

BLACKBERRY STRATEGIC PLAN 2005 - 2006

1. EXECUTIVE SUMMARY

Blackberry (*Rubus fruticosus* L. *agg.et al*) comprises 23 invasive and 11 native *Rubus species* in Australia and is an already established weed that threatens both environmental and agricultural lands. Blackberry has probably reached the climatic limits of its potential range in Australia, however individual species may spread further and increase in density within these climatic limits.

The three main Goals of the National Blackberry Strategy (NBS) (2001) are to: prevent further spread of different Blackberry species, contain existing infestations and to rehabilitate treated areas to prevent reinfestation.

The National Blackberry Taskforce (NBT) which drives the implementation of the National Blackberry Strategy comprises representatives from all relevant stakeholders where Blackberry occurs as well as researchers, Agribusiness, and Universities.

All of the twenty-three actions in the NBS are well underway with at least 4 of the actions being completed. A review of the NBS to assess the overall degree of successful implementation of actions is to be undertaken in the remainder of 2006.

Major achievements achieved during 2005-2006 towards the NBS Goals

Goal 1 Prevent contains and rehabilitates blackberry infestations

- NorthEast Blackberry Action Group – (NEBAG-UM) established in Victoria in the Upper Murray to effectively achieve Blackberry control work on private land and on adjacent roadsides. This group has undertaken herbicide trials / demonstration sites and trials for pasture re-establishment post blackberry removal. See Figures 3-7.
- Actions to achieve total eradication of Blackberry on Flinders Island Tasmania

Goal 2: Adoption of “best practice” management

- Lucid key (CD-Rom) for *Rubus spp.* identification completed and operational. Training workshops to use the Lucid key / CDROM for the identification of the different *Rubus spp.* held in NSW, ACT, Vic, SA.
- The distribution of the different Blackberry species in WA was mapped.
- 8 new Rust strains were released in WA where it has established well and is very effective at two sites. All Blackberry species tolerant to the Blackberry rust in WA were targeted for control and a buffer line separating the different species was established.

Goal 3: National commitment to the effective management of blackberries is maintained

- National Blackberry Taskforce (established in 2003) is operational; meeting 3 times in 2005/06
- Blackberry is a declared noxious weed in all States & Territories in Australia.
- DtWM Blackberry project applications coordinated with 23 Blackberry project applications received nationally & assessed by the NBT. 2 Projects were successful in receiving funds in 05/06.

Coordinated Blackberry Research

- Overseas exploration for potential additional biological control agents
- Blackberry Rust mass rearing program
- Release & monitoring of eight additional biological control rust strains in NSW, WA, Vic.
- Population genetics of Blackberry rusts and the genetic implications of the new rust genes.
- Impact and evaluation of Blackberry rust program in NSW, Vic, WA.

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2. Introduction

Blackberry (*Rubus fruticosus* L. agg.) has been declared a Weed of National Significance (WoNS) because of its high degree of invasiveness and its substantial economic and environmental impacts. It is an already established weed that threatens both environmental and agricultural lands throughout Australia.

There are at least 23 invasive and 11 native *Rubus* taxa in Australia.

Blackberry has probably reached the climatic limits of its potential range in Australia, however individual species may spread further and increase in density within these climatic limits.

The Weeds of National Significance (WoNS) National Blackberry Strategy (NBS) was published in 2001 and highlights the major challenges of preventing further spread of different Blackberry species, containing existing infestations and the need to rehabilitate treated areas to prevent reinfestation

The vision of the strategy is that "Blackberry is managed effectively to prevent further spread and reduce the impact on all land across Australia". The strategy includes three goals, and twenty-three actions.

The National Blackberry Taskforce (NBT) was formed in 2003 and comprises Representatives from six states and ACT plus Aust. Rubus Growers Assoc. (ARGA) and National Weeds Facilitator. The group also has technical expertise from researchers, (eg. CSIRO), Agribusiness, and Universities. Its role is to drive the implementation of the National Blackberry Strategy.

The Victorian Department of Primary Industries hosts the National Blackberry Coordinator who acts as executive officer for the NBT and is responsible to ensure that the strategy is effectively managed. Members of the National Blackberry Taskforce are listed in Appendix 3.

Major achievements of the NBS to date (2005) have included:

- A National Blackberry Research Summit (2004),
- The release & monitoring of eight additional biological control rust strains,
- Studies of the population genetics of Blackberry rust ,
- Exploration of potential additional biological control agents ,
- Post-fire regeneration research and monitoring,
- Best practice herbicide use,
- Development of an electronic identification tool for blackberry species & training workshops for the identification key for *Rubus*,
- Mapping of blackberry extent, density, and taxa,
- Major Blackberry control undertaken in fire affected areas (post-January 2003 fires) & Blackberry identification and Management guides produced

This report outlines the actions that have been implemented during 2005-2006 in each state and the ACT to address the strategy. A comprehensive review of the NBS and subsequent work plan for the remainder of the NBS implementation is to be undertaken in 2006.

Sources of information

Information for this report was sourced from progress reports from each of the States represented on the NBT.

Acronyms used are expanded in Appendix 2.

Review of Actions

For each Strategy and Action, information was collected on recent achievements, current activities, and plans. Publications produced are noted in Appendix 3.

Financial inputs

Budget tables could not be completed as reliable data was not available.

3. Review of Actions

Highlights in 2005-2006

ACT:

- New pest plant legislation was introduced in the ACT in 2005. The act is referred to as the *Pest Plant and Animal Act, 2005*. Under the Act, Blackberry is referred to as a Category 3 pest plant which is a pest plant that "must be contained" {declaration made under 7(2)(c)}.
- Blackberry control was undertaken in priority areas that included fire affected riparian corridors and former *Pinus radiata* plantation areas

NSW

- Training in identification of blackberry species using the Lucid key was conducted for all relevant Local Government Weeds Officers (Local Government implements noxious weed legislation in NSW). Each Council where blackberries occur has a copy of the CD - Rom.
- Comprehensive data for mapping blackberry occurrence throughout NSW was collected
- Legislation prohibiting the sale, purchase and distribution of Blackberry plants and fruit enacted Blackberries are declared noxious in all shires where they occur and are one of the major noxious weed programs in this state.

Victoria

- Victorian Blackberry Taskforce (VBT) re-convened to include full complement of members. Meetings held in February and April 2005. VBT Executive Officer appointed in December, 2005 – Andy Wernert, DPI Tallangatta
- Achievements in 2005-06 were successful media coverage including radio interviews and media articles in "The Weekly Times" and local print media.
- Meeting with Minister for Agriculture Mr Bob Cameron resulting in extra \$40,000 funding for on ground works.
- North East Blackberry Action Group – Upper Murray (NEBAG-UM) established as a pilot group for blackberry management and establishes effective cooperative partnerships with relevant stakeholders to effectively achieve Blackberry control work on private land and on adjacent roadsides.
- NEBAG-UM project includes herbicide application demonstration site.
- NEBAG-UM project includes trial for pasture re-establishment post blackberry removal.

TAS

- On ground Blackberry control continued in the priority eradication areas of Flinders Island and Southwest Tasmania, including Maatsuyker Island.

- A number of Blackberry sites on Flinders Island have now been eradicated and are on target for total eradication,
- The cover of blackberries in SW Tasmania has been greatly reduced with a few more years of treatment still required. T

SA

- A map of blackberry density by Hundred (the cadastral unit used in South Australia) has been compiled by the Department of Water, Land and Biodiversity Animal and Plant Control group from data submitted by the Authorised officers (See Map 5)
- Lucid key for *Rubus* identification completed (Robyn and Bill Barker State Herbarium of South Australia, DEH) and training in its use has been conducted and more is planned.

WA

- The new 8 Rust strains were released in late spring at 10 sites. It has established very well and at two sites it is causing a lot of damage to the Blackberry. See Figs 1-2.
- The distribution of Blackberry species was mapped.
- There are 3 main species – *R anglocandicans* (European blackberry) around the south, *R laudatus* (an American species) around Perth and odd patches of *R. ulmifolius* (European species). All species tolerant to the Blackberry rust (*R. laudatus* and *R ulmifolius*) were targeted for spraying to control these species. All known *R. ulmifolius* infestations were sprayed. Nearly all infestations of *R. laudatus* in south of the state were sprayed and a buffer line separating *R. laudatus* and *R. anglocandicans* was established. In the western regions where there is only the one species (which is sensitive to rust) control continued as normal.

QLD

- Blackberry is spreading in QLD, eg. there are reports of Blackberry along the Toowoomba range (basalt soils and cool climate)
- The blackberry problem is concentrated around the shires of Stanthorpe and Warwick.
- The Warwick shire has an excellent weed management program where blackberry is one of the high priority weeds
- It is difficult to lift the profile of this weed species. Funding has been applied for to lift the profile of blackberry through mapping and increased awareness but was not successful

KEY ISSUES

The major challenges for blackberry management addressed in the WoNS National Blackberry Strategy (2001) are to:

- prevent the further spread of individual species
- contain infestations, and
- Rehabilitate treated areas to prevent reinfestation.

The blackberry leaf rust *Phragmidium violaceous*, which attacks the leaves, has been the most successful biocontrol so far. Although the rust has had a big impact on the more common and widespread blackberry strains, other strains are resistant, resulting in one strain replacing another, with no net decrease in blackberry cover. Matching virulent pathogens to susceptible blackberry species is essential for successful biological control. To address this issue, additional rust strains are being

released to attack the resistant Blackberry strains /hybrids. Recent funding (through DtWM RD 2) will enable community groups to assist to disperse the new rust varieties across Australia.

In Victoria DPI are using the a Community Weed Model to facilitate community Blackberry Action groups to reduce Blackberry infestations , address the rate of spread of blackberries, and successfully rehabilitate land in their areas.