

# Zero tolerance to weeds in Ecological Restoration

Is this approach ever practicable?

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# We often need to target one weed or a few weeds

Needed for:

- very invasive transformative weeds
- eradicating new arrivals

Weeds that are so threatening to native vegetation that they should be dealt with wherever they are.

Eg – Monadenia, Fountain Grass, Buffel Grass, Pentaschistis, African Love Grass, *Juncus acutus*, etc, etc.

# Particular weeds on a landscape scale













Targeting selected weeds at a site or property scale  
- works where weeds are at a disadvantage.













But there are sites where only a zero-tolerance approach to weeds will work.



Highly degraded remnants – urban or small rural sites





Constructed wetlands, stormwater basins etc





Paddocks and tree plantings





watercourses and floodplains



Zero-tolerance to weeds  
does not mean “just spray everything”.





Maybe best to target no weeds.

Maintain a weedy landscape

- but at least do no harm.





# Problems with choosing particular weeds -

- The other weed species will fill the gaps
- These might be harder-to-eliminate
- You will get poor natural regeneration
- Small native plants will be outcompeted by weeds
- Chronic weed infestations will usually lead to high on-going maintenance
- The site might quickly degrade on completion of the project



The Bradley sisters first enunciated a no-weeds approach -

Bradley's Rule 7

“Remove all species of exotics from areas weeded.”

(J. Bradley 1988 “Bringing Back the Bush”)



# For a Zero Tolerance approach

- more initial time required per area
- therefore - work area by area over time  
(ie apply a Bite and Hold Strategy)

Define the first area

Remove weeds **while protecting natives**

Follow-up weed removal as natives grow and look out for new natives

Introduce other local species if needed

Regularly search for, and destroy, weeds

When the first area is under control, start the next one





Separating native plants  
from weeds prior to the first  
spray







Native plants still there after the first season of weed work





Fire is useful for eliminating weeds in degraded grasslands:

- killing newly germinated annual grass weeds,
- facilitating regeneration of herbaceous natives,
- exposing the ground to make weeds easier to find.





Paddock to grassy woodland by eliminating all weeds in tree plantation





Primary clearance of floodplain – marked *Carex appressa* , front, right





Same location, 5 years later





Volunteers freeing up natives to facilitate weed spraying









Detailed work right up to the edge of the cleared area





Using cut woody material to protect slopes





Planting trees on protected slope









Introduce understorey when weed levels very low –  
Consider establishing nuclei from which the ground flora develops









Scrape and sow method for destroyed sites on flat ground



Follow-up, follow-up, follow-up until it is easy.

Take another bite when the site is under control







Taking the next bite







# Attitudes required

- Learn the local plants – natives and weeds – ID, origin status, growth and regeneration characteristics etc, etc
- Have a long-term oversight
- Attention to detail
- Vegetation development is a process
- Start small, gain experience, then work larger areas
- Plant and sow only when weed levels allow
- Weed hygiene









Family: Irisaceae  
 Botanical name: *Iris latifolia*  
 Common name: Meadow Iris  
 Location: Wetland, Gully, Gully  
 Date: 10/10/11  
 Collector: [illegible]



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# So why bother?

With no weeds:

- You can develop quality reference areas
- Provide habitat for locally rare, smaller and specialised species
- Quality is maintained as the restored area expands
- There will be low long-term maintenance inputs
- The site will look better
- There are lower fire fuel loads
- Over time, sequential bites add up to a large restored area

























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# Consider a zero-tolerance to weeds approach if:

- You are prepared for initial high input and want long lasting rewards
- Site quality is important
- You want to make a developing habitat rather than a garden or a plantation
- If you enjoy learning about local plants and what methods works best at your site
- If you have volunteers who are happy to learn
- If you can take a long term interest



“Don’t fight them – eliminate them”

From The UC System – Uni of California 1957

Thank You