Southland. With a weak high-pressure wedge from the west on the 15th fresh south-westerlies with rather cloudy and cool weather prevailed. A disturbance passed the following day and gave occasional rain, especially in the west and south of the South Island.

An anticyclone followed on the 27th, when fine settled weather became general. On the 29th a cold front reached Southland, south-westerly winds being strong at first in the south but moderate otherwise, and a rapid clearance followed. The final two days were fine and mild with a high-pressure belt crossing New Zealand.

M. A. F. BARNETT, Director.