DISEASE CONTROL IN ERICAS AND CALLUNAS

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INTRODUCTION

The diseases *Phytophthora cinnamomi*, *Pestalotiopsis spp.*, *Pythium spp.*, and *Cylindrocarpon spp.* can cause significant crop losses in *Erica* and *Calluna* production and, in recent years, the disease *Rhizoctonia solani* has caused appreciable losses to specialist growers especially in wet growing seasons.

Having specifically identified *Rhizoctonia* as a problem with a specialist producer, nursery trials were carried out using the fungicide Iprodine (Rovral) to contain the disease. (Rovral had the necessary clearance and recommendations for the control of *Rhizoctonia* in lettuce and bedding plants).

The nursery practice is to grow 1 year Ericas and Callunas in ½ litre containers under high polyethylene tunnels (the polyethylene being removed in May/June and replaced in September/October). Overhead irrigation is used with a fibre capillary mat on a black polyethylene sheet base.

METHODS AND MATERIALS

Trial 1. A drench of 2 grams of Rovral 50% a.i. in 5 litres of water per m^2 was applied at 2, 4 and 6 weekly intervals. There was a non-treated control. The four treatments of 25 plants were replicated 4 times in 10 cultivars of callunas. Results are given in Table 1.

Table 1. Fungicide Control[1] of Rhizoctonia on *Calluna vulgaris* Cultivars. 1981 Drench Trial.

		Rovral drench every:		
Cultivar	Untreated	2 weeks	4 weeks	6 weeks
J.F. Letts	*	**	**	**
J.H. Hamilton	*	**	**	**
Gold Haze	**	***	***	***
Darkness	**	***	***	***
Golden Carpet	*	**	**	**
Elsie Purnell	**	**	***	**
Multicolour	*	***	***	***
Sister Anne	*	***	***	**
Serlei Aurea	**	**	**	**
Cupryea	***	***	***	***

[1] Disease control: *poor, **moderate, ***good

Trial 2. A compost incorporation of 400 g Rovral 1.25% dust (mixed with 1.1 kg of dry sand) per m^3 in addition to the normal nursery practice of incorporating 75 g Etridiazole (Aaterra) was used. This was followed up in the most successful treatment by 4 weekly interval drenches of Rovral at the rate of 2 g Rovral in 5 litres of water per m^2. There were six treatments of 24 plants replicated 4 times. Results are given in Table 2.

Table 2. Fungicide Control[1] of Rhizoctonia on *Calluna vulgaris* Cultivars. 1981 Compost Incorporation and Drench trial.

Cultivar	Untreated	Aaterra in Compost	Rovral in Compost	Aaterra + Rovral in Compost	Rovral drench every 4 weeks	Aaterra + Rovral incorporated, + Drench every 4 weeks
Sunset	*	*	**	**	***	***
Joy Vanstone	*	*	**	***	***	***
Kinlochruel	**	***	***	**	**	***
Orange Queen	*	*	**	**	***	***
Beoley Gold	**	**	**	**	***	***
Robert Chapman	**	**	**	**	***	***

[1] Disease Control: *poor, **moderate, ***good.

Trial 3. To establish whether a drench or a spray at high volume would be effective, a trial was established to compare the two methods. It was replicated 4 times and had a control of clear water.

Results obtained were:

1. No significant difference between the two methods of application.
2. The 2 g Rovral treatment was similar to the 4 g Rovral treatment.

Trial 4. To establish whether a Rovral treatment of 2 g per 1 litre of water per m^2 would be an effective control in the propagation stage, trays of *Erica vagans* 'Valerie Proudley' cuttings were treated. Results are given in Table 3.

Table 3. Effect of Rovral on root vigor and weight and on cutting weight.

	Percentage		
	Poor	Moderate	Good
Root vigor			
Untreated	4	76	20
Rovral on Insertion	12	24	64
Root weight	Grams		
Untreated	0.30	—	—
Rovral on Insertion	0.40	—	—
Cutting weight			
Untreated	0.74	—	—
Rovral on Insertion	1.17	—	—

Cost of Treatment (1 year plants)	**per 1000 plants**
Aaterra incorporated	£3.50
Rovral, 1.25% dust incorporated	1.00
Rovral drench — 3 week intervals, 14 treatments	2.50

CONCLUSIONS

1. Drenches every 3 weeks would be ideal.
2. Compost incorporation was very effective, especially after potting and before drenching programmes could commence.
3. Drenches, when combined with compost incorporation, gave excellent results.
4. Treatment of the propagation trays was very effective and resulted in superior plants for later potting on.
5. Trials work suggested that the volume of drenches could be reduced.

Recommendations. The Agriculture Department and Advisory Service (ADAS) is currently in discussion with the manufacturers of Rovral, who are interested in extended the recommendation of Rovral to include Ericas and Callunas as a label recommendation in the future.

THE ECONOMICS OF GRAFTING

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REASONS FOR GRAFTING

I am committed to grafting as a way of propagating plants because:

I worked in Boskoop for 2½ years and, during this time, I went to Sweden doing contract grafting roses for the glasshouse industry. The money I received for this work purchased the liners and stock plants which helped to start my business ten years ago.

It is ideal for the small nurseryman.

There is a need for a quick turnaround of plants.

I consider that grafted plants produce a better end product if handled properly in containers, i.e. grafted Viburnums are superior to Viburnums produced from cuttings.