

THE GREEN VEGETABLE BUG . . .

Flowers, developing seed, growing points, and foliage are attacked. The developing seed in legumes is particularly attractive to the bugs; pods become shrivelled and distorted and little seed formation occurs. This is particularly noticeable in beans. Fruits which are attacked become mottled and discoloured and fall prematurely. Included in plants noticeably attacked in Northland are beans of all types, peas, *Dolichus*, clovers, tomatoes, potatoes, native solanaceous plants, tree tomatoes, mustard, cabbages, cauliflower, turnips, silver beet, pumpkins and marrows, maize and sweet corn, grapes, banana passion fruit, rhubarb, and thistles. Damage to peaches has also been reported.

Control Measures

Two parasites are known to control *Nezara*. One of these, a small hymenopterous egg parasite, *Microphanurus basalis* Woll. (*Scelionidae*), has recently been introduced into New Zealand. It is hoped that the other, a fly *Trichopoda pennipes* Fabr. (*Tachinidae*), will be introduced later. *Microphanurus* is a wasp-like insect

about 1/25in. long. It lays its eggs in those of *Nezara* and the adult parasite hatches out about 3 weeks later. Early this year several hundred of the egg parasite were received from Mr. F. Wilson, Division of Economic Entomology, Canberra, Australia. (The parasite was introduced into Australia from Egypt in 1934.) A temporary breeding station was set up in the Bay of Islands, where conditions appeared to be favourable for the work, and there some 48,000 parasites were bred by the writer. The main areas of liberation* were Awanui, Kaitaia, Paihia, Kawakawa, Whangarei, New Plymouth, and Te Kaha (near Opotiki). In three of the northern areas where liberations were made subsequent examinations showed parasitised egg masses and emerging parasites at the liberation sites. The success of these liberations cannot be assessed for some time. If a measure of control is obtained, it is likely to be more noticeable in the warmer coastal areas.

Results of spray trials carried out by the Department of Agriculture in New Zealand are not yet available. Recent experiments with D.D.T. dusts

and sprays in Australia gave promising results. Weekly spraying with 0.2 per cent. D.D.T. in a suitable solvent has given satisfactory control. Sprays are more effective against the immature stages of the bug. The adults, in addition to being more resistant, are able to fly and readily move from place to place.

As the bugs breed and hibernate in rough wastage areas and spread rapidly in the adult stage, destruction of hibernation sites and hand picking have limitations as control measures. However, the destruction of possible hibernation sites, the burning of old infested plants, and the destruction by hand of adults and nymphs, particularly those found early in the season, can all aid in reducing the *Nezara* population.

* Assistance in field work and parasite liberations was given by W. Delf, Paihia, A. A. Sneddon, Maori Affairs Department, Opotiki, and officers of the Department of Agriculture at Kaitaia, Whangarei, New Plymouth, Kalkohe, and Tauranga.

BOOK REVIEW

"The Shepherd's Dogs":

C. W. G. Hartley

THIS is a most interesting and instructive book based on 25 years' experience in training dogs for mustering and trial work.

The training described starts with the pup 3 to 4 months old and by patience, encouragement, and progressive lessons the aim is to produce a dog that can be relied on in all circumstances and will work in an attractive manner. Illustrations show dogs being trained and working sheep. Two separate methods of training heading dogs are explained, one for the heading pup and the other for the young dog ready to work.

Chapters clearly describe the training of huntaways, and all-round, leading, backing, and trial dogs and the correction of common faults.

The section "Teaching a Puppy Tricks" should have a wide appeal to dog owners, and the photograph of the dog Trojan using his paw to tap a stubborn sheep on the nose rather than bite it illustrates the successful training he has received. Those who have broken in dogs by the rough and ready methods too often used because of lack of time and the necessary patience should find the chapter "Training the Dog Trainer" illuminating.

For the portion of the book "Judging of Sheep Dog Trials" the author draws upon the experience of a successful trial judge and competitor of 50 years' standing, and this section is intended to serve as a guide to all dog-trial competitors.

This is a valuable book and should be of interest to all dog owners keen on getting the best work out of their dogs.

—G.L.W.

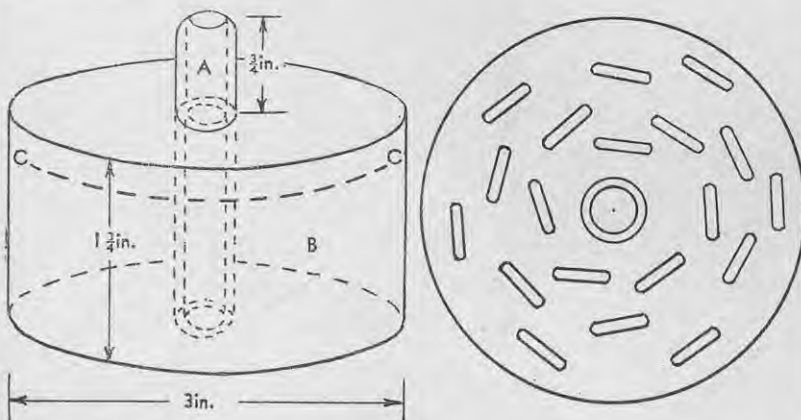
Whitcombe and Tombs Ltd. 6s.

Artificial Teat for Starting Calves on Bucket

A DEVICE for starting calves on the bucket which does away with hours of back-bending and saves fingers from being bitten has been devised by Mr. G. Macpherson, of Kaitaia, Northland. It consists of a piece of milking-machine claw rubber passed through a weighted fishing-net cork which floats well down in the milk. The calf draws milk through the upper end of the rubber which, by being subjected to heat, is moulded to teat shape and is softened so that it gives a spongy feel when in the calf's mouth. Mr. Macpherson has found that calves seldom need to be started on this device more than once and that after a week it can be removed and the calves will drink straight from the bucket without noticing the absence of the artificial teat.

Mr. Macpherson used large staples to weigh the cork down in the milk, and the weight of the staples also prevents the calf from lifting the float out of the bucket. Staples are arranged so that they prevent the cork from splitting (see diagram).

Corks used for making the device, as far as possible, should be free of air holes. Mr. Macpherson has found that if corks are scalded daily they will last for several seasons.



Left—Side view of device. A—Claw-rubber. B—Fishing-net cork. C—Level of milk. Right—Showing how the staples are arranged in the bottom of the cork.