

## Post emergence chemicals for use in seedling lucerne

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## SUMMARY

T.C.A. and Hoe 23408 were applied to seedlings of summer grass (*Digitaria sanguinalis*) growing in seedling lucerne at two sites. Neither chemical significantly reduced the summer grass nor the lucerne. Because of the tolerance of lucerne these chemicals may be useful for the selective control of other grasses growing in lucerne.

## INTRODUCTION

A range of herbicides is available for use in controlling broadleaved weeds in seedling lucerne (*Medicago sativa*) (Klingman and Ashton, 1975).

Chemical weed control of grass weeds in seedling lucerne is, however, more difficult because of a lack of tolerance of young lucerne to grass killing herbicides applied at rates high enough to achieve a satisfactory kill of the target weed.

T.C.A. and a new chemical Hoe 23408 have both shown ability to selectively kill grasses in some situations (Reeves and Brooke, 1977; Klingman and Ashton, 1975).

In north-eastern Victoria summer grass (*Digitaria sanguinalis*) is a summer growing weed that can cause establishment problems in spring sown lucerne.

The experiments reported in this paper were designed to investigate the effects of T.C.A. and Hoe 23408 on lucerne and summer grass seedlings.

## MATERIALS AND METHODS

The experiments reported in this paper were conducted at Seymour (Site 1) and Benalla (Site 2) in north-eastern Victoria.

Plots were sprayed at Site 1 on 18 November 1977. At the time of spraying the lucerne cv WL451 was in the 4 to 8 leaf stage and the summer grass had from 3 to 9 leaves.

The experiments at Site 2 were established on 1 December 1977 when the lucerne cv WL311 and the summer grass both had from 3 to 9 true leaves.

The sodium salt of T.C.A. (95% a.i. product) was sprayed on the plots at 0, 5, 10 and 20 kg/ha at Site 1, whilst at Site 2 an additional rate of 2.5 kg/ha was included. The T.C.A. was applied in 150 l water/ha.

Hoe 23408 (37.5% a.e.) was applied at Site 1 at 0, 0.5, 1, 2

and 4 l/ha, at Site 2 the 0.5 l/ha treatment was omitted. Hoe 23408 was applied in 150 l water/ha containing 150 ml of Agral 60.

The experiments were set out as randomized blocks with three replications of each treatment.

#### RESULTS AND DISCUSSION

Four weeks after application of the chemicals, plant counts were made to assess the effects of the treatments on the lucerne and the summer grass.

Neither chemical, at the rates used in these experiments, significantly reduced the number of lucerne or summer grass plants.

Following application of the two highest rates of T.C.A. at each site, pronounced scorching of the leaves of the lucerne and marked distortion in the leaves of the summer grass occurred.

In view of the tolerance of the lucerne seedlings to both chemicals in these experiments it is felt that they may have a place in postemergent control of some grass weeds in seedling lucerne. Whilst both chemicals used did not control summer grass further investigations should be carried out to determine the effect of T.C.A. and Hoe 23408 on a range of other grass weeds that occur in seedling lucerne.

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