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NOTE BREVI — SHORT COMMUNICATIONS

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CONTROL OF *TYLENCHORHYNCHUS CLARUS* ON SOYBEAN WITH SYSTEMIC NEMATICIDES

by

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In Egypt, soybean *Glycine max* L. crops often are infested with *Tylenchorhynchus clarus* Allen and therefore trials were undertaken on chemical control, evaluating the efficacy of four granular systemic nematicides applied at two rates.

A clay loamy field, heavily infested with *T. clarus*, was selected in the NRC Agricultural Experimental Station, near Cairo. The experimental area was arranged as a randomized block, with 9 treatments replicated 4 times in plots measuring 18 m^2. The nematicides were applied at the rates shown in Table I. The granules were incorporated in the soil covering the seed drills at sowing; foliar sprays of oxamyl in water emulsion (500 l water/ha) were applied one month after emergence of the seedlings. All plots were irrigated immediately after the soybeans were sown. Soil samples were taken for nematode counts every two weeks throughout the period of the experiment. At the end of the experiment, the yield of beans per treatment was weighed and recorded and the percentage of proteins, lipids, and ash in a composite sample from the beans in each plot were estimated according to the methods of A.O.A.C. (1975). The data were statistically analysed by Duncan's multiple range test.

The highest yield of soybeans was obtained in the plots receiving the higher rate of aldicarb but all other treatments, with the exception of the lower rate of fensulfothion, gave greater yields than the untreated control (Tab. I).

The percentage total protein was greatest in the aldicarb treatment which gave the highest yield of soybeans (Tab. I). Conversely,

Table I - *Influence of nematicidal treatments on yield and chemical composition of soybean cv. Clarke grown in soil infested with* Tylenchorhynchus clarus.

Nematicide and rate of application (a.i.)	Yield (kg/ha)	Chemical composition %		
		Proteins	Lipids	Ash
Aldicarb G (3.7 kg/ha)	3815 a	34.0 a	21.0 a	6.1
Aldicarb G (2.5 kg/ha) + oxamyl L (1.8 l/ha)	2852 bc	32.0 d	23.6 fg	6.1
Oxamyl G (3.7 kg/ha)	3462 ab	33.0 ab	22.3 acdf	6.1
Oxamyl G (2.5 kg/ha) + oxamyl L (1.8 l/ha)	3124 ab	33.0 bc	22.4 de	5.7
Phenamiphos (3.7 kg/ha)	3224 ab	32.0 cd	21.9 acde	6.1
Phenamiphos G (2.5 kg/ha) + oxamyl L (1.8 l/ha)	3450 ab	32.0 d	25.0 hi	6.2
Fensulfothion G (3.7 kg/ha)	2805 bc	30.0 f	23.2 bc	6.1
Fensulfothion G (2.5 kg/ha) + oxamyl L (1.8 l/ha)	2284 c	31.0 e	23.4 beth	6.2
Control (untreated)	2352 c	32.0 d	21.6 bdgi	6.0

In each column, numbers with same letter do not differ significantly (P = 0.05).

Table II - *Effect of nematicidal treatments on population levels of* T. clarus *in soil « cropped » with soybean cv. Clarke.*

Treatment	No. of nematodes 200 g soil							
	0	14	28	42	56	70	84	120
	(days from sowing)							
Aldicarb G *	45	0	5	12	26	115	162	260
Aldicarb G + oxamyl L	24	0	3	13	49	100	146	325
Oxamyl G	29	0	0	8	50	72	248	305
Oxamyl G + oxamyl L	31	0	0	15	64	88	203	393
Phenamiphos G	72	0	25	30	46	90	204	210
Phenamiphos G + oxamyl L	23	0	0	20	24	55	397	598
Fensulfothion G	53	10	17	20	20	135	223	263
Fensulfothion G + oxamyl L	17	0	28	36	42	87	213	305
Control (untreated)	15	23	33	62	69	73	135	292

* For rates of application see Table I.

the least productive treatments had the greatest percentage lipids. There was no significant effect of the nematicidal treatments on the ash content.

All treatments decreased the populations of *T. clarus* which remained at relatively low levels for up to six weeks in plots treated with aldicarb or oxamyl granules (Tab. II).

LITERATURE CITED

Official Methods of Analysis. 1975. 16th Edition, AOAC, Washington D.C.

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