

During the year the Government has appreciated the probable growing demands of aviation for weather service, and extra staff has been taken on to prepare for and to cope with this work. Moreover, the Director has been sent overseas to Empire and international conferences to assist in drawing up a scheme of international co-operation of these services. At present there is a great need for development of better wireless services in connection with interchange of weather information, and this aspect of meteorology is at present under consideration.

The whole subject of weather and climatological services is being carefully organized so that such finance as is available may be productive of maximum results. Fortunately we have been able to build up an efficient staff to cope with the problems involved.

OBSERVATORIES.

Apart from the Meteorological Office, there are three astronomical and geophysical observatories under the control of the Department—

- (1) The Dominion Observatory, at Wellington, charged with the time services of the Dominion and the main seismological work ;
- (2) The Magnetic Observatory, at Christchurch, where the main activities are magnetic, seismic, atmospheric electricity observations, and meteorology ; and
- (3) The Apia Observatory, where comprehensive geophysical and meteorological observations are undertaken, and for which the major part of the finance is found by the Carnegie Institute, the Rockefeller Foundation, and the Admiralty.

The various observatories are worked, as far as possible, in co-ordination.

During the past few years the maintaining of accurate time service has been facilitated by receipt of wireless time signals from abroad, and this has allowed the officers to devote more attention to a study of the seismological conditions in New Zealand, with the result that a much larger measure of understanding of local earthquake conditions is now available, and a number of publications have been issued on this subject.

RESEARCH ACTIVITIES.

It will be appreciated that among the various Departments and institutions—*e.g.*, Scientific and Industrial Research Department, Agriculture Department, Massey and Lincoln Colleges, and Cawthron Institute—we have a large amount of capital invested in land, buildings, equipment, and brains, and we have men who compare favourably with technical officers overseas. The work of the Research Council is, to advise on the co-ordination so far as is possible, of these research facilities to the common good without introducing, at the same time, a degree of rigid control which will stifle initiative, and contemporaneously to encourage flexibility and freedom from vested ideas or confirmed rule-of-thumb methods. Moreover, we are in New Zealand spending a fairly large sum in University education, and from the science departments many of the best men have to leave the country to find openings for their special abilities, and many of these are attaining to good positions abroad. It would appear desirable, in these days when the research and process control method is becoming almost invariably practised in modern industry, that New Zealand industries should absorb more of these men, since the country has expended a certain amount of money in training them.

During the past few years many of our industries have made considerable headway towards the appreciation of the place of science in industry. In our primary industries one may cite the cases of dairy, fruit, and wheat, which now possess research institutes of their own in connection with the Research Council. There are, in addition to the special research activities associated with definite sections of industry, many common research problems—*e.g.*, those relating to plant breeding and diseases, insect pests, soils, fuel, &c.—in which the Government and Research Council feel justified in taking a more direct sponsorship.