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EFFICACY OF SOME NEMATICIDES FOR THE CONTROL OF ROOT-KNOT NEMATODE INFESTING MUNG

by
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Mung [*Vigna radiata* cv. *aureus* (L.) Wilczek] is an important pulse crop and is highly susceptible to the root-knot nematode, *Meloidogyne incognita* (Kofoid *et* White) Chitw. (Prasad *et al.*, 1969). Several nematicides have been used for the control of root-knot nematodes on this crop, but the results have not always been satisfactory (Sakhuja and Singh, 1980; Kaushik and Bajaj, 1981). Further trials on chemical control were carried out in Ludhiana, from 1980 to 1982.

A block of plots, each measuring 4×3 m, was laid out in a field infested with *M. incognita*, with the site of block changed in each of the three years of the experiment. There were three replicates of each of the chemical tratments plus the untreated control. The nematicides were applied as granular formulations in the furrows, together with fertilizer (CAN) applied at the normal commercial rate. Mung cv. ML-5 was sown in June each year and the crop was harvested 3 months later. At harvest grain and straw yields were recorded; the root system of 10 plants selected at random from each treatment were examined and root galling visually estimated on a 0-4 scale.

The results (Table I) show that aldicarb at 1.5 kg a.i./ha was the most effective treatment and increased the grain yield by 68% and straw yield 86%, compared with the untreated control.

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Table I - *Efficacy of some nematicides against* Meloidogyne incognita *on mung.*

Treatments (kg a.i./ha)		Grain yield (kg/ha)				Straw yield (kg/ha)				Root-knot index (a)			
		1980	1981	1982	Average % increase over control	1980	1981	1982	Average % increase over control	1980	1981	1982	Average
Aldicarb	0.5	nd	1261	553	45.5	nd	4083	1658	48.5	nd	1.9	1.9	1.9
	1.0	729	1448	582	38.6	2725	4344	1745	49.0	2.4	1.9	2.2	2.1
	1.5	755	nd	931	67.8	2882	nd	2792	85.5	1.3	Q	1.3	1.3
	2.0	867	1215	789	53.0	2430	3646	2367	52.3	1.7	2.1	1.9	1.9
Carbofuran	1.0	725	nd	708	38.2	1970	nd	2125	75.8	2.5	nd	2.5	2.5
	2.0	781	nd	539	21.5	2257	nd	1617	21.7	1.5	nd	1.5	1.5
Terbofos	0.5	nd	1271	322	49.4	nd	3813	967	49.4	nd	2.3	2.1	2.0
	1.0	nd	1042	361	22.4	nd	3125	1083	22.5	nd	2.1	1.9	2.0
Control	—	721	851	403	—	2057	2552	1209	—	3.2	2.3	2.8	2.7
C. D. at 5%	—	NS	NS	33	—	745	NS	NS	—	1.2	0.4	0.8	—

(a) 0 = no galling; 1 = light galling with almost no egg mass; 2 = moderate galling wit 1-25 egg masses approximately; 3 = moderate galling with 36-50 egg masses approximately; 4 = severe galling with numerous - more than 50 egg masses per root; nd = not detected.

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