

Healthy Country

managing the land for healthy waterways

Lockyer Newsletter 4 – November 2010

Instream vegetation management

Information exchange

Landholders have identified that trees growing in the main channel flow of Blackfellow Creek are a priority erosion control issue. However, insufficient knowledge of legislation and the nature of local flows has resulted in a do-nothing approach by all parties that over time has contributed to localised streambank erosion.

Recently, landholders, Department of Environment and Resource Management (DERM) and SEQ Catchments staff met to share information about management of instream vegetation and ultimately work together for bank erosion control. Site visits and open discussion made for greater understanding of legislation, specific management issues, practical problem solving options and compromise.

DERM officer Andrew Fielding stated, "Site visits with landholders were really beneficial in understanding the problem in an overall context."

The morning concluded with a heavy storm which reinforced the unpredictable nature of flows in Blackfellow Creek.



ABOVE: INFORMATION SHARING BETWEEN LANDHOLDERS, DERM AND SEQ CATCHMENTS STAFF FOR PRACTICAL EROSION CONTROL OPTIONS THAT ARE SUPPORTED BY SCIENCE AND COMPLY WITH LEGISLATION.



ABOVE: BLACKFELLOW CREEK INSTREAM VEGETATION MANAGEMENT. TREES CATCHING DEBRIS IN THE MAIN CHANNEL (TOP) AND LOW FLOW CHANNEL RESTORED BY MANUAL TREE REMOVAL (CIRCLED)

Management principles

Instream vegetation management that satisfies landholder practicalities, science and legislation is do-able but requires a permit. Essentially, the principles for management are common sense:

- Remove only as little nonflexible vegetation in the main channel as you need in order to maintain a low flow through the channel,
- Retain flexible vegetation in the main channel,
- Protect the banks by leaving existing vegetation and establishing more deeprooted vegetation on the banks,
- Minimise creekbed disturbance, and
- Comply with State and Local Government legislation.

For further advice on legislation concerning management of instream vegetation, phone Andrew Fielding (DERM) (07) 3896 3301 or Andrew McLoughlin (Lockyer Valley Regional Council) 0409 348 555.

Groundcover management

Fire management

Last month, 27 graziers gathered at Blenheim community hall to discuss the roles and responsibilities of using fire to manage grazing lands.

Damien O'Sullivan, DEEDI, spoke about the importance of setting goals for your fire, whether it be to burn off rank pasture, control weeds or improve pasture composition. Each of these goals need a different type of fire, for example burning pastures for improved composition needs a 'cool' fire while burning to control woody weeds needs a hotter fire.

In order to manage the fuel load to achieve these fires, graziers must think about their fire plan early in the year and manage their grazing throughout the dry season.

Dr Samantha Lloyd from the Fire and Biodiversity Consortium (FABCon) spoke about the reliance on fire that many of our animals and plants have to survive and reproduce. Burning for grazing purposes can complement burning to manage natural systems. Sam advised to burn smaller patches at a time, in a mosaic style to provide refugia during burns.



ABOVE: FIRE TO CONTROL REGROWTH

Simon Dawson from the Queensland Fire and Rescue Service spoke on the responsibilities of landholders in relation to fire, including securing permits for burning pastures. Of note, two permits are necessary when neighbours are burning together across both properties. He also spoke about the rights of adjoining landholders not be burnt out.

Questions or comments can be directed to: Ian McConnel, DEEDI, ph 0407168995, Samantha Lloyd, ph 3503 1415 or Simon Dawson ph 3381 7122.

Grazing trial

After receiving Healthy Country funding, Matthew Creamer put in place a project on his property to improve the evenness of grazing across one of his largest paddocks.

This project consisted of fencing the paddock into three smaller paddocks and moving water from the dam in the middle of the paddock to the southern and northern ends. The aim was to make more use of the pastures that are far from the original dam and reduce the grazing pressure near the dam to improve overall land condition.

The fencing and watering points were completed this year and monitoring of the sites has shown we are already achieving some of the goals of the project.

Site 1 is on the southern end of Matt's property and is furthest from the dam. It was previously very



ABOVE: GRAZING TRIAL SITE LEFT, AT A SET STOCKING REGIME SEPT 2009 AND RIGHT, UNDER ROTATIONAL GRAZING OCT 7TH, 2010.

underutilised as can be seen in the photo taken in September 2009.

Subsequently, this site has been fenced into a different paddock, allowing Matt to rest each paddock while he grazes one paddock at a time.

The same site is now being grazed by cattle. Matt's project will continue to be monitored over the summer growing season to identify changes in land condition.

Wild dog management

You are invited to have your say on the refreshed Wild Dog Management Strategy for Queensland. This strategy includes reduction of wild dog impacts and most up to date control methods.

Comment submissions close 12 November 2010.

The consultation draft is available online at http://www.dpi.qld.gov.au/4790_18743.htm or phone 13 25 23.

Soil loss over summer: the importance of ground cover

With indications of La Niña conditions and the possibility of a wetter than average spring and summer, now is the time to think about options to reduce the risk of soil loss off fields in rainfall events.

How much could you expect to lose?

During the 2009/10 summer a monitoring site was set up on a commercial vegetable farm to measure what soil losses may be occurring from vegetable fields and compare any soil loss between bare fallow and lablab cover.

Findings:

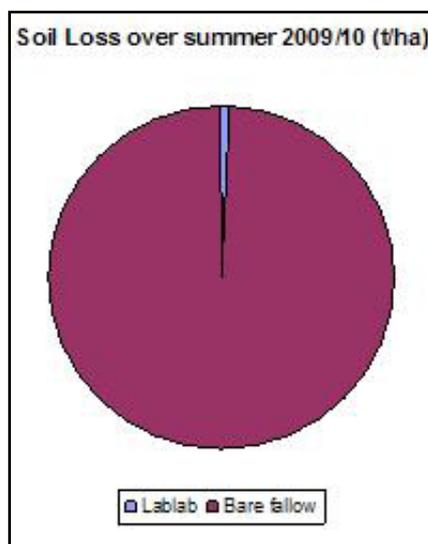
- Less than 0.1 tonne/ha of soil was lost from the lablab block over the summer
- Up to 11 tonnes/ha were lost from the bare fallow block over the summer



On farm options to reduce erosion losses

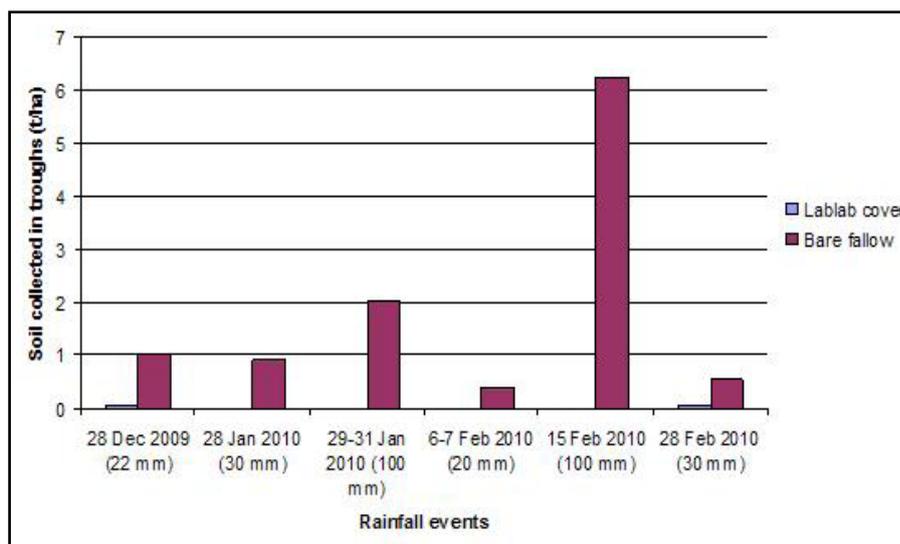
To reduce erosion risk, consider the following:

- Protect soil through cover. This is the most effective way to reduce erosion risk and add organic matter to your soil.
- Controlled traffic farming and minimised tillage systems reduce erosion risk.
- Farm infrastructure such as sediment traps, grassed drains and filter strips will reduce soil loss off farm. These require legislative permits, site specific design and



BELOW LEFT: LABLAB COVER CROP

BELOW RIGHT: SOIL LOSS FROM THE BLOCKS WITH EACH RAINFALL EVENT



The effects of rainfall

There were several rainfall events over the summer that varied in amount and intensity.

- As expected the amount of soil lost varied with these differences in rainfall.
- In each event the bare fallow lost significantly more soil than the lablab.
- The lablab was very effective in reducing soil loss even when only just established (See event 28 Dec 2009 in graph below)

LEFT: SEDIMENT LOSS OVER THE SUMMER FROM THE LABLAB COVER BLOCK AND THE BARE FALLOW BLOCK.

regular maintenance, and

- Preventing the movement of your productive topsoil (nutrients and organic matter too) off your fields is the best management practice.

Controlled traffic farming systems for vegetables

DEEDI has been working with vegetable growers on controlled traffic farming (CTF) through the Healthy Country Project. CTF can help to reduce the erosion potential of soil. Additional benefits to the production system identified by

growers that are implementing this system include:

- Potential fuel savings of 25-40%
- Reduced field operations
- Improved timeliness of operations and turnaround after wet weather
- Improved soil structure
- Water savings
- Increased average yields
- Increased production from greater accuracy of field layout using GPS guidance (ie more rows per field).

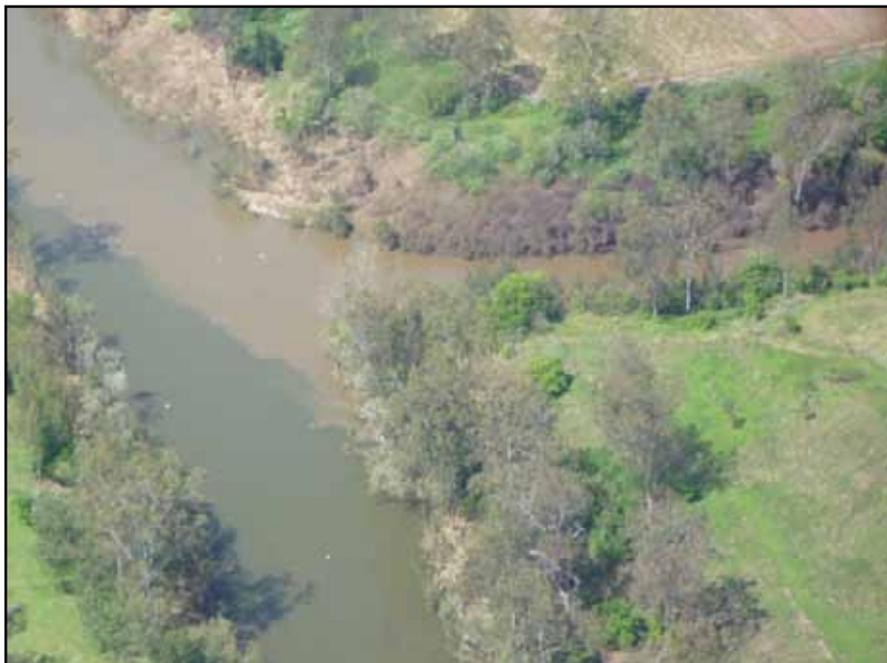
Monitoring the health of our waterways

Science report: Lockyer focal area

Scientists have modelled that sediment control measures implemented in the Lockyer Healthy Country trial site, or focal area, save about 20% of the overall sediment predicted to be entering the waterway in this area.

This is a fantastic saving and means that these measures applied in a broader scale across the landscape could really make an improvement to water quality within the Lockyer catchment as well as Moreton Bay.

BELOW: CONFLUENCE OF LOCKYER CREEK (RIGHT) WITH BRISBANE RIVER 22 OCTOBER 2010 FOLLOWING HEAVY RAINFALLS. SUSPENDED SEDIMENT IS CLEARLY VISIBLE ENTERING THE BRISBANE RIVER. IMAGE COURTESY SEQ WATER.



Trial measures which have already made a difference in the focal area include sediment traps, contour banks and strategic fencing to manage groundcover.

Healthy Waterways Partnership report card

The Ecosystem Health Report Card was launched at the Tenthill Hotel in company of local landholders and representatives from Local and State Government, SEQ Catchments and SEQ Water.

The latest report card for the waterways of South East Queensland indicated that there is plenty of room for improvement in controlling sediment into waterways. The Lockyer catchment again received an overall 'D' rating which was the same as 2009.

According to Professor Jon Olley who is leading the Healthy Country science team, "To improve these scores we need to significantly expand the rehabilitation program. There are 24 000 km of degraded waterways in the SEQ region and to date we have treated less than 500 km."

BELOW: PROF JON OLLEY, FIONA BENGTSOON, PAUL TUCKER AND MALCOLM LITTLE AT THE REPORT CARD LAUNCH, TENTHILL HOTEL.



What's coming up in Healthy Country...

Thursday 25 November: Soil loss self-guided tour

FREE

An opportunity to look at alternatives for soil management on farm and how they can be incorporated into individual properties.

Includes infrastructure, cropping and grazing management options.

Come along to discuss with landholders involved and extension staff.

From 4pm. Afternoon tea provided.

Phone Fiona Bengtsson 0417 764 754 or Julie O'Halloran 0409 054 263

RIGHT: EARTHWORKS FOR SEDIMENT CONTROL, LOCKYER FOCAL AREA, MT SYLVIA.