

for preventing damage by second and third instar larvae.

In 1978 (Table 2) *E. tuberis* larval damage to tubers was not so severe as in 1977. Untreated plots had 95% unmarketable tubers, but three sprays for second and third generation control reduced damage to less than 33%. Both the 1977 and 1978 results show the need to control the first generation beetles. Fonofos broadcast and soil-incorporated allowed 4% unmarketable tubers. This was reduced to 1% unmarketable tubers by 3 applications of any of the foliar treatments. Soil-incorporated band treatments with the exception of chlorfenvinphos followed by the 3 sprays all produced acceptable control ranging from 88 to 100% marketable tubers. Again carbofuran and permethrin were equally effective and both significantly better than methamidophos.

Although aldicarb applied as a band treatment gave satisfactory control of aphids by systemic action, its contact activity did not prevent wireworm damage (Table 3). Of the soil-incorporated treatments, only the fonofos broadcast treatment with 16% unmarketable

tubers, and possibly band treatments with fonofos (25% unmarketable tubers), isofenphos (32% unmarketable) and terbufos (27% unmarketable) can be considered as possible candidate materials for preventing damage to potatoes by *A. obscurus*.

In summary, *aldicarb* is an excellent Systemic aphicide, but appears to lack sufficient effectiveness against wireworms and possibly tuber flea beetle even when foliar sprays are applied against second and third generation beetles. *Fonofos* broadcast was the most effective soil-incorporated insecticide but even it allowed 16% damage by wireworm. *Carbofuran* and *permethrin* were the most effective sprays against flea beetles, but aphid populations increased when these insecticides were applied. *Methamidophos* was the best aphicide and against a low level infestation of tuber flea beetle good protection was afforded. However, under a high level of infestation (1977) the percentage of unmarketable tubers from methamidophos sprayed plots was not significantly different from that of plots which had no foliar applications.

#### REFERENCES

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The recent death of Colin Curtis marks the passing of one of British Columbia's early authorities on biting insects which affect man, livestock and wildlife.

Formerly a science teacher and a director of audio-visual education in Victoria, Mr. Curtis was employed at the Federal Department of Agriculture, "Mission Flats" laboratory at Kamloops, from 1948 until his retirement in 1969. During this period he was engaged in various phases of life-history, identification and control studies involving blackflies, no-see-ums, snipeflies and mosquitoes, as well as spiders. Among his publications are several pertaining to mosquito control and a Monograph on the Mosquitoes of British Columbia published by the Provincial Museum.

Mr. Curtis was also widely known among Ham Radio operators, with whom he kept in regular touch until his recent illness, and, in addition, maintained a knowledgeable interest in early B.C. steamship and railway history.

His wife Audrey, two sons and four grandchildren are left to mourn.