Technical Notes

A NOTE ON SWEET POTATO WEEVIL IN CENTRAL QUEENSLAND

The sweet potato weevil, *Cylas formicarius elegantulus* (Sum.), occasionally causes severe damage to crops of sweet potatoes (*Ipomoea batatas* (L.) Lamk.) in Central Queensland.

During 1955-1960, 8 randomized block trials, with a plot size of 40 plants, were carried out to investigate the status of the pest and the possibility of economic control by chemical means. Planting was between August and March, with cuttings as the material in all except one trial where small tubers were used.

In two trials the cuttings were dipped in DDT emulsion (0·4 per cent. active), BHC dispersible powder (0·1) and emulsifiable preparations of dieldrin (0·2), aldrin (0·2), endrin (0·2), toxaphene (0·4), chlordane (0·4) and parathion (0·05). Planting was during hot dry weather, and severe burning occurred despite moist soil conditions and immediate post-planting irrigation.

In other trials, sprays of the insecticides at half the strengths given above were applied up to five times at fortnightly intervals. In two of these, DDT (5 lb active per acre), dieldrin (5), BHC (2·5) and aldrin (2·5) dusts were used as preplant soil dressings either alone or in combination with spray treatments.

In one trial, large numbers of weevils were active in crown runners prior to the first spray.

Tubers were harvested approximately six months after planting date, except in one trial which was planted in August and not dug until the following August: this is a common practice on dairy farms, where the top growth is used for autumn and early winter feed and the tubers are turned up as required for grazing during late winter.

Weevil infestations in tubers were virtually non-existent at harvest in both treated and check plots of all trials. There were no significant yield differences among treatments, or between treatments and checks.

Results from these trials and field observations suggest that damage in runners is not important unless severe growth checks occur. Appreciable tuber infestation may be encountered only when tubers are exposed and this can be prevented in most seasons by deep planting of tubers and hilling before runner growth becomes too prolific.

In Central Queensland, severe weevil damage to sweet potatoes can be expected only when crops are grown continually in adjacent areas with little regard for field hygiene, and during droughts. Potential yields under these conditions are so low that expenditure on insecticides is not warranted.

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