

Minimum levels of three commonly used insecticides to control five insect pests of rice in the Philippines

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The recommended foliar insecticide rate to control rice insect pests in the Philippines is 0.75 kg ai/ ha. We tested monocrotophos, MIPC, and chlorpyrifos + BMPC at 0.3, 0.4, and 0.5 kg ai/ ha on the IRRI farm. IR22 seedlings were transplanted at 21 d old in 6.0- X 5.2-m plots with 4 replications. Insecticides were sprayed 5 times at 14-d intervals from 5 to 61 d after transplanting. Populations of *Nephotettix virescens* (GLH), *Hydrellia philippina* (RWM), *Cnaphalocrocis medinalis* (LF), *Chilo suppressalis* (SB), and *Leptocoris oratorius* (RB) were monitored.

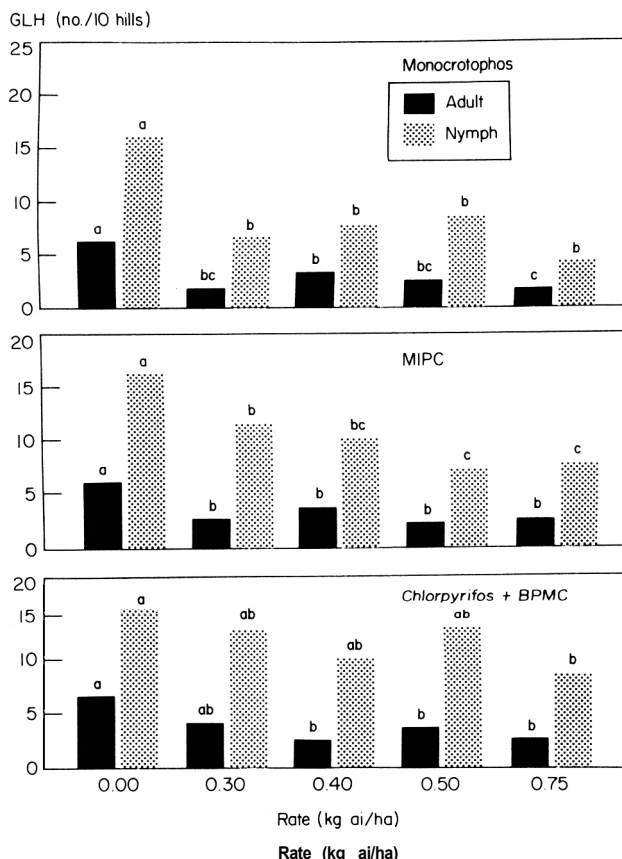
There was no difference between dosages of the effective insecticides (see table). Monocrotophos or chlorpyrifos + BMPC were effective against LF. None of the insecticides lowered RWM incidence below 50%. Monocrotophos at 0.4 kg ai/ha was effective against RB. None of the insecticides gave better than 50% control of SB deadhearts. Monocrotophos at 0.3 kg ai/ha or chlorpyrifos + BMPC at 0.5 kg ai/ ha

prevented whiteheads.

Significantly fewer rice tungro virus (RTV) infested hills were observed on plots treated with monocrotophos.

Monocrotophos or MIPC at 0.3 kg

ai/ha was as good as higher dosages against GLH adults and nymphs. Chlorpyrifos + BMPC at 0.4 kg ai/ ha was effective on adults and at 0.75 kg ai/ ha on nymphs (see figure).



Effect of 3 insecticides applied as foliar spray at different rates on GLH. IRRI, 1985–86. In a row, means followed by different letters show that the average populations of adults and nymphs were significantly different at the 5% level by DMRT.

Field evaluation of minimal levels of commonly used insecticides to control insect pest complex. ^a IRRI, 1985–86.

Insecticide ^b	Rate (kg ai/ha)	LF damaged leaves (%) ^c 70 DT	RWM damaged leaves (%) ^c 20 DT	Hills (%) showing RTV symptoms 65 DT	Stem borer		RB ^e (no./m ²) at milk stage
					Deadhearts (%) 60 DT	Whiteheads (%) 5 DBH ^d	
Chlorpyrifos + BPMC 3 I.5 EC	0.3	6 a	24 bc	13 de	15.4 cd	1.1 abc	5.3 bcde
	0.4	7 a	23 abc	9 cde	13.3 bcd	1.2 bc	4.8 abcd
	0.5	5 a	25 bc	11 de	15.0 cd	0.9 ab	4.3 abc
	0.7	5 a	20 ab	8 bcd	13.5 bcd	0.8 ab	5.0 bcde
MIPC 50 WP	0.3	13 b	25 bc	9 cde	14.7 cd	2.8 d	5.8 cde
	0.4	14 b	27 bc	10 cde	13.7 bcd	2.8 d	6.3 cde
	0.5	12 b	24 bc	10 cde	14.9 cd	2.5 d	8.8 de
	0.7	14 b	22 abc	8 bcd	14.5 cd	1.9 cd	4.5 abcd
Monocrotophos 30 EC	0.3	7 a	20 ab	5 abc	12.4 abc	0.8 ab	5.3 bcde
	0.4	6 a	24 bc	3 a	9.6 a	0.6 ab	2.3 abc
	0.5	6 a	20 ab	7 abcd	9.4 a	0.4 ab	1.0 ab
	0.7	5 a	18 a	4 ab	10.9 ab	0.3 a	0.7 a
Control	-	14 b	32 d	12 de	17.1 d	2.5 d	9.2 e

^a DT = days after transplanting. In a column, means followed by a common letter are not significantly different at the 5% level by DMRT. ^b Insecticides were applied at 5, 19, 33, 47, and 61 DT. Spray volume was 300–500 liters/ha. ^c Data based on 20 sample hills. Av of 4 replications. LF = leaf folder, RWM = rice whorl maggot. ^d Days before harvest. ^e Rice bug.