

Other Timber Insects

Work has been commenced on investigation of biology and control of the two-toothed longhorn (*Ambeodontus tristis*) and *Lyctus* powder-post beetles.

Testing Preservatives against Fungi

(a) "Graveyard" Test.—A soil "graveyard" test plot for oil-soluble preservatives has been laid down to secure information on loadings required to preserve timber brought in contact with the ground.

(b) *Fungous Preservatives for Building-timbers*.—Evidence indicates that agar plate and Kolle flask methods are unsuitable for testing preservatives used for building-timber. A method is consequently being developed whereby test blocks are exposed to fungous attack under such conditions that the moisture content is maintained about fibre saturation point (*circa* 30 per cent.).

Preservative Treatment by Pressure

Studies are nearing completion of gross absorption, net absorption, "kickback," and treating-time of three common timbers treated in cold aqueous solutions under a range of pressure systems.

DOMINION PHYSICAL LABORATORY

(1) *Heat Insulation of Houses*.—Work commenced last year entailing measurement of thermal transmittance made on two types of concrete construction, and also on a weatherboard house built over twenty years ago, has been continued. Values for this latter structure prove much more favourable than those for any modern house yet investigated.

(2) *Mould in State Houses*.—This investigation has been completed and a detailed report presented to the State Advances Corporation. The reasons for the occurrence of the mould are quite clear, and the factors involved are mainly inadequate thermal insulation of the walls, ceilings, and floors, linked with inadequate ventilation.

(3) *Other Work*.—A considerable number of other projects involving the testing of building-materials are reported in the Dominion Physical Laboratory report, page 57.

THE DAIRY RESEARCH INSTITUTE (N.Z.)

Director: Professor W. RIDDET

In this first complete post-war year the work of the Institute has been focused upon still further improving the quality of New Zealand export dairy products—butter and cheese—expanding the variety of products, reducing losses in manufacture to a minimum, utilizing skim-milk to the best advantage in feeding calves in New Zealand, and the influence of the plane of nutrition of the dairy cow during her normal dry period on the quantity and quality of milk produced in her subsequent lactation. An endeavour has accordingly been made to make some contributions to the present state of knowledge which may assist the dairy industry in making available to people overseas an increasing quantity of much-needed dairy products of uniformly good quality and high dietetic value. The following statement, prepared by the principal workers concerned, gives a brief account of the nature of the research projects undertaken and of the progress results. More detailed information will be contained in papers published in technical journals when the results of the work justify reporting in detail.

Land-cress Taint in Cream and Butter.—The finding that cress taint does not appear in the butter if cream from cows that have consumed cress is pasteurized at a temperature below 180° F. has been confirmed by further work. If a temperature of 180° F. is used, the time of pasteurization must be short, as is the case with vacreator