

perature, the direction and velocity of the wind, and precipitation, if any. All these reports having been entered in a map of North America, lines called isobars connecting places with the same barometric pressure, are drawn and show graphically the distribution of pressure; the areas of high and low pressure are thus clearly marked out. Noting the movements of these areas as shown by previous maps, the forecasting official, from long experience, and a knowledge of many of the physical laws which govern atmospheric phenomena, is able to judge of changes likely to occur over subsequent periods of from one to several days.

Supplementary to this weather chart of America, a chart is also prepared daily containing reports from Europe and Alaska, and also from the Azores and several sub-arctic stations in the North Atlantic. This chart is very helpful, showing as it does how intimately connected are the changes in all parts of the globe.

The weather forecasts are issued twice daily, namely at 10 a.m. and 10 p.m. and are usually in both instances for the ensuing 36 hours. At times the forecast is more extended, but there is no regular issue covering a longer period. The general means of disseminating the forecasts is by telegraph, and arrangements exist whereby every telegraph office in Canada should receive them without delay.

In many parts of the Dominion, a copy of the forenoon forecast is supplied to central telephone offices and furnished to rural subscribers and shipping people when asked for. The forecasts are also broadcasted from all the government wireless stations for the benefit of shipping near the Atlantic coast and on the Great Lakes.

In addition to the regular bi-daily issue of forecasts, special warnings of expected gales are telegraphed to agents at over 100 ports, where storm signals are displayed, and special notice is telegraphed to the railways when snowstorms and drifts are expected.

The daily weather map is printed each morning in the Toronto and Winnipeg offices, and several hundred copies are distributed to commercial companies, insurance companies, railways, and many other business concerns. In addition a large number of public schools and high schools receive the map, and as a result, a good knowledge of atmospheric changes is not uncommon among teachers, who, it is found, take pleasure in explaining the maps to their pupils.

A very similar weather map is prepared at Victoria Meteorological Office, whence forecasts are issued for British Columbia and the sea routes adjacent thereto.

Meteorological Research.—Since research is essential to the life and progress of meteorology, a trained physicist and assistants are included in the staff of the central office. Meteorological research includes a scientific study of the earth's atmosphere and its circulation, and in view of this, increasing attention is devoted to exploration by balloons carrying self-recording instruments. Results are co-ordinated with those obtained in other countries by the same means. Further, as it is probable that variation in the temperature and the position of the great ocean currents are factors intimately connected with prevailing winds and climatic control, transoceanic steamships are being equipped with thermometers for continuously registering the water temperature. The study of solar radiation and atmospheric electricity is not neglected.

A subject which receives very serious attention is that of agricultural meteorology, which is concerned with the effect of weather changes on the growth, yield and quality of crops, more especially as this effect is modified by various methods of cultivation. Data for the determination of the epochs of wheat growth are now collected by the Dominion Bureau of Statistics for the use of this Branch, and