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Agricultural College and Research Institute, Tamil Nadu Agricultural University
Coimbatore - 641003 - India

CHEMICAL CONTROL OF *MELOIDOGYNE INCOGNITA* IN THE NURSERIES

by
T. G. NAGANATHAN

Root-knot nematode *Meloidogyne incognita* is invariably present in the nurseries in Tamil Nadu. In infested fields where seedlings are produced, crops such as tomato (*Lycopersicon esculentum* Mill.), brinjal (*Solanum melongena* L.) and chilli (*Capsicum annuum* L.) grow poorly and the rate of survival when transplanted is much reduced. Therefore, suitable means for the chemical control of root-knot nematode in nurseries were investigated as a basis for the production of healthy seedlings to give better establishment in the field.

Experiments were conducted in soils infested by *Meloidogyne incognita* (Kofoid *et* White) Chitw. Experimental plots were 1 m^2 arranged in a randomized block design, 6 replications of each treatment. The liquid fumigant metham sodium 32% a. i. was applied fifteen days before sowing at the rates indicated in Table I with a watering can fitted with a rose on to a 5 cm layer of stagnating water covering the nursery beds. A light hoeing was given 10 days after the application of the chemical to facilitate escape of residual fumigant. Carbofuran 3G and aldicarb 10G were applied to the plots in shallow furrows, along with seeds at the rates indicated in Table I. Plots were left untreated for controls. Seeds of tomato, brinjal and chilli were sown in lines at 2 g/m^2. Plant stand on 10th, 20th and 30th day after sowing, seedling weight and gall indices at the time of transplanting were recorded.

Significant differences between treated and untreated plots were observed with reference to root-knot gall indices on a 0-5 scale in

tomato cv. PKM-1, brinjal cv. MDU 1 and chilli cv. CO 1 (Table I). All the treatments reduced the root-knot galling. Tomato and chilli seedlings produced in soil treated with metham sodium recorded significant increase in weight with respect to the control. The weight of brinjal seedlings was significantly increased compared with the control only in plots treated with the highest rates of aldicarb and carbofuran (Table I). Treatments had no apparent effect on the number of seedlings produced per plot for any of the plant species tested.

Table I - *Control of root-knot nematode* Meloidogyne incognita *in nurseries of tomato, brinjal and chilli.*

Treatments	Tomato		Brinjal		Chilli	
	Wt. of 25 seedlings g	Galling	Wt. of 25 seedlings g	Galling	Wt. of 25 seedlings g	Galling
Metham sodium 60 ml/m2	58.2 a	1.1 a	11.8 a	2.5 a	15.5 a	1.7 a
Metham sodium 80 ml/m2	57.8 a	1.2 a	18.5 a	2.6 a	22.3 b	1.8 a
Metham sodium 100 ml/m2	58.0 a	1.5 a	16.3 a	2.5 a	19.0 b	2.1 a
Aldicarb 2 g/m2	13.0 b	1.9 a	12.5 a	2.2 a	12.3 a	1.5 a
Aldicarb 3 g/m2	12.5 b	1.6 a	17.8 a	2.3 a	11.5 a	1.8 a
Aldicarb 4 g/m2	15.3 b	1.3 a	20.0 b	1.5 ab	13.5 a	1.8 a
Carbofuran 6.5 g/m2	15.8 b	1.8 a	12.5 a	2.1 a	12.8 a	1.8 a
Carbofuran 10.0 g/m2	16.3 b	1.8 a	13.3 a	2.4 a	12.3 a	1.8 a
Carbofuran 13.0 g/m2	12.5 b	1.9 a	20.0 b	2.3 a	16.8 a	1.7 a
Untreated	7.5 b	4.5 b	13.3 a	3.2 b	7.3 a	2.8 b

Column figures followed by different letters are significantly different from each other. (Duncan's multiple range test P = 0.05).

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