



National Blackberry Program

REVIEW OF PROGRESS TOWARDS THE NATIONAL BLACKBERRY STRATEGIC PLAN 2006-2007

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Australian Government
Defeating the Weed Menace



Department of
Primary Industries

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Executive Summary

European blackberry (*Rubus fruticosus aggregate*) is one of the most important weeds of southern Australia and is listed as one of the twenty Australian Weeds of National Significance (WoNS). It is a widely established weed that threatens both environmental and agricultural lands. The European *Rubus fruticosus aggregate* has probably reached the climatic limits of its potential range in Australia; however individual species within the aggregate may spread further and increase in density within these climatic limits.

The three main Goals of the National Blackberry Strategy (NBS) (2001) are to:

1. Prevent further spread of different Blackberry species,
2. contain existing infestations and
3. to rehabilitate treated areas to prevent reinfestation.

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

Twelve of the twenty-three actions in the NBS are completed with actions under Goal 1 being 65% completed, Actions under Goals 2 & 3 are 80% completed respectively.

National coordination and other activities to implement the NBS were funded by the Australian Governments Defeating the Weed Menace program and Natural Heritage Trust. Support and in kind contributions were made by the Departments of Primary Industries in Victoria, Qld, NSW and Tasmania, Warwick and Stanthorpe Shire Councils in QLD, South Australian Herbarium, Victorian Blackberry Taskforce, North –East Victorian Blackberry Action Group – Upper Murray, CSIRO (Entomology) in Canberra and Perth and the relevant state government departments represented on the NBT (see Attachment B).

Summary of the major achievements during 2006-2007 towards the NBS Goals

Goal 1 Prevent contains and rehabilitates blackberry infestations

- Blackberry group formed in SE QLD to raise the profile of blackberry and to instigate an on- ground Blackberry control project
- Collation of State Blackberry distribution maps into a National Blackberry Abundance and Distribution Map for the National Land and Water Resources Audit WoNS mapping project.

Goal 2: Adoption of “best practice” management

- Four Training workshops to use the Lucid key / CD Rom for the identification of the different *Rubus* species held (2 in SA & 2 in Victoria). Successful in obtaining funds (DtWM RD 3) to facilitate 9 more workshops nationally in 07/08.
- Three Blackberry technical field tours held in WA, QLD, & NE- Victoria which assisted knowledge transfer to other states about applying best-practice to on-ground situations via trials and demonstration sites in the field.
- 8 new blackberry rust strains were released in WA, SA, Victoria, and Qld.

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

- Two face to face meetings held of the National Blackberry Taskforce held, plus 2 teleconferences (Nov. 2006 & Jan 2007) and 3 field tours (WA, QLD, & NE- Vic 2007)
- Blackberry group formed in WA (Informal Blackberry WA taskforce) and in QLD (Stanthorpe & Warwick Shires, QMDC, DPI, and Landcare).

Coordinated Blackberry Research

- Release & monitoring of eight additional biological control rust strains in 06/07 in NSW, ACT, SA, QLD, WA & Vic.
- Impact and evaluation of Blackberry rust program in NSW, Vic, WA.

Introduction

This report outlines what has been achieved towards successful implementation of the WoNS National Blackberry Strategy (2001) from national coordinated action during the 2006 / 2007 financial year.

Blackberry its history and impact in Australia

Blackberry (*Rubus fruticosus* agg.) and other species are perennial, scrambling, prickly shrubs that often form large clumps 1–7 metres high. They mostly grow in humid temperate regions on fertile soils with rainfall greater than 750 millimetres, but will also grow in drier areas alongside streams.

Blackberry is a major weed of pastures, native forests and along streams and gullies and is a prolific seed producer with a single plant producing between 170,000–400,000 seeds/year and thickets producing 7,000–13,000 seeds/square metre. These seeds are dispersed widely by birds and foxes. There are at least 23 invasive and 11 native *Rubus* taxa in Australia.

European Blackberry (*Rubus fruticosus* . agg.) has been declared a Weed of National Significance (WoNS) because of its high degree of invasiveness and its substantial economic and environmental impacts.

Blackberry was deliberately introduced into Australia in the mid 1800s as a horticultural plant and was promoted by acclimatisation societies in the 1860s and was recognised as an important weed in the 1880s. Blackberry occurs in all States except the Northern Territory and is of particular importance in NSW, Victoria and Tasmania. It is considered to have reached the climatic limits of its potential range in Australia, however many species have the potential to spread further and increase in density within the climatic limits of its range .

In 1984, there was approximately 2.5 million hectares of dense or medium infestation in Australia and this was estimated to increase to 8.8 million hectares in Australia by 2003- more than the area of Tasmania. An economic appraisal of blackberry in 1984 estimated the annual production loss and cost of control to NSW, Victoria and Tasmania was estimated to total \$42.1 million (without taking into account social or biodiversity costs). By 1990 losses and costs had increased to at least \$70 million/year. (Page and Lacy, 2006)

A National Solution

National Coordination and funding

The management of Blackberry is coordinated at a national scale. The project is funded through the Australian Government's *Defeating the Weed Menace* (DWM) program with matching in-kind support from State Government departments, research institutions, and community representatives. Funding of \$118,250 was received from the DtWM for national coordination in this reporting period.

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 re-infestation.

The National Blackberry Coordinator under the direction of the National Blackberry Taskforce (NBT) manages implementation of the strategy. The Victorian Department of Primary Industries (DPI Vic) hosts the National Blackberry Coordinator who acts as Executive Officer for the NBT. The position of WoNS National Blackberry Coordinator was re-filled on a part time basis (0.5) in April 2006. Extra funding was received which enabled the position to become full time in December 2006.

The NBS is overseen by the National Blackberry Taskforce (NBT) which was formed in 2003 and comprises representatives from six states and the ACT plus the Australian Rubus Growers (ARGA) and the National Weeds Facilitator. The group also has technical expertise from researchers, (e.g. CSIRO), Agribusiness, and Universities. Members of the National Blackberry Taskforce are listed in Appendix 3.

The vision of the NBS 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.

Twelve of the twenty-three actions in the NBS are completed with actions under Goal 1 being 65% completed, Actions under Goals 2 & 3 are 80% completed respectively. A review of the NBS to assess the progress of implementation of actions has commenced and is to be completed in 2007-08. This will assist the WoNS performance review for the NBS due in 08/09.

Major Goals and Achievements in 2006-07

Goal 1 Prevent contains and rehabilitates blackberry infestations

- Blackberry group formed in SE QLD to raise the profile of Blackberry and to instigate an on ground Blackberry control project
- Visited Blackberry management group in WA on a NBP WA Blackberry technical tour which resulted in knowledge-transfer to other states about applying best-practice to on-ground situations via trials and demonstration sites in the field.
- 4 Blackberry projects submitted to DtWM Rd 3 were successfully funded.
- Collation of State Blackberry distribution maps into a National Blackberry Abundance and Distribution Map for the National Land and Water Resources Audit WoNS mapping project.

Goal 2: Adoption of “best practice” management

- Four Training workshops to use the Lucid key / CDRom for the identification of the different *Rubus* species held (2 in SA & 2 in Victoria).
- Successful in obtaining Funds (DtWM RD 3) to facilitate 5 more workshops nationally. Through leverage of additional funds 9 species identification workshops will be run nationally in 07/08.
- Three Blackberry technical field tours held in WA, QLD, & NE Victoria which assisted knowledge transfer to other states about applying best-practice to on-ground situations via trials and demonstration sites in the field.
- Presentation on Victoria’s Community Weed Model given on WA & NE- Victoria Blackberry Field Tours
- Two Blackberry Action groups formed in South Gippsland Vic (Bass coast and Foster).
- The NBT visited three states’ DtWM projects liaising with regional communities and agencies which resulted in the wide promotion of WONS projects, networking with and between regional NRM bodies, communities and agencies.
- 8 new Rust strains were released in WA, SA, Victoria, and Qld.
- Land manager case studies of “Best Practice Blackberry Management” were collated for the national Blackberry BPMG being compiled with DtWM funding in 07/08.

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

- Two face to face meetings held of the National Blackberry Taskforce held , plus 2 teleconferences (Nov.2006 & Jan 2007) and 3 field tours (WA, QLD, & NE- Vic 2007)
- Successful liaison between NBT and State (Vic, WA) Blackberry Taskforces
- Facilitated the start of a Blackberry community group in QLD (Warwick & Stanthorpe Shire area.)
- 2 Blackberry action groups formed in South Gippsland Vic (Bass coast and Foster).
- Presentation on Community Weed Model given on WA & NE- Vic Blackberry Field tour.
- Blackberry group formed in WA (Informal Blackberry WA taskforce) and in QLD (Stanthorpe & Warwick Shires, QMDC, DPI, and Landcare).
- 4 Blackberry projects submitted to DtWM Rd 3 (+ 2 other Blackberry projects supported by the NBT) were successfully funded.

Coordinated Blackberry Research

- Overseas exploration for potential additional biological control agents continues
- Blackberry Rust mass rearing program continues in Vic (DPI – Vic)and ACT (CSIRO)

- Release & monitoring of eight additional biological control rust strains in 06/07 in NSW, ACT, SA, QLD, WA & Vic.
- Impact and evaluation of Blackberry rust program in NSW, Vic, WA.

Future Priorities.

- Identification and Mapping of distribution of Blackberry at species level in all states
- Continue National Co-ordination to effect blackberry mitigation on a national scale
- Continue and expand nationally strategic on-ground control with the development of tools to help prioritise areas for Blackberry control.
- Greater adoption of the Community Weed Model (CWM).

Research

- Ecological studies on the blackberry taxa.
- Early warning rapid response of blackberry taxa.
- Scoping study for feasibility of new GM (GM blackberry, & GM biocontrol agents)
- Continue release and monitoring of new Blackberry rust strains
- Research to find out optimal controls methods for the different Blackberry species.

Major achievements of the NBS to date (2007) 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*,
- National map of blackberry extent, and density compiled.
- State Blackberry Taskforces in Vic, WA.
- Blackberry Strategies produced for Victoria, ACT, TAS and WA.
- Mapping of Blackberry species in WA.
- Implementation of a strategic eradication and control plan for all Blackberry species in WA
- Major Blackberry control undertaken in fire affected areas (post-January 2003 fires)
- Blackberry identification and Management guides produced
- Identification of Blackberry in timber plantations as a major national issue – Draft Issues paper has been prepared.

Goals and achievements in 2006-07

Performance indicators

- An accurate and thorough assessment of the current blackberry problem is made.
- Areas for blackberry treatment are identified and prioritised.
- A clear understanding of the economic, social, and biodiversity impacts of blackberry, and its treatment(s) are appreciated.
- Increased resources regarding blackberry management projects and planning are apparent.

Goal

1 Prevent, contain and rehabilitate blackberry infestations

Desired Outcome: Reduce and mitigate the invasion of blackberry, and promote rehabilitation of significant production and natural Ecosystems.

Goal	KEY ACHIEVEMENTS FOR THE YEAR.	The extent of progress towards the goal	Work that still needs to be done
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Goal	KEY ACHIEVEMENTS FOR THE YEAR.	The extent of progress towards the goal	Work that still needs to be done
<p>1. Prevent, contain and rehabilitate blackberry infestations.</p>	<ul style="list-style-type: none"> • Collation of State Blackberry distribution maps into a Draft National Blackberry Abundance and Distribution Map for the National Land And Water Resources Audit WoNS mapping project • Visited Blackberry management group in WA on a NBP WA Blackberry technical tour which resulted in knowledge-transfer to other states about applying best-practice to on-ground situations via trials and demonstration sites in the field. • Blackberry group formed in SE QLD to raise the profile of Blackberry and to instigate an on- ground Blackberry control project • 4 Blackberry projects submitted to DtWM Rd 3 (and 2 other Blackberry related projects supported by the NBT) were successfully funded. 	<p>65%</p>	<p>Mapping of distribution of Blackberry at species level needed in all states</p> <p>Greater adoption of Community Weed Models (CWM).</p> <p>Need to strategically identify areas where it is important to control Blackberry at the national and regional level</p>

Goal

2. Adoption of “Best Practice” Management.

Desired Outcome: Adoption of “best practice” management options, using CRC guidelines.

Performance indicators

- Implement, and monitor “best management practices”.
- Establish and implement an effective communication and extension plan.
- Establish a range of incentive schemes for the ongoing treatment of blackberry, and the necessary hygiene methods.
- Gaps in knowledge regarding the “best” management of blackberry are identified.
- Annual evaluation reports are published.

GOAL	KEY ACHIEVEMENTS FOR THE YEAR	The extent of progress towards the goal	Work that still needs to be done
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GOAL	KEY ACHIEVEMENTS FOR THE YEAR	The extent of progress towards the goal	Work that still needs to be done
<p>2. Adoption of Best Practice Management.</p>	<p><u>Developing awareness of and training opportunities for the Lucid key/ CD ROM for identifying blackberry taxa.</u></p> <ul style="list-style-type: none"> • Four Training workshops to use the Lucid key / CDRom for the identification of the different <i>Rubus</i> species held (2 in SA & 2 in Victoria)... • 34 Blackberry species identification lucid key/ CD ROMs distributed. <ul style="list-style-type: none"> • Successful in obtaining Funds (DtWM RD 3) to facilitate 5 more workshops nationally. Through leverage of additional funds 9 species identification workshops will be run nationally in 07/08. • Three Blackberry technical field tours held in WA, QLD, & NE Victoria which resulted in: <ul style="list-style-type: none"> • knowledge transfer to other states about applying best-practice to on-ground situations via trials and demonstration sites in the field , • successful networking & knowledge-transfer between NRM regional bodies (regional weed coordinators) agencies and regional communities • successful lobbying and support for the release of the 8 new strains of Blackberry Rust in Tasmania , • :Increased involvement of NRM / CMA staff in NBP/ NBT projects • 5 Media releases • identification of the serious National issue of Blackberry in Timber plantations • Instigation of the preparation of an Issues paper on Blackberry in plantations • Recognition of the urgent need for National Blackberry species identification mapping • Instigation of the preparation of an Issues paper on National Containment lines and eradication zones for Blackberry • Identified the need for a Decision Support System (DSS) for Blackberry • instigation of a project application for DtWM which has been successfully funded <p>The NBT visited three states DtWM projects resulting in networking with regional communities and agencies, knowledge transfer best-practice management ,promotion of WONS projects-16 Media releases produced and distributed (.Radio Interviews held:-</p>	<p>80%</p>	<p>Implement a process to ensure Blackberry species identification workshops results in national Blackberry species mapping.</p> <p>Research is needed to find out what chemicals work best for which Blackberry species.</p> <p>Results of all Blackberry monitoring needs to be posted on a website with links</p>

Goal

3 National commitment to the effective management of blackberries is maintained.

Desired Outcome

On-going and coordinated commitment to blackberry management is established and maintained by the Australian community.

Performance indicators

- The establishment of a national blackberry taskforce.
- Complementary legislation for blackberry’s status (and other Weeds of National Significance) is proclaimed throughout its Australian range, both current and possible.
- Cooperative research into blackberry management is continued.

GOAL	KEY ACHIEVEMENTS FOR THE YEAR	The extent of progress towards the goal	Further actions needed work that still needs to be done
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GOAL	KEY ACHIEVEMENTS FOR THE YEAR	The extent of progress towards the goal	Further actions needed work that still needs to be done
<p>3. National commitment to the effective management of blackberries is maintained.</p>	<p><u>National Blackberry Taskforce is operational and functioning well</u></p> <ul style="list-style-type: none"> • Two face to face meetings held of the NBT , plus 2 teleconferences (Nov.2006 & Jan 2007) and 3 field tours held (WA, QLD, & NE- Vic 2007) • Successful liaison between NBT and State Blackberry Taskforces (Vic, WA,) <ul style="list-style-type: none"> • Blackberry group formed in WA (WA Blackberry taskforce) • Visited QLD to facilitate the start of a Blackberry community group in Warwick & Stanthorpe Shire area. (Stanthorpe & Warwick Shires, QMDC, DPI, and Landcare). • Two Blackberry Action Groups formed in Victoria- (South Gippsland Bass coast and Foster). • Preliminary work done to facilitate Blackberry Action Groups using CWM in WA, QLD, Vic, TAS. • Victorian Blackberry Taskforce re-established - 4 meetings held • Presentation on Community Weed Model given on WA & NE- Vic Blackberry Field Tours • Prepared and distribute 2 editions of the NBP Newsletter • 4 Blackberry projects submitted to DtWM Rd 3 (and.2 other Blackberry related projects supported by the NBT) were successfully funded. • Process established to assess the overall degree of successful implementation of actions in the NBS commenced in 06/07 and is to be completed in 2007-08. This will assist the WoNS performance review for the NBS due in 08/09. • <u>Promote awareness of blackberry best practice, using displays at National and State events</u>, Represent and advertise the WoNS program to national & international weed managers. <ul style="list-style-type: none"> • 4 WoNS Blackberry Retractable display stands in existence actively used by groups for community extension. WoNS Blackberry Displays held at 4 events. <p><u>Coordinated Blackberry Research</u></p> <ul style="list-style-type: none"> • Overseas exploration for potential additional biological control agents continues • Blackberry Rust mass rearing program continues in Vic (DPI – Vic)and ACT (CSIRO) 	<p>80%</p>	<p>NBT needs to monitor legislation and check that “noxious” status of Blackberry doesn’t change with legislative changes.</p> <p>·</p> <p>Community Weed Model (i.e. Blackberry Action Groups) needs to be expanded nationally</p> <p>Continue promoting Blackberry control through coordinated extension programs.</p>

References

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Appendices and Attachments

Appendix 1: Acronyms used

AG	Australian Government
DPI	Department of Primary Industries (Vic)
DPIW	Department of Primary Industries, and Water (TAS)
DtWM	Defeating the Weed Menace
IDO	Industry Development Officer
NBC	National Blackberry Coordinator
NBP	National Blackberry Program
NBS	National Blackberry Strategy (2001)
NBT	National Blackberry Taskforce
VBT	Victorian Blackberry Taskforce
WoNS	Weeds of National Significance

Attachment A - Budget Statement.

2006-07		Planned budget		Actual Expenditure	
Employees & Positions Held	Recipient's Contributions (without GST)	Funds paid by the Commonwealth (without GST)	Recipient's Contributions Expended (without GST)	Commonwealth Funds Expended (without GST)	
Co-ordinator salary and on-costs		\$76,000			\$55,516.83
Management, admin support, research officers	\$125,063		\$125,500		
NRM groups, state /territory community support inputs	\$58,800		\$58,800		
A	Total Employment Costs	\$183,863	\$76,000	184,300	\$55,516.83
	Operating Cost Items	Recipient's Contributions (without GST)	Funds be paid by the Commonwealth (without GST)	Recipient's Contributions Expended (without GST)	Commonwealth Funds Expended (without GST)
	Management Group travel & meeting expenses	\$17,600	\$13,000	\$15,000	\$17,510
	General operating costs	\$12,275	\$18,500	\$13,000	\$12,367.44
B	Total Operating costs	\$29,875	\$31,500	\$28,000	\$29,877.44
C	Total Cost (without GST) (A+B)	\$213,738	\$107,500	212,300	\$85,394.27
D	GST (10%)	\$21,373	\$10,750	21,230	\$8,539.42
E	Total Cost (including GST)	\$235,111	\$118,250	233,530	\$93,933.69

Attachment B - National Blackberry Taskforce Members during 2006-2007

Alex Arbuthnot	Community Chair,
Philip Blackmore	Regional Coordinator Weeds, NSW DPI
Dennis Gannaway	WONS Management Coordinator SA DWLBC
Graham Hardwick	Principal Land Protection Officer, Biosecurity Queensland -
John Moore	Department of Agriculture WA
Geoff Price	Environment ACT
Phil Rowe	Australian Rubus Growers Association. (ARGA)
Tim Rudman,	Dept of Primary Industries and Water Tasmania
John Thorp	National Weeds Management Facilitator
Virginia Harman	Victorian State Govt .Representative - DSE
Penny Richards	National Blackberry Coordinator

Associate Members / Watching Brief Members

Dr Kathy Evans	University of Tasmania
Dr Louise Morin	CSIRO Research, A.C.T.
Ms Alison Brinson	(<i>Rubus</i> IDO) DPI

