ONEHUNGA WEED CONTROL WITH BENTAZONE

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Summary

Bentazone gave excellent control of Onehunga weed (*Soliva* spp) when applied at any growth stage, it caused no damage to established turf species.

INTRODUCTION

Onehunga weed is prevalent in the North Island on mown turf. It germinates in the autumn but growth remains restricted until early spring from which time it grows rapidly, it starts to set seed from mid-November. Because it tends to grow faster than the other more desirable turf species in the early spring, it smothers these species. The other main disadvantage of Onehunga weed is that the seed is prickly and walking in bare feet is painful.

Matthews (1975) recommended MCPA, 2,4,5-T, MCPA plus ioxynil or ioxynil plus mecoprop but maintains that control is variable on mature plants. Patterson (1978) reported: "Under favourable weather conditions, bromofenoxim rapidly killed Onehunga weed ... fine warm weather at the time of application is necessary for maximum herbicidal effect."

Bentazone, a contact herbicide, has been evaluated for Onehunga weed control over the last 2 years.

METHOD

Applications were made with a CO₂ pressured back-mounted spray tank connected to a hand-held lance. In two trials Teejet 730308 fanjet nozzles were used operating at 210 kPa delivering 330 litres/ha of water. In the other two trials applications were as above except Teejet 8002 nozzles were used at 350 kPa delivering 342 litres/ha of water. All trials had 2 or 3 replications.

Weed assessments were done visually and expressed as percentage control of Onehunga weed compared to the untreated check. Trials were done on golf-course fairways and school playing fields.

RESULTS AND DISCUSSION

Bentazone at rates between 1.44 and 2.4 kg/ha provided a high level of control of Onehunga weed. This chemical has been shown to be temperature and rainfall dependant on some weed species (Nalewaja and Adamczewski 1977).

In these trials a considerable range of air temperatures occurred with no effect on the degree of control. Bentazone's control of musky storksbill (*Erodium moschatum*) has also been shown not to be greatly influenced by climatic conditions (James and Hartley 1977). Results with bromofenoxim presented in Trial 3 (Table 1) agree closely with Pattersons (1978) finding, "that maximum control is dependant upon the factors of rate and temperature". Where air temperatures were between 12-13°C he obtained 50% control of Onehunga weed. In Trial 3, 60% control of

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Pasture Weeds

Table 1. Percentage control of Onehunga weed.

Treatment	Rate kg/ha	Trial			
		1	2	3	4
untreated	—	91*	60*	50*	65*
bentazone	0.96	97.5	—	—	—
bentazone	1.44	99	98.5	100	99.9
bentazone	2.40	100	100	100	—
bromofenoxim	0.75	—	—	50	—
bromofenoxim	1.00	—	—	60	—
Air temperature °C		20	20-21	11-15	12-14
Application date		11/11/77	14/11/77	1/8/78	30/10/78

* Percentage ground cover

Onehunga weed was obtained at air temperatures between 11-15°C.

In the present trials rainfall did not occur within an 8 h period after application, however since it has been shown that rainfall soon after application does affect control on other weed species it would seem advisable to allow at least 8 h fine weather after application.

Although the time of application varied between trials from the beginning of August to the middle of November and other unreplicated applications have been applied in the Autumn with equally good results; optimum timing of application should be towards the end of October or middle of November to maximise the number of seeds that will germinate but before any new seeds have been set. If an application is made after seed set, then prickles will occur even though a bentazone application has been made.

No effect on grasses or white clover (*Trifolium repens*) occurred at rates up to 2.4 kg/ha (the highest rate evaluated). Grasses included chewings fescue (*Festuca rubra*) paspalum (*Paspalum dilatatum*) perennial ryegrass (*Lolium perenne*), browntop (*Agrostis* spp) and poa annua (*Poa annua*).

REFERENCES

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