Managing watercourses

This guide has been prepared to help individual landholders and the community understand the value and importance of sustainable riparian land management. This guide is a companion to the more extensive guide and provides an introduction to the riparian lands in the Northern and Yorke Region, their importance and benefits as well as the key aspects of protecting riparian lands: stock management, revegetation and weed control.

Riparian land in Northern and Yorke region

The Northern and Yorke Region contains several catchments including the Willochra, Broughton, Wakefield and Light. These catchments cover most of the region and contain native riparian vegetation corridors within a largely cleared agricultural landscape. Grazing has been identified as the most extensive threatening process of the riparian zone in Australia in assessments of biodiversity. Riparian land is often the most productive part of a landscape, in terms of both agricultural production and natural ecosystems and frequently supports a higher diversity of plants and animals than surrounding areas.

There are many specific measures which can be used to protect and rehabilitate riparian land within the Northern and Yorke Region, but there are three key measures to consider:

- sustainable management of stock
- weed control
- revegetation of degraded riparian areas.

Key aspects of protecting riparian lands

Stock management

The most effective way to manage uncontrolled livestock in riparian land is to prevent or control stock access with fencing. At sites with a long history of grazing, riparian vegetation may have adapted to this form of disturbance. In these cases livestock exclusion can lead to changes in the vegetation and invasion by woody plants and reduced species diversity. Sustainable grazing that does not affect vegetation cover should be the

long term aim of riparian land management. Creating an alternate watering point for livestock is another option to protect riparian areas. Carefully located, shaded watering points and supplementary feeding stations can be used as an alternative to fencing.

Revegetation

There are several techniques for riparian revegetation but tube-stock planting, machine direct seeding and hand seeding are the most common. The choice of planting technique will depend upon the species planted, the target sub-zones being planted, and the available resources (including budget). Tube stock (nursery seedlings) planting is often the most appropriate revegetation technique within waterways and eroding areas, as access for direct seeders and other machinery can be difficult. The recommended number of plants per hectare can vary depending on site features, such as the existing flora, cost, time, climatic variables (e.g. rainfall) and the type of vegetation association. Selecting the right species to plant is an important part of a revegetation project and only species that are native to the local riparian area should be used. Seek advice from landscape officers or revegetation consultants to develop a specific species list for a particular site as this can vary between properties.

Weed management

Weed invasion of riparian areas is a serious threat to local landowners and ecological communities. Prevention is the first and most important part of weed management and represents good land management. This is true whether we are dealing with environmental or agricultural weeds. Most properties in the Region have agricultural or environmental weeds that need to be controlled to some degree. It is far more cost effective to prevent weed infestation than it is to treat weeds, as the total cost of control is high. If weeds are neglected and become dominant, then the productivity and diversity of native riparian vegetation can seriously decline. Developing a weed management plan is a vital step towards a successful weed control program for landholders. The most effective weed control is achieved when a variety of methods are used to target susceptible aspects of a weed, such as its lifecycle or its

environment. The steps involved in developing a sustainable weed management plan include: assessing the site, setting objectives, selecting weed control options and monitoring and recording. There are four main treatment options that can be used alone or together to provide effective weed management: chemical, mechanical, biological and hand weeding.

Monitoring and maintenance

Ongoing monitoring and maintenance of riparian lands is a vital part of sustainable land management. Watercourse areas are continually subject to a range of pressures such as weeds, flooding, erosion and grazing. Incorporating grazing management activities, weed management, feral animal control and fire management into revegetation plans will provide the base for a good maintenance strategy.

More information

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