



CENTRE FOR
INVASIVE SPECIES SOLUTIONS

National Weed Biocontrol Pipeline Strategy: Initial Stage



FACTSHEET

Weeds cost Australia \$5 billion every year, with major impacts on our ecosystems, waterways and agriculture.

Weed biocontrol is a powerful tool to combat this national problem at landscape scale.

What is weed biocontrol?

Biological control (or biocontrol) harnesses 'natural enemies', such as insects and pathogens from the plant's native range, to control invasive weeds.

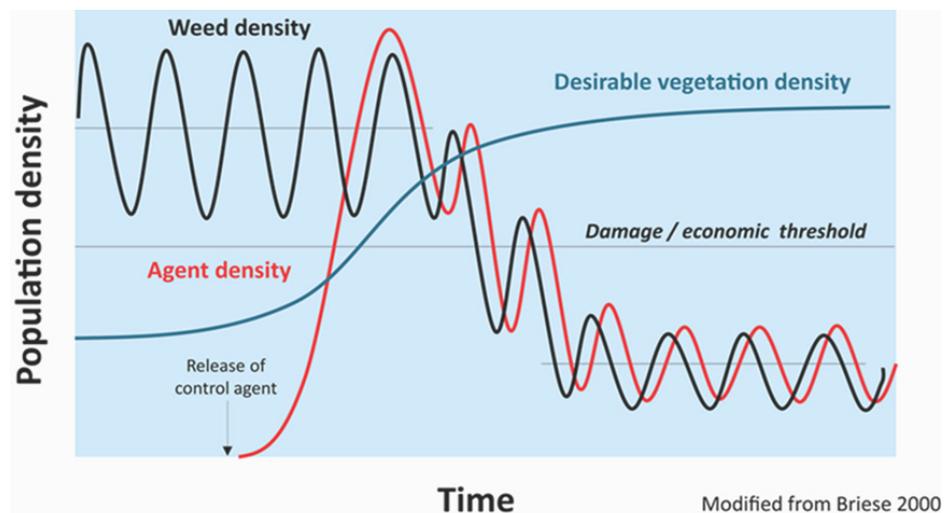
Australia's biocontrol success stories include programs for prickly pear, skeleton weed and Paterson's curse, where environmental and production values have been restored to weed-infested landscapes.

Based on a review of over 100 years of data, weed biocontrol is one of the most cost-effective solutions to manage invasive weeds, with benefits outweighing costs by over 23:1.

But these solutions don't emerge quickly. They are the result of a rigorous and long-term, science-based 'pipeline' beginning with the discovery of potential agents, through a national approval process to their release. Even after release, it can take several years for biocontrol agents to establish and impact their target.

Biocontrol at work in the landscape

The graphic below demonstrates the desired outcomes of biocontrol, where the biocontrol agent establishes to high levels after introduction to suppress its target below a nominated threshold, allowing desirable vegetation to recover.



Briese DT (2000) Classical biological control. Australian weed management systems, 161-186.

What is the National Weed Biocontrol Pipeline Strategy?

The [National Weed Biocontrol Pipeline Strategy](#) (the Strategy) is a framework to coordinate weed biocontrol research, development and engagement (RD&E) investment based on national priorities. It aligns these efforts nationally across:

- governments
- industry and land managers
- research and
- on-ground weed management.

Endorsed by governments through the National Environment and Invasives Committee in July 2023, the Strategy was developed by a cross-government working group coordinated by Australia's national science agency, CSIRO, with the Centre for Invasive Species Solutions.

Importantly, this initiative supports Goal 2 of the [Australian Weeds](#)

Strategy: to reduce the impact of existing priority weeds via coordinated and cost effective solutions and reinvigorates Australia's weed biocontrol capability.



PhD student Tahina Rajoanera collecting biocontrol agents from mother-of-millions (*Kalanchoe delagoensis*) in its native range of Madagascar. Photo NSW DPI.

Top banner image: Rubber vine seedlings by Wild Matters

Together, create and deliver valued invasive species solutions

invasives.com.au

Introducing the Strategy Initial Stage project

The initial stage project will roll out between November 2023 and December 2024. It will be led by the Centre for Invasive Species Solutions and its partners. The project will be funded by the Australian Government Department of Agriculture, Fisheries and Forestry with in-kind support by the Centre, CSIRO, Biosecurity Queensland - Department of Agriculture and Fisheries, Agriculture Victoria and the New South Wales Department of Primary Industries.

It will create a National Weed Biocontrol RD&E Alliance drawn from Federal, State and Territory governments, researchers, weed biocontrol practitioners, natural resource managers, agricultural sector and other relevant stakeholder groups. The initial stage of the project will:

- enable a transparent and robust selection and assessment of candidate weeds for biocontrol through a National Weed Biocontrol Prioritisation Framework.
- develop a National Weed Biocontrol Priority List to describe the most promising candidate weeds through an assessment and refinement process based on a nation-wide call for weed nominations.
- increase community engagement in weed biocontrol monitoring and reporting via a roadmap to improve the Atlas of Living Australia Biocontrol Hub.
- develop a Weed Biocontrol Investment Report for ~20 candidate weeds with five-year

implementation plans. The report will inform future investment decisions in nationally coordinated weed biocontrol projects.

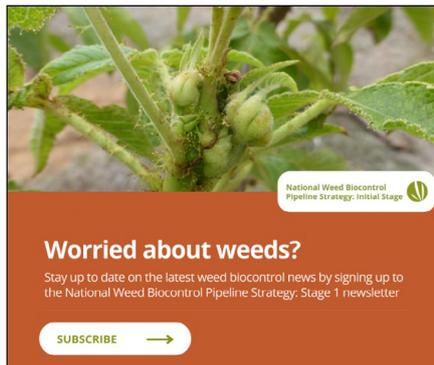
Get involved

The project will consult broadly across Australia, including farmers and agricultural producers groups, First Nations peoples, community organisations, weed officers, biocontrol practitioners, and local, State and Australian government weed experts.

There will be opportunities to nominate weeds impacting on social, environmental, agricultural and First Nations people's cultural values.

Stay in touch

[Subscribe](#) to the National Weed Biocontrol Pipeline Strategy project e-Update.



Further reading

National Weed Biocontrol Pipeline Strategy : A roadmap to guide Australia's future weed biocontrol research, development and extension

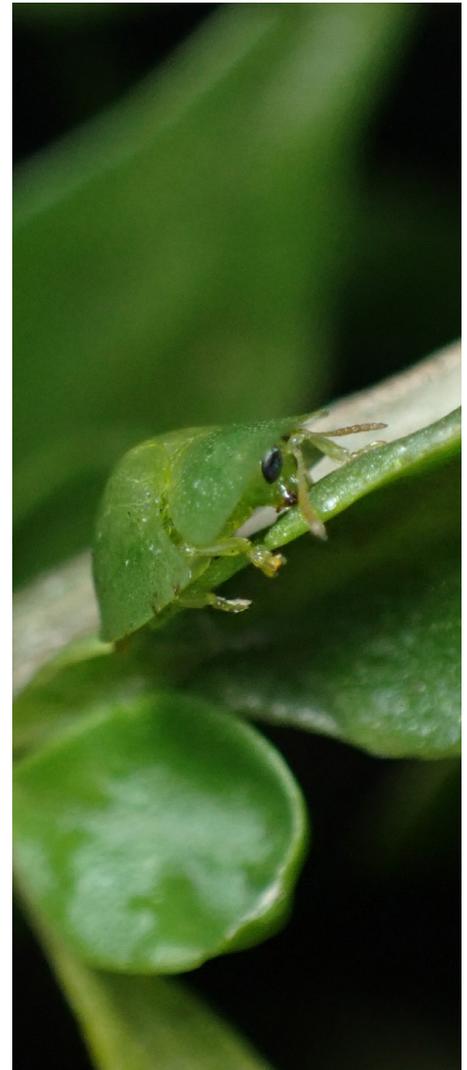
<https://weeds.org.au/wp-content/uploads/2023/10/National-Weed-Biocontrol-Pipeline-Strategy.pdf>

Candidate weeds for biological control list

<https://weeds.org.au/overview/lists-strategies/>

Atlas of Living Australia Biocontrol Hub (citizen science reporting of weed biocontrol agent releases and performance)

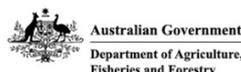
<https://biocollect.ala.org.au/biocontrolhub>



The leaf-feeding beetle *Cassida distinguenda* in host-specificity testing for African boxthorn (*Lycium ferocissimum*). Source: CSIRO.



Funded by the Australian Government Department of Agriculture, Fisheries and Forestry



Who to contact: weeds@invasives.com.au

invasives.com.au