

A PRELIMINARY INVESTIGATION INTO CONTROL OF FALSE WIREWORM ON THE DARLING DOWNS

Damage by the false wireworm, *Gonocephalum* sp. ? *macleayi*, Bla. (det. Commonwealth Institute of Entomology, Aug. 1958), to newly germinated crops, both summer and winter, occurs sporadically on the Darling Downs. When larval populations are high, extensive thinning of the stand occurs and replanting may be necessary. The areas most frequently affected are Clifton-Nobby, Evanslea-Mt. Irving, and to the west of Dalby.

Infestations usually occur on the lighter soil types and are noticeably worse on land where stubble of the previous crop has been ploughed in. A weedy fallow is ideal for false wireworm build-up. The beetles congregate around and under the weeds to oviposit, and this accounts for the subsequent scattered areas of larval attack.

On Nov. 11, 1957, a 4 x 4 latin square trial with a plot size of 1/100th acre was planted out in the Evanslea district to compare three strengths of BHC. The insecticide was diluted with rock phosphate, and the mixture applied as a drill dressing at the rate of 100 lb. per acre.

Stand counts were made in 12 random 3 ft. lengths of row per plot.

Details of treatments and results are given in Table 1.

Table 1.
TRIAL RESULTS—PLANT STANDS.

Treatment.	Nov. 22.		Jan. 16.	
	No. of Plants.	Mean Log.	No. of Plants.	Mean Log.
A 2 oz. g. i. BHC/acre	389	1.95	417	2.00
B 4 oz. g. i. BHC/acre	503	2.10	631	2.19
C 6 oz. g. i. BHC/acre	501	2.08	626	2.19
D Untreated (Rock phosphate 100/ac.) ..	215	1.69	233	1.56
Necessary differences for significance	} 5%	0.32		0.44
		0.49		0.66

Nov. 22, B, C > D
Jan. 16, A, B, C > D

The increased counts on Jan. 16 were due to further germination following rain.

All the strengths of BHC applied as a drill dressing gave a significant increase in stands, and thus a control of the false wireworm.

Damage by this pest is sporadic, and furthermore replantings are not always attacked. Preventive treatment therefore must be cheap and simple. Further work will be concerned with insecticide treatment of the grain before planting, an approach which has solved a similar problem—protection of cereal seed from attack by the seed-harvesting ant *Pheidole ampla* Forel.

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