

Some of the new insecticides have been used according to the recommendations of the manufacturers for the purpose of being in a position to recommend their use in New Zealand.

WHEAT-STEM WEEVIL

A search for parasites of this weevil is being continued in the Argentine. Certain species have been located, but no decision is yet possible as to their usefulness under New Zealand conditions.

TIMBER-BORERS

Studies of the biology of the resin-beetle (*Ernobius mollis*) of insignis pine and of the common house borer (*Anobium punctatum*) continue, while a comprehensive work on borers of service timbers, and their treatment (based on the results of experiments with wood-preserved), has been published.

GENERAL

Attention has been given to the cause of manuka dying out in South Canterbury, and though an insect and certain fungi are prevalent on the affected plants, the actual cause of death is not yet known.

GRASSLANDS DIVISION

Director: Mr. E. BRUCE LEVY

PEDIGREE STRAINS OF PASTURE SPECIES

Bred strains of perennial, Italian, and short-rotation rye-grass, and white clover, Montgomery red clover, and broad red clover have been released and accepted into farming practice, but further breeding is being applied to the gradual improvement of these strains. With Italian rye-grass, for example, a strain which is a biennial rather than an annual has been bred, and the persistency of short-rotation rye-grass has been considerably improved since the first pedigree strain was released.

To complete the wide agronomic coverage of the rye-grasses, work is now being done on the production of a high-producing Western Wolths rye-grass and also a long-rotation rye-grass which, like short-rotation rye-grass, is being bred from hybridization between perennial and Italian rye-grass.

Seed stocks are being built up of bred strains of timothy and cocksfoot.

To provide data on the performance of bred strains of the grasses and clovers and of promising types during breeding, broadcast sward trials are being carried out at Palmerston North and the substations at Lincoln and Gore. Collaborative trials are also being carried out on Department of Agriculture experimental farms and hundreds of observational trials have been sown on farms throughout New Zealand. Other bred strains such as the Welsh Plant Breeding Station's strains of perennial rye-grass, white clover, and Montgomery red clover are being fully tested out against our New Zealand pedigree strains.

Sufficient nucleus seed of the more important species is being produced annually to supply stocks for admission into the highest grades of certified seed of the following species: perennial rye-grass, Italian rye-grass, short-rotation rye-grass, timothy, white clover, broad red clover, and Montgomery red clover.

To ensure that the high standards required of certified seeds are being well maintained, 10,780 seed-certification plots have been sown this year, as against 5,600 the previous year.

The value of pedigree strains of high-producing grasses and clovers suited to the varied agronomic needs of the country is rapidly becoming appreciated and must play an important part in raising the level of the primary production of the country.