

1 Purpose of the guide

This guide is a resource for improving riparian land management on cotton farms. Riparian land is important because it is economically and environmentally productive. Intensive agricultural production systems like cotton growing can affect waterways, downstream water users, neighbours and communities. Careful management of riparian land on cotton farms can help minimise these effects, and result in environmental and aesthetic benefits for cotton growers and their families.

Riparian land is any land which adjoins, directly influences, or is influenced by, a body of water.

This guide provides information on how best to manage riparian land. Different management options are provided, with the science underpinning these options described so that on-farm decisions can be made based on the best available information. It is intended that the guide be used to complement existing information on sustainable cotton production, as well as to assist the development of other products and materials. For example, material in the guide could be used by the cotton industry, government agencies and other groups to develop:

- projects and activities to restore and improve riparian land;
- best management practices, codes or plans;
- workshops to increase awareness and skills;
- fact sheets on specific issues of riparian management; and
- presentations to landcare, farming and community groups.

Provided that the original source of the material is acknowledged, reproduction of parts of the guide in other products is encouraged.

The guide has been developed by the Cotton Research & Development Corporation, Australian Cotton Cooperative Research Centre, Land & Water Australia, the New South Wales Department of Infrastructure, Planning and Natural Resources and the Queensland Department of Natural Resources and Mines. It is recognised that today's best practice may not be tomorrow's. As such, it is expected that this guide will be reviewed and further improved from time to time, based on grower experience and new scientific knowledge.

Background

Cotton production has grown to become one of Australia's most important agricultural industries, with several regional economies supported by its development. Growing cotton is an intensive land use, requiring cultivation of the soil, inputs in the form of fertiliser and pesticides, and a reliable supply of water. Cotton is a significant user of arable land and irrigation water in several catchments in New South Wales and Queensland. In recent times, the industry has been proactive in developing production systems that are both profitable and sustainable. For example, it has developed systems of integrated pest management with reduced use of pesticides for dryland and irrigated production, as well as improving water use efficiency for irrigated cotton systems.

The location and extent of cotton-producing districts means that they have the potential to significantly affect water quality and river flow, with impacts on down stream neighbours and communities, as well as on the health of riverine systems. Although cotton farms cover less than 5% of the catchment area, they are generally located adjacent to rivers and riparian areas. Many of the improved practices introduced by the industry over the past decade have had beneficial effects on the health of rivers and waterways. Improving the management of riparian lands is an obvious and necessary next step for the industry.

Recent scientific research has substantially improved the understanding of how riparian land functions in Australia. This guide draws together scientific findings, tools and techniques that can assist cotton growers to better manage the important, yet vulnerable, riparian lands that exist on their farms. The management of riparian land should be incorporated with other aspects of farm operation, and this guide should be considered as a further component of the Australian Cotton Industry Best Management Practices Program. The guide is intended to cover both irrigated and dryland cotton growing, and growers should adapt the recommended management approaches accordingly. It is also important that growers check any regulations that apply (see Appendix B). Although this guide has been prepared specifically for the cotton industry, many of the management approaches described can be applied to the growing of other field crops.