

while, in lower concentrations, there is a tendency for larval tunnelling to be prolonged. Though oil-soluble preservatives were found to be highly toxic to beetles, *Anobium* larvæ tunnelled for a period of over four weeks in timber completely penetrated by the preservatives.

In tests with the brush application of oil-soluble preservatives it was demonstrated that one coat for every quarter-inch of timber thickness gave satisfactory control of *Anobium* and *Calotermes browni*.

DIAMOND-BACK MOTH

During the past few seasons field surveys of the main cruciferous crop areas in both Islands have been carried out to ascertain the influence of the introduced parasites (*Angitia cerophaga* and *Diadromus collaris*) in controlling the diamond-back moth. The last of the surveys has been completed and a full analysis of the data is now being made. The indications are that the parasites have proved extremely effective, though control in the South Island does not appear to have yet reached the same high level that occurs in the North Island. Even so, the results are excellent. In some *foci*, however, odd crops still show a pronounced infestation of the moth larvæ, and the factors responsible for this have yet to be studied.

WHITE BUTTERFLY

As the occasion allowed, the larval parasite (*Apanteles glomeratus*) of the white butterfly has been distributed from Nelson, where it is well established, to other parts of the Dominion.

GRASSLANDS DIVISION

Director : Mr. E. BRUCE LEVY

ESTABLISHMENT

Plans for the new grasslands building at Palmerston North have been revised and submitted to the Architect, Public Works Department, for draughting for incorporation into the 1947-48 building programme.

During the war the staff loyally put up with very great inconveniences in temporary accommodation consisting of Army huts, Public Works Department hutments, seed-cleaning store, implement-shed, covered-in glasshouses, and men's quarters.

The task of removal to, and remodelling of glasshouses on, an appropriate site has been undertaken during the year, and these four houses and potting-sheds are almost completed.

A combined implement and wool shed, feeding-shed, office, store, and yards has been erected at Lincoln Substation, and this building will greatly facilitate the work there.

The linen-flax-factory site and appropriate buildings have been taken over at Gore, and a substation is now established there.

The acquisition of these substations are links in a chain of such in order to give coverage of soil and climatic conditions throughout New Zealand, both for the purpose of breeding, selecting, and testing new strains and as focal points for the encouragement of the use of the improved strains through New Zealand.

PLANT-BREEDING

Breeding of improved grasses and clovers to cater in the ultimate for a complete agronomic coverage of the farming systems throughout New Zealand and allied climatic countries overseas has progressed a stage further towards our goal during the year. The rye-grass coverage has been extended to include Western Wolths rye-grass for one-year leys and special winter supplementary feed, and Long-rotation rye-grass for leys up to six to eight years' duration. Thus pedigree strains in Western Wolths rye-grass, Italian rye-grass, Short-rotation rye-grass, Long-rotation rye-grass, and true perennial rye-grass give a complete agronomic range as far as these species and varieties are concerned.