

while the station technicians, who are also responsible for the technical supervision of the operation of the wind-finding equipment, remained under the control of the Meteorological Office. It is expected that this arrangement, whereby the engineering and maintenance resources for radio and radar equipment of the Civil Aviation and Meteorological Branches are pooled, will result in a saving both in man-power and equipment.

The Instrument Section co-operated with the Dominion Physical Laboratory in the setting-up of meteorological instruments at the Earnslough Experimental Farm for the purpose of frost research. This installation comprised a full climatological station, together with a 50 ft. mast on which were mounted temperature and humidity instruments at various heights. Additional ground stations were installed in adjacent areas to investigate the variation of frost intensity throughout the whole Central Otago fruit-growing area.

Training of Observers.—This section is responsible for the inspection of all types of weather stations, as well as the training of staff of the Meteorological Service and the staff of other Departments engaged on weather reporting.

Eighty-six inspections of weather stations of various types were arranged during the year for the purpose of installing new equipment and giving instructions to the observers. Miscellaneous instruction in weather observing and reporting was also given to members of the Marine Department, Post and Telegraph Department, and various Boy Scout organizations. A scheme for the training of Native observers in the Cook and Samoan Groups was instituted in conjunction with the Island Territories Department.

On completion of the demobilization of the meteorological staff from the Air Force it became necessary to reorganize the wartime examination system of the service. In conjunction with the Public Service Commission, a scheme for the training and examination of meteorological observers was drawn up and put into effect in 1947. The first examination was held in August, 1947. As part of the training scheme, a correspondence course for the Observers' Senior Examination was prepared and a full course of twenty assignments issued.

Schools for the initial training of observers for the staff of the Meteorological Service were also held as required throughout the year at Auckland, Wellington, and Christchurch, some 30 officers completing the courses.

RESEARCH

Provision is made in the establishment of the Meteorological Service for a Research Section, comprising two professional officers and two assistants, the main task of which is to carry out systematic practical and theoretical studies in the meteorology of New Zealand and the surrounding regions, with the aim of improving the accuracy of current weather forecasts and extending the time range of their validity. It is also responsible for the co-ordination and supervision of research work done at branch offices of the New Zealand Meteorological Service both in New Zealand and in the Pacific. In all cases great attention is paid to meteorological work done overseas with a view to possible applications of these results to rather specialized local conditions.

Unfortunately, the staffing position during the greater part of the year under review did not permit any part of the establishment to be filled, and it was not until February, 1948, that conditions improved sufficiently to allow one research officer to take up his duties. Again under normal staffing conditions the establishment is such as to permit each forecaster in the various branches to devote about one-quarter of his time to study and investigations designed to improve the general standard of the service, but with the current shortage of staff most officers are kept fully occupied on routine forecasting rosters.

In spite of these difficulties, a limited number of research projects has been carried out, and the main fields of activity are indicated below.