

A PRELIMINARY NOTE ON THE CONTROL OF NYSIUS HUTTONI WHITE USING CHEMICALS.

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Nysius huttoni White 1878, the wheat bug, is recorded by Gurr (1957) as attacking a wide range of crop plants and weeds. He states that 1% bug-affected wheat when made into flour is unusable for baking except by blending with other clean lines and also that the greatest economic loss caused by this insect is to cruciferous seedlings. Except for the possibility of this insect transmitting viruses, the damage to plants is caused by the feeding of large numbers. Any reasonable reduction in numbers of **N. huttoni** will therefore be acceptable.

Tests were carried out on a natural population of *N. huttoni* in pasture using three different types of insecticide, viz. chlorinated hydrocarbons (lindane & D.D.T.), organophosphates (demeton methyl and malathion), and a carbamate (carbaryl).

Plots of 1/80 of an acre were set out in a Latin square of six replications of each treatment and six untreated controls. The insecticides (see Table) were applied by hand with knapsack sprayer using the equivalent of 20 gallons of water to the acre.

Insecticide	Formulation	Per Acre Dosage	
		(Active Ingredient)	Mortality (%)
D.D.T.	20% emulsion	$\frac{1}{2}$ lb	76
Malathion	50% (Liquid)	1lb	68
Lindane	20% emulsion	$\frac{1}{2}$ lb	61
Demeton-s-methyl	25% emulsion	3 fl. oz.	56
Carbaryl	50% Wettable pdr.	$\frac{1}{2}$ lb	0

Demeton methyl was used at the maximum rate of active ingredient allowable under the Agricultural Chemicals Insecticides Regulations (1964/23).

All stages of the insect were counted within each of ten six-inch diameter circles taken randomly from each plot. Analysis of five counts which were taken at approximately weekly intervals showed that with the exception of carbaryl all treatments were significantly better than control, at the 1% level. Further trials are envisaged as opportunity permits.

REFERENCE

- GURR, L., 1957: Observations on the Distribution, Life History, and Economic Importance of *Nysius huttoni* (Lygaeidae: Hemiptera). *N.Z. J. Sc. Tech.* A 38: 710-4.