

Pest management and control INSECTS

Control of rice thrips

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An experiment in 1980 kuruvai season evaluated insecticides for controlling *Baliothrips biformis* (Bagnall). An existing rice crop of variety TKM 9 which was infested severely at 50 days after transplanting was utilized. Chemicals applied at 625 liters/ha to 20-m² plots with a knapsack sprayer were: monocrotophos, phosphamidon, methyl demeton, chlorpyrifos, and BHC. Thrips on all

Effect of insecticides on rice thrips at Tamil Nadu, India.^a

Insecticide	Formulation	Dosage (kg a.i./ha)	Thrips density (no./10 hills)	Pest reduction (%)
Monocrotophos	40 EC	0.25	3 a	97
Phosphamidon	100 EC	0.63	5 ab	90
Methyl demeton	25 EC	0.16	6 bc	87
Chlorpyrifos	20 EC	0.13	8 cd	83
BHC	10 dust	2.47	9 e	81
Water only	—	—	26 f	45
Control	—	—	48 g	—

^aMeans followed by a common letter are not significantly different at 0.05% level.

leaves from 10 randomly selected hills were counted 72 hours after spraying.

All treatments, including water,

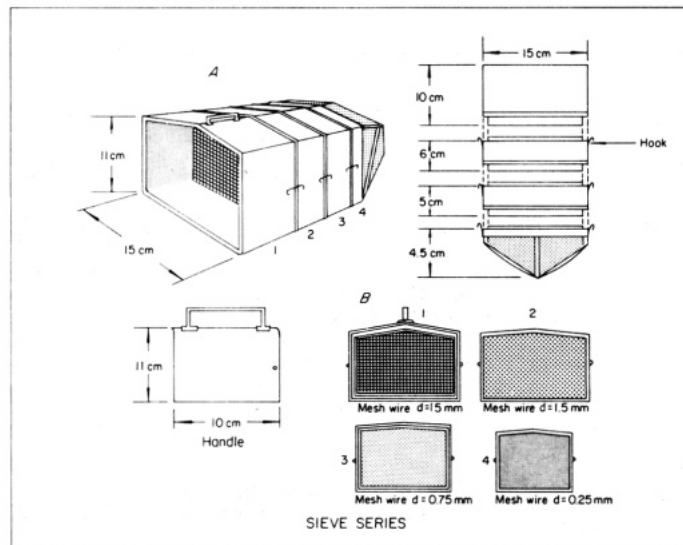
reduced thrip density (see table). The insecticides, especially monocrotophos, gave good control. ■

A nested sieve sampler for collecting aquatic invertebrates in rice paddies

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A study of rice field aquatic habitats initiated in 1981 is cataloging invertebrate species in order to construct a foodweb for rice agroecosystems. This foodweb will be a basis for understanding the role of natural pest enemies and how perturbations such as pesticide use may influence populations of rice insect pests.

An aquatic net is the standard collecting device used to collect invertebrates from streams and ponds. But a net cannot be used in puddled fields with heavy clay soils, shallow water, and closely spaced rice plants because it will not



Nested sieve sampler, side view (A) with 4 detachable nested sieves with 15, 1.5, 0.75, and 0.25-mm mesh diameter (B), developed for collecting aquatic invertebrates in rice paddies at IRRI.

pass quickly through the mud. A number of invertebrates — chironomid larvae, coleopterans, mites, collembolans, small hemipterans, copepods, and ostracods — can escape collection.

A 25.5 × 15 × 11-cm metal sampler with 4 nested sieves (see figure) has been used at IRRI for 1 year. It fits between rice hills and can be forced through the mud. ■

Effects of rice ragged stunt virus on its vector *Nilaparvata lugens*

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Virus-free insects were fed on rice ragged stunt infected plants during the

first 2 days after hatching, 6 days after hatching, and the entire nymphal period.

In the 2-day feeding, viruliferous female brown planthoppers lived 21.4 days and the males, 22.2 days; in the control, females lived 16 days and males, 24.8 days. In the 6-day feeding, viruliferous females lived 20 days and males, 18.1 days; in the control, females lived 21.4 days and males, 21.4 days. The

effect of the virus on the life span of nymphs and adults is not significant. There was no difference in number of instars nor duration of instar feeding on diseased plants during the entire nymph period.

The viruliferous vectors laid 29.7% fewer eggs in the 6-day feeding and 44.5% fewer eggs in the nymphal feeding period than did the control insects. ■