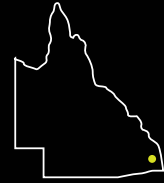




Case studies

SEQ Water Corporation, Lake Somerset, Kilcoy Qld.



PROPERTY DETAILS

Location: Leaseholder property, Somerset Dam, Kilcoy, south-east Queensland

Catchment: Stanley River

Property area: Lease area 27 hectares

Main enterprises: Beef cattle grazing

Where lippia is a problem: Area immediately below full water level, spreading to the adjacent land above full water level

General information and lippia infestation

Large areas of land around Lake Somerset have been invaded by lippia, posing a potential threat to water quality in the lake and also to the sustainability of grazing enterprises in the catchment. In a drinking water catchment there are limited options for controlling weeds, particularly in waterways entering the lake and on the land that is exposed as the lake recedes. One of the preferred methods of control is to use a selective herbicide that breaks down quickly in the environment and has a low toxicity to fish and other aquatic life.

The water level in the dam varies considerably over time. Water couch, an excellent pasture species, is usually present below full water level and the grass spreads onto land exposed by falling water levels. Because it is such good cattle feed the cattle tend to concentrate on the areas below full water level, and grazing pressure (as well as the drought) has resulted in many bare areas ideal for lippia establishment.

The property involved in this trial has about 50% of the lease area infested by lippia, ranging from 25% to 100% groundcover.

Methods of lippia management

An area of 0.75 hectares was sprayed twice with Agricrop Lantana® 600 and rotationally grazed to maximise pasture recovery. The paddock was grazed according to available feed throughout the observation period (and leading up to it)

The calculation of cost includes only the cost of the herbicide. To employ a contractor or factor in fuel and labour costs would therefore increase the overall cost of the treatment.

| Application date | Herbicide rate | Cost |
|------------------|--------------------------------|---------------------|
| Early March 2007 | 6.7 L/ha Agricrop Lantana® 600 | \$81.07 per hectare |
| Late June 2007 | 6.7 L/ha Agricrop Lantana® 600 | \$81.07 per hectare |
| Total cost | | \$162.14 |

Table 6: Agricrop Lantana® 600 application timing, rate and cost (cost based on Agricrop Lantana® 600 price at April 2008 of \$12.10 per litre)





Comparison of the treated and non-treated areas taken on 27 March 2000

(Photo by V. Alsemgeest)

Application 1 (March 2007)

The first treatment was applied after significant rainfall (20 mm) in March 2007. An extended period (three months) of dry conditions followed, which may have assisted in achieving such dramatic results so quickly. There was very little regrowth of lippia following the first treatment until good rainfall in June. The lippia responded vigorously to the winter rainfall during this period and as a result another treatment of Agricrop Lantana® 600 was applied.

Application 2 (June 2007)

The second application achieved a very good kill (estimated at over 90%), but the most dramatic change was the significant increase in grass species. When the treatment was observed in early December (2007), Windmill grass (*Chloris spp*) was the dominant grass post-treatment, but there were also significant areas of Rhodes grass (*Chloris gayana*) on the treated area. Very little lippia was present in the area treated in December, whereas lippia in the untreated area had not changed significantly since January 2007.



Comparison of the treated and non-treated areas in December 2007, with insets showing a close-up of each area

(Photo by V. Alsemgeest)

Future control options

The challenge will be to apply this strategy on other properties to see if similar results can be achieved. SEQ Water Corporation will also be monitoring this site into the future to see how effective the treatment was over the longer term (three years).

Grazing management has an impact on managing weed populations and this is especially true in the case of lippia. SEQ Water Corporation personnel have observed that continuous grazing systems seem to promote the spread of lippia considerably more than rotational grazing systems, where rest periods enable grass pastures to recover.

SEQ Water Corporation is engaged in a property management planning programme for the leaseholders, and field days and workshops are also held to encourage leaseholders to better manage their leasehold land.

