

Invasiveness of invasive weeds

Overview of plants that are called weeds.

Plants behaving badly.

Which ones.

Invade ability of ecosystems.

What should we do about it.

Invasiveness of invasive weeds

Plants behaving badly.

Appearance

Prickly, showy, large.

Effects

Toxic, allergenic.

Competitive

Form monocultures.

Reduce yields of economic plants.

Interference

Visual, hinder machinery operations, reduce access.

Biodiversity

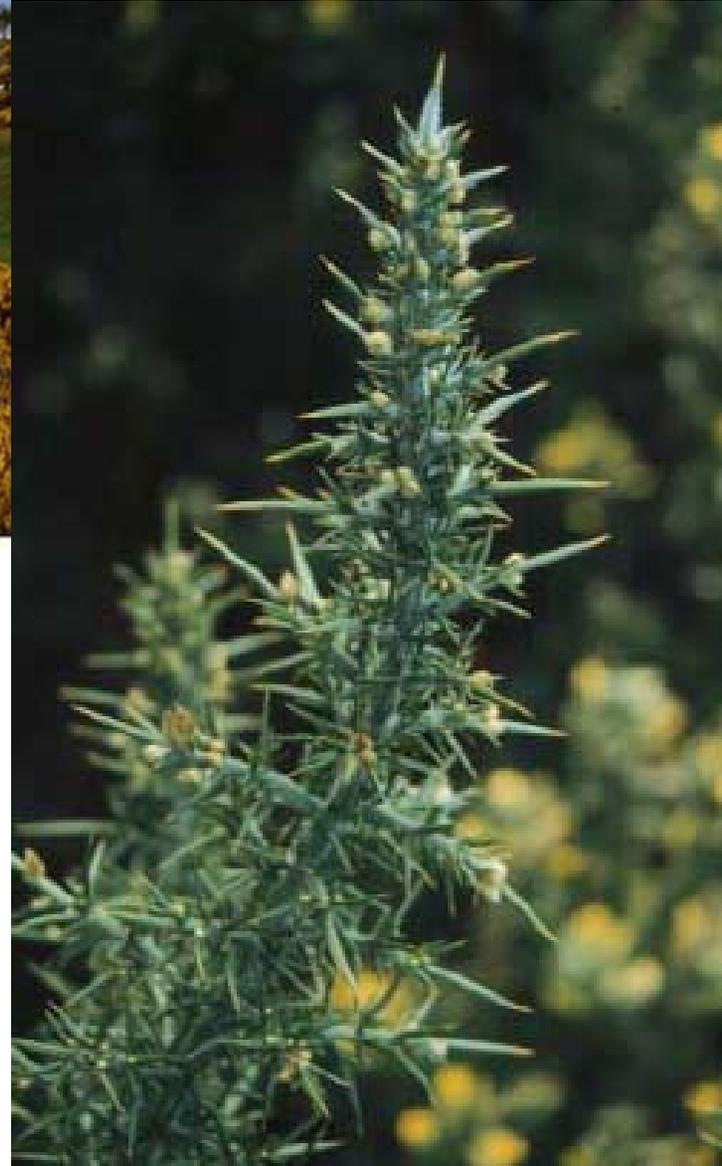
Weeds **can** be the most significant factor affecting biodiversity but may also contribute positively.





HG1726

Gorse



Weed of National Significance
(WONS)

Ulex europaeus

Biodiversity

Weeds are plants whose virtues have yet to be discovered

Schools of thought on introduced species range from

- 1) *Natural selection will determine what the winners will be and should be left to run its course to*
- 2) *Introduced species should be eradicated*

Introduced species follow the Ten's rule

Some species increase biodiversity and others decrease it.

8588 native species and 1052 naturalized species in WA

Maybe 50 of these are causing environmental damage

Invasiveness of invasive weeds

Overview

~10,000 native plants.

~10,000 introduced plants.

10's rule.

Risk assessment.

The Tens Rule

- 1 in 10 introduced plants will naturalize
- 10,000 introduced plants - about 1000 naturalized and in Western Weeds
- 1 in 10 naturalized plants will become economic weeds
- 1000 naturalized – about 100 of economic importance. 400 in HerbiGuide and on herbicide labels. 80 in Southern Weeds. 60 in the Paddock Spray Guide. 50 on Cereal Spray Chart.
- 1 in 10 economic weeds will become serious weeds.
- 21 WONS weeds. 10 biocontrol programs. Herbicide use - Ryegrass, Radish, Capeweed, Wild Oats, Clover, Skeleton Weed, Blackberry

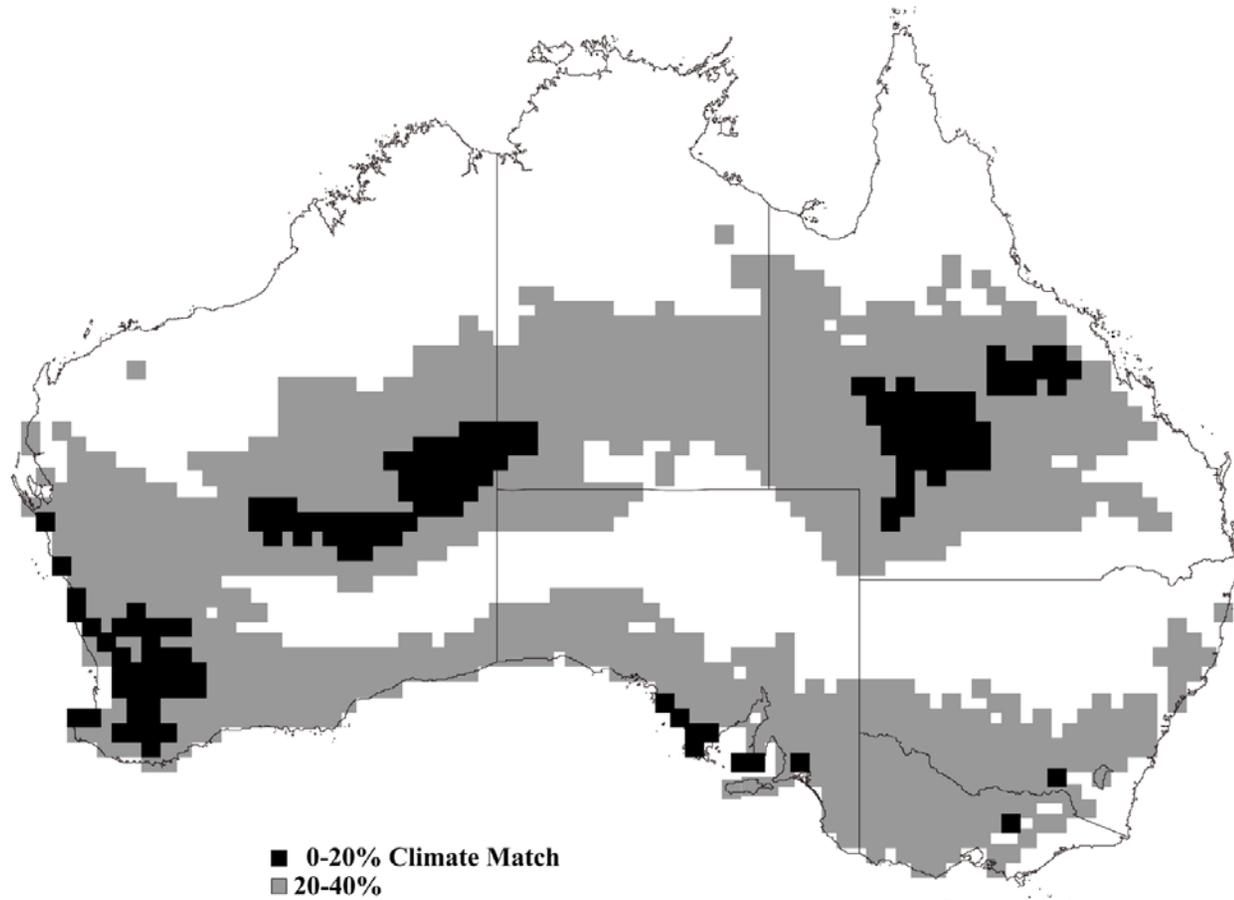
Risk Assessment

- All plants that are not in WA are assessed before introduction.
- Various models with scoring systems.
- Climatic match, plant family, history, toxicity, method of propagation.

Climate match for Kochia

AWC 13 Successful Eradications Workshop

7. Potential distribution in Australia





Courtesy John Moore

Many weeds are from the Asteraceae family
e.g. Capeweed



And Spear Thistle



Or they are from the
Brassicaceae family
e.g. Wild Radish



And Sea Rocket



Lines of Kochia near Jerramungup WA, Feb. 1993

Tumbling plants have efficient means of dispersal which may make them weedy



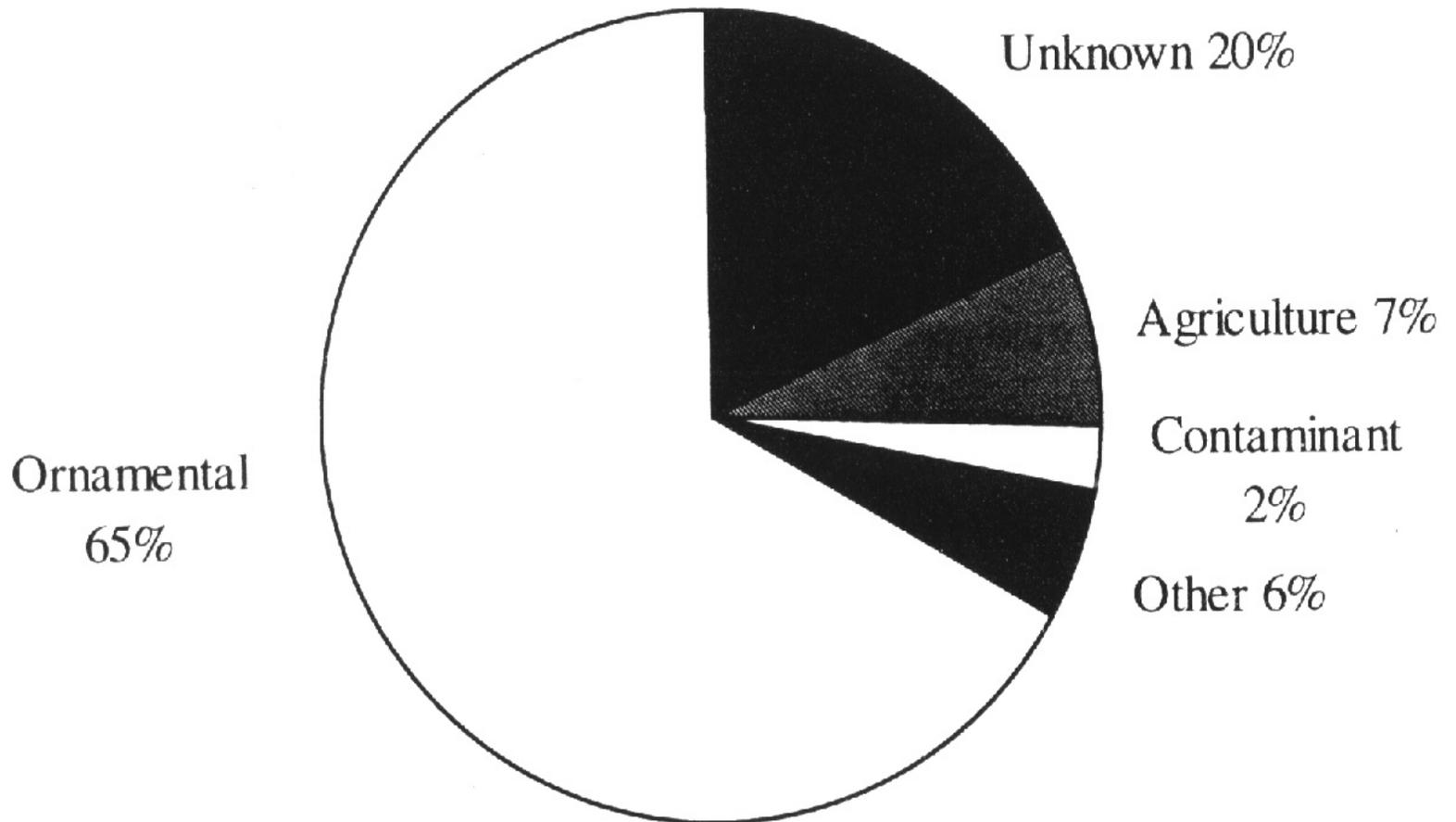
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Overview

Two thirds come from gardens.

**Generally take 10-50 years to
become a serious problem**

Where do weeds come from



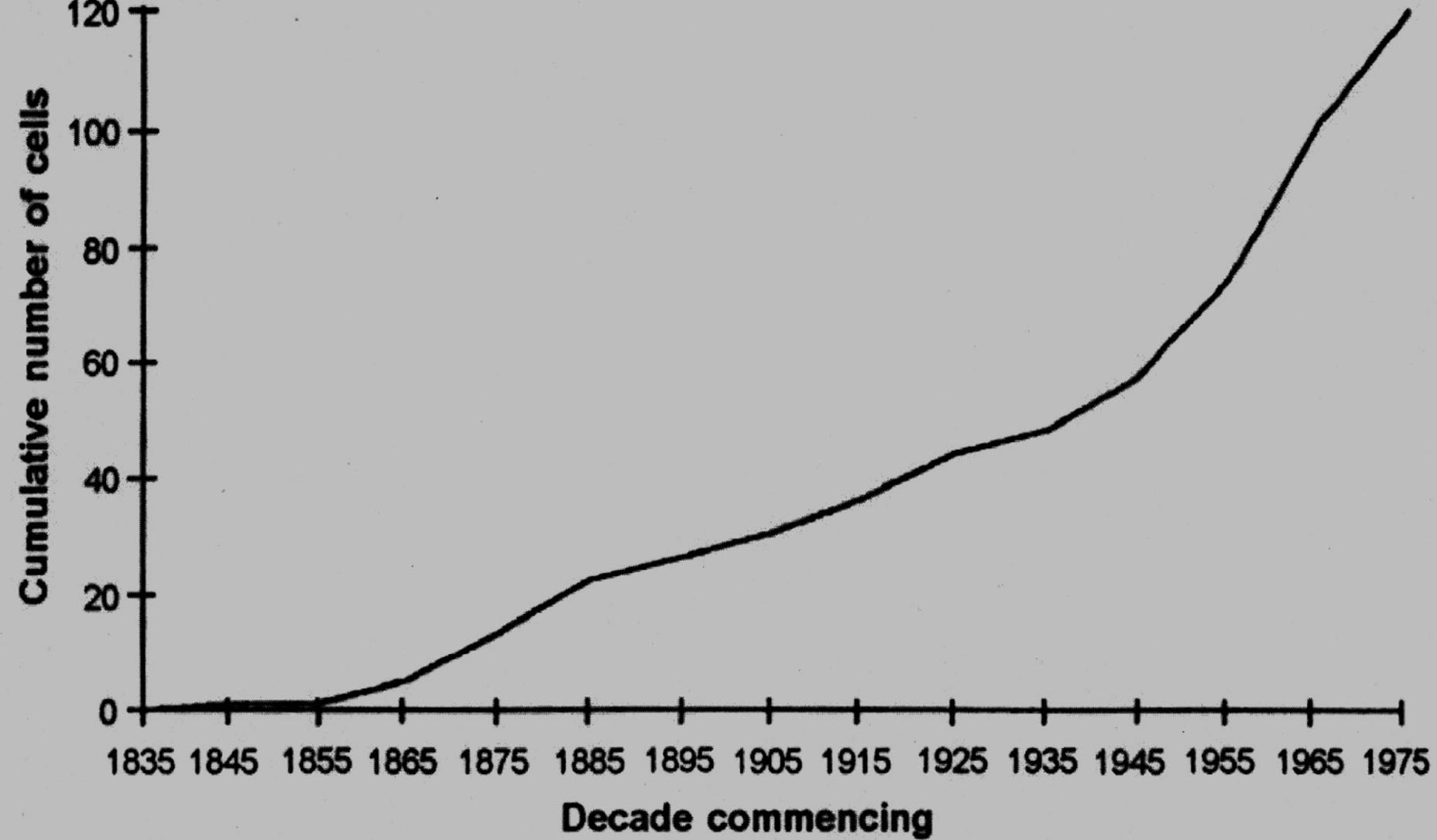
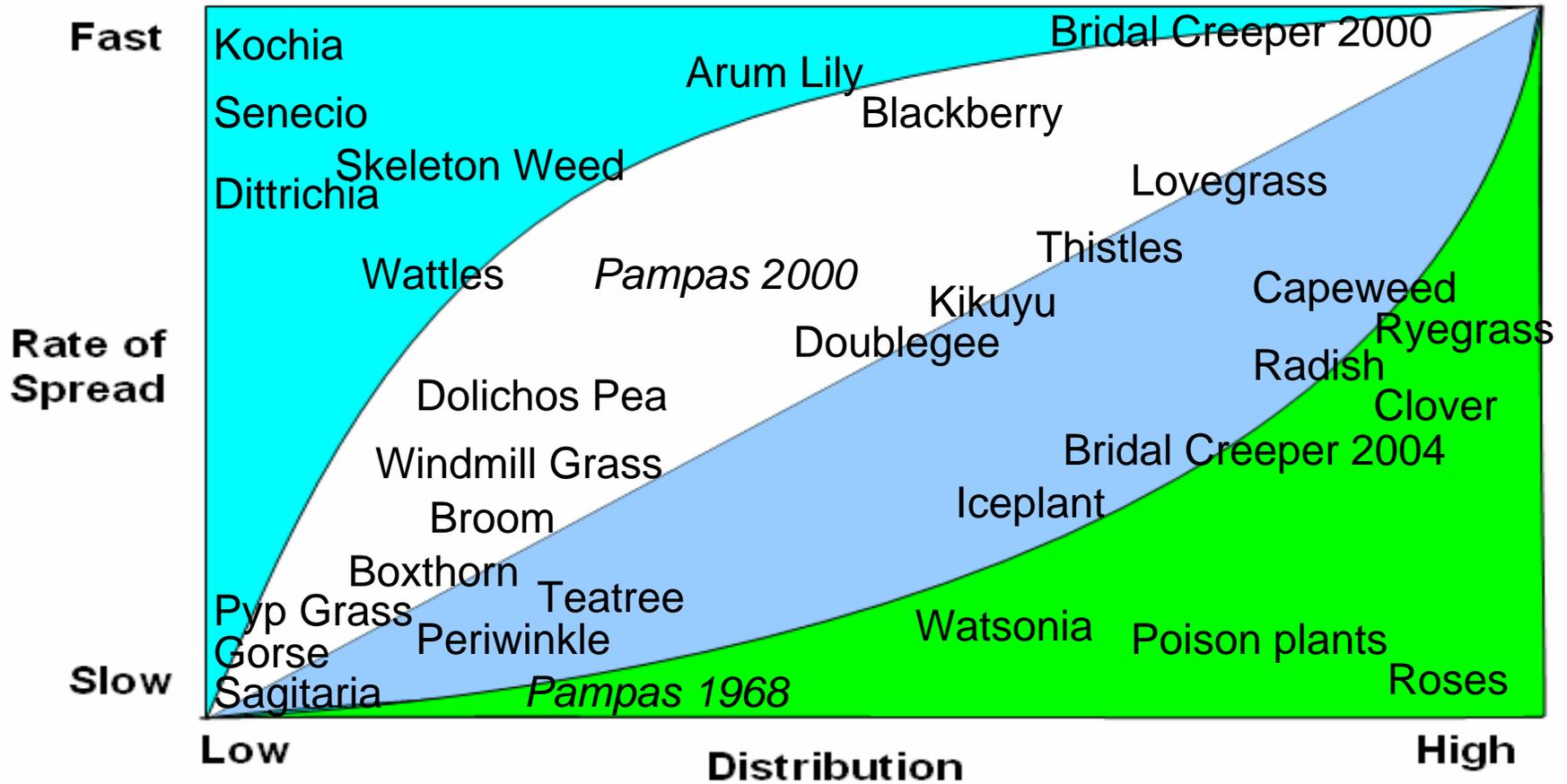


Figure 3. Spread of capeweed over time. Cells are 1° latitude by 1° longitude

Categorizing Weeds



- Individuals most effective
- Government most effective

Invasiveness of invasive weeds

Invade ability of ecosystems.

Some areas are far more prone to invasion than others.

What should we do about it.

- Surveillance
- Early intervention
- Stop selling potentially invasive species
- Targeted control
- Biocontrol
- Support community groups
- Improve bushland health – reduce disturbance.

Kochia Eradication program - costs

Direct costs = \$176,100

herbicides (40% of total)

fuel & vehicles

aircraft hire

insurance

contract spraying

staff travel allowances

Labour costs = \$318,500 (borne by DAWA)

Total cost = \$494,600 over 8 years