

PHYTOTOXICITY OF SELECTED INSECTICIDES AND ACARACIDES TO FOLIAGE PLANTS

Trials were conducted at the University of Hawaii on two foliage plants, Dwarf Brassiaia

(*Brassaia arboricola*) and Dwarf Ti (*Cordyline terminalis* 'Madameandre') to determine their phytotoxicity to selected insecticides and acaricides. Plants, growing in 6-inch pots, were treated by submerging the aerial portions of the plant in water suspensions of 7 pesticides for 15 seconds. Granular formulations of 2 pesticides were applied to the soil surface. Materials, at 2X standard rates, were as follows:

Material and formulation	Amount formulation per:	
	1-gallon water	6-inch pot
chlorobenzilate 4E	2t	—
dicofol (Kelthane) 35WP	2T	—
Pentac 50WP	2T	—
carbaryl (Sevin) 50WP	2T	—
diazinon AG500 (48% EC)	2t	—
dimethoate (Cygon) 2E	2t	—
Volck Oil Supreme	2T	—
aldicarb (Temik) 10G	—	1.5t
disulfoton (Di-Syston) 15G	—	1.5t
untreated controls	—	—

T = tablespoon

t = teaspoon

Pots receiving granules also received 180 ml water in the case of Dwarf *Brassaia* and 250 ml in the case of Dwarf Ti for more rapid systemic action. Thereafter, all the plants were maintained (watering and fertilizing) by the greenhouse crew according to their standard practice. There were 4 Dwarf *Brassaia* plants and 3 Dwarf Ti plants per treatment.

Plants were examined 1 and 2 days following treatment, at half week intervals until 3 weeks and at weekly intervals until 8 weeks when observations were terminated.

Dwarf Brassaia. Within a week all aldicarb treated plants showed leaf spots with older leaves dropping some or all their leaflets. Within 2 weeks there was extensive killing of older leaves and 2.5 weeks all 4 plants had deteriorated to the extent that recovery was impossible and all were considered dead by the end of 3 weeks.

After 2 weeks Volck oil produced chlorosis of several leaflets of basal leaves starting at the midrib. By 3 weeks these leaflets fell from the plants with no further progress of phytotoxicity.

Diazinon produced only minor chlorosis on 1 plant after 3 weeks. Disulfoton produced yellow spots on 2 plants after 7 weeks.

Dwarf Ti. None of the ti plants showed any discernable reaction to any of the treatments during the entire observational period.

Volck oil produced shiny leaf surfaces to both species of plants and enhanced their appearance for about 2 weeks.

Conclusions. With the exception of aldicarb it appears that all these materials can be safely used at standard rates for control of mites or insects. However, slight reactions of Dwarf Brassica to Volck oil, diazinon and disulfoton may be expected, but complete recovery of plants can also be expected.

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