

National Willows Program

Priority Research Themes 2011

Willows (*Salix* spp.) are a complex and often controversial riparian and weed management issue. Past research and management efforts have given us an appreciation of these complexities and provided us with a sound basis for our understanding of willow management in the Australian landscape. However, the 2nd National Willows Research Forum (2010) identified that further research is required in order to fully understand these complexities and to ensure that management and investment decisions are directed to the areas where the greatest benefits can be achieved.

These research needs, which were identified and ranked for priority by participants at the 2nd National Willows Research Forum (Beechworth, Victoria 22-23 July 2010), are set out below in order of priority.

These themes are intended to be a guide to enable research to target the areas of greatest need.

Rank	Identified research themes	Rank (%)*
1	Understand how willow populations interact with different habitats and systems at the landscape scale. Including, develop a Decision Support Tool for management of willows that enables management decisions to effectively target habitats/systems where willows are causing the greatest impacts.	96.4
2	Links with #1 a.) Collate current knowledge on the interactions of willows with our landscape. b.) Build predictive models for application of this knowledge at the landscape-scale.	92.7
3	Initiate a biological control development program for invasive willows.	67.3
4	Measure the water quality of streams associated with willows (and their management) and streams not associated with willows. (Links with #8)	67.3
5	Improve our knowledge on the biology and ecology of seeding willows: a.) Understand the level of intervention (management) required for effective seed reduction (to prevent spread). b.) Develop predictive models to identify the most threatening source populations (to target resources most efficiently).	60.0
6	Improve our knowledge of potential water savings from willow removal: a.) Test use of high resolution remote sensing to scale water saving to broadscale estimates. b.) Extend water usage study to include additional variables (such as taxa, regions, river types).	54.5
7	Explore the costs and benefits of utilising willows and their by products commercially.	50.9
8	Measure the short and long term impacts of willow clearing on river health (such as biodiversity etc, links with #4).	45.5
9	Improve understanding of and develop ways to address community concerns to willow management.	43.6
10	Improve understanding of the potential impacts of climate change on the future management needs for willows (and riparian zones).	25.5
11	Research the benefits of native vegetation to quantify the expected change when rehabilitating willow infested areas.	16.4

*Rank (%) refers to the percentage of votes achieved (out of the votes that were available to any one theme) as part of the prioritisation process. This could be interpreted as a weighting for the level of priority for each of the identified research needs.