

# Awareness of native vegetation and its impact on integrated pest management

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Natural enemies, or beneficials, suppress populations of a wide range of pest insects, reducing the potential for pest species to reach outbreak levels in field crops. Conserving and enhancing populations of beneficials is an important component of any integrated pest management strategy. There are a range of beneficial insects that control insect pests. In addition, birds, bats, frogs, lizards and some small mammals also prey on insect pests.

Perennial vegetation (ie vegetation that grows all year round) such as native bushland is an important alternate habitat for beneficials. The stability of perennial vegetation provides resources otherwise not found in cropping fields, especially when in fallow. While pest species can be found in native vegetation, most do not use native hosts, so native vegetation has a low risk of increasing pest numbers. Pests are more commonly found on exotic weeds than on native plants. Native vegetation in good condition (containing few weeds and a diversity of shrubs, trees, tall grasses and groundcover) may help reduce the number of pests.

Native vegetation on farm also provides habitat for pollinators such as honeybees, wild insects and birds. Current research by CSIRO suggests that pollination contributes to reduced yield loss in cotton at high pressure from some insects.

Beneficials are highly mobile and must be able to move between suitable habitats through the landscape to be effective. The abundance and diversity of beneficials can be improved through the health of individual stands of native vegetation and how they are placed in the landscape.

Patches of native vegetation need to be linked to each other and cropping areas to assist movement of beneficial's across the landscape.

Vegetation that is diverse, ie that consists of a range of different types of vegetation, sizes and structure, provides a suite of resources for beneficials as different organisms have different habitat preferences

and food requirements.

To optimise the benefits from beneficials on your farm, care should be taken when selecting and applying insecticides as they can not only reduce the health of your beneficial populations but also impact on the health of habitat supporting native vegetation.

Further information is available in the GRDC's Pest Suppressive Landscapes fact sheet (see link below). This fact sheet outlines some key points in pest management using native vegetation. It also provides information on high-risk weeds that harbor pests, and native plants that support beneficial insects.

## References & further reading:

- CRDC and CottonInfo *Pest & Beneficials in Australian Cotton Landscapes* (see Sustainable Landscapes chapter): [www.cottoninfo.com.au/publications/pests-and-beneficials-australian-cotton-landscapes](http://www.cottoninfo.com.au/publications/pests-and-beneficials-australian-cotton-landscapes)
- GRDC *Pest Suppressive Landscapes* fact sheet: [www.grdc.com.au/Resources/Factsheets/2014/05/Pest-Suppressive-Landscapes-fact-sheet](http://www.grdc.com.au/Resources/Factsheets/2014/05/Pest-Suppressive-Landscapes-fact-sheet)

*Image: For beneficials to move across the landscape, it is ideal to have areas of native vegetation linked to each other. (Photo G. Roth)*

