

Manufacturing Trial of Hairy Wool.—In co-operation with the Wool Metrology Laboratory, Lincoln College, a start has been made on the further manufacturing trial of hairy wool of 58's quality at the Kaiapoi Mills. Further work on the mill trial has been planned to commence shortly.

Combing Trial on Exported Scoured Wool.—On behalf of the Department of Scientific and Industrial Research a test of the travelling properties of scoured wool is being made, with special reference to the combing properties of the wool after travel. The scouring of 58's quality wool has been supervised at the Bruce Mills. This wool is having a double journey to England and back. Plans have been made for the combing trial on its return.

Tests of the Insecticides D.D.T. and 666 for the Protection of Wool against Carpet Beetles.—The advent of these new insecticides was thought to offer hope of solving a problem which has engaged the attention of the Research Association since it was founded—namely, the elimination of losses in yarn stores due to damage caused by moths and carpet beetles.

As detailed in our Bulletin No. 40, D.D.T. has been found ineffective against carpet beetles on woollen yarn containing the usual amount of batching-oil, but about 0.2 per cent. D.D.T. on clean woollen goods gives promise of adequately protecting the wool. Some preliminary experiments with a purified form of 666, known as Gammexane, suggest that less than 0.3 per cent. Gammexane will protect the wool even in the presence of 10 per cent. batching-oil. These experiments are being continued.

Textile Education.—Many textile processes in the future will require the services of fully-trained graduates in the mills. The textile engineering training will probably have to be undertaken overseas, but it is unlikely that any one man will be able in the future to cover all the knowledge required in a woollen-mill. Following discussion at the last executive meeting on the desirability of establishing a post-graduate diploma course in colour chemistry and textile science (which is of interest not only to the woollen-mills, but also the artificial-silk industry, to dyers and dry-cleaners, colour printers, and laundries), the position has been further explored.

Service to Members.—Quarterly bulletins have continued to be prepared and circulated, as well as journals sent on loan from the library. Six reports on work in progress have also been circulated to date during the present year giving a brief statement of the work carried out.

The Chief Chemist made two rounds of visits to members' mills, on one occasion carrying test equipment which he used for a study of dyeing and wool scouring.

A range of technical service problems has continued to be dealt with in the laboratory. Examples of these were determination of grease and alkali contents of scoured wools and cloth, fibre fineness measurements on wools, strength tests on yarns and an investigation of the cause of deficient rubbing fastness of tops dyed afterchrome black.

PLANT CHEMISTRY LABORATORY

Director: Dr. J. MELVILLE

The new building, which replaces the one destroyed by fire in 1940, is nearing completion and should be ready for occupation in May, 1946. It comprises four general and two special purpose laboratories with the necessary ancillary units, and in every way meets the requirements of modern biochemical research. Except for some few items of continental origin, the equipment which was lost by fire has been replaced during the war years and will be in keeping with the new laboratory. It is most gratifying that, after five and a half years of wholly inadequate and unsuitable accommodation, the staff will again have satisfactory working conditions.

Dehydration.—Since the cessation of hostilities the work on this project has been confined to rounding off certain phases of fruit dehydration. The fate of sulphur dioxide added to fruit during the dehydration process has been under investigation, and substantial progress has been made. Some work on vegetable varieties with regard to vitamin content and other nutritional qualities has been continued.

Vitamin Work.—Microbiological assays for several vitamins of the B complex in milk (in collaboration with the Dairy Research Institute) and other materials have been continued.