Section 4
Root Feeding Maggots, etc.

INFLUENCE OF TEMPERATURE AND SPRAY VOLUME ON CHEMICAL DISSIPATION AND EFFICACY OF CHLORPYRIFOS APPLIED FOR CABBAGE MAGGOT CONTROL

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Spray drench formulations of chlorpyrifos were applied as soil surface and incorporated row-band treatments to cabbage at the time of planting. Soil samples were taken at several post application intervals and analyzed for insecticide residues. Plant roots were also examined for cabbage maggot injury at 8 weeks after planting.

Residues from August chlorpyrifos treatments which weathered under high mean temperatures disappeared much faster than residues from April treatments which weathered under lower mean temperatures. Soil-surface treatments always disappeared faster than incorporated treatments. Initial half lives ranged from 3 days with summer-surface treatments to 56 days with spring-incorporated treatments. Incorporated chlorpyrifos provided better insect control than surface deposits. There was little difference in the degree of root maggot control between spring and summer trials in spite of the fact that residues of summer applications dissipated faster than those of spring applications. Increasing the water volume for soil-surface spray drenches from 3.5 to 33 liters of finished spray/300 m of row increased chemical persistence and efficacy, but only slightly.