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Section II Foliage and Seed-feeding and Mining Insects

EFFECT OF PLANT SPECIES ON TOXICITY OF PYRETHROIDS TO ADULT BLACK VINE WEEVIL C. H. Shanks, Jr. and J. D. Chamberlain Washington State University, 1919 N.E. 78th Street, Vancouver, WA 98665

Fenvalerate has been reported to be very effective against adult black vine weevil, Otiorhynchus sulcatus, but in our trials it was ineffective. Some of the reported successes were with fenvalerate on yew (Taxus sp.) but we had always used strawberry or raspberry foliage.

Fenvalerate, permethrin, and fluvalinate were applied to both yew and strawberry foliage. Fenvalerate and fluvalinate knocked down almost no weevils on strawberry leaves but were highly active against the weevils on yew foliage. Permethrin was active against the weevils on strawberry leaves but was more so on yew. Feeding weevils untreated yew needles for 24 to 48 hours before placing them on strawberry leaves treated with fenvalerate or fluvalinate greatly increased the knockdown of weevils. Feeding the weevils an ethanolic extract of untreated yew needles also increased weevil knockdown when they were placed on strawberry leaves treated with fenvalerate. Apparently some chemical in yew needles increases the toxicity of pyrethroid insecticides to black vine weevil.

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