Tackling weeds on private land

Helen Anderson1 and Beth Jones2
1 Department of Primary Industries, Private Bag 105, Hamilton, Victoria 3380, Australia
2 Department of Primary Industries, cnr Mair and Doveton Streets, Ballarat, Victoria 3350, Australia

Summary Tackling Weeds on Private Land (TWoPL) is a $9 million, three-year, Victorian Government initiative that seeks to encourage landowners to work collaboratively to manage weeds. The initiative assists in the implementation of the Government's Victorian Pest Management Framework – A Framework for Action (VPMF), which sets direction for pest management within Victoria. The project works with five key stakeholders whose activities significantly influence how weeds impact upon and are managed on private land: local government; catchment management authorities; reserve managers; the garden industry; and the fodder industry.

This paper outlines the program delivery arrangements and key achievements of the initiative to date. Midway through implementation, TWoPL has built on the momentum of a range of existing programs by building the profile of weed management as a core component of business operations. Through partnerships with key stakeholders, a range of new initiatives were developed to promote weed management responsibilities, share knowledge, build capacity and ensure integrated and cooperative approaches to preventing new weeds and managing existing problems. Victoria’s Department of Primary Industries (DPI) delivers key components of the Initiative on behalf of the Department of Sustainability and Environment (DSE).

Keywords Partnerships, collaboration, garden industry, engagement, local government, fodder industry, Catchment Management Authority, railways, roads.

INTRODUCTION
Changing environmental conditions, increased knowledge and a rising number of new weed invasions, requires the development of new and improved approaches to managing weeds. The Tackling Weeds on Private Land Initiative was launched in October 2004 as a policy initiative under the Victorian Government’s Victorian Pest Management – A Framework for Action (VPMF). The $9 million, three-year initiative seeks to expand and promote innovative and collaborative approaches to reducing the impacts of weeds on private land. By developing and maintaining effective partnerships with the many land custodians whose actions and activities impact on or influence the management of weeds on private land, Victoria can prevent the incursion of new problems and reduce the cost and impacts of existing weeds.

RATIONALE
It is estimated that weeds cost Australian agriculture $4 billion annually through direct control costs, yield losses and product contamination (Sinden et al. 2004). The cost of weeds to Victorian agriculture is estimated at more than $900 million per year (derived from Sinden et al. 2004). This is a conservative estimate, as it does not include costs and losses associated with weed management in natural environments or with loss of amenity. Weed invasion is ranked second only to habitat loss as the major cause of biodiversity decline (Sattler et al. 2002).

Sixty percent of Victoria’s land is in private ownership and all of it requires coordinated weed management. There are many examples of successful community partnerships tackling weeds and successful key stakeholder policies and programs for weed management. The Victorian Government recognises that more can be done to coordinate the range of stakeholders involved in weed management. Coordinated approaches to weed control will ensure that all land managers and organisations play their part in reducing the impact of weeds on social, environmental and economic assets.

APPROACH
Adoption of new or different practices is a staged process. The model used by the initiative is a progression along a continuum of ‘awareness’ and ‘acceptance’ to ‘action’ (AAA continuum). Baseline positioning of key stakeholders along the AAA continuum was established through initial attitudinal research. Shifts along the continuum will be assessed mid-2006 and mid-2007. Comparison of results with baseline data will be used to determine the effectiveness of the initiative in bringing about practice change.

Evaluation will take into account the potential differences in positioning on the AAA continuum between individuals within stakeholder organisations and the organisations themselves.
**Key stakeholders** The project works with five key stakeholders whose activities significantly influence how weeds impact upon or are managed on private land. These stakeholders are local government (62 municipal councils), catchment management authorities (ten CMAs), linear reserve managers (including VicRoads and four rail companies), the garden industry and the fodder industry.

Stakeholder analysis was undertaken for each of the five stakeholders to gain an understanding of organisation/industry structure, operational systems and networks, decision-making processes and key personnel, inter- and intra-organisational dependencies, size of organisation/industry, and major organisations/industry influences (Mantelli 2005). Surveys of stakeholder attitudes (King 2005a, 2005b, 2005c) were completed to establish a baseline for measuring progression along the AAA continuum over the life of the initiative and to inform the development of effective engagement strategies for each stakeholder.

**Project delivery** The initiative is delivered through four subprojects: Partnerships, Prevention and Early Intervention, Enhanced Enforcement and Engagement. The Partnerships subproject supports key stakeholders to gain a better understanding of their roles and responsibilities, actively integrate weed management into their programs, and increase collaborative action on weeds. The Prevention and Early Intervention subproject aims to improve stakeholder adoption of prevention of spread principles (with particular emphasis on pathways) and hygiene systems and practices. It will also establish a process to prioritise new high-risk weed species in Victoria for improved surveillance. The Enhanced Enforcement subproject provides increased support to stakeholders and community priority weed control programs through targeted compliance programs. The Engagement subproject supports delivery of the other subprojects through expertise in communication, social research and evaluation.

**ACHIEVEMENTS**

**Partnerships** Local government partnership projects focus on capacity building for the prevention of weed spread. In 2004/05 twenty projects involving twenty-two municipal councils were developed for implementation. Total grants of $386,133 were matched by co-investment from local government of $728,360. In 2005/06 thirty-three projects involving thirty-six municipal councils were developed. Total grants of $736,142 were matched by co-investment from local government of $1,426,166. Projects include community education and awareness, weed spread prevention training, weed mapping and introducing weed marker systems, developing weed hygiene protocols, and development of planning guidelines and local laws.

Six municipal councils (205 staff) have undertaken the weed movement, machinery inspection and cleaning workshop known as ‘Weedstop’. This Certificate 2 course includes weed biology and identification, job planning to reduce weed movement, inspection/cleaning machinery and other equipment, records and reporting, and legislation.

Linear reserve manager partnership projects involving VicRoads and a partnership group consisting of all four managers of rail reserves were developed in 2004/05. Six projects with total grants of $105,300 were matched by co-investment of $106,200. Projects included development of industry standards for weed management along rail corridors, trialling the ‘Enviromark’ system as a mechanism for local identification of priority weed species for works crews, review of weed mapping systems and databases, and a Chilean needle grass management trial.

Five linear reserve manager partnership projects were supported in 2005/06 including training staff and contractors in weed identification and hygiene procedures, review and development of mapping and GIS systems, completion of best practice weed management trials, and development of rail industry standards for weed/vegetation management. Linear reserve managers have co-invested $184,100 with initiative grants of $115,500.

Cooperative projects with the nursery and garden industry and the fodder industry were initiated in 2006 to support the progression of weed management within these industries.

A series of three regional forums (North East, South East and Western Victoria) were held to provide opportunities for networking and sharing of knowledge and information between key stakeholders and others involved in weed management. Each regional forum has focused on a specific region of the state to maximise the benefit of networking and partnership development. The forums have been attended by 250 participants and have received a strong positive response.

Additional events are planned with the Nursery and Garden Industry of Victoria, Landscapers Industry Association of Victoria, Australian Fodder Industry Association, Fodder Conservation Operators Association of Victoria and, in conjunction with the CRC for Australian Weed Management, the Horticultural Media.

**Prevention and early intervention** There are some 1300 weed species already in Victoria, with an estimated 40,000 potential weeds that could still enter...
A preliminary investigation was undertaken to identify the most likely candidate species posing a weed risk to Victoria. A risk assessment identified 1268 species for further consideration.

A rapid assessment methodology was developed to enable the candidate weeds to be prioritised to identify the highest risk species to Victoria. Application of the rapid assessment criteria to the candidate weeds has produced a list of 410 weeds with high potential threat to Victoria. This list is referred to as the ‘Victorian Alert List’ and is comprised of 212 taxa not currently known in Victoria (priority for prevention of introduction), 141 taxa with less than 10 known distribution records (priority for eradication), and 57 taxa with 11–20 known/unknown distribution records (Blood 2005).

Of these taxa, 30 were selected to provide focus to the Victorian Weed Spotters Network. These weeds will be promoted to the Weed Spotters to encourage reporting of these new and emerging species to improve surveillance measures. A Weed Spotters website has been developed as a one-stop information and resources site for current Weed Spotters and those inquiring about the network. The website includes a photo library of the 30 priority taxa to assist identification and enable improved surveillance.

A scoping report on development of weed spread prevention extension material (Snell and Norris 2005) identified information needs of key stakeholders and priorities for further development. Materials developed to date include: Clean-down Quick Check guides; CD-Rom for the garden and nursery industry containing a list of declared species, legislative obligations, photo library, references, extension materials and contacts; and 32 fact sheets covering topics such as: Guidelines to developing weed spread prevention codes of practice; Activities to minimise the risk of spreading weeds during field operations; Guidelines for the establishment of machinery clean-down sites; Actions for minimising weed spread at an operational level within the nursery and garden industries; Using effective hygiene practices to minimise weed spread; and Buying Hay? Are you getting more than you bargained for?

Enhanced enforcement In December 2004, a mobile compliance task force initiated compliance activities to support community groups working to control ragwort in south-west Gippsland. The project covered 1,860 hectares of infested land around Leongatha, Foster, Mirboo North, Yarram, Ellinbank and Traralgon and generated significant interest from the public and local media. Four landholders failing to meet their responsibilities for ragwort control were prosecuted. Two landholders have also been issued official warning letters, while two other landholders were issued directions under the Victorian Catchment and Land Protection Act 1994 to prevent fodder infested with ragwort from leaving a property.

A second mobile compliance task force operation was undertaken in March 2005 to support gorse control and revegetation projects undertaken by local community groups in north central Victoria and the Victorian Gorse Task Force. The project area covered 2550 hectares and was well supported by landholders, with only one landholder facing further action from 35 Land Management Notices issued. The Macedon Ranges Shire supported the project through roadside weed control works.

In 2005/06 mobile compliance operations have supported community led weed control programs on serrated tussock, ragwort and blackberry. A further 150 properties covering 11,080 hectares have been inspected, with compliance proceedings initiated for a number of recalcitrant landholders. An audit of 100 nurseries in the Yarra valley for declared noxious weeds is also in progress.

Engagement Stakeholder analysis and attitudinal surveys informed the establishment of targets and the most effective engagement strategies for working with key stakeholders. A project communication plan has been effectively implemented with project communication materials presented to a high and consistent standard. Regular media coverage provides opportunities for key stakeholders and the project to profile and recognise achievements in weed management.

The spring Weed Media Offensive was a joint program between the Initiative and the recurrent DPI, Landscape Protection, Pest Plant Program. Over spring 2004, 89 positive weed media articles were distributed; 86 articles were published at least once, with a total of 149 media appearances achieved. The article creation process and media schedule ensured that there was a constant flow of articles appearing weekly across the state, with Landscape Protection staff actively involved in creating media articles to promote current issues and activities.

DISCUSSION
The key stakeholders involved in the initiative have a significant influence on successful weed management in Victoria. They have all contributed to weed management to varying degrees in the past and believe weeds to be a major problem that requires collaboration and additional resourcing.

TWoPL has tailored engagement tools and materials to the needs of the individual organisations to
ensure that the project built on previous work undertaken. Opportunities for networking and information sharing have led to collaborative action resulting in a more coordinated approach to weed management.

TWoPL is halfway through implementation. Achievements to date provide an indication of the work that has been done to progress weed management. Mid-term evaluation will provide an assessment of key stakeholder progression along the AAA continuum.

‘Weeds are everyone’s property’ is the slogan for the TWoPL initiative. It recognises that all land managers and Victorians have a role or responsibilities in weed management, not only for the management of our existing weed problem, but also for the prevention of new and emerging weeds. TWoPL will build the capacity of key stakeholders to manage weeds and encourage and foster partnerships and collaboration that will last well beyond the life of the initiative.

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REFERENCES


