

Section II

Foliage & Seed-Feeding & Mining Insects

KARATE, AMMO AND PENNCAP-M FOR CONTROL OF ONION THRIPS

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This study was designed to evaluate Karate 1EC (ICI), Ammo 2.5 EC (FMC) and Penncap-M 2FM (Atochem) and the addition of the adjuvants Bivert (Wilbur-Ellis), Sylgard 309 (Wilbur-Ellis) and R56 (Wilbur-Ellis) for control of onion thrips (*Thrips tabaci*) when applied to onions (*Allium cepa*).

Plots were established in a commercial field of 'Tango' onions located near Warden, WA. Onions were planted 28 March 1992 on double rows. Standard fertility, irrigation, and weed control practices were followed. Plot size was 0.005 acre and arranged in a randomized complete block design with 4 replications. The rates of the insecticides used are given in Table 1. Sylgard 309 was used at the rate of 3 pints per 100 gallons, oil at 8 oz per acre, and Bivert at 1 oz per acre. In the second application Bivert was used at the rate of 3.2 oz per acre in the Karate plots and at the rate of 4 oz per acre in the Ammo plots. Spray applications were done 19 June with a R&D CO₂ pressurized sprayer at 26 gallons of water per acre with a hand-held boom with 4 (LF3) nozzles. Applications were at 1 pm. Temperatures were 85° F., solar radiation 54 langley, relative humidity 30 and no wind. Spray water pH was 7.5. A second application was done on 25 June with the same equipment after counting the thrips in the plots. Applications were at 10 am. Temperatures were 80 degrees F., solar radiation 67 langley, relative humidity 28% and no wind.

Evaluations were done 22, 25 June and 2, 10 and 17 July by counting all thrips adults and nymphs found on 5 plants in the center of each of the plots.

Results:

No phytotoxicity was observed. Karate and Ammo gave good control of the onion thrips while Penncap M gave fair control. There were no significant differences in onion thrips control with the different adjuvants as compared to the insecticide by itself. There appears to be a trend that the addition of Bivert or Sylgard enhanced thrips control. However it is difficult to reach any conclusion based on one year's data. Onion thrips are variable and difficult to control and small increases in effectiveness brought about by an adjuvant may have been masked.

Table 1. Effect of insecticides applied to 0.005 acre plots of 'Tango' onions on onion thrips. Warden, WA. 1992.

Treatment	lb(AI)/a	Mean No. thrips per plant				
		22 Jun	25 Jun	2 Jul	10 Jul	17 Jul
Karate 1E	0.01	27ab	30a	14a	20a	45ab
Karate 1E	0.02	10ab	23a	8a	17a	27a
Karate 1E	0.03	7a	22a	4a	14a	35a
Karate 1E + Bivert	0.025	6a	28a	20a	31a	33a
Karate 1E + Sylgard	0.025	9ab	24a	12a	16a	28a
Karate 1E + Bivert + Sylgard	0.025	10ab	32a	3a	10a	35a
Karate 1E + oil	0.025	8a	29a	9a	11a	28a
Ammo 2.5EC	0.079	15ab	47ab	19a	20a	38a
Ammo 2.5EC + Bivert	0.079	17ab	38a	5a	15a	37a
Ammo 2.5EC + Sylgard	0.079	19ab	37a	13a	17a	29a
Ammo 2.5EC + Bivert + Sylgard	0.079	14ab	29a	15a	16a	27a
Ammo 2.5EC + oil	0.079	15ab	62ab	10a	13a	36a
PennCap M 2FM	1.0	30b	69b	25a	72b	64b
Untreated check	--	57c	97c	53b	96c	109c

Means within a column followed by the same letter are not significantly different at the $P + 0.05$ level, Newman-Keuls studentized range test.