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Evaluation of the systemic nematicide Phenamiphos to control the nematode *Anguina* sp in toxic ryegrass pasture

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WESTERN AUSTRALIAN DEPARTMENT OF AGRICULTURE

1975 - SUMMARY OF FIELD EXPERIMENTS

(FEBRUARY, 1976)

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EVALUATION OF THE SYSTEMIC NEMATOCIDE
PHENAMIPHOS (NEMACUR) TO CONTROL THE NEMATODE ANGUINA SP.
IN TOXIC RYEGRASS PASTURE

Field trials done in 1974 showed that phenamiphos could be used to control Anguina sp. and suggested that low rates may be effective with critical timing of applications. These possibilities were investigated in 1975.

LOCALITY

Katanning - F. Quartermaine and C. Butterworth.
Gnowangerup - J. Griffith.

TREATMENTS

At each property - 10 treatments; 3 nematicide rates in 3 spraying schedules; 4 reps in plots 3 m x 1 m.

RESULTS

Tables 1 and 2 show the absolute levels of nematodes in ryegrass seed and the density of nematodes per unit area of pasture after treatment with phenamiphos. All rates of nematicide reduced the level and density of nematodes; the highest rate being slightly more effective. The spray schedule including sprays in July and August was superior to the schedule excluding the August spray. A single spray in June did not control Anguina sp.

DISCUSSION

The 1974 results suggested that a June spray was essential for nematode control. In 1975 the opening rains were later than in 1974 and the application of nematicide in July was more effective than in June. The possibility that an optimum period to spray in relation to the occurrence of opening rains needs to be investigated.

TABLE 1 - NEMATODE LARVAE PER GRAM RYEGRASS SEED

Times of application	Rate of nematicide l/ha			
	0	2.5	5.0	10.0
<u>Quartermaine property:</u>				
June	21,025	9,250	8,350	16,475
June + July		75	450	475
June + July + August		225	100	150
<u>Griffith property:</u>				
June	23,700	42,700	13,125	48,700
June + July		5,950	75	100
June + July + August		150	0	0
<u>Butterworth property:</u>				
June	3,400	2,318	1,625	1,430
June + July		700	2,400	25
June + July + August		0	275	0

TABLE 2 - NEMATODE LARVAE PER 0.12 SQ.M PLOT

Times of application	Rate of nematicide l/ha			
	0	2.5	5.0	10.0
<u>Quartermaine property:</u>				
June	25,719	15,199	18,510	25,902
June + July		113	720	734
June + July + August		294	162	333
<u>Griffith property:</u>				
June	36,332	74,428	26,080	115,630
June + July		9,923	128	172
June + July + August		281	0	0
<u>Butterworth property:</u>				
June	5,562	2,337	2,301	1,204
June + July		1,207	6,144	33
June + July + August		0	314	0