



Australian Government
Department of Agriculture,
Fisheries and Forestry



Future
Drought
Fund



CENTRE FOR
INVASIVE SPECIES SOLUTIONS



Australia's National
Science Agency

Community-led biocontrol for African boxthorn and drought resilience

This project received funding from the Australian Government's Future Drought Fund

African boxthorn is a thorny, drought-hardy invader choking out native plants and degrading farmland across Australia. CSIRO is leading a national biocontrol initiative using the rust fungus *Puccinia rapipes*: a safe, approved biocontrol agent that weakens African boxthorn and supports ecological recovery across invaded landscapes. This project invites farmers, First Nations groups, and community stakeholders to receive biocontrol release kits, and take part in training for release and monitoring. By joining the national network, you will help suppress a major weed, build resilience to drought, and contribute to sustainable, community-led weed control.



Introducing African boxthorn and its impacts

African boxthorn (*Lycium ferocissimum*) is a highly invasive woody weed that threatens biodiversity, agricultural productivity, and drought resilience across Australia. It forms dense, thorny thickets that outcompete native vegetation, obstruct access to land, and degrade habitat for wildlife. Infestations are widespread in farming regions and natural landscapes, particularly in areas already vulnerable to climate stress. Its resilience to drought and ability to spread rapidly make it a priority target for national biocontrol efforts.

A new biocontrol solution: a rust fungus, *Puccinia rapipes*

CSIRO is leading a national initiative to deploy the rust fungus *Puccinia rapipes* as a biocontrol agent against African boxthorn. This fungus has been approved as a safe, host-specific and effective tool for suppressing boxthorn infestations and improving drought resilience. Once established, it weakens boxthorn by damaging leaves and reducing plant vigour, which may help reduce fruit and seed production and limit spread and supports the recovery of native vegetation.

Because the fungus does not spread rapidly on its own, human-assisted release is essential. Through mass-rearing facilities, biocontrol kits, and coordinated fieldwork, CSIRO and its partners will distribute the fungus to hundreds of sites across Australia, empowering communities to lead the charge in sustainable weed control.

Project overview

This new project is funded by **the Australian Government's Future Drought Fund** and delivered by CSIRO under the national 'Nation-wide Weed Biocontrol Mass-Rearing and Release Network for Enhanced Drought Resilience in Australia's Agricultural Landscapes' led by the Centre for Invasive Species Solutions. This new project supports community-led releases of a biocontrol agent to suppress African boxthorn and strengthen drought resilience across Australia's agricultural landscapes. Project activities will commence in October 2025 and run through to mid-2029. Project goals include:

- Establish *Puccinia rapipes* at over 400 release sites nationwide.
- Reduce African boxthorn infestations and their impact on biodiversity and productivity.
- Enhance drought resilience through sustainable weed suppression.
- Build community capacity for long-term biocontrol and land management.

How you can get involved

CSIRO is inviting farmers, Indigenous groups, and community organisations to help roll out the new biocontrol solution for African boxthorn. Participants will be able to register interest and receive biocontrol kits containing the rust fungus *Puccinia rapipes*, along with clear instructions for its release and monitoring. You will be supported through workshops, training events, and field demonstrations to safely release the fungus and contribute data via national platforms. By joining the network of release sites, you will help suppress a major weed, strengthen drought resilience, and play a vital role in shaping the future of biocontrol in Australia.

Who eligible to participate

All interested stakeholders are welcome to participate in this project. CSIRO will provide the rust fungus *Puccinia rapipes*, along with training, release kits, and monitoring guidelines. Participants will contribute their time and effort to release the fungus at local sites and track its impact. This includes managing site access and any necessary approvals.

The program is especially suited to farmers, community groups, and government agencies already working to control African boxthorn. A key focus is partnering with First Nations organisations to co-design and deliver biocontrol activities that reflect local values, knowledge systems, and land management priorities. We welcome conversations about how this engagement can be supported through training, funding, or other mechanisms.

To learn more, visit: <https://research.csiro.au/african-boxthorn/current-research/future-drought-funding/>

To submit an express interest, please email: boxthornbiocontrol@csiro.au.

As Australia's national science agency, CSIRO is solving the greatest challenges through innovative science and technology.

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Contact us | 1300 363 400 | csiro.au/contact | csiro.au

If you would like to chat to someone on the CSIRO African boxthorn biocontrol team, please call:

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research.csiro.au/african-boxthorn