

THERAPEUTANT TESTING

Improvements in Disease Control

Grape Mealy-bug.—A spray of 1 per cent. p.p.i. D.D.T. applied just before buds burst in spring, followed by a 5 per cent. dust of D.D.T. at thinning, gave best results of any tested. Chemical analyses have shown that residues are well below the permitted maximum. Unfortunately, use of D.D.T. often results in increased infestation by red spider.

Red Mite and Clover-mite of Apples.—Selocide (a selenium-containing spray) for control of mites has been further investigated. One or two sprays applied at blossom period gave commercial control when used at 1½ pints per 100 gallons.

Leaf-roller Caterpillar.—Successful control has been secured by use of Rothane (dichlor-diphenyl-dichlorethane).

Woolly-aphis.—Encouraging results in control of this pest have been secured with applications of benzene hexachloride during the dormant season.

Brown-rot of Peaches.—Work with Phygon (dichloro-naphthoquinone) has been continued, following previous work in which it was established that this product gave a higher degree of control than any other product.

Tomato Late-blight.—Several new products have been tested for control of late-blight, but none proved superior to the copper products in commercial use.

Certification of Therapeutants

Forty-seven products were certified during the year. In sample checks all products certified proved to be of satisfactory quality. Derris sprays and dusts have been withdrawn from certification owing to the superior control given by D.D.T. products.

TIMBER PRESERVATION INVESTIGATIONS

The section moved into a new building on the Owairaka area early in the year. Some time was consequently spent in dismantling equipment and re-establishing it in the new building.

For report of investigations see under "Reports of Research Committees of the Council of Scientific and Industrial Research—Building Research."

MISCELLANEOUS

Legume Culture.—Culture for 319,000 lb. of lucerne seed has been supplied to 2,528 farmers. This is an increase of approximately 105,000 lb. over the previous highest figure (1946-47), and represents a 50 per cent. increase in quantity.

Testing Household Insecticides.—Tests in a Peet-Grady apparatus have been continued during the year with the housefly, *Musca domestica*. Pyrethrum and Thanite have been evaluated, and work is being carried out with Lethane 384 Special. Because of variation in resistance of the laboratory-bred strain, it was found necessary to commence a fresh culture of houseflies in November.

Poor results were secured in fly control with showcards (suitable for food-shops) painted with poster paints containing D.D.T.

Investigations are being carried out—following numerous complaints regarding inefficacy of D.D.T. to control flies—to ascertain if D.D.T. resistant strains are present, or are being developed, in the Dominion.

Fabric-pest Project.—With the purpose of working out adequate methods for proofing fabrics (carpets, woollens, &c.) against insect attack, a temperature and humidity control apparatus has been installed and checked. Stocks of various species of fabric pests have been established for test purposes, and their life histories are being investigated. Various methods of testing moth-proofing agents are being tested so that standard test methods may be established.