



2. Objectives

To screen herbicide treatments for the control of two problem broadleaf species Anredera basselloides (Madeira vine) and Physalis viscosa (Sticky gooseberry)

3. Treatments

<u>Chemicals</u>	<u>Rate (kg or l prod. ha<sup>-1</sup>)</u>
1. Control (unsprayed)	-
2. Tordon 101	4
3. Garlon	1,5
4. MSMA repeat application	4 + 4
5. MSMA	4
6. Roundup	6

3.1 Chemical formulation

<u>Product</u>	<u>Chemical name</u>	<u>Formulation</u>
Tordon 101	piclogram/2,4-D	65g/l/240g/l
Garlon	triclopyr	480 g/l ec
Daconate	MSMA	720 g/l Soln
Roundup	glyphosate	359 g/l soln

4. Experimental

On 13 January, fragments of Madeira vine tuber were weighed (16 grams/tray) and planted into pots of size 300 mm x 300 mm x 100 mm. On 17 January, seedlings of Sticky gooseberry were also planted into similar pots.

On 21 March, treatments were sprayed directly over the foliage using a gas-operated knapsack sprayer, fitted with a Spraying System 8004-E fanjet. The repeat treatment of MSMA (Treatment 4) was sprayed on 23 April. Foliage in all Madeira vine pots was thick and actively growing. However, Sticky gooseberry foliage was damaged by insects a few days before and ground cover % was very poor (5-10%).

Two replications of each treatment on each species were used.

5. Results: Table 1 : Mean visual ratings of Madeira vine control 12, 26, 41 and 68 days after spraying.

Treatment	Rate prod.ha <sup>-1</sup> (kg or ℓ)	Percent kill			
		12	26	41	68
1. Control (unsprayed)	-	0	2	5	10
2. Tordon 101	4	94	100	100	100
3. Garlon	1,5	99,5	100	100	100
4. MSMA/MSMA	4 + 4	35	47	30	35
5. MSMA	4	62	80	30	25
6. Roundup	6	75	95	80	85

Comments on Table 1

1. Within 2 weeks, both, Garlon and Tordon, had provided a 100% kill of Madeira vine. No regrowth occurred over the next 2 months, after which the experiment was discontinued.
2. Treatment 4, the MSMA repeat application treatment, was not effective. Although the second application caused scorching initially, this treatment was no more effective than one application of MSMA only.
3. Roundup at 6 ℓ/ha, provided an acceptable control of Anredera basselloides within 4 weeks of spraying.

However, this was not as effective as treatments 2 and 3 and these effects were short-lived.

Table 2 : Mean visual ratings\* of Sticky gooseberry control 12, 26, 41 and 68 days after spraying

Treatment	Rate prod.ha <sup>-1</sup> (kg or ℓ)	% Regrowth			
		12	26	41	68
1. Control (unsprayed)	-	20	40	75	80
2. Tordon 101	4	15	10	0	0
3. Garlon	1,5	15	10	0	0
4. MSMA/MSMA	4 + 4	20	20	30	40
5. MSMA	4	20	20	30	40
6. Roundup	6	20	10	5	15

\* Insect attack on Sticky gooseberry leaves before spraying the treatments, made it impossible to assess foliage damage by the treatments. However, foliage regrowth, from the small plants, still varied according to treatments, as shown in Table 2.

1. The absence of regrowth from the Tordon and Garlon treatments, confirms the persistence of picloram and triclopyr in the soil.
2. Both MSMA treatments were inadequate in preventing regrowth of Physalis viscosa although a substantial amount of scorching was present.
3. Roundup at 6 l/ha provided good temporary control of Sticky gooseberry, but regrowth was unacceptable.

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