

# CRC for Australian Weed Management

A 2020 Vision Statement



## Killing us softly – Australia's green stalkers

A call to action on invasive plants, and a way forward





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**Cover photos**

- 1) Karoo thorn (*Acacia karroo*), one of the 28 Alert List species. Photo: Peter Martin.
- 2) Rubber vine (*Cryptostegia grandiflora*) smothering native vegetation along the Burdekin River in Queensland. Photo: Colin Wilson.
- 3) A diver struggles to the surface through a dense cover of cabomba. Photo: Abyss Diving Pty Ltd.

**Back cover photo**

- 4) A dense stand of mimosa (*Mimosa pigra*). Photo: Colin Wilson.

**Page 1 photo**

- 5) The yellow flowering shrub is an infestation of parkensonia (*Parkensonia aculeata*) in the catchment of the Burdekin River, Queensland. Photo: Roger Lawes.

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*“The invasive plants issue is a natural resource management problem that is easily in the same league as salinity, and possibly even more urgent.”*

## Foreword

This booklet shows what you can do to limit the incidence of new weeds and to reduce the spread of invasive plants already infesting our cropping and grazing lands, our water supplies and our natural environment. The facts about weeds are frightening. The cost to our economy is an estimated \$4 billion annually and the cost in the degradation of our native bushland environment is inestimable. Weeds are an increasing problem for asthma and hay-fever sufferers. Of the more than 28 000 plant species introduced into Australia, over 2 500 have become naturalised. Of those species 'gone bush' in recent decades, 65% came from urban gardens and parks.

The problem with weeds needs to be understood before it can be comprehensively attacked in national policy and community involvement terms. The few selected case studies in this booklet graphically demonstrate various dimensions of the problem. Community skills to deal with weeds can only come with awareness, information and support. School children are already showing what can be done in the destruction of some of our most insidious environmental weeds. It has taken us a long time to recognise and measure the havoc wrought by the 'early settler' weeds introduced with European settlement of our continent. It is now only with border protection, knowledge, science and community involvement that we can deal with constant 'late arrivals'.

Australia is a mega-diverse continent, flora-wise. I urge you to read this publication and focus on what you may do in terms of the solutions that the CRC for Australian Weed Management sees as being most appropriate.



**John Kerin**

*Chairman*

The Hon John Kerin AM, BA, BEc, FAIAST, FTSE  
CRC for Australian Weed Management

## Summary



The arrival of Europeans in Australia has been followed in the last 200 years by over 28 000 foreign plants. Some introductions were accidental, but most were imported for pasture, horticulture or for ornamental reasons. Of the nearly 300 plants known to have established themselves as weeds in the wild between 1971 and 1995, for example, two-thirds were introduced as ornamentals. Of the 460 pasture and legume species trialled in northern Australia 1947-85, 60 became weeds, and 13 of these are now serious crop weeds. Only four proved useful without also causing weed problems. One plant introduced for pasture became a major weed within a decade.

Until very recent times, almost no assessment was made of the risk these plants posed to primary production or natural ecosystems. The consequence of this long period of thoughtless introductions has been devastating. The cost of weeds to Australian agriculture now exceeds \$4 billion per year, and almost all the plants involved are foreign. Over 2 500 species of introduced plants are now established in the wild in Australia, and many threaten the integrity of some of our most valued places. Half a million dollars a year, for example, is spent trying to keep just one species (*Mimosa pigra*) out of Kakadu.

In recent years salinity, which has been estimated to cost the nation at least \$200 million per year, has finally received the serious public attention it deserves. The recent National Action Plan for salinity was worth \$1.4 billion. Clearly, the \$4 billion per year cost of weeds means the issue is at least in the same league as

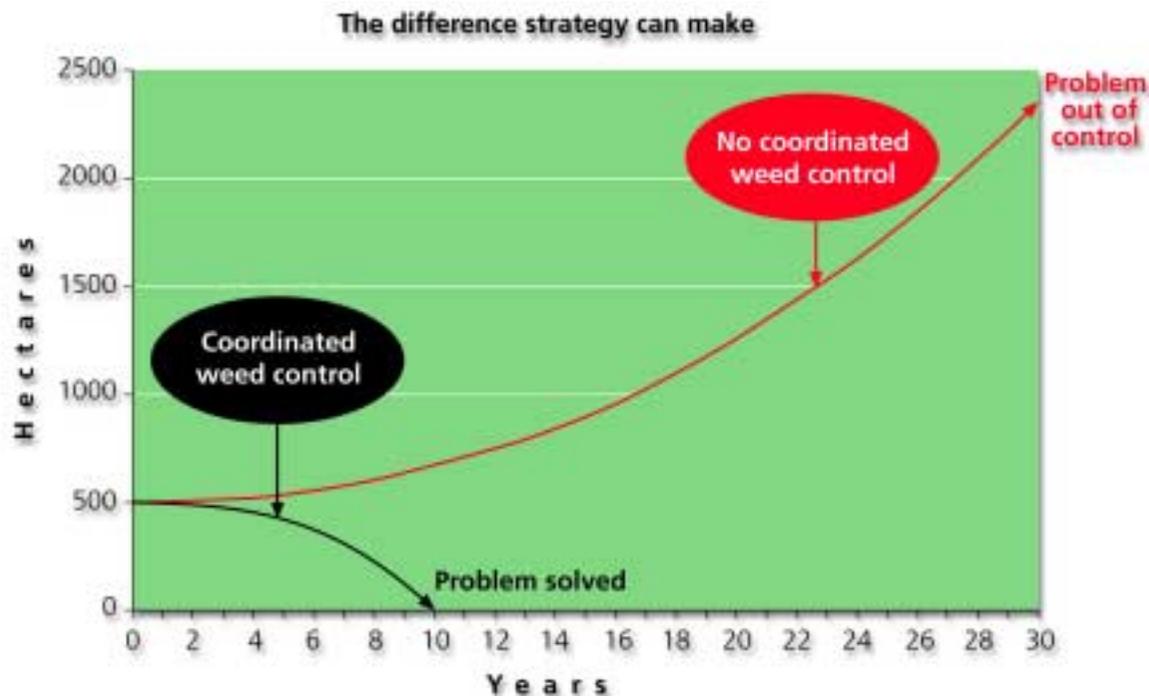
salinity. Indeed, it appears to be a substantially larger problem.

An independent study in 2000 by the Centre for International Economics in Canberra showed that available control measures for many invasives are highly cost-effective. However, they require education, long-term strategy and investment. Investing in control now will repay us well in future, but we urgently need to begin. Indeed, as all farmers with weed problems know, we cannot afford *not* to act.

Examples of invasive plants having a high impact on the natural environment are all around us, but often go unrecognised. Slow but wholesale landscape change is happening on a large scale in many regions. In many respects it is the rabbit problem repeated hundreds of times over, quietly and slowly degrading whole landscapes, largely out of the public eye. Within a generation or two many once-loved places, including parts of national parks and World Heritage Areas, could be dominated by invasive plants from South America, South Africa and elsewhere. Already it is clear that many of our native plants and animals are unable to compete with these invasions. They decline in numbers, and even disappear from affected areas altogether.

Many invasive plants are also decidedly unhealthy. Apart from being toxic, causing rashes, stings or injury by spines, many common weeds cause severe respiratory problems, especially in children. Rye grass, parthenium, ragweed, plaintains and privet are all well known culprits. Some water weeds can entangle swimmers. Many invasive plants are also toxic to native animals and livestock, and others of no food value can simply displace nutritious plants. Both cause major losses to farmers.

## Summary



At year zero initial infestation is 500ha

Without a coordinated control strategy, infestation will cover 2400 ha after 30 years

With a coordinated control strategy the aim is eradication over 10 years

Adapted from: Weiss, J., Morfe, T.A., McLaren, D. (2002), 'Assessing the financial implications of alternative investment options in weed control' in *13<sup>th</sup> Australian Weeds Conference Papers & Proceedings*, Plant Protection Society of WA Inc., Merideth.

This document attempts to outline the main causes and dimensions of the invasive plant crisis in which Australia now finds itself. It reviews the economic, social and environmental impacts of the invasion, and suggests the role that Australian science could have in finding solutions. It also looks at the need to engage

and support communities in learning to recognise and act on preventing new invasions, and in bringing current ones under control.

A suite of national programs is proposed, worth an estimated \$27 million per year over ten years. This is a modest sum compared to the annual cost of \$4 billion

per year currently borne by farmers in yield loss and weed control costs. It would pale into insignificance if an economic estimate could be made of the mounting impact of invasive plants on Australia's natural environment.

The CRC for Australian Weed Management (Weeds CRC) concurs with the assessment of the 1997 National Weeds Strategy, that 'weeds are among the most serious threats to Australia's primary productivity and natural environment'.

The invasive plant crisis urgently needs public recognition and education to underpin support for new national programs. Australia already has world-class scientific excellence in this field, and communities everywhere have shown a willingness to work for a sustainable future by protecting the environment.

The control of invasive plants represents an immense new challenge for Australia in the opening decades of the 21<sup>st</sup> century. For the sake of our future economy and our environment, we must tackle the problem more effectively.

**Dr Rachel McFadyen**

*Chief Executive Officer*

CRC for Australian Weed Management

Bridal creeper (*Asparagus asparagoides*) can smother whole ecosystems.  
Photo: Louise Morin

***“The control of invasive plants represents an immense new challenge for Australia in the opening decades of the 21<sup>st</sup> century.”***