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CHEMICAL CONTROL OF ROOT-KNOT NEMATODES ON SNAKEGOURD IN SRI LANKA

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In Sri Lanka snakegourd, *Trichosanthes anguina* L., is often attacked by the root-knot nematodes *Meloidogyne arenaria* (Neal) Chitw. and *M. javanica* (Treub) Chitw. which cause variable losses.

The results of a nematicide trial carried out at Pallekelle, Kandy are reported.

The field, consisting of sandy loam soil heavily infested by *Meloidogyne javanica*, was ploughed to a depth of 30 cm and divided into plots 3 m by 4 m, spaced 0.5 m apart, and distributed at random in six blocks.

Treatments were done three weeks before sowing (12 Dec. 1979) with 1,3-dichloropropene 1,2-dichloropropane (D-D) by injecting the chemical to a depth of 15 cm in holes that were 30 cm apart. At sowing (31 Dec. 1979), granular carbofuran and phenamiphos were incorporated in the 15 top cm of the soil by broadcasting.

Sowing was done by placing two seeds of a local snakegourd cultivar in each of the holes spaced 90 cm within rows and 120 cm between rows. After germination plantlets were thinned to one per hole. Fruits were harvested at weekly intervals between 4 March and 19 April 1980.

The highest yields were obtained in the plots treated with carbofuran, but significant increases with respect to the control were observed also in the plots fumigated with D-D or in which phenamiphos had been applied (Table I).

Table I - *Effect of nematicidal treatments on yield of snakegourd in soil infested by* Meloidogyne javanica.

Treatment	Rate a.i./ha	Average kg/12 m²	Increase with respect to control (%)
Control		10.2 A (1)	—
Phenamiphos	40 kg	14.4 B	41
D-D	300 l	15.0 B	47
Carbofuran	10 kg	18.7 C	83

(1) Different letters indicate statistically differences, P = 0.01.

Nematode control was equally effective in all the treated plots, as no nematodes were detected on the root system of the plants, whereas an infestation of about 30 egg-laying females and 90 larvae was observed on aliquots of 100 g of roots taken from the control plots.

The results of this experiment indicate that it might be worthwhile to treat root-knot infested soils with nematicides before planting snakegourd and that the response of yield to treatments is also dependent on the density of the initial infestation.

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