3500/7 CONTROL OF HETERONYCHUS LICUS

TERMINAL REPORT

Catalogue: 1191

Object : To investigate the effectiveness of Monocrotophos for controlling Heteronychus licas when applied to wet soil immediately after harvest.

Location : Hippo Valley Estates, Section 3 Field 3B.

Soil type : PE.1 sandy clay loam derived from gneiss.

Design : Randomised blocks, 4 replecations. Nett plot size 3 rows x 55m.

Treatments : It was planned to compare ratios of 1,0; 2,0; and 3,0 litres product per ha, using Nuvacron 60% a.i. However, the operator walked slightly slower than scheduled, with the result that the amounts applied were as follows :

1. 1,35 l . product/ha in 282 l/ha water
2. 2,70 " " " " "
3. 4,05 " " " " "

Conduct :

1. A field of ratoon cane was chosen where it was expected that beetle damage would be severe because adjacent fields which had been cut earlier all showed signs of extensive damage.
2. The field was harvested on 26th November, 1978, and treatments were applied on 5th December when the cane was actively flushing with the most vigorous shoots ± 10 cm tall.
3. Treatments were applied to wet soil after 45 mm rain had fallen the night before.
4. A knapsack sprayer was used with a D2 nozzle giving 1,045 l/min at 20 p.s.i., held 25 cm above the ground to give a 0,75 m band. Treatments were applied directly over the cane row.

RECORDS

Insect populations were checked by screening soil samples taken from within the cane rows, each sample being 60 cm x 30 cm x 15 cm deep. Ten samples were taken at random over the trial area before treatments were applied in order to provide an estimate of the initial population level. Thereafter the plots were sampled at weekly intervals by taking 3 samples per plot and 12 samples as controls from surrounding unsprayed areas.

In addition, weekly records were taken of "dead-hearts" per plot by counting in a 50m length of the centre row only.

2./ RESULTS .....

RESULTS

The trial site proved to be a poor choice, and the results from soil sampling revealed extremely low insect population levels, even in the untreated controls. Insect collection records showed that the few beetles present were erratically distributed over the trial area, and there was no relationship between insect numbers and applied treatments. Similarly, counts of "dead-hearts" normally a good measure of beetle activity and response to insecticide treatment, did not show any major differences between treated plots and controls.

The trial was abandoned in mid-January, 6 weeks after the treatments had been applied, when it was obvious that insect numbers were too low to show up treatment effects.

Note: See results of 3500/6 for more meaningful data on the effect of Monocrotophos in controlling H. licas.

KEC/Jan '80.