

Landcare after the fires:

Erosion control



Erosion and the siltation of waterways and dams is a real issue after fire. But, while waiting for bush to recover, we can do lots to protect the land using silt barriers made of a variety of materials including rice straw.

This information sheet includes principles applicable to most properties affected by fire, but includes details and actions specific to fire areas on the northern side of Melbourne in 2014.

Clem Sturmfels from DPI Hamilton spoke at a fire recovery workshop in Wandong in 2009, and had some useful tips on protecting gullies and water supplies, including slopes above dams. Clem recommended the use of a series of sediment traps, made of silt fencing, hay bales, coir logs, and even bundles of small branches trapped in old wire netting or hinge-joint. Placing of these is important:

- Sediment traps should be placed at intervals along smaller gullies to slow water and trap sediments, leaves, sticks, etc.
- They should be held in place by stakes or star pickets.
- Make sure water cannot rush under the trap and hence deepen the gully and maybe start another erosion head. The bottom of any silt fencing needs to be buried.
- Traps should be lowest in the middle so that water remains in the main stream bed. Ensure that water cannot flow around the ends of the trap as this will move the course of the waterway and create new erosion issues.

Note that water flow in catchments more than 20ha may be too great to control and sediment traps may just add to the material being washed downstream; larger engineering solutions may be needed. Contact Landcare or local agencies for advice.

Rice straw Project

In 2009, Rotary Club of Southern Mitchell, Sunday Creek Dry Creek Landcare Group and Pretty Sally Garden Club combined to arrange the provision of rice straw to properties affected by the 2009 fires. Demonstration sites were set up at Clonbinane with help from a Greencorps team. A demonstration day held on the 15th August 2009 ended with the delivery rice straw bales to the properties of those who attended the workshop.

After the 2014 fires north of Melbourne, South West Goulburn and Upper Deep Creek Landcare Networks are arranging for the provision of rice straw and mesh to affected properties. Large bales of rice straw will be delivered to two sites (to be announced) where they can be picked up by landholders. All landholders are welcome to participate.



How does it work?

The bales are broken into “biscuits” about 10-20cm thick. Biscuits are packed close together across slopes and drainage lines to create low barriers. The barriers slow water flows and restrict the movement of soil and gravel. Wire netting and posts salvaged from the fire are placed down slope from the straw, with the netting folded back under or preferably buried to help hold the straw in place. Alternatively, shade cloth or other similar material may be used.

On slopes, barriers should follow the contours to avoid channelling the water (fallen branches and small trees can also be placed across slopes to slow water). The ash and soil that builds up behind the straw can be later used as a planting bed but this may happen naturally from seeds washed down with silts.

In small drainage lines, ensure that the lowest point in the barrier is in the middle so that water spills over the barrier rather than going around the side and creating a new line of erosion. Also ensure that water cannot run under the barrier and use several barriers in series down drainage lines. Solid structures like stumps and old machinery are not recommended in drainage lines – water will bypass them and create more erosion.

The bales could also be broken up and spread across an area to introduce much needed cover from heavy rain and build up biomass on the soil. However, the straw needs to be thinly spread – if the straw is too thick, it may prevent plants from growing.



Why Rice Straw?

Rice straw does not harbour pasture weeds and holds together as a mat. The rice straw will take approximately 1 year to decompose and generally animals do not find it palatable. The Bales measure 8x4x4 ft and a 7x4 trailer or ute is needed for transportation.

Actions

- Landcare is organising bales of rice straw to use in sediment traps. To be involved, please contact the Landcare facilitators below.
- Check out the Department of Environment and Primary Industries (DEPI) pamphlets on erosion “Managing erosion with temporary sediment traps and fences”, and contact the DEPI office at Broadford on 5784 0600 for technical advice on erosion issues.

For more information on fire recovery north of Melbourne:

<http://www.landcarevic.net.au/resources/for-land-managers/bushfire-recovery-resources-for-landholders>

www.mitchellshire.vic.gov.au/council/news-media-notices/news-updates/information-fire-affected-farmers-animals.html

Landcare in conjunction with other natural resource management agencies is organising a series of workshops on care of soils, pastures and bushland, revegetation and weed management. Landcare is also seeking funding and support for internal fencing to protect bushland, pastures and waterways, and for revegetation works within fire areas. Watch out for details or lodge an “Expression of Interest” with your Landcare facilitator (below).

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