

Although for many purposes the hormones are preferred to Sinox, the latter has special value in controlling black bindweed (*Polygonum convolvulus*) and black nightshade (*Solanum nigrum*), particularly in pea crops, because these weeds are readily killed by Sinox but not by the hormones, whereas peas are resistant to Sinox but rather susceptible to the hormones.

APIA OBSERVATORY

The first stage in the carrying-out of a scheme in which the staff of the Christchurch Magnetic Observatory are each to spend periods of two years in Samoa has been reached.

Time Service.—Daily checks on all timepieces by means of radio time signals have been carried out.

Terrestrial Magnetism.—International magnetic character figures and the “K” indices of geomagnetic activity have been supplied monthly to Carnegie Institution, of Washington, also descriptions of magnetic disturbances for publication.

Seismology.—Quarterly reports of earthquakes have been forwarded to a number of observatories throughout the world.

AUCKLAND INDUSTRIAL DEVELOPMENT LABORATORIES

The main trend of the work undertaken by the Auckland Industrial Development Laboratories during 1947 has been increased assistance to local manufacturing firms covering a wide range of industries.

Since the inception of the Laboratories a little over two years ago, over 1,100 jobs have been undertaken (approximately 75 per cent. for local industry).

A cross-section of the work handled by the Laboratories during the last twelve months is set out below :—

Special tools, gauges, and fixtures for the production engineering and metal trades groups.

Control and investigational equipment for the textile groups.

Dies, machinery, and control equipment for the plastics industry, as well as testing of finished products.

Optical components for the motion-picture and photographic trade.

Equipment and plant for the chemical-engineering industry.

Assistance to the electroplating group.

Checking of products and assistance with technical difficulties of merchants and importers.

Tools, control equipment, and testing for the building trades and woodworking industry.

RESEARCH PROJECTS

Frost Protection.—A considerable amount of preliminary work has been done on the engineering aspects of frost protection for winter crops in Auckland. An experimental installation of smokeless orchard-heaters was installed at Avondale and used for frost protection of passion-vines. A 14 ft. horizontal frost fan was constructed, but was installed too late in the season to obtain satisfactory data under frost conditions. This work will be continued and intensified.

Air-conditioning of Glasshouses.—The installation of a number of experimental glasshouse heating and air-conditioning units has been completed with the co-operation of the Plant Diseases Division. These are being operated for a period to obtain sufficient data for further developmental work.

Measurement of Pulse-rate and Blood-pressure during Anaesthesia.—An experimental pulse-indicator is at present undergoing practical tests.