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Effect of pasture spraying on gall development.

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DEPARTMENT OF AGRICULTURE
WESTERN AUSTRALIA

1985 - SUMMARY OF RESULTS OF FIELD EXPERIMENT

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PLANT RESEARCH DIVISION

EFFECT OF PASTURE SPRAYING ON GALL DEVELOPMENT

EXPERIMENT: 85KA65

LOCATION: Katanning

AIM:

Sprays with low rates of desiccant herbicide just after head emergence has been shown to control development of toxicity in the same year. The trial was conducted to compare the effect of herbicides with different modes of action on control of toxicity and seed set.

MATERIALS AND METHODS:

An experimental site known to be affected by ARGT was selected and then inoculated with approximately 209 nematode and 97 bacterial galls/m² to help achieve a uniform heavy injection. The experimental design comprised three randomized blocks each including seven herbicide treatments and an untreated control. Herbicides were applied 5 times at fortnightly intervals between August 28 and October 10.

The rates applied were

Paraquat ^R	.55 l/ha
Fusilade ^R	.25 l/ha & 0.5 l/ha
Hoegrass ^R	0.5 l/ha & 1.0 l/ha
Roundup ^R	0.15 l/ha & 0.3 l/ha

At maturity plant tops were harvested from 1 m² quadrants and threshed to collect galls.

RESULTS AND COMMENTS:

The bacterial injection at this site was low so only the total number of galls are shown in Figure 1. The results of Fusilade, Roundup and hoegrass 1 l/ha showed good nematode control which was comparable to paraquat, the herbicide currently being used. The optimum time for spraying with all herbicides except hoegrass at 0.5 l/ha was on 10/9. Unfortunately spraying at this time produced substantial losses in pasture production (Fig.2) regardless of the type of herbicide used.

Control of ryegrass seed production is also shown in figure 1. Roundup though giving good nematode control in the earlier sprays showed less seed control in these sprays than in the later times of spraying. With the use of Hoegrass 1 l/ha and Fusilade at 0.5 l/ha good results in control of both nematode galls and seed production was shown in the earlier times of spraying.

FIG. 1 Effect of herbicide on the production of galls and seed production.

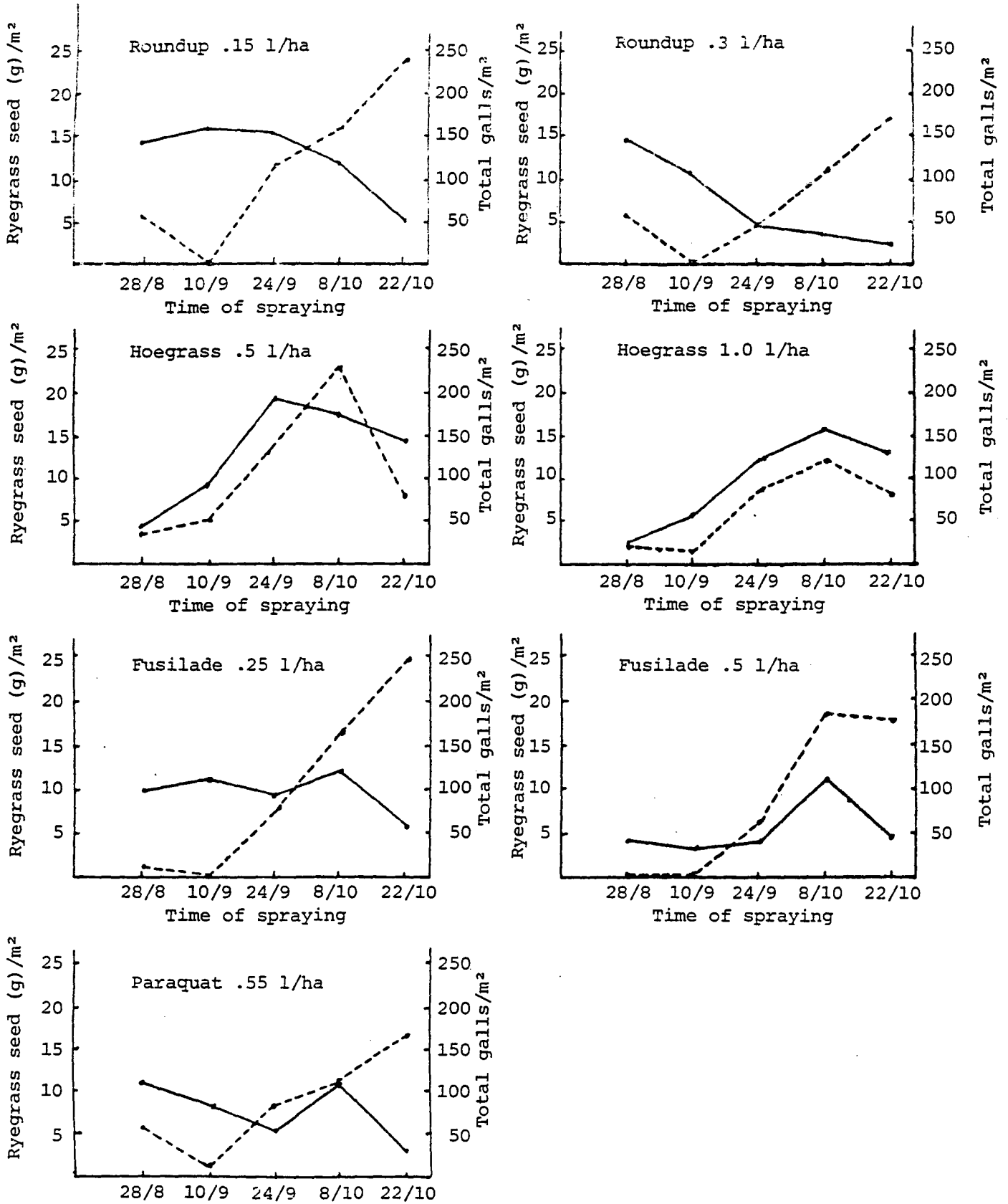
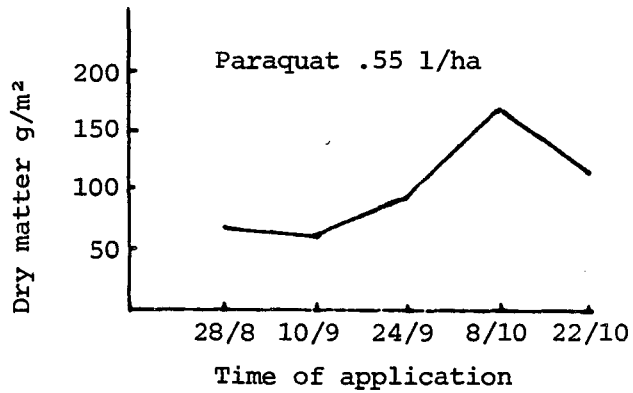
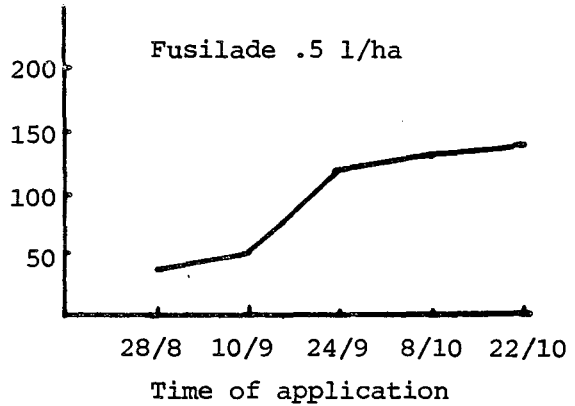
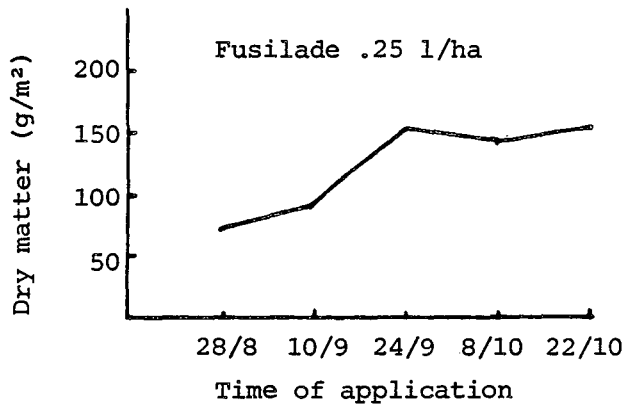
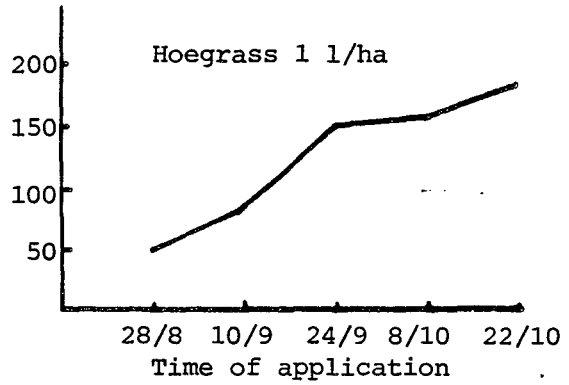
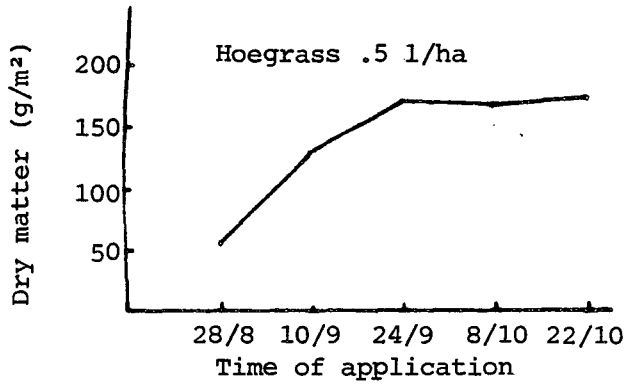
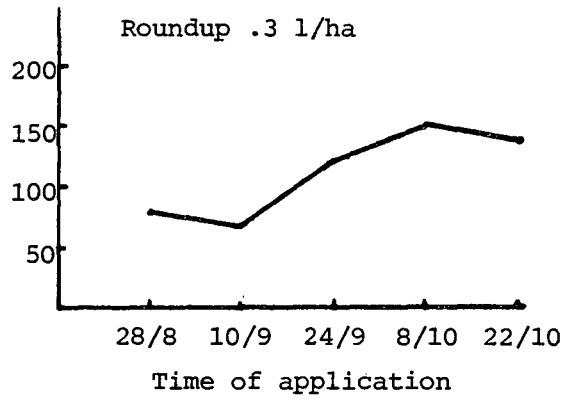
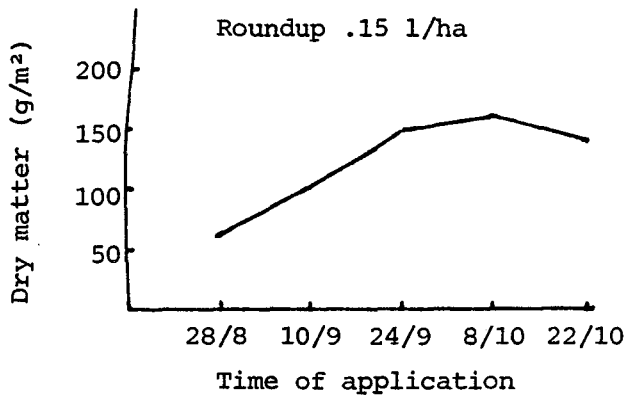


FIG. 2 Effect of Herbicide on Pasture Production



11

