

AG15 Update

- a natural resource management newsletter for irrigated cotton and grains growers

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What's been happening in Ag15?

In the last couple of months we have been busy organizing and conducting 'Land and Water' Workshops in central and southern Queensland with cotton growers.

In early August, 18 people (representing 14 properties) from Dawson participated in Land and Water workshops organised by Cotton Australia and Ag15 extension staff. These workshops followed a similar format to the successful workshops already held in Southern Queensland. The day was supported by Fitzroy Basin Association and staff from Cotton Australia, Department of Primary Industries and Fisheries, Natural Resources, Mines and Water, Dawson Catchments Coordinating Association and Integrated Area Wide Management. A similar workshop was held in St George with 7 growers. The workshop was a joint effort between Cotton Australia, Ag15 and Queensland Murray Darling Basin Committee (QMDC).

We attended the 13th Australian Cotton Conference at the Gold Coast on 8-10 August. At the conference we assisted at the Cotton Catchment Communities CRC display and helped facilitate two 'Hands-on Research' sessions – 'Simple Water Quality Tests on Farm' and 'Storage losses and remediation'. A number of papers presented at the conference contained strong messages regarding the need to protect the natural resource base used in cotton production.

Vegetation condition assessment and management

Assessing the condition (or health) of your vegetation does not have to be complicated. The first step is to ensure that vegetated areas are clearly marked on a property map and a short description of the vegetation type is given.

There are a number of assessment tools used by vegetation specialists, some of which are very complex. Fortunately there are some simple techniques you can use on your property to determine the current health of your vegetation and to monitor it over time.

The BMP manual:

The Land and Water Management (L&W) section of the Australian Cotton Industry BMP manual provides a table listing features of healthy and degraded vegetation (L&W module p. 36). You can use this table as a checklist to determine the initial health of your vegetation and then as a means of monitoring changes in vegetation health with changes in management or seasonal conditions. The L&W module also provides information on ways to improve vegetation management on your property (pp. 34-38).

Monitoring Farm Flora and Fauna kit:

This is an excellent resource developed by Greening Australia. The kit includes forms to record information and tips on how to conduct the assessment. It is available from Greening Australia website:

http://www.greeningaustralia.org.au/nativevegetation/pages/pdf/authors%20C/20_Cupitt.pdf

Photopoints:

Another technique that can be used on its own or in conjunction with other tools is the use of photopoints. To ensure you get a good comparison over time some useful tips include:

- Use a landmark feature or sighter post (preferably 10m away) to ensure that photographs are always of the same area and can be compared over time,
- Photographs are best taken after the 'wet' season — February to May in the north and May – June to the south,
- Photographs should be taken on a clear day between 9.00 am and 3.00 pm with the sun behind the camera and
- Face south (if possible) to reduce the potential for too much sunlight and over-exposure of the picture.

For more information on photopoints

http://www.nrm.qld.gov.au/monitoring_guide/indicators/photopoints/index.html

'Managing Riparian Lands in the Cotton Industry' and 'Growing Trees on Cotton Farms' are useful publications available from the Cotton Catchment Communities CRC.

If you are interested in more information on vegetation assessment and monitoring we can put you in touch with organisations that can provide assistance.



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Lippia- what is it?

Lippia (*Phyla canescens*) – or Condamine Couch or Curse - is a broadleaf, perennial herb which forms a solid mat-like ground cover with runners that take root at the nodes. Leaves are 1-3 cm in length.

Lippia is an aggressive weed and establishes readily on bare ground. It is able to grow from vegetative parts that break off and take root in moist soil. Hence it is primarily spread by floodwaters. It can also be spread as seed by vehicles, machinery, birds and livestock. Lippia is drought and frost tolerant and can survive periods of inundation. All these characteristics make it a formidable weed!

Lippia is found in the more temperate regions of Australia particularly the floodplain environments preferring heavy clay soils – ie. the cotton growing regions of the Murray-Darling river system in Queensland and NSW.

Why is Lippia significant?

Lippia forms dense carpets preventing the growth of other riparian vegetation. This results in soil erosion, reduced bank stability and the associated decline in health of the waterway. Lippia infestation near irrigation structures can cause similar problems.

Efforts by the cotton industry and other landholders to improve management of riparian land have been impaired by heavy Lippia infestations in some areas. Establishment of native tree and grass species can be very difficult in badly affected areas.

Hence prevention – through maintenance of native vegetation around waterways - is better than control!

Control measures for Lippia

Lippia is difficult to control and some methods are costly and/or impractical. Long-term control is best achieved using a combination of methods.

Lippia does not tolerate cultivation. Machinery should be washed down before moving from infested to Lippia-free areas. Cultivation is not practical where the plant is growing in riparian areas due to high risk of erosion.

Herbicide control is also an option. However, herbicide use near waterways is not recommended as it can result in contamination. Multiple herbicide applications, which can be very costly, give better control than a single application.

Chemical products, rates and associated trial data can be found in 'Lippia: a review of its economic and environmental impact on floodplain ecosystems in the Murray-Darling basin' with more recent trial data available in 'Managing Lippia in the cotton farming systems' by Graham Charles.

In grazing situations productive pastures are essential to Lippia control as healthy, competitive pastures can suppress infestation.

Research activities

Research into the ecology (how a species grows, survives and reproduces) of lippia is being supported by the Cotton Catchment Communities CRC. A better understanding of the weed will help to improve control strategies. Biological control options (eg. introduction of an insect or pathogen such as rust) for Lippia are also being investigated. However useable results from this research are unlikely to be available in the short term.

More information

Article: 'Managing Lippia in the cotton farming systems' by Graham Charles, *The Australian Cottongrower*, August-September 2005

Publication: 'Lippia: a review of its economic and environmental impact on floodplain ecosystems in the Murray-Darling basin', QDPI, 1995, ISBN 0 646 24625 9

Department of Natural Resources & Mines (NR&M) Fact Sheet – 'Lippia'

<http://www.nrm.qld.gov.au/factsheets/pdf/pest/pp61.pdf>

Your local NR&M Lands Protection Officer

Your local Regional NRM body or Landcare group

Invitation to attend the

LIPPIA FORUM

Narrabri - October 17&18

All welcome

For more information please contact us

