

Key Messages:

- Pests and beneficials are found in a range of habitats in grain cropping landscapes throughout the year.
- Pastures play a key role in providing habitat for pests.
- Pests are often found on exotic weeds rather than on native plants.
- Remnants of native vegetation in good condition (i.e. Containing few weeds with an intact understory) may reduce the number of pest species and support beneficials.

IMPLICATIONS

- Management of weeds in pastures may be crucial for reducing pest outbreaks in crops.
- Weedy native vegetation patches may also be a source of pests – develop a weed control plan.
- If you are thinking about re-vegetation there are many 'low risk' native plants that don't harbour pests but do support beneficials.



For more information about Pest Suppressive Landscapes, Integrated Pest Management (IPM), IPM tips and tricks or upcoming workshops and training, visit the National Invertebrate Pest Initiative (NIPI) website at: <http://www.nipi.com.au/>

FOR FURTHER INFORMATION FOR WA REGION:

Svetlana Micic
Svetlana.micic@agric.wa.gov.au

FOR INFORMATION ON THE NATIONAL PROJECT:

Hazel Parry
hazel.parry@csiro.au

Nancy Schellhorn
nancy.schellhorn@csiro.au

Many thanks go to the landholders for participation and GRDC for funding (project CSE00051). The national project was lead by CSIRO - with collaborators from DAFF QLD, UQ & DAFWA

Photo credits: 1 & 4 CSIRO Entomology; 2 K. Power; 3 & 6 S. Micic, DAFWA; 5 S. Macfadyen, CSIRO; 7 & 8 J. Wessels, DAFF; a & d M. Fagg, Australian National Botanical Gardens; b N.J. Blake; c P. Nichols, DAFWA; e courtesy of www.herbiguide.com.au/; f & g P. Yeoh, CSIRO



Department of
Agriculture and Food



Pest Suppressive Landscapes

Grain pests & beneficials: Where do they come from?

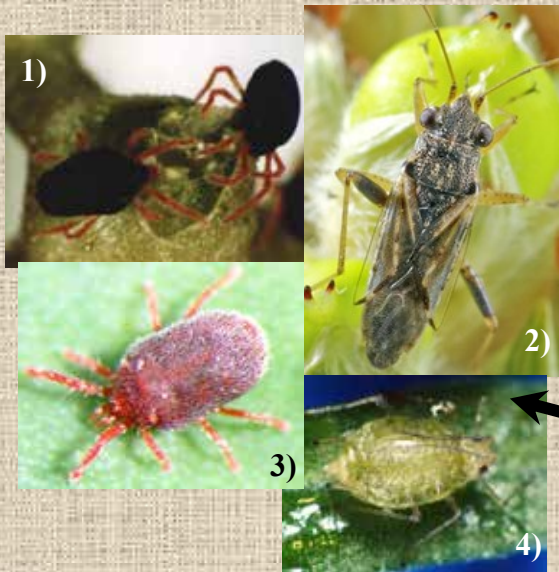
The key plants in WA that harbour pests and support beneficials.



Fold-out poster inside

Know your enemy

We monitored the numbers of key pests and beneficials over two years and found that pests are more commonly found on exotic weeds and beneficials are found on native vegetation.



Pests

A number of *weeds support pest species*. The key weeds identified in WA were: a) Capeweed, b) Wild Radish, c) Serradella clover, d) Fleabane & e) Nightshade

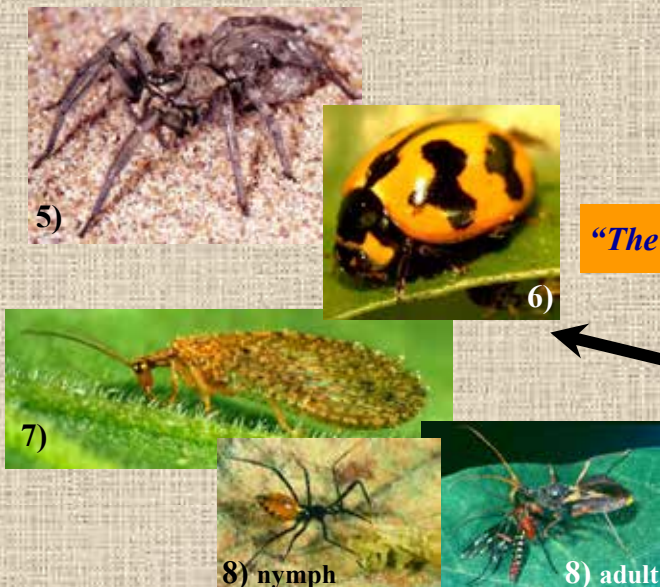
The **pests** found on these weeds are: 1) Red-legged Earth mites, 2) Rutherglen bugs, 3) *Balaustium* mites, 4) Aphids (including Green Peach Aphids) & European earwigs

Destroy their hideout



Beneficials

Know your friends



A number of *native plants support natural enemies*. The key plants group identified in WA were: f) Native shrubs and grasses & g) Eucalyptus species.

"The enemy of your enemy is your friend"

The **beneficials** found on these native plants are: 5) Spiders, 6) Ladybirds, 7) Brown Lacewings, Predatory mites (Pasture Snout and Mesostigmatid mites), Rove Beetles & 8) Assassin bugs.

Keep your friends close



WHAT YOU CAN DO

By removing weeds and managing the native vegetation in and around your property, you can reduce the number of pests and increase the number of beneficials. This could reduce your pests problems and the need to spray.