

An interesting case of corrosion of pipes was proved to be due to the activity of the sulphate-reducing bacterium, *Vibrio desulphuricans*. This type of corrosion is now thought to be more widespread than was previously supposed, and further studies are in progress.

A complete survey of all certified plant therapeutants on the market was undertaken. Samples of lime-sulphur, colloidal sulphur, spraying-oils, lead arsenate, and nicotine sulphate obtained both from distributing agents and from orchards were analysed. The results showed that the requirements of the certification scheme are being fully adhered to by manufacturers and that orchardists are being adequately protected in the quality of the spray materials they use. Several samples of D.D.T. dusting-powders were examined with a view to acceptance for certification. In collaboration with the Plant Diseases Division, a series of samples of cabbages grown at Auckland and treated with D.D.T. to control white butterfly and diamond-back moth were examined for the amount of D.D.T. residue contained on the cabbage when prepared for market. The results showed that it should be possible to market cabbages having a residual D.D.T. content of not more than 7 p.p.m.

BACTERIOLOGY

Owing to difficulty in obtaining suitable staff, bacteriology is practically confined to the Christchurch Branch, where this kind of work has increased. For the Health Department, potable water, pasteurized milk, milk-shakes, and miscellaneous food-stuffs were examined. For the Department of Agriculture, many milk samples were examined in connection with animal-diseases. Egg-pulp produced at Christchurch and at Timaru was regularly examined. Industrial work included several problems relating to mould growths.

GAS-TESTING

The gas-supplies of the four main centres and of most of the other main towns of the Dominion were regularly examined for calorific value, pressure, and freedom from sulphuretted hydrogen. Many thousands of meters were tested and stamped. Owing to coal shortages and staff difficulties, gasworks in general had a trying time, but with a few exceptions maintained a satisfactory supply.

LIBRARY

The amount of work in the Library again increased considerably.

An effort was made to increase the subject-index information by indexing all the articles in the most important journals as they are received. The usefulness of this has already been appreciated.

As in former years, a wide variety of inquiries was dealt with, including twenty-eight arising from abstracts in the *Industrial Bulletin*.

PAPERS PUBLISHED IN SCIENTIFIC JOURNALS BY MEMBERS OF THE STAFF

- "The Chemical Analysis of Clays—I: Determination of R_2O_3 and Alkalies." J. J. S. Cornes. *N.Z. J. Sci. & Tech.*, 27, (Sec. B), (1946), 307.
- "Cementstone at Feldwick." J. J. S. Cornes and R. Willett. *N.Z. J. Sci. & Tech.*, 28, (Sec. B), (1946), 101.
- "Equipment for the Sulphiting of Apple Slices." G. Maskill Smith. *N.Z. J. Sci. & Tech.*, 28, (Sec. A), (1946), 284.
- "Fluorine in New Zealand Waters"—
 - I: North Island Waters—*continued*. G. Chamberlain. *N.Z. J. Sci. & Tech.*, 28, (Sec. B), (1946), 154.
 - II: South Island Waters. C. F. Denmead. *N.Z. J. Sci. & Tech.*, 28, (Sec. B), (1946), 158.