

Post Emergent Herbicides for Perennial Veldt Grass Establishment

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Key messages:

- There are no registered herbicides for use in veldt grass
- Many of the herbicides resulted in greater veldt plant densities than the control
- Soil type had little effect on plant density and herbicide impact

Aims:

- To determine perennial veldt grass tolerance to broadleaf and grass selective herbicides
- To find out which treatments will enable optimum plant densities

Background:

Perennial veldt is well suited to erosion prone sandy mallee soils and provides valuable ground cover and a productive pasture when established. Veldt is often difficult to establish due to competition from other grass weeds. Veldt grass is often established with a cover crop to prevent wind erosion during early development. Broadleaf weeds, grass weeds and the cover crop all compete with veldt for valuable moisture.

Currently there are no selective herbicides registered for use when establishing perennial veldt grass. This trial will look at the effect of different selective herbicides on veldt grass health and density.

About the trial:

The trial design was completely randomized and consisted of seven treatments and a control replicated four times. Treatments and rates are shown in Table 1.

Sowing occurred after opening rains in the first week of May 2009. 2kg/ha of Veldt grass and 40kg/ha triticale was sown using an air seeder at 2cm followed by press wheels. Trial plots were 3.5x25m in an east-west orientation so replicates would occur on several different soil types. Treatments were applied at the 3 leaf stage on the 31st of July.

Table 1. Treatment herbicide and application rates used on Veldt grass

Herbicide	Rate/ha	Active	BS 1000 rate ml/100L
Raptor	45g	Imazamox 700g/kg	200
Agritone/lontrel	1L +150ml	750g/L MCPA, 300g/L Clopyralid	
Ally	5g	600g/L Metsulfuron	100
Logran	12g	750g/L Triasulfuron	
Amicide 625	1.4L	625g/L 2.4 D Amine	
Hoegrass	1L	500g/L Diclofop Methyl	250
Crusader	500ml	30g/L Pyroxsulam, 90g/L cloquintecet-mexyl	250
Control	n/a	n/a	

Assessments:

The collection of data at the trial site included:

- Veldt grass plant densities pre and post herbicide application
- Visual scoring for plant health of the veldt grass post treatment

Note: The impact of herbicides on weeds was not measured as this information is provided on the label.

Results:

Raptor had an impact on both veldt health and density whilst removing the cover crop (a benefit). This allows valuable soil moisture to be conserved. What will be interesting will be to compare treatments in 2010.

The Agritone/Lontrel mix and Ally treatments appear to have had no effect on the health of perennial veldt plants at the rates used.

The impact of Logran was minimal. What would be interesting would be to do some work with Logran and Trefluralin pre-sowing in future trial work.

Crusader and Hoegrass had a large impact on plant health but minimal impact on plant density when compared to the control.

There was little effect of soil type on perennial veldt plant density or herbicide impact. Soil texture ranged from sand in the first rep to loam in the fourth.

It is interesting to note the fact that many of the herbicide treatments resulted in a greater plant density than the control (no herbicide treatment). This could be explained by natural variation in the results or a reduction in weed density/cover crop density resulting in decreased competition and increased veldt seedling survival.

It is important to remember that these are trial results only and none of the chemicals used are registered for use in veldt grass.

Table 2. Results of treatment application on Veldt grass 55 days post application

Treatment	Veldt Density Plants/m ²	Veldt health (100%= unaffected)
Agritane/lontrel	13.4	100%
Ally	9.7	100%
Control	7.2	100%
Logran	10.8	98%
Amicide 625	8.1	93%
Hoegrass	6.9	80%
Raptor	5.9	80%
Crusader	6.8	48%

Who's Involved:

The trial is supported by;

- Farmer Co-operators : Kym and Denise Frahn

Activities, Events and Industry Participation:

The intent of this trial was published in the SA Murray Mallee Trials Book 2009, released in August 2009.

A report of the trial to date was published in Agronomy Matters newsletter in spring 2009. It is intended that the final results of the trial will be accrued in March 2010 and results discussed at farm workshops for livestock farmers.

Future Directions:

Veldt grass establishment will be again monitored in March 2010 to make a final assessment on the success of the treatments. This will enable data to be collected on veldt grass health and density of plants post summer to enable a true reflection on survival rates over summer.

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Figure 1. RSSA consultants Tamara Rohrlach and Mehdi Zaboli scoring Veldt density in the Raptor treatment

