BENZENE HEXACHLORIDE IN PINEAPPLE FIELDS

Scarabaeid larvae have been found associated with root damage to pineapple plants in various coastal localities in Queensland. Where a recommendation of BHC in the soil as a control method might reasonably have been made from work on other crops in the same localities, a consideration of possible tainting of the fruit has prevented this.

The extent to which tainting of pineapple fruit follows spraying and dusting of plants has been determined (Brimblecombe 1955). The present work was designed to investigate the effects of soil applications.

The trial was carried out on a contoured double-row of pineapples at the Maroochy Experiment Station near Nambour, between October 1957, and September 1959. The soil was a grey-brown loam. Plots of 14 ft of double-row, each containing 30 plants, were used in a 4 x 4 randomized layout. At rates shown in Table 1, 10 per cent. B.H.C. dust (1·3 per cent. gamma isomer) was applied to the plant bed shortly before planting, and worked in. The 10 in. bands of insecticide were placed between and to each side of the plant row positions and spaced 14 in. apart.

Ripe fruit were harvested and each was submitted to a panel varying from six to 11 tasters for opinions on tainting, which was recorded as absent, slight, or objectionable. The results are presented in Table 1.

Table 1

SUMMARY OF OPINIONS ON TAINTING

Rate per Acre of Application of 10% BHC (lb)	No. of Fruit	Mean No. of Opinions per Fruit	Percentage of Fruit with at Least One Opinion Indicating Taint	Percentage of Opinions Indicating any Taint	Percentage of Opinions Indicating Objectionable Taint
0	25	8·8	75	26·9	1·4
56	34	8·0	62	28·3	3·3
112	29	8·7	62	13·4	1·9
168	38	8·6	55	13·2	1·6

The opinion of panel members could have been influenced by the degree of fruit maturity and by the low sugar/acid ratio of winter fruit. It is apparent from the results, however, that BHC as preplanting soil applications at the rates used did not introduce taints or off-flavours into the plant crop. This finding is supported by those instances where BHC has been used in commercial plantings: invariably no market rejections have followed.

No differences in plant growth were observed at any stage.

REFERENCE

BRIMBLECOMBE, A. R. (1955). Pineapple scale investigations. *Qd J. Agric. Sci.* 12: 81-94.

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