## Government Meteorological Observatory.

TETEOROLOGICAL Observations at Kelburn, Wellington, for the Month of October, 1930. Observations taken at Altitude of Observatory, 415 ft.

|   | Date.      |    | Pressure, in Inches, at<br>Sea-level and Standard<br>Gravity. | Temperature (* F.) from Observations at 9 a.m. |      |                |               |        |                 | Wind,                        |            |                      | (100             | Hours               | at                             |                  |
|---|------------|----|---|--|------|----------------|---------------|--------|-----------------|------------------------------|------------|----------------------|------------------|---------------------|--------------------------------|------------------|
|   |            |    |   | In Screen.                                     |      |                |               | Grass. | :               | Beaufort<br>Scale.           |            | Anemo-<br>meter.     | Points<br>Inch). |                     | (Symbols)                      |                  |
|   |            |    |   | At 9 a.m.                                      |      | Maxi-<br>mum.  | Mini-<br>mum. | do     | adiatio<br>mum. | jū.                          |            | n 24<br>8.           | a"               | Sunshi<br>Fenths.   |                                |                  |
|   |            |    |   | Dry.   | Wet. | Humid-<br>ity. | Dry.          | Dry.   | Minimum         | Solar Radiation:<br>Maximum. | Direction, | Force.               | Run in<br>Hours. | Rainfall,<br>Points | Bright Sunshine<br>and Tenths. | Weather<br>9 a.m |
|   |            |    | 29.829  | 42.3   | 39.8 | 79             | 49.5          | 41.2   | 36.0            | 113.6                        | SSE        | 6                    | 398              | Trace               | 7.6                            | ор               |
|   | ·          | ٠. | 30.128  | 49.0   | 44.4 | 67             | $54 \cdot 2$  | 39.2   | 37.5            | 121.3                        | S          | 2                    | 344              |                     | 6.6                            | οp               |
|   |            |    | 30.122  | 53.2   | 49.1 | 72             | 57.8          | 41.1   | $34 \cdot 1$    | 119.8                        | NNE        | 4                    | 152              |                     | 8.2                            | b                |
|   | ••         |    | 29.954  | 53.2   | 51.0 | 85             | 60.6          | 47.0   | 38.8            | 122.5                        | Calm       |                      | 179              |                     | 3.7                            | О                |
|   |            |    | 30.303  | 55.2   | 50.1 | 67             | 58.2          | 39.7   | 34.0            | 118.2                        | NNW        | 4                    | 128              |                     | 11.3                           | be               |
|   |            |    | 30.190  | $52 \cdot 4$                                   | 49-1 | 77             | 56.0          | 48.6   | 46.0            | 118.8                        | NNW        | 6                    | 218              |                     | 7.]                            | be               |
|   |            |    | 30.093  | 55·1   | 53.2 | 88             | 59.0          | 50.1   | 48.8            | 113.9                        | NW         | 4                    | 446              | Trace               | 3.7                            | 0                |
|   |            | ٠. | 30.180  | 48.1   | 47.8 | 98             | 54·1          | 47.0   | 46.0            | 73.2                         | SE         | 3                    | 421              | 5                   | Nil                            | 0                |
|   |            |    | 30.030  | 54.0   | 53.8 | 99             | 58.9          | 46.7   | 47.0            | 121.7                        | NW         | 6                    | 208              | 2                   | 1.7                            | 0                |
|   |            |    | 29.812  | 58.6   | 54.3 | 74             | 65.3          | 51.2   | 49.2            | 124.1                        | NW         | 4                    | 481              | 20                  | 11.6                           | be               |
|   |            |    | 30.009  | 48.8   | 45.2 | 74             | 53.0          | 42.1   | 41.2            | 123.6                        | SE         | 4                    | 180              |                     | 6.3                            | c                |
|   |            |    | 30.016  | 49.8   | 45.7 | 71             | 57.8          | 38.3   | 29.5            | 127.2                        | NW         | 1                    | 103              |                     | 8.8                            | e                |
|   |            |    | 29.715  | 57.4   | 49.5 | 53             | 59.8          | 46.1   | 43.0            | 122.0                        | NW         | 4                    | 162              | Trace               | 9.1                            | b                |
|   |            |    | 29.821  | 47.1   | 45.8 | 90             | 48.2          | 46.0   | 44.2            | 86.3                         | SE         | 3                    | 169              | 2                   | 0.0                            | or               |
|   |            |    | 30.023  | 47.4   | 41.8 | 58             | 55.3          | 43.1   | 42.2            | 112.4                        | SE         | 5                    | 223              |                     | 0.6                            | О                |
|   |            |    | 29.839  | 55.1   | 49.0 | 61             | 59.8          | 41.0   | 32.0            | 130.0                        | NE         | 2                    | 139              |                     | 11.2                           | b                |
|   |            |    | 29.497  | 53.5   | 50.4 | 79             | 58.7          | 46.0   | 40.8            | 120.1                        | NNW        | 2                    | 43               | 12                  | 7.1                            | 0                |
|   |            |    | 29.331  | 51.7   | 49.2 | 83             | 57.7          | 46.2   | 45.0            | 121.2                        | SE         | 2                    | 224              | 6                   | 5.9                            | О                |
|   |            |    | 29.406  | 50.9   | 45.6 | 63             | 58.0          | 39.6   | 37.2            | 129.5                        | NNW        | 1                    | 164              | 6                   | 7.2                            | o                |
|   |            |    | 29.816  | 51.6   | 44.7 | 54             | 56.2          | 41.0   | 39.2            | 122.8                        | SSE        | 1                    | 286              |                     | 7.1                            | e                |
|   |            |    | 29.489  | 54.9   | 46.5 | 48             | 62.0          | 50.2   | 45·1            | 124.7                        | W          | 2                    | 343              | 5                   | 1.5                            | o                |
|   |            |    | 29.201  | 49.3   | 44.7 | 67             | 55.8          | 44.9   | 41.9            | 122.2                        | W          | 6                    | 278              |                     | 8.8                            | b                |
|   |            |    | 29.576  | 51.2   | 45.3 | 60             | 55.2          | 39.2   | 34.1            | 129.3                        | SSE        | $\overset{\circ}{2}$ | 265              |                     | 10.8                           | bo               |
|   | • •        |    | 29.739  | 52.2   | 47.2 | 66             | 56.3          | 42.2   | 34.1            | 122.7                        | WNW        | 4                    | 137              | 18                  | 3.5                            | 0                |
|   |            |    | 29.279  | 47.4   | 46.8 | 95             | 52.8          | 44.2   | 43.7            | 119.0                        | SE         | 3                    | 412              | 15                  | 1.2                            | or               |
|   |            |    | 29.357  | 50.2   | 45.0 | 64             | 53.8          | 41.8   | 34.9            | 124.0                        | WNW        | 6                    | 157              | 5                   | 4.7                            | 0                |
|   | • •        |    | 29.448  | 48.5   | 45.4 | 77             | 53.1          | 42.0   | 35.1            | 127.3                        | SE         | 4                    | 265              | 6                   | 5.3                            | oj.              |
|   | • •        |    | 30.015  | 52.3   | 46.1 | 59             | 58.0          | 43.0   | 37.0            | 126.8                        | SE         | ī                    | 221              |                     | 6.4                            | 0                |
|   |            |    | 30.327  | 58.0   | 52.1 | 65             | 59.6          | 42.1   | 32.2            | 125.2                        | NW         | î                    | 115              |                     | 11.8                           | bz               |
|   | • • •      |    | 30.205  | 51.5   | 48.1 | 77             | 53.9          | 49.2   | 48.8            | 111.6                        | NW         | 8                    | 261              | 15                  | 0.5                            | oio              |
|   |            |    | 29.660  | 53.8   | 53.5 | 98             | 60.0          | 50.1   | 49.5            | 131.9                        | NW         | 8                    | 611              | 18                  | 5.4                            | or               |
|   | • •        | •• | 25 000  |  |      |                |               |        |                 |                              |            |                      |                  |                     |                                |                  |
| - | Means, &c. |    | 29.820  | 51.7   | 47.7 | 73             | 56.7          | 44.2   | 40 3            | 119.6                        | 1          | 3.5                  | 249              | 135                 | 184.7                          |                  |

Mean earth temperature at 1 ft., 53.4° and at 3 ft., 52.5°. Number of rain days, 14.

## DIRECTION OF WIND.

| Gale (force | Forces  |       |    |      |               |      |                |      |    |      |
|-------------|---------|-------|----|------|---------------|------|----------------|------|----|------|
| 8 or more). | 4 to 7. | Calm. | N. | N.E. | $\mathbf{E}.$ | S.E. | S.             | S.W. | w. | N.W. |
| 2           | 14      | 1     | 21 | 11   | 1             | 91 1 | $2\frac{1}{8}$ | 1 1  | 3  | 111  |

Note.—A very cold and cloudy month, with rainfall at Karori Reservoir, near Kelburn, 40 per cent. of the normal. Total bright sunshine, 184.7 hours, 45 per cent. of the possible, and two sunless days. Frost was recorded on the grass on the morning of the 12th, and hail fell on the 27th. Lightning was seen and thunder heard on the 18th, and fog was in evidence on the 9th. Mean dew-point, 43°; and mean vapour pressure, 0.277 in.

## SUMMARY FOR THE MONTH OF OCTOBER, 1930.

General.—The past month has been, for the country as a whole, the coldest October experienced in New Zealand since the accurate recording of temperatures commenced. From all parts of the country come accounts of the coldness and backwardness of the season. October is the month in which pastures usually show rapid growth after the semi-dormant winter period, but this year the growth has been very poor in most districts. The stormy weather experienced during the month added to its severity. The adverse conditions as regards growth of vegetation have been accentuated, so far as most district are convented to the lack of a factorization. districts are concerned, also, by the lack of sufficient precipitation. In consequence, stock are generally in a somewhat backward condition. Frosts occurred on several days over large parts of the Dominion, and, in some cases, they were severe. A certain amount of damage was consequently caused to orchards and small crops, but generally speaking it does not appear

Rainfall.—Precipitation was greater than the average on the West Coast of the South Island, over most of Otago, and in scattered parts of the western districts of the North Island, especially around Auckland. Elsewhere there was a deficiency. Even in Central Otago some parts had less than the average amount. In North Auckland, and the East Cape, Gisborne, Hawke's Bay, and Wairarapa districts, around Wellington, and in Nelson, Marlborough, and North Canterbury, the month was a very dry one.

Snow fell on the ranges on the 14th, 17th to 19th, 22nd, 23rd, and 25th. The falls which occurred at various places on the 17th, 18th, and 19th were the heaviest, and extended to low levels in parts of the South Island. Hailstorms were frequent at many places.

Temperature.—As has been mentioned, temperatures were generally lower than had been recorded hitherto in New

Zealand. At Napier, Hokitika, and Dunedin, one slightly colder October has been experienced, but at all other stations this year's was the coldest.

It is noteworthy that the present spell of abnormally cold weather has lasted, with only short breaks, over most of the

country since June, 1929.